Addendum to the Final 100% Remedial Design-Southern Impoundment (Amended April 2021)

San Jacinto River Waste Pits Site Harris County, Texas

International Paper Company

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90056106

→ The Power of Commitment

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List of Acronyms

AOC	-	Administrative Settlement Agreement and Order on Consent for Remedial Design
ARAR	-	Applicable or Relevant and Appropriate Requirements
ASTM	-	American Society for Testing and Materials
BOD	-	Biochemical Oxygen Demand
CFR	-	Code of Federal Regulations
cy	-	Cubic Yard
DQO	-	Data Quality Objective
DWA	-	Depth-Weighted Average
EPA	-	Environmental Protection Agency
ERP	-	Emergency Response Plan
FSP	-	Field Sampling Plan
ft bgs	-	Feet Below Ground Surface
GAC	-	Granular Activated Carbon
GHD	-	GHD Services Inc.
gpm	-	Gallons per Minute
HASP	-	Health and Safety Plan
IBC	-	Intermediate Bulk Containers
ICIAP	-	Institutional Controls Implementation and Assurance Plan
MGD	-	Million Gallons per Day
mg/L	-	Milligrams per Liter
ML	-	Minimum Level
ng/kg	-	Nanograms per Kilogram
PC-FSE	-	Pre-Construction Field Sampling Event
PC FSP	-	Pre-Construction Field Sampling Plan
PDI	-	Pre-Design Investigation
pg/L	-	Picogram per liter
QAPP	-	Quality Assurance Project Plan
RA	-	Remedial Action
RC	-	Remedial Contractor
RCRA	-	Resource Conservation and Recovery Act
RD	-	Remedial Design
RI	-	Remedial Investigation
ROD	-	Record of Decision
SM	-	Standard Method
SOW	-	Statement of Work
SWMP	-	Site-Wide Monitoring Plan
TAC	-	Texas Administrative Code
TAT	-	Turnaround Time
TCDD	-	2,3,7,8-tetrachlorinated dibenzo-p-dioxin
TCLP	-	Toxicity Characteristic Leaching Procedure
$TEQ_{DF,M}$	-	TCDD Toxicity Equivalent for Mammals
TOC	-	Total Organic Carbon
TODP	-	Transportation and Off-Site Disposal Plan
TSS	-	Total Suspended Solids
UAO	-	Unilateral Administrative Order
µm	-	Micron

1. Introduction

GHD Services Inc. (GHD), on behalf of International Paper Company, submits to the United States Environmental Protection Agency (EPA) this Addendum to the Final 100% Remedial Design (Amended April 2021) for the Southern Impoundment (100% Remedial Design [RD] Addendum) of the San Jacinto River Waste Pits Site in Harris County, Texas (Site). This 100% RD Addendum was prepared pursuant to the requirements of the Unilateral Administrative Order (UAO) for Remedial Action (RA) of the Southern Impoundment, EPA Region 6, Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Docket No. 06-05-21 (Order) (EPA, 2021b). The *Final 100% Remedial Design-Southern Impoundment (Amended April 2021)* (Southern Impoundment 100% RD) was submitted on April 19, 2021 (GHD, 2021a) pursuant to Administrative Settlement Agreement and Order on Consent for Remedial Design (AOC), Docket No. 06 02 18, with an effective date of April 11, 2018 (EPA, 2018). The EPA approved the Southern Impoundment 100% RD on May 7, 2021 (EPA, 2021a).

This 100% RD Addendum was prepared to incorporate additional data collected as part of the Pre-Construction Field Sampling Event (PC-FSE), which was completed in accordance with Section 3.1 of the Statement of Work attached to the Order and the Pre-Construction Field Sampling Plan (PC-FSP) referenced in Section 1.1. This 100% RD Addendum updates only those sections of the Southern Impoundment 100% RD that require modification as a result of the PC-FSE. Table 1 lists each of the figures and tables included within the Southern Impoundment 100% RD and identifies each that has been superseded by a revised or replaced by a new figure or table in this 100% RD Addendum.

1.1 Pre-Construction Field Sampling Plan

The PC-FSP that was part of the approved Southern Impoundment 100% RD was updated and included as Appendix A to the Remedial Action Work Plan (RAWP), submitted to the EPA on October 14, 2021 (GHD, 2021b) and was conditionally approved by the EPA on November 5, 2021 (EPA, 2021c). A revised RAWP (Revised RAWP) that incorporated EPA comments was submitted to the EPA November 26, 2021 [GHD, 2021c]).

The PC-FSE was conducted from November 2021 through February 2022. Data from that event refined the extent and volume of material to be removed during the RA. A summary of the PC-FSE and the associated design modifications made based on the results of the PC-FSE are included in this 100% RD Addendum.

1.2 Objective

The objective of this 100% RD Addendum is to update the Southern Impoundment 100% RD based on an evaluation of the additional data collected during the PC-FSE. This 100% RD Addendum includes a description of the updated design elements for the selected remedy for the Southern Impoundment, including those related to excavation volumes of subsurface material, size of the bulkhead, and the addition of batch discharge to the water treatment system (WTS), and updated versions of design drawings and specifications that have been modified to reflect the updated design elements. After evaluating the additional data collected during the PC-FSE, the excavation volumes of subsurface materials increased by almost 100%. The increased volume, together with the construction of the effluent tanks to facilitate batch discharge, will require that excavation extend over two construction seasons as discussed further in Sections 2.6 and 4.5.

Applicable supporting deliverables will be updated to include information from the PC-FSE and submitted under separate cover in accordance with the EPA approved *Remedial Action Work Plan Revision 2* submitted in November 2021 (GHD, 2021c) and EPA's extension of the deadline for submitting one of those plans, the Institutional Controls Implementation and Compliance Plan (ICIAP) to September 15, 2022 (EPA, 2022d).

1.3 Document Organization and Supporting Deliverables

The remaining sections of this 100% RD Addendum are organized as follows:

– Section 2 of this 100% RD Addendum includes a description of the PC-FSE for the Southern Impoundment and a summary of the results and conclusions from this event.
– Section 3 of this 100% RD Addendum provides an update to the Applicable or Relevant and Appropriate Requirements (ARARs) that may be applicable to the Southern Impoundment RA Construction.
– Section 4 of this 100% RD Addendum provides an update to the design criteria assumptions that are the basis for and will be used as part of the excavation, bulkhead installation, transportation and disposal, and water treatment process elements of the Southern Impoundment design. This section also details the sequence of working seasons and anticipated RA Construction activities.
– Section 5 of this 100% RD Addendum includes a list of updated drawings developed to date for the Southern Impoundment RD, along with the list of updated detailed technical specifications.
– Section 6 of this 100% RD Addendum includes references to cited reports, correspondence, etc.

This 100% RD Addendum also includes the following appendices:

– Appendix A: PC-FSE soil sampling documentation including photographic logs, analytical laboratory reports, and the data validation report;
– Appendix B: PC-FSE additional waste characterization and investigation derived waste (IDW) documents including analytical laboratory reports and the data validation report;
– Appendix C: PC-FSE piezometer soil boring logs, piezometer slug testing information, water analytical data, and data validation report;
– Appendix D: Updated Design Drawings; and
– Appendix E: Updated Technical Specifications.

2. Pre-Construction Field Sampling Event

The Southern Impoundment 100% RD grouped the Southern Impoundment into four distinct excavation areas that were given the following designations-Northeast (NE), North Central (NC), South Central (SC), and Southwest (SW). One objective of the Southern Impoundment PC-FSE was to complete confirmation and overburden sampling activities prior to mobilization for the RA Construction to better refine the extents of excavation and the volume of material available for reuse. Results from this sampling event have been incorporated into updated design drawings submitted as part of this 100% RD Addendum in Appendix D. A detailed cut/fill plan is also included in Appendix D this 100% RD Addendum. The PC-FSE included the following activities to address remaining data gaps from the pre-design investigations (PDIs) and remedial investigation (RI).

– Pre-construction confirmation sampling to determine the vertical extent of overburden above each delineated zone of impact and the horizontal and vertical extent of impacted soils in advance of excavation and removal activities. This will allow for a prescribed excavation during RA Construction implementation.
– Collection of additional waste characterization samples to be used in planning for the construction phase of the Southern Impoundment RA.
– Collection of data to be used in refining the volumes of wastewater to be treated during excavation activities.

The PC-FSE was conducted from November 2021 through February 2022 in accordance with the PC-FSP submitted with the RAWP dated November 26, 2021 (GHD, 2021c), approved by the EPA with modifications on November 5, 2021 (EPA, 2021d) and as described in the following sections.

2.1 Soil Confirmation Sampling

As part of the PC-FSE three different types of confirmation samples were collected pursuant to the PC-FSP as summarized below and detailed in Tables 2 through 5.

– **Overburden**
  - Soils that could potentially be placed back into the various excavations were sampled to ensure that dioxin and furan concentrations after replacement of the overburden will meet the 240 nanograms per kilogram (ng/kg) 2,3,7,8-tetrachlorinated dibenzo-*p*-dioxin (TCDD) toxicity equivalents for mammals ($TEQ_{DF,M}$) clean-up level on a depth weighted average (DWA).
  - Each polygon that was defined by a PDI or RI sample boring was subsequently divided into approximately 500 cubic yard (cy) confirmation sampling grids. A five-point (or more) composite sample was collected from each grid for analysis, with individual samples to be collected over the vertical and horizontal extent of the 500 cy volume. This approach allowed for full delineation and calculation of the volume of reusable overburden prior to construction. This designated overburden can be immediately replaced in an excavation after the material from the delineated zone of impact has been removed.
  - The depth and/or thickness of the overburden in each sampling grid (ranging from 0 to 8 feet above the zone of impact) determined how many borings were installed in that grid to provide a representative sample.

– **Sidewall**
  - Soil samples were collected adjacent to the edges of each exterior polygon to confirm whether the horizontal extent of impacted soils had been defined for purposes of removal.
  - Each sidewall composite sample was sampled at 2-ft depth intervals (five total) and composited into one vertical composite sample representing 10 ft. The sidewall samples were placed on a rush turnaround time (TAT) with an EPA-accredited laboratory (SGS Analytical Inc. [SGS]) to determine if step-out borings and additional sampling were required to fully delineate the horizontal extent of material for excavation.

– **Excavation Bottom**
  - Soil samples were collected to confirm whether the vertical extent of impact had been defined (down to the maximum 10-ft bgs depth).
  - In areas where the proposed excavation depth was determined to be shallower than 10 ft bgs, the proceeding intervals (e.g. 6-8 ft and/or 8-10 ft) were collected down to 10 ft bgs and analyzed, as directed by the EPA via email dated February 4, 2022 (EPA, 2022a).
  - Each soil boring was advanced via direct push drilling (DPT) methodology and the installed borings within each polygon/sampling grid was used for horizontal compositing (overburden or bottom of excavation) and/or vertical compositing (sidewall sampling) following the procedure outlined in the PC-FSP and detailed below:
    – Placed each 2-ft soil sample in separate stainless-steel bowl.
    – Created a homogenous mix of the 2-ft long soil core.
    – Separated the homogenous soil mixture into two distinct halves.
      - Half was designated for the horizontal (overburden or bottom) composite.
      - Half was designated for the vertical (sidewall) composite.
    – Five (or more) half mixtures were combined for a horizontal and/or vertical composite.
    – Where there was no need to split a sample, the remainder of the collected material was containerized for off-site disposal.

Step-out borings were required to fully achieve horizontal delineation in each excavation area. GHD routinely communicated with the EPA to review the PC-FSE composite sidewall analytical results and to align on the approach for additional step-out borings and analytical sampling for the NE, NC, SC, and SW excavation areas. Including the step-out borings, a total of 381 soil borings were advanced and 393 composite samples were collected, as detailed in Table 2.1. Additionally, quality assurance/control (QA/QC) samples were collected in accordance with the Quality

Assurance Project Plan (QAPP) including field duplicates (FD), matrix spike/matrix spike duplicate (MS/MSD) samples, and rinsate blanks.

Table 2.1 PC-FSE Sampling Summary

	Proposed PC-FSE (Planned)		Post PC-FSE (Actual)	
Excavation Area	**Number of Borings**	**Number of Samples[1]**	**Number of Borings[2]**	**Number of Samples[2]**
Northeast	26	26	39	40
North Central	62	50	132	124
South Central	51	45	86	90
Southwest	63	62	124	139
Total	**202**	**183**	**381**	**393**

Notes:

1. The initial sample count proposed in the PC-FSP did not include the shallower excavation bottom samples that were collected and held for later analysis. The shallower excavation bottom samples are included in the actual sample count.
2. Preemptive secondary sidewall step-out borings were advanced in the NC and SC excavation areas during Round 4 and were only analyzed if the preceding sidewall sample exceeded 240 ng/kg. These borings and associated samples are included within the post PC-FSE counts, even though not all of the samples were analyzed. Details regarding all samples are included in Tables 2 through 5.

All samples were placed into laboratory-supplied containers on ice and sealed and labeled under chain-of-custody (COC) documentation for subsequent delivery to SGS. Pre-construction confirmation composite samples were analyzed for dioxins and furans utilizing EPA Method 1613B and data validation was completed by GHD. The validated analytical PC-FSE data is presented in Table 6 (soil samples) and Table 7 (rinsate blanks). The PC-FSE confirmation sampling analytical laboratory reports, data validation report, and photographic log are included as part of Appendix A.

2.2 Discrete Waste Characterization Sampling

To supplement the existing waste characterization data, six additional discrete samples for waste characterization were collected during the PC-FSE from the confirmation analytical borings (NE-D1 [6 to 8 ft bgs], NE-G4 [4 to 6 ft bgs], NC-E2 [8 to 10 ft bgs], NC-Y2 [6 to 8 ft bgs], SC-B4 [2 to 4 ft bgs], and SW-B4 [2 to 4 ft bgs]) as shown on Figure 1. These locations targeted intervals of known high dioxins and furans concentrations. These samples were analyzed for the four RCRA hazardous waste characteristics per EPA required test methodology in 40 Code of Federal Regulations (CFR) Part 261. As with all past waste characterization samples for the Southern Impoundment, the results indicate that the waste is non-hazardous and can be disposed of as a Texas Class 2 non-hazardous waste.

2.3 IDW Sampling

Composite samples of the investigation-derived waste (IDW) were collected, in accordance with Texas non-hazardous industrial solid waste regulations (Texas Administrative Code [TAC] 335.505-506) to further refine the non-hazardous classification (Class 1 or Class 2) of that material. One composite sample was collected from the IDW from each of the four excavation areas and analyzed for the Class 2 disposal parameters including Toxicity Characteristic Leaching Procedure (TCLP), in accordance with Texas non-hazardous industrial solid waste regulations (TAC 335.505-506). Additionally, composite water samples were collected and analyzed for Class 2 parameters from the water generated during decontamination of the sampling equipment and mixing bowls between borings and the piezometer development water. The results indicate that the IDW is non-hazardous and can be disposed of as a Texas Class 2 non-hazardous waste.

2.4 Piezometers

2.4.1 Slug Testing

To obtain a more accurate assessment of the expected water volumes to be managed during the Southern Impoundment RA, temporary piezometers were installed, one within each proposed excavation area at the planned deepest point of excavation (PZ-SW, PZ-NE, PZ-SC and PZ-NC). All four piezometers were constructed of 2-inch diameter Schedule 40 polyvinyl chloride (PVC) well screen and threaded casing over the 10 ft depth using DPT and hollow stem auger drilling equipment. The locations of the piezometers are shown on Figure 2 and the soil borings logs are included in Appendix C.

After the piezometers were developed, rising and falling head tests (slug tests) were performed on December 17, 2021 to evaluate the lateral hydraulic conductivity of the strata through which each piezometer was screened. These tests were performed with disposable bailers in two-inch temporary piezometers and measured with an Insitu Leveltroll 700.

2.4.2 Chemistry Testing

One water sample was collected from each of the four temporary piezometers and submitted for analyses of the parameters identified below. Dissolved metals were field filtered and dissolved dioxins and furans were lab filtered using a 0.45 micron filter.

– Total and Dissolved Dioxins and Furans - EPA 1613B
– Total and Dissolved Metals - EPA 6010C
– Total and Dissolved Mercury - EPA 7470A
– Alkalinity – Standard Method (SM) 2320B
– Ammonia Nitrogen - EPA 350.1
– Anions (bromide, chloride, fluoride, nitrate, nitrite, sulfate) - EPA 300.0
– Biochemical Oxygen Demand (BOD) - SM 5210B
– Chemical Oxygen Demand (COD) - EPA 410.4
– pH - EPA 9040C
– Phosphorus - EPA - SW846-6010D/3050B/7471B
– Sulfide – EPA - SW846-9034
– Total Dissolved Solids (TDS) - SM2540C
– Total Organic Carbon (TOC) - SM5310C
– Total Suspended Solids (TSS) - SM 2540D

2.4.3 Transducers

On January 12, 2022, transducers were installed in the four piezometers (PZ-SW, PZ-NE, PZ-SC, and PZ-NC) to evaluate the water level variability of the shallow sand and silt zone beneath the Southern Impoundment. The transducers collected data every fifteen minutes for over three weeks until they were removed on February 6, 2022. Review of the water level data indicated that rainfall precipitation was the primary contributor to changes in water level elevations.

2.5 Summary of PC-FSE Results

2.5.1 Soil Confirmation Results

A total of 393 composite confirmation soil chemistry samples were collected for dioxin and furan analysis during the PC-FSE activities within the NE, NC, SC, and SW excavation areas. TEQ concentrations ranged from 5.92 ng/kg to 2,330 ng/kg within the NE excavation, 3.41 ng/kg to 12,500 ng/kg within the NC excavation, 0.25 ng/kg to 28,400 ng/kg within the SC excavation, and 0.754 ng/kg to 11,800 ng/kg within the SW excavation, as shown in Tables 2 through 5. Three figures are included for each of the four excavation areas (Figures 3 through 14) presenting the overburden, sidewall, and excavation bottom analytical results, respectively.

Analytical analysis and data handling for the PC-FSE followed the procedures identified in the QAPP that was submitted in the RAWP (GHD, 2021c) to ensure that data quality objectives (DQOs) were achieved. This included a systematic process, which included data validation that is designed to ensure that the data collected are of the appropriate type and quality for the intended application. The cumulative validated analytical PC-FSE data is presented in Tables 6 and the data validation memorandum demonstrates that the data collected is usable. The PC-FSE confirmation sampling analytical laboratory reports, data validation report, and photographic log are included as part of Appendix A.

2.5.2 Discrete Waste Characterization Results

Waste characterization samples analyzed during the PC-FSE were consistent with the results from previous investigations, indicating that material to be excavated during RA Construction for off-site disposal does not exhibit any of the four characteristics of hazardous waste (ignitability, corrosivity, reactivity, or toxicity), as defined in Title 40 of the Code of Federal Regulations (CFR) Part 261, Subpart C.

The validated PC-FSE analytical waste characterization data is presented in Table 8 and the data validation memorandum demonstrates that the data collected is usable. The waste characterization sampling analytical laboratory reports and data validation report are included as part of Appendix B.

2.5.3 IDW Results

Analytical results from the PC-FSE composite IDW samples from each of the excavation areas demonstrated that constituents are below the Texas non-hazardous industrial solid waste regulations TAC 335.505-506 Class 1 disposal parameter thresholds. Therefore the material will be managed as a Class 2 non-hazardous waste. Any other type of waste material that may be encountered during excavation activities will be segregated from the excavated material, characterized, and profiled separately.

The validated analytical IDW data is presented in Table 9 and the data validation memorandum demonstrates that the data collected is usable. The IDW sampling analytical laboratory reports and data validation report are included as part of Appendix B.

2.5.4 Piezometers

2.5.4.1 Slug Testing

The software AQTESOLV version 4.50 was used while measuring curve fitting to the Bouwer-Rice Solution (1976) to find an approximate hydraulic conductivity value during the slug testing for each piezometer. The values found from the slug tests performed at each well were averaged and used as the representative value for each excavation area. The highest hydraulic conductivity values were found in the SC and NE excavation areas, and the lowest were found in the SW and NC excavation areas. The average conductivity values for each excavation area are included in Table 2.2 below:

Table 2.2 Piezometer Conductivity Numbers

Excavation Area	Estimated Hydraulic Conductivity (ft/day)	Estimated Hydraulic Conductivity (cm/sec)
Northeast	14	4.94E-03
North Central	7	2.47E-03
South Central	50	1.76E-02
Southwest	2	7.06E-04

These average conductivity numbers are intended to be used as a reference for potential ranges anticipated in the excavation area as evaluated further in Section 4.4. Appendix C includes the curve-matching files for the slug tests. Based on the levels of water expected to be generated during the excavation of each area, the WTS outlined in the 100% RD is equipped to manage the anticipated volumes as discussed further in Section 4.4.1.2.

2.5.4.2 Chemistry Testing

Water samples were collected from each piezometer to better characterize pore water that could be encountered during excavation activities. The analytical results from the total and dissolved analytical samples showed that a few congeners were reported as estimated concentrations (J flags) within some of the water samples, however most congeners were not reported above the associated reporting limit. The TEQ results from the dissolved water samples ranged from not detected above the reporting limit to an estimated 0.312 pg/L. The validated analytical water data is presented in Table 10 and the data validation memorandum demonstrates that the data collected is usable. The water sampling analytical laboratory reports and data validation report are included as part of Appendix C.

2.5.4.3 Transducers

Analysis of the transducer water level data from the piezometers indicated that rainfall precipitation was the primary driver in water level fluctuation. The data does not suggest connectivity between the stored shallow alluvial groundwater and the San Jacinto River.

2.6 Conclusions

PDI-1 results showed dioxins and furans concentrations greater than 240 ng/kg $TEQ_{DF,M}$ DWA at 23 boring locations and the PDI-2 results showed concentrations greater than 240 ng/kg $TEQ_{DF,M}$ DWA at eight boring locations. The data from PDI-1 and PDI-2 were combined with the data from the RI to generate Thiessen polygons to determine the approximate vertical and horizontal extent of the dioxins and furans concentrations in the subsurface greater than 240 ng/kg $TEQ_{DF,M}$ in the four distinct excavation areas (NE, NC, SC, and SW). Data from the PC-FSE was utilized to refine the excavations vertically (up to 10 feet) and horizontally to update the excavation volume.

Following the PC-FSE, the original Thiessen polygons and excavation footprints were re-evaluated and updated to determine final horizontal extents, excavation bottom depths, and the volume of overburden that can be re-used while maintaining a DWA below 240 ng/kg $TEQ_{DF,M}$. The original distinct excavation areas expanded, and the NC, SC, and SW excavation boundaries are now adjoining but still referred to their original nomenclature in the design drawings. The updated data resulted in a new total excavation volume of approximately 92,000 cy, of which approximately 28,800 cy would be overburden that would be temporarily stockpiled and then used as backfill and an estimated 63,200 cy would be transported off-site for disposal at a Subtitle D landfill. The updated Thiessen polygons developed from these results are shown in Figure 15 and are the basis for the excavation area and volume discussed further in Section 4.1.

The excavation volumes within each of the four excavation areas of the Southern Impoundment expanded vertically and horizontally, increasing the excavation volume by almost 100%. As approved in the 100% RD and reflected in the RAWP, RA Construction will be completed outside of hurricane season (November – April) to minimize safety concerns and potential for flooding of the work site due to hurricanes and other storm events. Due to the increased volume of material for excavation and the need for the construction of additional water tanks to facilitate batch discharge of treated effluent, it is expected that RA Construction will now extend over two working seasons.

3. Applicable or Relevant and Appropriate Requirements

The applicable regulatory requirements along with project-specific comments that explain how these regulations apply to the project, and how the RA Construction will comply with the regulations are summarized in Table 11. Table 11 was included in the Southern Impoundment 100% RD and has been updated to reflect discussions with and information from various regulatory agencies post-approval of the 100% RD. Table 11 addresses each of the ARARs identified in the Record of Decision (EPA, 2017) and certain additional ARARs applicable to the Southern Impoundment RD.

4. Remedial Design

This section outlines the RD components associated with the Southern Impoundment that are being updated following the PC-FSE and include the following:

- ***Excavation Limits***
- ***Structural Design of the Bulkhead***
- ***Transportation and Disposal***
- ***Water Management***
- ***Working Seasons***

Table 4.0 summarizes the differences from the Southern Impoundment 100% RD, as further detailed in the sections below.

Table 4.0 Summary of 100% RD Differences

RD Component	Southern Impoundment 100% RD	100% RD Addendum, Post PC-FSE	Notes
Excavation Limits	Overburden Reuse - 22,900 cy Impacted Material - 24,600 cy Total excavated material - 47,500 cy	Overburden Reuse - 28,800 cy Impacted Material - 63,200 cy Total excavated material - 92,000 cy	The excavation areas expanded horizontally based on sidewall sampling and vertically based on excavation bottom sampling, accounting for the increased excavation volume.
Structural Design of the Bulkhead	210 linear feet	260 linear feet	Due to the lateral expansion of the excavation in the northwest corner of the SW excavation area, the bulkhead will extend an additional 50 feet along the shoreline.
Transportation and Disposal (T&D)	Impacted Material - 24,600 cy	Impacted Material - 63,200 cy	Impacted material to be disposed off-site increased. Based on additional waste sampling, the impacted material remains classified as RCRA non-hazardous and Texas non-hazardous Class 2.
Water Management	Treatment and continuous discharge	Treatment and storage of treated water in effluent tanks pending analytical results prior to batch discharge.	The WTS is unchanged except for the addition of water storage prior to discharge. The treatment system design previously developed remains sufficient for the expected volume of water to be generated during RA Construction.

RD Component	Southern Impoundment 100% RD	100% RD Addendum, Post PC-FSE	Notes
Working Seasons	One working season (November to April)	Two working seasons (November to April)	Due to the increased excavation volume and change to the batch discharge from the WTS, RA Construction is expected to extend over two working seasons.

4.1 Excavation Limits and Procedures

4.1.1 Excavation Limits

The sample results for all borings from the RI, PDI-1, PDI-2, and PC-FSE were evaluated against the soil clean-up value of 240 ng/kg $TEQ_{DF,M}$ DWA. The pre-excavation results are presented in Table 12, with the borings containing DWA concentrations in excess of the clean-up level identified by orange dots and borings containing DWA concentrations less than the clean-up level identified by green dots as seen in the column labeled “Pre-Excavation DWA”. Yellow dots have been used to denote discrete sampling intervals where the analytical results are greater than the 240 ng/kg $TEQ_{DF,M}$ DWA criteria but that specific interval does not require excavation/removal because the DWA concentration in that polygon does not exceed the criteria (after removal of the other impacted intervals).

Additional columns were then added to Table 12 to calculate the post-excavation DWAs as seen in the column labeled “Post-Excavation DWA” for the initial and sub polygon areas after removal of the impacted soil (as denoted with orange dots). Yellow dots have been used to denote sampling intervals where the analytical results are greater than the 240 ng/kg $TEQ_{DF,M}$ DWA criteria but that specific interval does not require excavation/removal because the DWA concentration in that polygon does not exceed the criteria (after removal of the other impacted intervals). A zone of impact was then defined for each polygon, consisting of one or more 2-ft vertical intervals, to be removed during excavation. The roadmap below summarizes the process utilized to determine the excavation extent and backfill for each polygon.

Roadmap – Excavation Limit Definition

Based on the additional results obtained from the PC-FSE investigation, specific 2-foot interval vertical soil horizons were identified for excavation such that, following their removal, the resulting soil would be below the 240 ng/kg $TEQ_{DF,M}$ DWA. The zone of impact was then updated for each polygon, consisting of one or more 2-ft vertical intervals, to be removed (overburden and impacted material) during excavation, as shown on Figures 16 through 19.

In each polygon, material will be excavated and temporarily stockpiled (as shown in Detail 7 on Drawing C-44 in Appendix D) to access and facilitate the zone of impact removal for that particular polygon. Any material that will be transported off-site for disposal will be replaced with the overburden soils initially removed from above the zone of impact and then covered with imported clean backfill to achieve original ground surface. Imported backfill will be sampled and analyzed in accordance with the Field Sampling Plan to be provided under separate cover to confirm that the material is not impacted with dioxins and furans, ensuring that the post-excavation DWAs remaining are below 240 ng/kg.

It was previously anticipated that all excavation activities would occur on the Musgrove Towing, Inc. property (Musgrove property) and on the parcel on which Market Street is located. However, the PC-FSE derived data resulted in the horizontal limit for the SW excavation area extending south slightly onto the Kirby Inland Marine, LP property. As provided for the in Southern Impoundment 100% RD, for the areas requiring excavation adjacent to the Market Street

roadway and the Glendale Boat Works property, the lateral limits of the excavation will extend up to the boundary of the roadway on the Market Street parcel and to the boundary of the Glendale Boat Works property but not beyond, with the excavation being sloped down at 2 feet horizontal:1 foot vertical (2:1) from the west edge of the street pavement and the southern boundary of the Glendale Boat Works property.

For the areas requiring excavation in the southwest portion of the Southern Impoundment, a bulkhead will be installed along the shoreline adjacent to the San Jacinto River. Upon installation of the bulkhead, excavation will be completed to the required depth up to the lateral limit of this bulkhead.

4.1.2 Excavation Volumes and Disposal Volumes

Based on the results of the RI, PDI-1, PDI-2, and PC-FSP, specific 2 ft-interval vertical horizons were identified in Table 12 for excavation such that, following their removal the resulting soil DWA concentration for that polygon area would be less than 240 ng/kg $TEQ_{DF,M}$. This results in total excavation volume of approximately 92,000 cy, of which approximately 28,800 cy will be overburden that will be temporarily stockpiled and then reused as backfill (because it does not require off-site disposal) and approximately 63,200 cy will be transported off-site for non-hazardous waste disposal.

4.1.3 Protection of Structures and Utilities

On the south end of the Musgrove property, in the vicinity of the SW excavation area, there is an existing building (elevated frame structure approximately 1,300 square feet) and a concrete slab (approximately 10,000 square feet) that will need to be demolished and removed prior to excavation work in those locations. The location of this existing building is shown on Design Drawing C-03 (Appendix D) and is south of boring location SJSB023-S1 and east of boring location SJSB066.

All existing utilities will be protected, relocated, or removed (if abandoned) as necessary to complete excavation work safely. How to address excavation around specific utilities is currently being evaluated with respect to the CenterPoint utility poles within the NE, NC, and SW excavations and the below grade AT&T utility within the NE excavation footprint. In addition, the remedial contractor (RC) selected to perform the RA Construction will be responsible for obtaining the necessary utility clearances prior to commencing excavation work. This includes contacting the Texas “One-Call 811” service for a public utility locate, as well as retaining the services of a private utility locator to mark private on-site utilities.

4.2 Structural Design of Bulkhead

As previously indicated, excavation activities will be required to extend to the shoreline in a section of the SW excavation area. In this area, a steel sheet-pile bulkhead approximately 260 feet in length, the length of which was extended by 50 feet based on the PC-FSE, will be installed directly adjacent to the San Jacinto River. The details of the sheet-pile wall are shown on Design Drawings C-40, Sheet Pile Plan and Profile, and C-41, Sheet Pile Sections and Details in Appendix D. The sheet-pile bulkhead will allow the excavation to be performed in polygon SJSB065-C1 (which is immediately adjacent to the river) in dry conditions. Based on discussions with the property owner, it is anticipated the bulkhead will be removed after completion of the excavation and the area restored to pre-RA Construction conditions. The original basis of design for the 210 feet long bulkhead included in the Southern Impoundment 100% RD was re-evaluated for the updated length. No change in the design parameters was required based on the increase in length of sheet pile bulkhead. The sheet pile sections remain unchanged and meet the design criteria.

4.3 Characterization, Transportation, and Disposal

The RD elements related to the characterization of excavated material that requires off-site disposal, transportation and off-site disposal of such excavated material will be further outlined in the Transportation and Off Site Disposal Plan (TODP) to be submitted under separate cover. The TODP will summarize the regulatory requirements,

characterization results, disposal facility profiling requirements, on-site management and loading, transportation plans, and record keeping.

4.4 Water Management

4.4.1 Basis of Design

4.4.1.1 Contact Water Characterization

During the PC-FSE , borehole water samples were collected from each of the piezometers within the four excavation areas to provide additional data of potential contact water. The results are detailed in Table 10 and appear consistent or below the results from SJSB059 collected during PDI-2 for treatability testing.

4.4.1.2 Contact Water Volume and Treatment Rate

For the Southern Impoundment, contact water may be generated by:

1. Mounded Water: Drains into excavation from excavation and surrounding soils when the bottom of the exaction is lower than the groundwater level as estimated from soil borings for each of the four excavation areas (i.e., NE, NC, SC, and SW).
2. Persistent Infiltration: water that infiltrates through the soil from the river when the base of the excavation is below the average mean sea level (AMSL) of the river (i.e., 1.5 ft-AMSL)
3. Stormwater: accumulates in the excavation and containment areas during a rain event
4. Equipment Decontamination Water: generated by the washing/rinsing of equipment (e.g., Truck Wash)
5. Miscellaneous Contact Water: Other water that come into contact with waste material not associated with water types listed above

Contact Water generated by each of the abovementioned contact water sources was estimated using the following formulas, inputs and assumptions:

1. Mounded Water

a. Mounded Water Storage = Estimated Drainage Area x Mounded Water Height X Estimated Porosity of Fill
b. Estimated Excavation Drainage Area = Estimated Excavation Area (i.e., NE, NC, SC, SW) + 50 ft buffer from perimeter of excavation
c. Mounded Water Height = Average Water Elevation from Borings (ft AMSL) – Average River Elevation (ft AMSL)
d. Estimated Porosity of Fill = 30%
e. Average River Elevation = 1.5 ft AMSL North American Vertical Datum of 1988 (NAVD 88)

2. Persistent Infiltration

a. Persistent infiltration is the estimated flowrate of water that may enter an excavation at a given excavation depth
b. Persistent infiltration is driven by hydraulic head difference between the river and the base of the excavation
c. No persistent infiltration occurs when the elevation of the base of excavation is above the average river elevation
d. Persistent infiltration is not dependent on rainfall
e. Hydraulic conductivities are based on piezometer slug tests for each area
f. Hydraulic conductivity for each area is consistent within an excavation area
g. Average River Elevation = 1.5 ft AMSL (NAVD 88)
h. Largest open excavation area is assumed to be 50 ft x 50 ft.

Estimated using “Analytical Solutions for the Preliminary Estimation of Long-term Rates of Groundwater Inflow into Excavations” (Neville, 2017)

3. **Rainfall**
   a. To determine the potential volume of rainfall that would require treatment, rainfall from the following areas were considered: an area of a 50 ft x 50 ft excavation with a 25’ buffer on all sides (i.e., 100 ft x 100 ft catchment area); the WTS containment area not covered by effluent tanks (~53,800 ft^2); and dewatering/overburden storage areas (~30,000 ft^2).
   b. Each area was multiplied by the largest 24-hour storm event recorded in Houston during the construction period of November 1st to April 30th, which is 6.2 inches
4. **Equipment Decontamination Water**
   a. Based on an estimated area of 2,300 ft^2
   b. Area was multiplied by the largest 24-hour storm event recorded in Houston during the construction period of November 1st to April 30th, which is 6.2 inches
5. **Miscellaneous Contact Water**
   a. Assumed to be insignificant compared to other areas

A summary of the maximum expected contact water generated, shown in gallons per day (gpd), from each source is provided in Table 4.4.1.2 below.

Table 4.4.1.2 Maximum Expected Contact Water Generated Summary

Influent Sources	SW	SC	NC	NE	Notes
Maximum Predicted Persistent Infiltration (gpd)	13,600	212,700	29,200	116,200	Assumes excavation is 50' x 50'
Mounded Water (gpd)	25,000	70,000	65,000	25,000	Based on area to be remediated plus 50-ft buffer
Rain Collection - Excavation (gpd)	38,600	38,600	38,600	38,600	Assumes open excavation is 50' x 50' and collection area is 100' x 100' (i.e., 25' buffer)
Rain Collection - WTS Containment Area (gpd)	207,900	207,900	207,900	207,900	24-hr rain event, 53,800-ft^2
Rain Collection - Overburden/ Dewatering Areas (gpd)	115,940	115,940	115,940	115,940	24-hr rain event, 30,000-ft^2 area
Rain Collection - Truck Wash Area (gpd)	8,900	8,900	8,900	8,900	24-hr rain event, 2,400-ft^2 area
Rain Event (inch)	6.2	6.2	6.2	6.2	Maximum rain event (1930 to 2019) = 6.2" in 24 hours
Estimated 24-hour Collection with Rain (gpd)	396,000	441,000	436,000	396,000	Assumes excavation is filled before rain event (i.e., no persistent infiltration)

The selected treatment rate for the WTS is 300 gallons per minute (gpm). This will allow treatment of the estimated maximum accumulation of contact water from all areas of the work site that is generated by the largest predicted rain event in ~1 day (based on continuous treatment).

4.4.2 Treatment System Design

A treatment train with multiple processes will be employed to reduce concentrations of suspended solids, dioxins and furans, and metals in the contact water. Water treatment will be required during the RA, based on the estimated volumes of water to be managed. Details of the basis of design of the WTS are provided below.

4.4.2.1 Major Equipment List and Sizing Basis

The major WTS components and basis of sizing are detailed in Table 13. This includes sizing criteria assumptions, preliminary design value, and notes for each major equipment and process component.

4.4.2.2 Water Treatment Equipment General Arrangement and Layout

It is contemplated that the WTS, including Influent and Effluent Tanks as well as the treatment equipment, for the Southern Impoundment will be staged within an approximately 300 ft by 300 ft earthen containment area. The containment area will be surrounded by an earthen berm covered with an impermeable geomembrane. Containment will capture and convey contact water from the release or overflow from the system for subsequent treatment. The WTS will be placed in a different location during each of the working seasons. During the first season, the WTS will likely be located over the SW excavation area to accommodate remediation activities in the NE and NC excavation areas, while also allowing for excavation of the SC excavation area to begin if activities run ahead of the expected schedule. During the second season, the WTS will likely be located over the NC excavation area, which at that point is expected to have been remediated and backfilled during the first season. Both locations will discharge along the western edge of the Southern Impoundment area into the San Jacinto River. The locations for the WTS are shown in Drawings P-06 for Season 1 and P-07 for Season 2 included in Appendix D.

4.4.2.3 Specification and Equipment Data Sheet List

The detailed design drawings associated with the WTS have been supplemented with technical specifications detailing the water treatment equipment, consumables, staging/sequencing, and operation. The technical specifications for the WTS are listed in Section 5.2 and are included in Appendix E.

4.4.3 Operations and Maintenance Requirements

The WTS will operate intermittently based on need to treat contact water. A preliminary discussion of the operational and maintenance requirements (including consumables and utilities) associated with water treatment is provided below. The WTS will initially use 10-micron, 95% efficient cartridge filter elements in the first bag filter system and 1-micron, 95% efficient cartridge filter elements in the second filter system.

If the WTS's operational efficiency can be improved without impacting compliance with the Texas Commission on Environmental Quality Texas Surface Water Quality Standards discharge criteria, optimization testing of the WTS could be implemented via test ports to evaluate other types of bag or cartridge filter elements and micron rating.

4.4.3.1 Consumables

Effective treatment of contact water will require the use of several water treatment chemicals to facilitate solids separation, metals precipitation (if metals removal is required), and pH adjustment (as required). A brief discussion of the water treatment chemicals that may be utilized is provided below.

Coagulant - Coagulants (such as ferric chloride or polyaluminum chloride) may be dosed to facilitate enhanced removal of metals (through co-precipitation) and suspended solids in the inclined plate clarifier of the WTS. Required dosages will be confirmed based on-site jar testing. It is anticipated that coagulant will be delivered to the work site in intermediate bulk containers (IBC) totes (~300 gallons).

Polymer - It is anticipated that liquid polymers will be utilized to enhance the settling of suspended solids and precipitated metals in the inclined plate clarifier of the WTS. Polymer may also be required to enhance the dewatering

of chemical sludge in the sludge dewatering boxes. Polymer will be activated/diluted prior to dosing into the water treatment process. Required dosages will be confirmed based on on-site jar testing. It is anticipated that polymer will be managed in drums or IBC totes.

Organosulfide - Organosulfide is a commonly used water treatment additive for the removal of metals (via sulfide precipitation). Organosulfide may be added if influent soluble metals concentrations exceed the discharge criteria. Precipitated metals will be removed through the inclined plate clarifier and filtration processes of the WTS. Required dosages will be confirmed based on on-site jar testing. It is anticipated that organosulfide will be delivered to the work site in IBC totes (~300 gallons).

Acid/Caustic - Acid and/or caustic may be added to the contact water to adjust the water pH to optimize metals removal, enhance the effectiveness of the added coagulants, and/or return the treated water pH to within the discharge criteria range. Required dosages will need to be confirmed based on on-site jar testing. It is anticipated that acid/caustic will be delivered to the work site in IBC totes (~300 gallons).

Bag/Cartridge Filters - 10-micron and 1-micron bag or cartridge filters, each with a minimum 95% removal efficiency, will be used to remove residual solids. As the filters are fouled (with captured solids), they will need to be removed and replaced.

Granular Activated Carbon (GAC) - The proposed GAC treatment vessels will be filled with bitumen-based GAC media. The GAC vessels will be configured in a lead-lag arrangement. Effluent quality of the lead GAC vessel will be monitored for chemical breakthrough to identify the need for media replacement.

4.4.3.2 Power

The WTS (in addition to the other structures in the Southern Impoundment) will require electricity for operation. The estimated electrical load for the Southern Impoundment WTS is 100 kilowatts, A 480 volt, 3 phase power service with adequate capacity will be required in the vicinity of the Southern Impoundment to power the WTS. Equipment vendors will need to provide step-down transformers (i.e., in power or control panels) to the power service (i.e., to 120-volt AC, 24 volt DC, etc.) as needed for minor electrical loads, instruments, etc.

4.4.3.3 Labor

The WTS is expected to operate in a semi-automatic mode, with oversight by the RC's or its subcontractor's treatment system operators. It is expected that operation of the WTS will require at least two full-time operators, depending on the activities being performed. The need for licensed wastewater treatment operators for the WTS is currently being evaluated.

4.4.3.4 Residuals

The operation of the WTS will result in the generation of a number of residuals. A discussion of the residuals resulting from water treatment is provided below. Waste characterization and disposal of these residuals will be discussed in the TODP to be provided under separate cover.

Chemical Sludge: The contact water is expected to contain solids from the waste material in the excavation. The addition of coagulants, organosulfide, and polymer will result in the precipitation of metals and removal of suspended solids. The resulting chemical sludge will be withdrawn as the underflow of the inclined plate clarifier. The chemical sludge will be directed to sludge dewatering boxes where it is estimated that it will be gravity thickened to a solids concentration of 6 to 8% by weight. As previously noted, polymer may need to be added to enhance the thickening effect. During operation of the WTS, thickened chemical sludge will be generated at a rate of almost 700 pounds per hour (dry solids basis). Once dewatered, the sludge dewatering boxes will be trucked back to the dewatering areas for further processing and solidification.

Spent Bag and Cartridge Filter Elements: As previously noted, the bag and cartridge filter elements will become fouled with solids as the treatment system operates. These fouled elements will need to be removed and replaced.

Exhausted GAC Media: GAC media has a finite capacity to remove dissolved constituents (including metals and dioxins and furans) from water. As previously noted, the GAC vessels will be operated in a lead-lag configuration. The discharge of both the lead and lag GAC vessels will be monitored to identify when the GAC media is exhausted. When concentrations of constituents of concerns are detected at elevated levels in the lead GAC vessel, the media in this vessel will be removed and replaced. Once back in service, this vessel will become the lag vessel, and the previous lag will be operated as the lead vessel.

4.4.4 Compliance Monitoring

Routine effluent compliance monitoring requirements associated with the WTS are expected to include pH, TSS, metals, and dioxins/furans. Treated effluent will stored in three (3) Effluent Tanks for batch discharge based on the monitoring results. Samples from the WTS will be collected from a specified compliance monitoring point on the combined effluent line of the Effluent Tanks, prior to discharge to the San Jacinto River. In accordance with 30 TAC Part 1 Chapter 319 Subchapter A Rule 319.5, Section A, (30 TAC 319.5 (a)), samples and measurements of the effluent will be taken at a location following the last treatment unit. Effluent samples will be collected and analyzed prior to discharge. Samples will only be collected and analyzed on a per batch basis.

Table 4.4.4 Monitoring Frequencies and Sample Type

Parameter	Minimum Frequency of Measurement	Standard Analytical TAT (business days)[1]	Sample Type
Flow	Per discharge batch[2]	---	Instantaneous
pH	Per discharge batch	---	Grab
TSS	Per discharge batch	3-5 days	Composite
Metals	Per discharge batch	3-5 days	Composite
Dioxin/Furans	Per discharge batch	3-5 days	Composite

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

[2] The design drawings detail one influent and three effluent 688,000 gallon tanks. However, the RC could consider increasing the tank sizing as long as properly sized secondary containment and controls are in place.

During pilot testing conducted in connection with the development of the Southern Impoundment 100% RD, clarifier effluent and filter effluent turbidity were measured to evaluate performance of the system and adjust chemical dosage rates. In addition, a direct correlation was established between turbidity, suspended solids, and dioxin/furan concentrations. Based on the strong correlation between turbidity and dioxin/furan concentrations, it is anticipated that during the RA, real-time turbidity readings will be used as an indicator for operational performance as related to TSS and dioxin/furans. TSS may also be used as a performance indicator. In addition, process monitoring samples will be collected within the treatment process (e.g., influent, post clarifier, post filtration, post lead GAC column) to inform necessary operational adjustments, such as chemical dose optimization and GAC change out. As discussed, turbidity will be monitored through online instrumentation to evaluate treatment system performance and adjust operations as needed. Operational parameter monitoring that may require a response may be incorporated into a future treatment system monitoring plan.

If analyses at the specified compliance monitoring point indicate that effluent has not met discharge criteria for a regulated parameter, effluent will be held in the Effluent Tanks and returned to the Influent Tank to be re-treated. Additionally, performance checks may be conducted on the treatment system, including but not limited to, appropriate modifications with respect to chemical dose, checking to determine whether GAC and/or filter media and bag filters should be replaced, etc.

4.5 Working Seasons

It is anticipated that RA Construction will require two separate seasons, during non-hurricane season (November to April) to avoid potential high river water levels and elevated potential for significant weather conditions. It is anticipated during the first season the NE and NC excavation areas will be completed, followed by the SC and SW excavations the second season. Each area will need to be restored post-excavation. Additionally, following excavation of the SW, the bulkhead will be removed, and the area will be restored to pre-excavation conditions. The following details the main elements likely to be completed during each season, assuming that all necessary access is available throughout each season. Following selection of the RC, the proposed sequence of tasks could be modified. In accordance with the RAWP, the RC will provide a RA Construction schedule within 30 days following notice to the EPA of the selection of the RC.

Season 1

1. Mobilization
2. Site preparations and clearing including building and concrete pad demolition, temporary facilities, controls, and fencing
3. WTS and effluent tanks construction
4. Excavation and backfill (estimated to complete the Northeast and North Central excavations)
5. WTS operation
6. Transportation and disposal
7. Restoration
8. WTS and effluent tanks demobilization
9. Site demobilization

Season 2

1. Mobilization
2. Site preparations and clearing including temporary facilities, controls, and fencing
3. WTS and effluent tanks construction
4. Installation of bulkhead along the southwest corner
5. Excavation and backfill (estimated to complete the South Central and Southwest excavations)
6. WTS operation
7. Transportation and disposal
8. Restoration including replacement of Kirby features such as the concrete pad, storage cover in lieu of the demolished building structure, gravel parking lot, and lighting
9. Removal of bulkhead
10. WTS and effluent tanks demobilization
11. Final demobilization and closeout

5. Preliminary Drawings and Specifications

5.1 Design Drawings

The updated Southern Impoundment 100% RD design drawings are presented in Appendix D and include the following:

- Drawing G-01 – Cover Sheet
- Drawing C-01 – Overall Plan
- Drawing C-02 – Existing Conditions
- Drawing C-03 – Site Works
- Drawing C-03A – Site Works Water And Material Handling Season 1
- Drawing C-03B – Site Works Water And Material Handling Season 2
- Drawing C-04 – Soil Erosion and Sediment Control Plan
- Drawing C-05 – Soil Erosion and Sediment Control Details
- Drawing C-06 – Project Traffic Control Plan
- Drawing C-10 – Northeast Excavation Area Overburden Excavation Plan
- Drawing C-11 – Northeast Excavation Area Final Excavation Plan
- Drawing C-12 – Northeast Excavation Area Excavation Sections 1 of 2
- Drawing C-13 – Northeast Excavation Area Excavation Sections 2 of 2
- Drawing C-14 – Northeast Excavation Area Restoration Plan
- Drawing C-18 – North Central Excavation Area Overburden Excavation Plan
- Drawing C-19 – North Central Excavation Area Final Excavation Plan
- Drawing C-20 – North Central Excavation Area Excavation Sections 1 of 2
- Drawing C-21 – North Central Excavation Area Excavation Sections 2 of 2
- Drawing C-22 – North Central Excavation Area Restoration Plan
- Drawing C-26 – South Central Excavation Area Overburden Excavation Plan
- Drawing C-27 – South Central Excavation Area Final Excavation Plan
- Drawing C-28 – South Central Excavation Area Excavation Sections 1 of 2
- Drawing C-29 – South Central Excavation Area Excavation Sections 2 of 2
- Drawing C-30 – South Central Excavation Area Restoration Plan
- Drawing C-34 – Southwest Excavation Area Overburden Excavation Plan
- Drawing C-35 – Southwest Excavation Area Final Excavation Plan
- Drawing C-36 – Southwest Excavation Area Sheet Pile Wall Excavation Plan
- Drawing C-37 – Southwest Excavation Area Excavation Sections 1 of 2
- Drawing C-38 – Southwest Excavation Area Excavation Sections 2 of 2
- Drawing C-39 – Southwest Excavation Area Restoration Plan
- Drawing C-40 – Sheet Pile Plan and Profile
- Drawing C-41 – Sheet Pile Sections and Details
- Drawing C-42 – Typical Details 1 of 3
- Drawing C-43 – Typical Details 2 of 3
- Drawing C-44 – Typical Details 3 of 3
- Drawing P-00A – Water Treatment System Process Flow Diagram/Schedules
- Drawing P-00B – Water Treatment System Process Flow Diagram/Schedules
- Drawing P-01 – Water Treatment System Process Flow Diagram/Mass Balance
- Drawing P-02 – Water Treatment System P&ID (1 of 4)
- Drawing P-03 – Water Treatment System P&ID (2 of 4)
- Drawing P-04 – Water Treatment System P&ID (3 of 4)
- Drawing P-05 – Water Treatment System P&ID (4 of 4)

– Drawing P-06 – Site Plan Water Treatment System Season 1
– Drawing P-07 – Site Plan Water Treatment System Season 2
– Drawing P-08 – Water Treatment System Site Plan Season 1
– Drawing P-09 – Water Treatment System Site Plan Season 2

The drawings associated with the PC-FSE sampling locations are no longer included in the drawing set as the sample locations and associated results are presented in Figures 3 through 14. These former associated drawings are included on the cover sheet for reference only. These drawings, insofar as they reflect use of specific means and methods for carrying out the site work, may be modified as the design process proceeds and means and methods for performing the Southern Impoundment remedy are further defined.

5.2 Technical Specifications

To support the updated Southern Impoundment 100% RD design drawings, updated technical specifications are presented in Appendix E and include the following:

– Section 01 10 00 – Summary
– Section 01 30 00 – Administrative Requirements
– Section 01 33 00 – Submittal Procedures
– Section 01 35 00 – Temporary Traffic Controls
– Section 01 35 29 – Health and Safety
– Section 01 40 00 – Quality Requirements
– Section 01 50 00 – Temporary Facilities and Controls
– Section 01 57 13 – Temporary Soil Erosion and Sediment Control
– Section 01 57 19 – Temporary Environmental Controls
– Section 01 60 00 – Product Requirements
– Section 01 70 00 – Execution and Closeout Requirements
– Section 01 91 00 – Water Treatment Consumables
– Section 01 91 20 – Facility Testing and Commissioning
– Section 02 61 14 – Material Handling and Transportation
– Section 02 61 16 – Off-Site Transportation and Disposal
– Section 03 30 00 – Cast-in-Place Concrete
– Section 22 05 03 – Pipe Data Sheet-PVDF Tubing and Carrier Piping
– Section 23 05 53 – Identification for Piping and Equipment
– Section 31 10 00 – Site Clearing
– Section 31 23 16 – Excavation
– Section 31 23 19 – Dewatering
– Section 31 23 23 – Fill
– Section 31 41 16 – Sheet Piles
– Section 32 31 13 – Chain Link Fences and Gates
– Section 32 92 19 – Seeding
– Section 35 49 25 – Turbidity Curtain
– Section 40 05 13 – Common Work Results for Process Piping
– Section 40 05 33 – High Density Polyethylene Process Pipe
– Section 40 05 51 – Common Requirements for Process Valves

– Section 40 70 00 – Instrumentation for Process Systems
– Section 46 07 01 – Water Treatment System

6. Supporting Deliverables

Pursuant to the RD and RA statement on work (SOWs), supporting deliverables were included as part of the Southern Impoundment 100% RD and may require updating prior to commencing RA Construction. Additionally in support of the PC-FSE, specific supporting deliverables (e.g. PC-FSP, PC-FSE Health and Safety Plan [HASP], Emergency Response Plan [ERP], and QAPP) were updated and included in the RAWP. The RAWP required that additional specific supporting deliverables are to be updated based on PC-FSE results within 60 days after receipt of all validated data. Those supporting deliverables will be updated and submitted under separate cover on that date, other than the ICIAP, as to which the submission date has been extended to September 15, 2022. After the RC has been selected, the RC will be required to adhere to the EPA approved plan(s) or modify the plan(s), as needed.

6.1 Field Sampling Plan

As part of the Southern Impoundment 100% RD, a FSP was developed to outline procedures for collecting samples of treated water from the WTS, the imported backfill, and IDW generated during the RA Construction. Following notice to the EPA of the selected RC, the RC will either further update the FSP or develop its own plan to address the components outlined in the updated FSP.

6.2 Site - Wide Monitoring Plan

The SWMP describes the procedures to obtain information on the contamination levels at the work site throughout the remedial process and to demonstrate whether performance standards for the Southern Impoundment are achieved. Following notice to the EPA of the selected RC, the RC will either further update the SWMP or develop its own plan to address the components outlined in the SWMP.

6.3 Transportation and Off-Site Disposal Plan

The TODP included in the Southern Impoundment 100% RD will be updated and provided under separate cover. Following notice to the EPA of the selected RC, the RC would have the option of further updating the TODP or developing its own TODP.

6.4 Institutional Controls Implementation and Assurance Plan

The ICIAP included in the Southern Impoundment 100% RD described ICs applicable to the Southern Impoundment and will be updated prior to commencing RA Construction and will include a draft soil management plan template. As approved by the EPA in correspondence dated May 17, 2022 (EPA, 2022d), the updated ICIAP is to be submitted by September 15, 2022.

6.5 Operation & Maintenance Manual

Per discussion with the EPA and email correspondence dated May 6, 2022 (EPA, 2022c), this plan is not anticipated to be necessary based on the RD of the selected remedy.

6.6 Operation & Maintenance Plan

In correspondence dated April 28, 2022 (EPA, 2022b), EPA directed that an O&M Plan be prepared for the Southern Impoundment, and is to be submitted to the EPA prior to completion of RA Construction activities.

7. References

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

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

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

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

EPA, 2021a. Letter to Charles W. Munce, GHD Services Inc. regarding approval of Final 100% Remedial Design-Southern Impoundment (Amended April 2021), dated May 7, 2021. U.S. Environmental Protection Agency.

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

EPA, 2021c. Letter to Charles W. Munce, GHD Services Inc. regarding approval and comments on the Remedial Action Work Plan-Southern Impoundment, dated November 5, 2021. U.S. Environmental Protection Agency.

EPA, 2022a. Email Correspondence to Charles W. Munce, GHD Services Inc. regarding the analytical analysis of bottom of excavation samples, dated February 4, 2022. U.S. Environmental Protection Agency.

EPA, 2022b. Letter to Philip J. Slowiak, International Paper Company, regarding Soil Management Plan and Operations & Maintenance Plan Requirements, dated April 28, 2022. U.S. Environmental Protection Agency.

EPA, 2022c. Email to Philip J. Slowiak, International Paper Company, regarding Operations & Maintenance Manual no longer required, dated May 6, 2022. U.S. Environmental Protection Agency.

EPA, 2022d. Email to Meagan Willis, GHD Services, Inc. regarding approval of ICIAP extension request, dated May 17, 2022. U.S. Environmental Protection Agency.

GHD, 2021a. *Final 100% Remedial Design-Southern Impoundment (Amended April 2021)*, San Jacinto River Waste Pits Superfund Site. Prepared for International Paper Company and U.S. Environmental Protection Agency, Region 6. April 19, 2021.

GHD, 2021b. *Remedial Action Work Plan-Southern Impoundment*, San Jacinto River Waste Pits Superfund Site. Prepared for International Paper Company and U.S. Environmental Protection Agency, Region 6. October 14, 2021.

GHD, 2021c. *Remedial Action Work Plan-Southern Impoundment Revision 2*, San Jacinto River Waste Pits Superfund Site. Prepared for International Paper Company and U.S. Environmental Protection Agency, Region 6. November 26, 2021.

Appendices

Appendix A

PC-FSE Soil Sampling Analytical Supporting Documents – Provided as Separate PDF Files

Appendix B

PC-FSE Waste Characterization Supporting Documents - Provided as a Separate PDF File

Appendix C

PC-FSE Water Supporting Documents - Provided as a Separate PDF File

Appendix D

Design Drawings - Provided as a Separate PDF File

Appendix E

Technical Specifications - Provided as a Separate PDF File

Table 1

Figures and Tables Reference
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

100% Remedial Design (RD) Addendum (June 2022) Reference	100% RD (Amended April 2021) Reference	Comments
Tables		
Table 2.1 - Pre-Construction Field Sampling Event (PC-FSE) Sampling Summary	--	New table within text summarizing the samples collected during the PC-FSE.
Table 2.2 - Piezometer Conductivity Numbers	--	New table within text summarizing the piezometer hydraulic conductivity numbers for each proposed excavation area.
Table 4.0 - Summary of 100% Remedial Design (RD) Differences	--	New table within text summarizing the changes in design components from the 100% RD (Amended April 2021) to present.
Table 4.4.1.2 - Maximum Expected Contact Water Generated Summary	--	New table within text summarizing the expected contact water volumes.
Table 4.4.4 - Monitoring Frequencies and Sample Type	Section 5.5.4 Table (No Title)	Updated table in Addendum text reflects changes associated with batch discharge from the effluent tank. This version supersedes version in 100% RD (Amended April 2021).
Table 1 - Figures and Tables Reference	--	New table which identifies figures and tables included in the 100% RD (Amended April 2021) and notes whether information in each figure or /table was superseded by a revised or new figure/table.
Table 2 - Northeast Excavation Area Confirmation Composite Samples	Appendix C, Attachment 3 PC-FSP Table 1	Updated table to includes PC-FSE validated confirmation sample results. Supersedes version in 100% RD (Amended April 2021).
Table 3 - North Central Excavation Area Confirmation Composite Samples	Appendix C, Attachment 3 PC-FSP Table 2	Updated table to include PC-FSE validated confirmation sample results, supersedes version in 100% RD (Amended April 2021).
Table 4 - South Central Excavation Area Confirmation Composite Samples	Appendix C, Attachment 3 PC-FSP Table 3	Updated table to include PC-FSE validated confirmation sample results, supersedes version in 100% RD (Amended April 2021).
Table 5 - Southwest Excavation Area Confirmation Composite Samples	Appendix C, Attachment 3 PC-FSP Table 4	Updated table to include PC-FSE validated confirmation sample results, supersedes version in 100% RD (Amended April 2021).
Table 6 - PC-FSE Soil Analytical Results Summary	--	New table with complete PC-FSE validated confirmation sample results.
Table 7 - PC-FSE Rinsate Blank Analytical Results Summary	--	New table with complete PC-FSE rinsate blank sample results.
Table 8 - PC-FSE Discrete Waste Characterization Analytical Results Summary	--	New table with complete PC-FSE waste characterization sample results.
Table 9 - PC-FSE Composite Investigation Derived Waste (IDW) Analytical Results Summary	--	New table with complete PC-FSE IDW sample results.
Table 10 - PC-FSE Water Analytical Results Summary	--	New table with complete PC-FSE water sample results.
Table 11 - Applicable or Relevant and Appropriate Requirements (ARAR) Requirements	Table 9 - ARAR Requirements	Table has been updated. Supersedes version in 100% RD (Amended April 2021).
Table 12 - Sample Interval Results	Table 5- Sample Interval Results	Table has been updated with additional data gathered from the PC-FSE. Supersedes version in 100% RD (Amended April 2021).
Table 13 - Southern Impoundment Water Treatment Basis of Sizing	Table 12 - Southern Impoundment Water Treatment Basis of Sizing	Table has been updated. Supersedes version in 100% RD (Amended April 2021).
--	Table 1 - Response to Comments (RTC)	No updates as the RTC pertains to the 100% RD (Amended April 2021) only.
--	Table 2 - First Phase Pre Design Investigation Waste Characterization Results Southern Impoundment	No changes from version in 100% RD (Amended April 2021).
--	Table 3 - First Phase Pre Design Investigation Analytical Results Southern Impoundment	No changes from version in 100% RD (Amended April 2021).
--	Table 4 - Second Phase Pre Design Investigation Analytical Results Southern Impoundment	No changes from version in 100% RD (Amended April 2021).
--	Table 6 - Treatability Soil Characterization	No changes from version in 100% RD (Amended April 2021).
--	Table 7 - Treatability Water Characterization	No changes from version in 100% RD (Amended April 2021).
--	Table 8 - Treatability Particle Size Analysis by Filtration	No changes from version in 100% RD (Amended April 2021).
--	Table 10- Site Specific Soil Parameters	No changes from version in 100% RD (Amended April 2021).
--	Table 11- Design Cases	No changes from version in 100% RD (Amended April 2021).

Table 1

Figures and Tables Reference
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

100% Remedial Design (RD) Addendum (June 2022) Reference	100% RD (Amended April 2021) Reference	Comments
Figures		
Figure 1 - Waste Characterization Sample Locations	--	New figure depicting the locations of waste characterization samples from PDI-1, PDI-2, and PC-FSE.
Figure 2 - Southern Impoundment	Figure 3 - Southern Impoundment	Updated figure to include the piezometer locations. Supersedes version in 100% RD (Amended April 2021).
Figure 3 - PC-FSE Northeast Sidewall Investigation Results	Appendix C, Attachment 3 PC-FSP Drawing C-08	Updated figure to include the piezometer locations. Supersedes version in 100% RD (Amended April 2021).
Figure 4 - PC-FSE Northeast Overburden Investigation Results	Appendix C, Attachment 3 PC-FSP Drawing C-07	Updated figure to include the piezometer locations. Supersedes version in 100% RD (Amended April 2021).
Figure 5 - PC-FSE Northeast Excavation Bottom Investigation Results	Appendix C, Attachment 3 PC-FSP Drawing C-09	Updated figure to include the piezometer locations. Supersedes version in 100% RD (Amended April 2021).
Figure 6 - PC-FSE North Central Sidewall Investigation Results	Appendix C, Attachment 3 PC-FSP Drawing C-16	Updated figure to include the piezometer locations. Supersedes version in 100% RD (Amended April 2021).
Figure 7 - PC-FSE North Central Overburden Investigation Results	Appendix C, Attachment 3 PC-FSP Drawing C-15	Updated figure to include the piezometer locations. Supersedes version in 100% RD (Amended April 2021).
Figure 8 - PC-FSE North Central Excavation Bottom Investigation Results	Appendix C, Attachment 3 PC-FSP Drawing C-17	Updated figure to include the piezometer locations. Supersedes version in 100% RD (Amended April 2021).
Figure 9 - PC-FSE South Central Sidewall Investigation Results	Appendix C, Attachment 3 PC-FSP Drawing C-24	Updated figure to include the piezometer locations. Supersedes version in 100% RD (Amended April 2021).
Figure 10 - PC-FSE South Central Overburden Investigation Results	Appendix C, Attachment 3 PC-FSP Drawing C-23	Updated figure to include the piezometer locations. Supersedes version in 100% RD (Amended April 2021).
Figure 11 - PC-FSE South Central Excavation Bottom Investigation Results	Appendix C, Attachment 3 PC-FSP Drawing C-25	Updated figure to include the piezometer locations. Supersedes version in 100% RD (Amended April 2021).
Figure 12 - PC-FSE Southwest Sidewall Investigation Results	Appendix C, Attachment 3 PC-FSP Drawing C-32	Updated figure to include the piezometer locations. Supersedes version in 100% RD (Amended April 2021).
Figure 13 - PC-FSE Southwest Overburden Investigation Results	Appendix C, Attachment 3 PC-FSP Drawing C-31	Updated figure to include the piezometer locations. Supersedes version in 100% RD (Amended April 2021).
Figure 14 - PC-FSE Southwest Excavation Bottom Investigation Results	Appendix C, Attachment 3 PC-FSP Drawing C-33	Updated figure to include the piezometer locations. Supersedes version in 100% RD (Amended April 2021).
Figure 15 - Thiessen Polygons	Figure 9 - Thiessen Polygons	Updated figure to include the piezometer locations. Supersedes version in 100% RD (Amended April 2021).
Figure 16 - Northeast Excavation Depth Weight Average (DWA) Summary	--	New figure depicting the DWAs of each polygon within the proposed excavation area.
Figure 17 - North Central Excavation DWA Summary	--	New figure depicting the DWAs of each polygon within the proposed excavation area.
Figure 18 - South Central Excavation DWA Summary	--	New figure depicting the DWAs of each polygon within the proposed excavation area.
Figure 19 - Southwest Excavation DWA Summary	--	New figure depicting the DWAs of each polygon within the proposed excavation area.
--	Figure 1 - Vicinity Map	No changes from version in 100% RD (Amended April 2021).
--	Figure 2- Site Plan	No changes from version in 100% RD (Amended April 2021).
--	Figure 4 - First Phase Pre Design Investigation Boring Locations	No changes from version in 100% RD (Amended April 2021).
--	Figure 5 - First Phase Pre Design Investigation Results	No changes from version in 100% RD (Amended April 2021).
--	Figure 6 - Second Phase Pre Design Investigation Boring Locations	No changes from version in 100% RD (Amended April 2021).
--	Figure 7 - Treatability Sample Locations	No changes from version in 100% RD (Amended April 2021).
--	Figure 8 - RI, PDI 1, PDI 2 Investigation Results	No changes from version in 100% RD (Amended April 2021).
--	Figure 10 - Pilot Test Process Flow Diagram	No changes from version in 100% RD (Amended April 2021).
--	Figure 11 - Pilot Test Effluent Turbidity	No changes from version in 100% RD (Amended April 2021).
--	Figure 12 - Filtration Testing Results	No changes from version in 100% RD (Amended April 2021).

Table 2

Northeast Excavation Area Confirmation Composite Samples
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

NE Overburden Confirmation Samples																
Polygon	**Impacted Zone**	**TEQ Results ng/kg**	**Composite Sample ID**	**Discrete Samples**												
SJSB012-N2	6 to 10 ft bgs	9.65	NE-O-1	NE-A1a	NE-A1b	NE-A1c	NE-A2a	NE-A2b	NE-A2c							
		24.60	NE-O-2	NE-B1a	NE-B1b	NE-B1c	NE-B2a	NE-B2b	NE-B2c	NE-B3a	NE-B3b	NE-B3c				
		9.58	NE-O-3	NE-C1a	NE-C1b	NE-C1c	NE-C2a	NE-C2b	NE-C2c	NE-C3a	NE-C3b	NE-C3c	NE-C4a	NE-C4b	NE-C4c	
		10.50	NE-O-4	NE-D1a	NE-D1b	NE-D1c	NE-D2a	NE-D2b	NE-D2c							
		7.95	NE-O-5	NE-E1a	NE-E1b	NE-E1c	NE-E2a	NE-E2b	NE-E2c	NE-E3a	NE-E3b	NE-E3c				
		50.20	NE-O-10	NE-J1a	NE-J1b	NE-J1c	NE-J2a	NE-J2b	NE-J2c							
SJSB012-W2	4 to 6 ft bgs	36.20	NE-O-6	NE-F1a	NE-F1b	NE-F2a	NE-F2b	NE-F3a	NE-F3b							
		14.30	NE-O-7	NE-G1a	NE-G1b	NE-G2a	NE-G2b	NE-G3a	NE-G3b	NE-G4a	NE-G4b					
		12.40	NE-O-11	NE-K1a	NE-K1b	NE-K2a	NE-K2b									
SJSB012/SJSB012-W1	4 to 8 ft bgs	11.90	NE-O-8	NE-H1a	NE-H1b	NE-H2a	NE-H2b	NE-H3a	NE-H3b	NE-H4a	NE-H4b					
		42.80	NE-O-9	NE-I1a	NE-I1b	NE-I2a	NE-I2b	NE-I3a	NE-I3b							
		14.70	NE-O-12	NE-M1a	NE-M1b	NE-M2a	NE-M2b	NE-M3a	NE-M3b							
		10.10	NE-O-13	NE-L2a	NE-L2b	NE-L3a	NE-L3b	NE-L4a	NE-L4b							
		47.60	NE-O-14	NE-L2c	NE-L3c	NE-L4c										

NE Sidewall Confirmation Samples																
Polygon	**Impacted Zone**	**TEQ Results ng/kg**	**Composite Sample ID**	**Discrete Samples**												
SJSB012-N2	6 to 10 ft bgs	14.50	NE-S-1	NE-A1a	NE-A1b	NE-A1c	NE-A1d	NE-A1e								
		250	NE-S-2	NE-A2a	NE-A2b	NE-A2c	NE-A2d	NE-A2e								
		642	NE-S-3	NE-B3a	NE-B3b	NE-B3c	NE-B3d	NE-B3e								
		237	NE-S-4	NE-C1a	NE-C1b	NE-C1c	NE-C1d	NE-C1e								
		6.19	NE-S-5	NE-C3a	NE-C3b	NE-C3c	NE-C3d	NE-C3e								
		18.20	NE-S-6	NE-E1a	NE-E1b	NE-E1c	NE-E1d	NE-E1e								
		16.40	NE-S-7	NE-E2a	NE-E2b	NE-E2c	NE-E2d	NE-E2e								
		15.10	NE-S-15	NE-J1a	NE-J1b	NE-J1c	NE-J1d	NE-J1e								
SJSB012-W2	4 to 6 ft bgs	34.80	NE-S-8	NE-F1a	NE-F1b	NE-F1c	NE-F1d	NE-F1e								
		117	NE-S-9	NE-G1a	NE-G1b	NE-G1c	NE-G1d	NE-G1e								
		86.80	NE-S-10	NE-G2a	NE-G2b	NE-G2c	NE-G2d	NE-G2e								
		29.60	NE-S-16	NE-K1a	NE-K1b	NE-K1c	NE-K1d	NE-K1e								
SJSB012/SJSB012-W1	4 to 8 ft bgs	261	NE-S-11	NE-H1a	NE-H1b	NE-H1c	NE-H1d	NE-H1e								
		28.90	NE-S-12	NE-H3a	NE-H3b	NE-H3c	NE-H3d	NE-H3e								
		246	NE-S-13	NE-I1a	NE-I1b	NE-I1c	NE-I1d	NE-I1e								
		12.80	NE-S-14	NE-I2a	NE-I2b	NE-I2c	NE-I2d	NE-I2e								
		2330	NE-S-17	NE-L1a	NE-L1b	NE-L1c	NE-L1d	NE-L1e								
		163.00	NE-S-18	NE-M1a	NE-M1b	NE-M1c	NE-M1d	NE-M1e								

NE Bottom of Excavation Confirmation Samples																
Polygon	**Impacted Zone**	**TEQ Results ng/kg**	**Composite Sample ID**	**Discrete Samples**												
SJSB012-W2	4 to 6 ft bgs	71.60	NE-B-1	NE-F1d	NE-F2d	NE-F3d	NE-G1d	NE-G2d	NE-G3d	NE-G4d						
		5.93	NE-B-1H	NE-F1e	NE-F2e	NE-F3e	NE-G1e	NE-G2e	NE-G3e	NE-G4e						
		531	NE-B-3	NE-K1d	NE-K2d											
		85.90	NE-B-3H	NE-K1e	NE-K2e											
SJSB012/SJSB012-W1	4 to 8 ft bgs	73.70	NE-B-2	NE-H1e	NE-H2e	NE-H3e	NE-H4e	NE-I1e	NE-I2e	NE-I3e						
		196	NE-B-4	NE-M1d	NE-M2d	NE-M3d										
		329	NE-B-4H	NE-M1e	NE-M2e	NE-M3e										
		340	NE-B-5	NE-L2e	NE-L3e	NE-L4e										

Notes:
The depth intervals are denoted as ‘a’ for 0 to 2 ft bgs, ‘b’ for 2 to 4 ft bgs, ‘c’ for 4 to 6 ft bgs, 'd' for 6 to 8 ft bgs, and 'e' for 8 to 10 ft bgs.
ft bgs = feet below ground surface
ng/kg = nanograms per kilogram
TCDD = 2,3,7,8 tetrachlorinated dibenzo p dioxin
TEQ = TCDD Toxicity Equivalent for Mammals
Red text indicates step out borings were advanced and samples collected in Round 1 of step out horizontal delineation.
Purple text indicates step out borings were advanced and samples collected in Round 2 of step out horizontal delineation.

Table 3

North Central Excavation Area Confirmation Composite Samples
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

NC Overburden Confirmation Samples															
Polygon	**Impacted Zone**	**TEQ Results ng/kg**	**Composite Sample ID**	**Discrete Samples**											
SJSB008/SJSB008-S1	6 to 8 ft bgs	20.9	NC-O-1	NC-A1a	NC-A1b	NC-A1c	NC-A2b	NC-A2b	NC-A2c	NC-A3a	NC-A3b	NC-A3c	NC-A4a	NC-A4b	NC-A4c
		72.7	NC-O-26	NC-AC1a	NC-AC1b	NC-AC1c	NC-AC2a	NC-AC2b	NC-AC2c	NC-AC3a	NC-AC3b	NC-AC3c			
		494	NC-O-35	NC-AC4a	NC-AC4b	NC-AC4c	NC-AC5a	NC-AC5b	NC-AC5c	NC-AC6a	NC-AC6b	NC-AC6c			
		581	NC-O-44	NC-AC7a	NC-AC7b	NC-AC7c	NC-AC8a	NC-AC8b	NC-AC8c	NC-AC9a	NC-AC9b	NC-AC9c			
		12,500	NC-O-49	NC-AC10a	NC-AC10b	NC-AC10c	NC-AC11a	NC-AC11b	NC-AC11c	NC-AC12a	NC-AC12b	NC-AC12c			
		154	NC-O-50	NC-AC13a	NC-AC13b	NC-AC13c	NC-AC14a	NC-AC14b	NC-AC14c	NC-AC15a	NC-AC15b	NC-AC15c			
		54.5	NC-O-54	NC-AC16a	NC-AC16b	NC-AC16c	NC-AC17a	NC-AC17b	NC-AC17c	NC-AC18a	NC-AC18b	NC-AC18c	HOLD (pending results of NC-S-48)		
		47.8	NC-O-2	NC-B1a	NC-B1b	NC-B1c	NC-B2a	NC-B2b	NC-B2c	NC-B3a	NC-B3b	NC-B3c			
		86.2	NC-O-27	NC-AD1a	NC-AD1b	NC-AD1c	NC-AD2a	NC-AD2b	NC-AD2c	NC-AD3a	NC-AD3b	NC-AD3c			
		176	NC-O-3	NC-C1a	NC-C1b	NC-C1c	NC-C2a	NC-C2b	NC-C2c	NC-C3a	NC-C3b	NC-C3c			
SJSB008-S2	8 to 10 ft bgs	199	NC-O-4	NC-D1a	NC-D1b	NC-D1c	NC-D1d	NC-D2a	NC-D2b	NC-D2c	NC-D2d				
		815	NC-O-5	NC-E1a	NC-E1b	NC-E1c	NC-E1d	NC-E2a	NC-E2b	NC-E2c	NC-E2d				
		1,380	NC-O-6	NC-F1a	NC-F1b	NC-F1c	NC-F1d	NC-F2a	NC-F2b	NC-F2c	NC-F2d	NC-F3a	NC-F3b	NC-F3c	NC-F3d
		2,480	NC-O-28	NC-AE1a	NC-AE1b	NC-AE1c	NC-AE1d	NC-AE2a	NC-AE2b	NC-AE2c	NC-AE2d	NC-AE3a	NC-AE3b	NC-AE3c	NC-AE3d
		298	NC-O-36	NC-AE4a	NC-AE4b	NC-AE4c	NC-AE4d	NC-AE5a	NC-AE5b	NC-AE5c	NC-AE5d	NC-AE6a	NC-AE6b	NC-AE6c	NC-AE6d
		502	NC-O-51	NC-AE7a	NC-AE7b	NC-AE7c	NC-AE7d	NC-AE8a	NC-AE8b	NC-AE8c	NC-AE8d				
		742	NC-O-7	NC-G1a	NC-G1b	NC-G1c	NC-G1d	NC-G2a	NC-G2b	NC-G2c	NC-G2d				
		2,500	NC-O-8	NC-H1a	NC-H1b	NC-H1c	NC-H1d	NC-H2a	NC-H2b	NC-H2c	NC-H2d				
		2,220	NC-O-29	NC-AF1a	NC-AF1b	NC-AF1c	NC-AF1d	NC-AF2a	NC-AF2b	NC-AF2c	NC-AF2d				
		1,440	NC-O-37	NC-AF3a	NC-AF3b	NC-AF3c	NC-AF3d	NC-AF4a	NC-AF4b	NC-AF4c	NC-AF4d				
		3,270	NC-O-45	NC-AF7a	NC-AF7b	NC-AF7c	NC-AF7d								
		296	NC-O-52	NC-AF8a	NC-AF8b	NC-AF8c	NC-AF8d	NC-AF9a	NC-AF9b	NC-AF9c	NC-AF9d				
		---	~~NC-O-55~~	~~NC-AF10a~~	~~NC-AF10b~~	~~NC-AF10c~~	~~NC-AF10d~~	~~HOLD (pending results of NC-S-49)~~							
		2,320	NC-O-38	NC-AF5a	NC-AF5b	NC-AF5c	NC-AF5d	NC-AF6a	NC-AF6b	NC-AF6c	NC-AF6d				
SJSB039	6 to 8 ft bgs	1,250	NC-O-9	NC-I1a	NC-I1b	NC-I1c	NC-I2a	NC-I2b	NC-I2c						
		603	NC-O-10	NC-J1a	NC-J1b	NC-J1c	NC-J2a	NC-J2b	NC-J2c	NC-J3a	NC-J3b	NC-J3c			
		83.4	NC-O-11	NC-K1a	NC-K1b	NC-K1c	NC-K2a	NC-K2b	NC-K2c	NC-K3a	NC-K3b	NC-K3c			
		67.2	NC-O-30	NC-AB1a	NC-AB1b	NC-AB1c	NC-AB2a	NC-AB2b	NC-AB2c	NC-AB3a	NC-AB3b	NC-AB3c			
		120	NC-O-39	NC-AB4a	NC-AB4b	NC-AB4c	NC-AB5a	NC-AB5b	NC-AB5c						
		129	NC-O-12	NC-L1a	NC-L1b	NC-L1c	NC-L2a	NC-L2b	NC-L2c	NC-L3a	NC-L3b	NC-L3c			
		36.3	NC-O-13	NC-M1a	NC-M1b	NC-M1c	NC-M2a	NC-M2b	NC-M2c	NC-M3a	NC-M3b	NC-M3c			
		96.7	NC-O-14	NC-N1a	NC-N1b	NC-N1c	NC-N2a	NC-N2b	NC-N2c	NC-N3a	NC-N3b	NC-N3c			
		49.1	NC-O-31	NC-AG1a	NC-AG1b	NC-AG1c	NC-AG2a	NC-AG2b	NC-AG2c						
		27	NC-O-40	NC-AG3a	NC-AG3b	NC-AG3c	NC-AG4a	NC-AG4b	NC-AG4c						
SJSB061	6 to 8 ft bgs	39.4	NC-O-15	NC-O1a	NC-O1b	NC-O1c	NC-O2a	NC-O2b	NC-O2c						
		15.5	NC-O-16	NC-P1a	NC-P1b	NC-P1c	NC-P2a	NC-P2b	NC-P2c	NC-P3a	NC-P3b	NC-P3c			
		58.5	NC-O-17	NC-Q1a	NC-Q1b	NC-Q1c	NC-Q2a	NC-Q2b	NC-Q2c						
SJSB061/SJSB061-C1	6 to 8 ft bgs	148	NC-O-32	NC-AA1a	NC-AA1b	NC-AA1c	NC-AA2a	NC-AA2b	NC-AA2c	NC-AA3a	NC-AA3b	NC-AA3c			
		1,800	NC-O-41	NC-AA4a	NC-AA4b	NC-AA4c	NC-AA5a	NC-AA5b	NC-AA5c						
		388	NC-O-46	NC-AA6a	NC-AA6b	NC-AA6c	NC-AA7a	NC-AA7b	NC-AA7c	NC-AA8a	NC-AA8b	NC-AA8c			
SJSB040	8 to 10 ft bgs	37.5	NC-O-18	NC-R1a	NC-R1b	NC-R1c	NC-R1d	NC-R2a	NC-R2b	NC-R2c	NC-R2d				
		46.1	NC-O-19	NC-S1a	NC-S1b	NC-S1c	NC-S1d	NC-S2a	NC-S2b	NC-S2c	NC-S2d				
		50	NC-O-20	NC-T1a	NC-T1b	NC-T1c	NC-T1d	NC-T2a	NC-T2b	NC-T2c	NC-T2d				
		68.9	NC-O-33	NC-AH1a	NC-AH1b	NC-AH1c	NC-AH1d	NC-AH2a	NC-AH2b	NC-AH2c	NC-AH2d				
		324	NC-O-42	NC-AH3a	NC-AH3b	NC-AH3c	NC-AH3d	NC-AH4a	NC-AH4b	NC-AH4c	NC-AH4d				
		19.1	NC-O-47	NC-AH5a	NC-AH5b	NC-AH5c	NC-AH5d	NC-AH6a	NC-AH6b	NC-AH6c	NC-AH6d				
		41.6	NC-O-21	NC-U1a	NC-U1b	NC-U1c	NC-U1d	NC-U2a	NC-U2b	NC-U2c	NC-U2d				
		1,330	NC-O-34	NC-AI1a	NC-AI1b	NC-AI1c	NC-AI1d	NC-AI2a	NC-AI2b	NC-AI2c	NC-AI2d				
		535	NC-O-43	NC-AI3a	NC-AI3b	NC-AI3c	NC-AI3da	NC-AI4a	NC-AI4b	NC-AI4c	NC-AI4d				
		959	NC-O-48	NC-AI5a	NC-AI5b	NC-AI5c	NC-AI5da	NC-AI6a	NC-AI6b	NC-AI6c	NC-AI6d				
		836	NC-O-53	NC-AI7a	NC-AI7b	NC-AI7c	NC-AI7d	NC-AI8a	NC-AI8b	NC-AI8c	NC-AI8d				
		33.5	NC-O-22	NC-V1a	NC-V1b	NC-V1c	NC-V1d	NC-V2a	NC-V2b	NC-V2c	NC-V2d				
SJSB061-C1	6 to 8 ft bgs	442	NC-O-23	NC-W1a	NC-W1b	NC-W1c	NC-W2a	NC-W2b	NC-W2c	NC-W3a	NC-W3b	NC-W3c			
SJSB060/SJSB060-C1	6 to 8 ft bgs	28.8	NC-O-24	NC-X1a	NC-X1b	NC-X1c	NC-X2a	NC-X2b	NC-X2c						
		33.3	NC-O-25	NC-Y1a	NC-Y1b	NC-Y1c	NC-Y2a	NC-Y2b	NC-Y2c						

Table 3

North Central Excavation Area Confirmation Composite Samples
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

NC Sidewall Confirmation Samples															
Polygon	**Impacted Zone**	**TEQ Results ng/kg**	**Composite Sample ID**	**Discrete Samples**											
SJSB008/SJSB008-S1	6 to 8 ft bgs	3,870	NC-S-1	NC-A1a	NC-A1b	NC-A1c	NC-A1d	NC-A1e							
		27.9	NC-S-32	NC-AD3a	NC-AD3b	NC-AD3c	NC-AD3d	NC-AD3e							
		2,920	NC-S-2	NC-A2a	NC-A2b	NC-A2c	NC-A2d	NC-A2e							
		2,750	NC-S-31	NC-AC2a	NC-AC2b	NC-AC2c	NC-AC2d	NC-AC2e							
		7,410	**NC-S-33**	**NC-AC4a**	**NC-AC4b**	**NC-AC4c**	**NC-AC4d**	**NC-AC4e**							
		241	**NC-S-41**	**NC-AC5a**	**NC-AC5b**	**NC-AC5c**	**NC-AC5d**	**NC-AC5e**							
		351	**NC-S-42**	**NC-AC7a**	**NC-AC7b**	**NC-AC7c**	**NC-AC7d**	**NC-AC7e**							
		2,890	**NC-S-43**	**NC-AC8a**	**NC-AC8b**	**NC-AC8c**	**NC-AC8d**	**NC-AC8e**							
		2,150	**NC-S-48**	**NC-AC13a**	**NC-AC13b**	**NC-AC13c**	**NC-AC13d**	**NC-AC13e**							
		4.38	**NC-S-51**	**NC-AC16a**	**NC-AC16b**	**NC-AC16c**	**NC-AC16d**	**NC-AC16e**	**HOLD (pending results of NC-S-48)**						
		2,130	NC-S-3	NC-A3a	NC-A3b	NC-A3c	NC-A3d	NC-A3e							
		4,380	NC-S-4	NC-B1a	NC-B1b	NC-B1c	NC-B1d	NC-B1e							
		48	NC-S-20	NC-AD1a	NC-AD1b	NC-AD1c	NC-AD1d	NC-AD1e							
		1,120	NC-S-5	NC-C1a	NC-C1b	NC-C1c	NC-C1C	NC-C1e							
SJSB008-S2	8 to 10 ft bgs	25.3	NC-S-6	NC-F1a	NC-F1b	NC-F1c	NC-F1d	NC-F1e							
		2,740	NC-S-7	NC-F2a	NC-F2b	NC-F2c	NC-F2d	NC-F2e							
		2,200	NC-S-21	NC-AE1a	NC-AE1b	NC-AE1c	NC-AE1d	NC-AE1e							
		8.97	**NC-S-34**	**NC-AE4a**	**NC-AE4b**	**NC-AE4c**	**NC-AE4d**	**NC-AE4e**							
		3.41	**NC-S-35**	**NC-AE5a**	**NC-AE5b**	**NC-AE5c**	**NC-AE5d**	**NC-AE5e**							
		4,290	NC-S-8	NC-G1a	NC-G1b	NC-G1c	NC-G1d	NC-G1e							
		9,040	NC-S-22	NC-AE2a	NC-AE2b	NC-AE2c	NC-AE2d	NC-AE2e							
		1,140	NC-S-9	NC-H1a	NC-H1b	NC-H1c	NC-H1d	NC-H1e							
		2,670	NC-S-23	NC-AF1a	NC-AF1b	NC-AF1c	NC-AF1d	NC-AF1e							
		733	**NC-S-36**	**NC-AF3a**	**NC-AF3b**	**NC-AF3c**	**NC-AF3d**	**NC-AF3e**							
		1,100	**NC-S-44**	**NC-AF7a**	**NC-AF7b**	**NC-AF7c**	**NC-AF7d**	**NC-AF7e**							
		70.6	**NC-S-49**	**NC-AF8a**	**NC-AF8b**	**NC-AF8c**	**NC-AF8d**	**NC-AF8e**							
		---	~~**NC-S-52**~~	~~**NC-AF10a**~~	~~**NC-AF10b**~~	~~**NC-AF10c**~~	~~**NC-AF10d**~~	~~**NC-AF10e**~~	~~**HOLD (pending results of NC-S-49)**~~						
SJSB039	6 to 8 ft bgs	3,360	NC-S-10	NC-J1a	NC-J1b	NC-J1c	NC-J1d	NC-J1e							
		890	NC-S-11	NC-K1a	NC-K1b	NC-K1c	NC-K1d	NC-K1e							
		869	NC-S-24	NC-AB1a	NC-AB1b	NC-AB1c	NC-AB1d	NC-AB1e							
		1,890	**NC-S-37**	**NC-AB4a**	**NC-AB4b**	**NC-AB4c**	**NC-AB4d**	**NC-AB4e**							
		1,430	NC-S-25	NC-AB2a	NC-AB2b	NC-AB2c	NC-AB2d	NC-AB2e							
		92.7	NC-S-12	NC-L1a	NC-L1b	NC-L1c	NC-L1d	NC-L1e							
		40.1	NC-S-13	NC-M1a	NC-M1b	NC-M1c	NC-M1d	NC-M1e							
		1,680	NC-S-14	NC-N1a	NC-N1b	NC-N1c	NC-N1d	NC-N1e							
		1,160	NC-S-26	NC-AG1a	NC-AG1b	NC-AG1c	NC-AG1d	NC-AG1e							
		1,010	**NC-S-38**	**NC-AG3a**	**NC-AG3b**	**NC-AG3c**	**NC-AG3d**	**NC-AG3e**							
SJSB061	6 to 8 ft bgs	636	NC-S-15	NC-P3a	NC-P3b	NC-P3c	NC-P3d	NC-P3e							
		638	NC-S-27	NC-AA2a	NC-AA2b	NC-AA2c	NC-AA2d	NC-AA2e							
SJSB040	8 to 10 ft bgs	695	NC-S-16	NC-T1a	NC-T1b	NC-T1c	NC-T1d	NC-T1e							
		917	NC-S-28	NC-AH1a	NC-AH1b	NC-AH1c	NC-AH1d	NC-AH1e							
		961	**NC-S-39**	**NC-AH3a**	**NC-AH3b**	**NC-AH3c**	**NC-AH3d**	**NC-AH3e**							
		138	**NC-S-45**	**NC-AH5a**	**NC-AH5b**	**NC-AH5c**	**NC-AH5d**	**NC-AH5e**							
		465	NC-S-17	NC-U1a	NC-U1b	NC-U1c	NC-U1d	NC-U1e							
		822	NC-S-29	NC-AI1a	NC-AI1b	NC-AI1c	NC-AI1d	NC-AI1e							
		308	**NC-S-46**	**NC-AI5a**	**NC-AI5b**	**NC-AI5c**	**NC-AI5d**	**NC-AI5e**							
		45.5	**NC-S-50**	**NC-AI7a**	**NC-AI7b**	**NC-AI7c**	**NC-AI7d**	**NC-AI7e**							
		419	NC-S-18	NC-V1a	NC-V1b	NC-V1c	NC-V1d	NC-V1e							
SJSB061-C1	6 to 8 ft bgs	745	NC-S-19	NC-W1a	NC-W1b	NC-W1c	NC-W1d	NC-W1e							
		328	NC-S-30	NC-AA1a	NC-AA1b	NC-AA1c	NC-AA1d	NC-AA1e							
		1,410	**NC-S-40**	**NC-AA4a**	**NC-AA4b**	**NC-AA4c**	**NC-AA4d**	**NC-AA4e**							
		1,670	**NC-S-47**	**NC-AA6a**	**NC-AA6b**	**NC-AA6c**	**NC-AA6d**	**NC-AA6e**							

Table 3

North Central Excavation Area Confirmation Composite Samples
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

NC Bottom of Excavation Confirmation Samples															
Polygon	**Impacted Zone**	**TEQ Results ng/kg**	**Composite Sample ID**	**Discrete Samples**											
SJSB008	6 to 8 ft bgs	6,440	NC-B-1	NC-A1e	NC-A2e	NC-A3e	NC-A4e								
SJSB008-S1	6 to 8 ft bgs	5,770	NC-B-2	NC-B1e	NC-B2e	NC-B3e	NC-C1e	NC-C2e	NC-C3e						
SJSB008/SJSB008-S1	6 to 8 ft bgs	4840	NC-B-7	NC-AC1e	NC-AC2e	NC-AC3e	NC-AD1e	NC-AD2e	NC-AD3e						
		258	NC-B-10	NC-AC4e	NC-AC5e	NC-AC6e									
		1,010	NC-B-13	NC-AC7e	NC-AC8e	NC-AC9e									
		376	NC-B-15	NC-AC10e	NC-AC11e	NC-AC12e									
		1,120	NC-B-16	NC-AC13e	NC-AC14e	NC-AC15e									
		224	NC-B-17	NC-AC16e	NC-AC17e	NC-AC18e	HOLD (pending results of NC-S-48)								
SJSB039	6 to 8 ft bgs	1,300	NC-B-3	NC-I1e	NC-I2e	NC-J1e	NC-J2e	NC-J3e	NC-K1e	NC-K2e	NC-K3e				
		4,730	NC-B-4	NC-L1e	NC-L2e	NC-L3e	NC-M1e	NC-M2e	NC-M3e	NC-N1e	NC-N2e	NC-N3e			
		749	NC-B-8	NC-AG1e	NC-AG2e										
		3,330	NC-B-11	NC-AG3e	NC-AG4e										
SJSB061	6 to 8 ft bgs	6,090	NC-B-5	NC-O1e	NC-O2e	NC-P1e	NC-P2e	NC-P3e	NC-Q1e	NC-Q2e					
SJSB061/SJSB061-C1	6 to 8 ft bgs	2,330	NC-B-9	NC-AA1e	NC-AA2e	NC-AA3e	NC-AB1e	NC-AB2e	NC-AB3e						
		1,650	NC-B-12	NC-AA4e	NC-AA5e	NC-AB4e	NC-AB5e								
		49.8	NC-B-14	NC-AA6e	NC-AA7e	NC-AA7e									
SJSB061-C1/SJSB060/ SJSB060-C1	6 to 8 ft bgs	779	NC-B-6	NC-W1e	NC-W2e	NC-W3e	NC-X1e	NC-X2e	NC-Y1e	NC-Y2e					

Notes:
The depth intervals are denoted as ‘a’ for 0 to 2 ft bgs, ‘b’ for 2 to 4 ft bgs, ‘c’ for 4 to 6 ft bgs, 'd' for 6 to 8 ft bgs, and 'e' for 8 to 10 ft bgs.
Preemptive secondary sidewall step out borings were advanced during Round 4 and were only analyzed if the preceding sidewall sample exceeded 240 ng/kg. If sample analysis was not required the borings are ~~struck through.~~
ft bgs = feet below ground surface
ng/kg = nanograms per kilogram
TCDD = 2,3,7,8 tetrachlorinated dibenzo p dioxin
TEQ = TCDD Toxicity Equivalent for Mammals
Red text indicates step out borings were advanced and samples collected in Round 1 of step out horizontal delineation.
Purple text indicates step out borings were advanced and samples collected in Round 2 of step out horizontal delineation.
Blue text indicates step out borings were advanced and samples collected in Round 3 of step out horizontal delineation.
Green text indicates step out borings were advanced and samples collected in Round 4 of step out horizontal delineation.

Table 4

South Central Excavation Area Confirmation Composite Samples
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

SC Overburden Confirmation Samples												
Polygon	**Impacted Zone**	**TEQ Results ng/kg**	**Composite Sample ID**	**Discrete Samples**										
SJSB041	2 to 6 ft bgs	73.00	SC-O-1	SC-A1a	SC-A2a	SC-A3a	SC-A4a	SC-A5a						
		9.31	SC-O-14	SC-N1a	SC-N2a	SC-N3a	SC-N4a	SC-N5a						
		3.14	SC-O-14a	SC-N6a										
		25.30	SC-O-2	SC-B1a	SC-B2a	SC-B3a	SC-B4a	SC-B5a						
SJSB019-N1/SJSB019-N2	4 to 8 ft bgs	16.20	SC-O-3	SC-C1a	SC-C1b	SC-C2a	SC-C2b	SC-C3a	SC-C3b					
		10.30	SC-O-15	SC-O1a	SC-O1b	SC-O2a	SC-O2b							
		42.50	SC-O-4	SC-D1a	SC-D1b	SC-D2a	SC-D2b	SC-D3a	SC-D3b	SC-D4a	SC-D4b			
		28.70	SC-O-5	SC-E1a	SC-E1b	SC-E2a	SC-E2b	SC-E3a	SC-E3b					
SJSB019-W1	2 to 8 ft bgs	40.70	SC-O-6	SC-F1a	SC-F2a	SC-F3a	SC-F4a	SC-F5a						
		71.80	SC-O-16	SC-P1a	SC-P2a	SC-P3a								
		47.60	SC-O-18	SC-P4a	SC-P5a	SC-P6a								
		24.50	SC-O-20	SC-P7a	SC-P8a	SC-P9a								
SJSB019	8 to 10 ft bgs	10100	SC-O-7	SC-G1a	SC-G1b	SC-G1c	SC-G1d	SC-G2a	SC-G2b	SC-G2c	SC-G2d			
SJSB019-E1	4 to 10 ft bgs	59.70	SC-O-8	SC-H1a	SC-H1b	SC-H2a	SC-H2b	SC-H3a	SC-H3b					
SJSB019-E2	4 to 6 ft bgs	39.80	SC-O-9	SC-I1a	SC-I1b	SC-I2a	SC-I2b	SC-I3a	SC-I3b					
		33.10	SC-O-10	SC-J1a	SC-J1b	SC-J2a	SC-J2b	SC-J3a	SC-J3b	SC-J4a	SC-J4b			
SJSB019-S1	4 to 6 ft bgs	23.70	SC-O-11	SC-K1a	SC-K1b	SC-K2a	SC-K2b	SC-K3a	SC-K3b	SC-K4a	SC-K4b			
		48.70	SC-O-17	SC-Q1a	SC-Q1b	SC-Q2a	SC-Q2b	SC-Q3a	SC-Q3b	SC-Q4a	SC-Q4b			
		4050	SC-O-19	SC-Q5a	SC-Q5b	SC-Q6a	SC-Q6b	SC-Q7a	SC-Q7b					
		345	SC-O-21	SC-Q8a	SC-Q8b	SC-Q9a	SC-Q9b	SC-Q10a	SC-Q10b	SC-Q11a	SC-Q11b	SC-Q12a	SC-Q12b	
		156	SC-O-24	SC-Q13a	SC-Q13b	SC-Q14a	SC-Q14b	SC-Q15a	SC-Q15b					
		---	~~SC-O-25~~	~~SC-Q16a~~	~~SC-Q16b~~	~~SC-Q17a~~	~~SC-Q17b~~	~~HOLD (pending results of SC-S-33)~~						
		20.70	SC-O-22	SCW-QR1a (discrete sample from 0-2 ft only)										
		91.90	SC-O-23	SCW-QR1b (discrete sample from 2-4 ft only)										
SJSB019-S2	0 to 2 ft bgs	126	SC-O-12	SC-L1a	SC-L2a	SC-L3a	SC-L4a	SC-L5a						
		59.90	SC-O-13	SC-M1a	SC-M2a	SC-M3a	SC-M4a	SC-M5a						

SC Sidewall Confirmation Samples												
Polygon	**Impacted Zone**	**TEQ Results ng/kg**	**Composite Sample ID**	**Discrete Samples**										
SJSB041	2 to 6 ft bgs	8540	SC-S-1	SC-A1a	SC-A1b	SC-A1c	SC-A1d	SC-A1e						
		2430	SC-S-2	SC-A2a	SC-A2b	SC-A2c	SC-A2d	SC-A2e						
		8470	SC-S-3	SC-A3a	SC-A3b	SC-A3c	SC-A3d	SC-A3e						
		60.10	SC-S-18	SC-N1a	SC-N1b	SC-N1c	SC-N1d	SC-N1e						
		1880	SC-S-19	SC-N2a	SC-N2b	SC-N2c	SC-N2d	SC-N2e						
		191	SC-S-26	SC-N6a	SC-N6b	SC-N6c	SC-N6d	SC-N6e						
		2.58	SC-S-20	SC-N3a	SC-N3b	SC-N3c	SC-N3d	SC-N3e						
		97.10	SC-S-4	SC-B1a	SC-B1b	SC-B1c	SC-B1d	SC-B1e						
		19.80	SC-S-5	SC-B2a	SC-B2b	SC-B2c	SC-B2d	SC-B2e						
		18.80	SC-S-6	SC-B3a	SC-B3b	SC-B3c	SC-B3d	SC-B3e						
SJSB019-N1/SJSB019-N2	4 to 8 ft bgs	6700	SC-S-7	SC-C1a	SC-C1b	SC-C1c	SC-C1d	SC-C1e						
		13.60	SC-S-21	SC-O1a	SC-O1b	SC-O1c	SC-O1d	SC-O1e						
		13.00	SC-S-8	SC-D1a	SC-D1b	SC-D1c	SC-D1d	SC-D1e						
		32.00	SC-S-9	SC-D2a	SC-D2b	SC-D2c	SC-D2d	SC-D2e						
SJSB019-W1	2 to 8 ft bgs	6.05	SC-S-10	SC-F1a	SC-F1b	SC-F1c	SC-F1d	SC-F1e						
		418	SC-S-11	SC-F2a	SC-F2b	SC-F2c	SC-F2d	SC-F2e						
		2820	SC-S-12	SC-F3a	SC-F3b	SC-F3c	SC-F3d	SC-F3e						
		5960	SC-S-22	SC-P1a	SC-P1b	SC-P1c	SC-P1d	SC-P1e						
		19.00	SC-S-27	SC-P5a	SC-P5b	SC-P5c	SC-P5d	SC-P5e						
		46.30	SC-S-30	SC-P7a	SC-P7b	SC-P7c	SC-P7d	SC-P7e						
		5.51	SC-S-31	SC-P8a	SC-P8b	SC-P8c	SC-P8d	SC-P8e						
SJSB019-E2	4 to 6 ft bgs	48.00	SC-S-13	SC-I1a	SC-I1b	SC-I1c	SC-I1d	SC-I1e						
		42.00	SC-S-14	SC-J1a	SC-J1b	SC-J1c	SC-J1d	SC-J1e						
		8.77	SC-S-15	SC-J2a	SC-J2b	SC-J2c	SC-J2d	SC-J2e						
SJSB019-S1	4 to 6 ft bgs	3950	SC-S-16	SC-K2a	SC-K2b	SC-K2c	SC-K2d	SC-K2e						
		4010	SC-S-17	SC-K3a	SC-K3b	SC-K3c	SC-K3d	SC-K3e						
		4130	SC-S-24	SC-Q1a	SC-Q1b	SC-Q1c	SC-Q1d	SC-Q1e						
		3850	SC-S-28	SC-Q5a	SC-Q5b	SC-Q5c	SC-Q5d	SC-Q5e						
		14400	SC-S-29	SC-Q6a	SC-Q6b	SC-Q6c	SC-Q6d	SC-Q6e						
		3810	SC-S-32	SC-Q10a	SC-Q10b	SC-Q10c	SC-Q10d	SC-Q10e						
		52.90	SC-S-33	SC-Q13a	SC-Q13b	SC-Q13c	SC-Q13d	SC-Q13e						
		---	~~SC-S-34~~	~~SC-Q16a~~	~~SC-Q16b~~	~~SC-Q16c~~	~~SC-Q16d~~	~~SC-Q16e~~	~~HOLD (pending results of SC-S-33)~~					
		154.00	SC-S-25	SC-Q2a	SC-Q2b	SC-Q2c	SC-Q2d	SC-Q2e						

Table 4

South Central Excavation Area Confirmation Composite Samples
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

SC Bottom of Excavation Confirmation Samples													
Polygon	**Impacted Zone**	**TEQ Results ng/kg**	**Composite Sample ID**	**Discrete Samples**									
SJSB041	2 to 6 ft bgs	14100	SC-B-1	SC-A1d	SC-A2d	SC-A3d	SC-A4d	SC-A5d					
		32400	SC-B-1H	SC-A1e	SC-A2e	SC-A3e	SC-A4e	SC-A5e					
		48.70	SC-B-8	SC-N1d	SC-N2d	SC-N3d	SC-N4d	SC-N5d					
		2820	SC-B-8H	SC-N1e	SC-N2e	SC-N3e	SC-N4e	SC-N5e					
		10.90	SC-B-8a	SC-N6d									
		2.51	SC-B-8aH	SC-N6e									
		362	SC-B-2	SC-B1d	SC-B2d	SC-B3d	SC-B4d	SC-B5d					
		5.30	SC-B-2H	SC-B1e	SC-B2e	SC-B3e	SC-B4e	SC-B5e					
SJSB019-N1/SJSB019-N2	4 to 8 ft bgs	6310	SC-B-3	SC-C1e	SC-C2e	SC-C3e	SC-E1e	SC-E2e					
		3370	SC-B-9	SC-O1e	SC-O2e								
		33.20	SC-B-4	SC-D1e	SC-D2e	SC-D3e	SC-D4e	SC-E3e					
SJSB019-W1	2 to 8 ft bgs	51.10	SC-B-5	SC-F1e	SC-F2e	SC-F3e	SC-F4e	SC-F5e					
		8.09	SC-B-10	SC-P1e	SC-P2e	SC-P3e							
		0.926	SC-B-12	SC-P4e	SC-P5e	SC-P6e							
		4.15	SC-B-14	SC-P7e	SC-P8e	SC-P9e							
SJSB019-E2	4 to 6 ft bgs	1480	SC-B-6	SC-I1d	SC-I2d	SC-I3d	SC-J1d	SC-J2d	SC-J3d	SC-J4d			
		7.45	SC-B-6H	SC-I1e	SC-I2e	SC-I3e	SC-J1e	SC-J2e	SC-J3e	SC-J4e			
SJSB019-S1	4 to 6 ft bgs	28400	SC-B-7	SC-K1d	SC-K2d	SC-K3d	SC-K4d						
		2690	SC-B-7H	SC-K1e	SC-K2e	SC-K3e	SC-K4e						
		11100	SC-B-11	SC-Q1d	SC-Q2d	SC-Q3d	SC-Q4d						
		865	SC-B-11H	SC-Q1e	SC-Q2e	SC-Q3e	SC-Q4e						
		25100	SC-B-13	SC-Q5d	SC-Q6d	SC-Q7d							
		394	SC-B-13H	SC-Q5e	SC-Q6e	SC-Q7e							
		10800	SC-B-15	SC-Q8d	SC-Q9d	SC-Q10d	SC-Q11d	SC-Q12d					
		175	SC-B-15H	SC-Q8e	SC-Q9e	SC-Q10e	SC-Q11e	SC-Q12e					
		29.20	SC-B-17	SC-Q13d	SC-Q14d	SC-Q15d							
		9.39	SC-B-17H	SC-Q13e	SC-Q14e	SC-Q15e							
		---	~~SC-B-18~~	~~SC-Q16d~~	~~SC-Q17d~~	~~HOLD (pending results of SC-S-33)~~							
		---	~~SC-B-18H~~	~~SC-Q16e~~	~~SC-Q17e~~	~~HOLD (pending results of SC-S-33)~~							
		3360	SC-B-16	SCW-QR1d	(discrete sample from 6-8 ft only)								
		58.00	SC-B-16H	SCW-QR1e	(discrete sample from 8-10 ft only)								

Notes:

The depth intervals are denoted as ‘a’ for 0 to 2 ft bgs, ‘b’ for 2 to 4 ft bgs, ‘c’ for 4 to 6 ft bgs, 'd' for 6 to 8 ft bgs, and 'e' for 8 to 10 ft bgs.

Preemptive secondary sidewall step out borings were advanced during Round 4 and were only analyzed if the preceding sidewall sample exceeded 240 ng/kg. If sample analysis was not required the borings are ~~struck through.~~

SC-S-23 number was not utilized.

ft bgs = feet below ground surface

ng/kg = nanograms per kilogram

TCDD = 2,3,7,8 tetrachlorinated dibenzo p dioxin

TEQ = TCDD Toxicity Equivalent for Mammals

Red text indicates step out borings were advanced and samples collected in Round 1 of step out horizontal delineation.

Purple text indicates step out borings were advanced and samples collected in Round 2 of step out horizontal delineation.

Blue text indicates step out borings were advanced and samples collected in Round 3 of step out horizontal delineation.

Green text indicates step out borings were advanced and samples collected in Round 4 of step out horizontal delineation.

Table 5

Southwest Excavation Area Confirmation Composite Samples
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

SW Overburden Confirmation Samples											
Polygon	**Impacted Zone**	**TEQ Results ng/kg**	**Composite Sample ID**	**Discrete Samples**							
SJSB065-C1	2 to 8 ft bgs	79.5	SW-O-1	SW-A1a	SW-A2a	SW-A3a	SW-A4a	SW-A5a			
SJSB065	2 to 6 ft bgs	118	SW-O-2	SW-B1a	SW-B2a	SW-B3a	SW-B4a	SW-B5a			
SJSB065-C1/SJSB065	2 to 6 ft bgs	17.1	SW-O-11	SW-P1a	SW-P2a	SW-P3a	SW-P4a	SW-P5a			
SJSB066	2 to 4 ft bgs	1,790	SW-O-3	SW-D1a	SW-D2a	SW-D3a	SW-D4a	SW-D5a			
SJSB066/SJSB067	2 to 4 ft bgs	212	SW-O-12	SW-Q1a	SW-Q2a	SW-Q3a	SW-Q4a	SW-Q5a			
SJSB023-N1/SJSB023	2 to 6 ft bgs	11.0	SW-O-4	SW-E1a	SW-E2a	SW-E3a	SW-E4a	SW-G1a			
SJSB023-N1	2 to 6 ft bgs	16	SW-O-13	SW-R1a	SW-R2a	SW-R3a					
		28.6	**SW-O-18**	**SW-R4a**	**SW-R5a**	**SW-R6a**					
		15.7	**SW-O-22**	**SW-R7a**	**SW-R8a**	**SW-R9a**	**SW-R10a**	**SW-R11a**			
SJSB023-E1	4 to 6 ft bgs	473	SW-O-5	SW-H1a	SW-H1b	SW-H2a	SW-H2b	SW-H3a	SW-H3b	SW-H4a	SW-H4b
SJSB023-E1	4 to 6 ft bgs	319	SW-O-14	SW-S1a	SW-S1b	SW-S2a	SW-S2b	SW-S3a	SW-S3b		
SJSB067	2 to 4 ft bgs	1,270	SW-O-6	SW-K1a	SW-K2a	SW-K3a	SW-K4a	SW-K5a			
		382	SW-O-7	SW-L1a	SW-L2a	SW-L3a	SW-L4a	SW-L5a			
		28.8	SW-O-15	SW-U1a	SW-U2a	SW-U3a	SW-U4a	SW-U5a			
		455	**SW-O-19**	**SW-Q6a**	**SW-Q7a**	**SW-Q8a**					
		93	**SW-O-23**	**SW-Q9a**	**SW-Q10a**	**SW-Q11a**	**SW-Q12a**	**SW-Q13a**			
		---	~~**SW-O-26**~~	~~**SW-Q14a**~~	~~**SW-Q15a**~~	~~**SW-Q16a**~~	~~**(hold sample until results from SW-Q9 and SW-Q10)**~~				
SJSB025-N1/SJSB025-N2	2 to 8 ft bgs	47.7	SW-O-8	SW-M1a	SW-M2a	SW-M3a	SW-M4a	SW-M5a			
		7.92	SW-O-9	SW-N1a	SW-N2a	SW-N3a	SW-N4a	SW-N5a			
SJSB067/SJSB025-N2	2 to 8 ft bgs	32.7	SW-O-16	SW-T1a	SW-T2a	SW-T3a	SW-T4a	SW-T5a	SW-T6a		
SJSB025-N2	2 to 8 ft bgs	4.58	**SW-O-20**	**SW-T7a**	**SW-T8a**	**SW-T9a**	**SW-T10a**	**SW-T11a**			
		31.9	**SW-O-24**	**SW-T12a**	**SW-T13a**	**SW-T14a**	**SW-T15a**	**SW-T16a**			
SJSB025/SJSB025-S1	2 to 6 ft bgs	150	SW-O-10	SW-O1a	SW-O2a	SW-O3a	SW-O4a	SW-O5a			
		9.74	SW-O-17	SW-V1a	SW-V2a	SW-V3a	SW-V4a	SW-V5a			
		6,390	**SW-O-21**	**SW-V6a**	**(discrete sample only)**						
		9.49	**SW-O-25**	**SW-V7a**	**(discrete sample only)**						
SW Sidewall Confirmation Samples											
Polygon	**Impacted Zone**	**TEQ Results ng/kg**	**Composite Sample ID**	**Discrete Samples**							
SJSB065-C1	2 to 8 ft bgs	630	SW-S-1	SW-A1a	SW-A1b	SW-A1c	SW-A1d	SW-A1e			
		517	SW-S-2	SW-A2a	SW-A2b	SW-A2c	SW-A2d	SW-A2e			
		17	SW-S-28	SW-P1a	SW-P1b	SW-P1c	SW-P1d	SW-P1e			
SJSB065	2 to 6 ft bgs	428	SW-S-3	SW-B1a	SW-B1b	SW-B1c	SW-B1d	SW-B1e			
		13.7	SW-S-29	SW-P3a	SW-P3b	SW-P3c	SW-P3d	SW-P3e			
		65.8	SW-S-4	SW-B2a	SW-B2b	SW-B2c	SW-B2d	SW-B2e			
SJSB023-W2	0 to 6 ft bgs	51.5	SW-S-5	SW-C1a	SW-C1b	SW-C1c	SW-C1d	SW-C1e			
SJSB066	2 to 4 ft bgs	27.5	SW-S-6	SW-D1a	SW-D1b	SW-D1c	SW-D1d	SW-D1e			
		3,930	SW-S-7	SW-D2a	SW-D2b	SW-D2c	SW-D2d	SW-D2e			
		11.1	SW-S-30	SW-Q1a	SW-Q1b	SW-Q1c	SW-Q1d	SW-Q1e			
SJSB023-N1	2 to 6 ft bgs	25.9	SW-S-8	SW-E1a	SW-E1b	SW-E1c	SW-E1d	SW-E1e			
		3,390	SW-S-9	SW-E2a	SW-E2b	SW-E2c	SW-E2d	SW-E2e			
		2,920	SW-S-10	SW-E3a	SW-E3b	SW-E3c	SW-E3d	SW-E3e			
		2,880	SW-S-31	SW-R1a	SW-R1b	SW-R1c	SW-R1d	SW-R1e			
		5,350	**SW-S-42**	**SW-R4a**	**SW-R4b**	**SW-R4c**	**SW-R4d**	**SW-R4e**			
		2.77	**SW-S-47**	**SW-R7a**	**SW-R7b**	**SW-R7c**	**SW-R7d**	**SW-R7e**			
		181	**SW-S-48**	**SW-R11a**	**SW-R11b**	**SW-R11c**	**SW-R11d**	**SW-R11e**			
SJSB023-E1	4 to 6 ft bgs	9520	SW-S-11	SW-H1a	SW-H1b	SW-H1c	SW-H1d	SW-H1e			
		179	SW-S-12	SW-H2a	SW-H2b	SW-H2c	SW-H2d	SW-H2e			
		37.1	SW-S-32	SW-S1a	SW-S1b	SW-S1c	SW-S1d	SW-S1e			
		49.1	SW-S-33	SW-S2a	SW-S2b	SW-S2c	SW-S2d	SW-S2e			
SJSB023-S1	0 to 6 ft bgs	124	SW-S-13	SW-I1a	SW-I1b	SW-I1c	SW-I1d	SW-I1e			
SJSB023-S2	0 to 4 ft bgs	8.72	SW-S-14	SW-J1a	SW-J1b	SW-J1c	SW-J1d	SW-J1e			

Table 5

Southwest Excavation Area Confirmation Composite Samples
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

SJSB067	2 to 4 ft bgs	279	SW-S-15	SW-K1a	SW-K1b	SW-K1c	SW-K1d	SW-K1e			
		85.9	SW-S-34	SW-T1a	SW-T1b	SW-T1c	SW-T1d	SW-T1e			
		59.6	SW-S-16	SW-K2a	SW-K2b	SW-K2c	SW-K2d	SW-K2e			
		7,030	SW-S-17	SW-L1a	SW-L1b	SW-L1c	SW-L1d	SW-L1e			
		4,520	SW-S-35	SW-Q3a	SW-Q3b	SW-Q3c	SW-Q3d	SW-Q3e			
		2,760	SW-S-43	SW-Q6a	SW-Q6b	SW-Q6c	SW-Q6d	SW-Q6e			
		81.9	SW-S-49	SW-Q9a	SW-Q9b	SW-Q9c	SW-Q9d	SW-Q9e			
		1.67	SW-S-50	SW-Q10a	SW-Q10b	SW-Q10c	SW-Q10d	SW-Q10e			
		---	~~SW-S-55~~	~~SW-Q14a~~	~~SW-Q14b~~	~~SW-Q14c~~	~~SW-Q14d~~	~~SW-Q14e~~	~~(hold sample until results from SW-Q9 and SW-Q10)~~		
		---	~~SW-S-56~~	~~SW-Q15a~~	~~SW-Q15b~~	~~SW-Q15c~~	~~SW-Q15d~~	~~SW-Q15e~~	~~(hold sample until results from SW-Q9 and SW-Q10)~~		
		---	~~SW-S-57~~	~~SW-Q16a~~	~~SW-Q16b~~	~~SW-Q16c~~	~~SW-Q16d~~	~~SW-Q16e~~	~~(hold sample until results from SW-Q9 and SW-Q10)~~		
		158	SW-S-18	SW-L2a	SW-L2b	SW-L2c	SW-L2d	SW-L2e			
		779	SW-S-19	SW-L3a	SW-L3b	SW-L3c	SW-L3d	SW-L3e			
		170	SW-S-36	SW-U1a	SW-U1b	SW-U1c	SW-U1d	SW-U1e			
SJSB025-N1/SJSB025-N2	2 to 8 ft bgs	855	SW-S-20	SW-M1a	SW-M1b	SW-M1c	SW-M1d	SW-M1e			
		819	SW-S-21	SW-M2a	SW-M2b	SW-M2c	SW-M2d	SW-M2e			
		887	SW-S-22	SW-M3a	SW-M3b	SW-M3c	SW-M3d	SW-M3e			
		1,730	SW-S-37	SW-T2a	SW-T2b	SW-T2c	SW-T2d	SW-T2e			
		1,310	SW-S-38	SW-T3a	SW-T3b	SW-T3c	SW-T3d	SW-T3e			
		3,010	SW-S-39	SW-T4a	SW-T4b	SW-T4c	SW-T4d	SW-T4e			
		1,850	SW-S-44	SW-T7a	SW-T7b	SW-T7c	SW-T7d	SW-T7e			
		2,100	SW-S-45	SW-T8a	SW-T8b	SW-T8c	SW-T8d	SW-T8e			
		16.8	SW-S-51	SW-T12a	SW-T12b	SW-T12c	SW-T12d	SW-T12e			
		84.1	SW-S-52	SW-T13a	SW-T13b	SW-T13c	SW-T13d	SW-T13e			
		461	SW-S-53	SW-T16a	SW-T16b	SW-T16c	SW-T16d	SW-T16e			
		283	SW-S-23	SW-N1a	SW-N1b	SW-N1c	SW-N1d	SW-N1e			
		833	SW-S-24	SW-N2a	SW-N2b	SW-N2c	SW-N2d	SW-N2e			
SJSB025/SJSB025-S1	2 to 6 ft bgs	911	SW-S-25	SW-O1a	SW-O1b	SW-O1c	SW-O1d	SW-O1e			
		1,770	SW-S-26	SW-O3a	SW-O3b	SW-O3c	SW-O3d	SW-O3e			
		639	SW-S-27	SW-O4a	SW-O4b	SW-O4c	SW-O4d	SW-O4e			
		798	SW-S-40	SW-V1a	SW-V1b	SW-V1c	SW-V1d	SW-V1e			
		2,000	SW-S-41	SW-V2a	SW-V2b	SW-V2c	SW-V2d	SW-V2e			
		609	SW-S-46	SW-V6a	SW-V6b	SW-V6c	SW-V6d	SW-V6e			
		19.9	SW-S-54	SW-V7a	SW-V7b	SW-V7c	SW-V7d	SW-V7e			

SW Bottom of Excavation Confirmation Samples

Polygon	Impacted Zone	TEQ Results ng/kg	Composite Sample ID	Discrete Samples							
SJSB065-C1	2 to 8 ft bgs	2,200	SW-B-1	SW-A1e	SW-A2e	SW-A3e	SW-A4e	SW-A5e			
		4.22	SW-B-13	SW-P1e	SW-P2e						
SJSB065	2 to 6 ft bgs	1,730	SW-B-2	SW-B1d	SW-B2d	SW-B3d	SW-B4d	SW-B5d			
		25.7	SW-B-2H	SW-B1e	SW-B2e	SW-B3e	SW-B4e	SW-B5e			
		1,000	SW-B-14	SW-P3d	SW-P4d	SW-P5d					
		20.1	SW-B-14H	SW-P3e	SW-P4e	SW-P5e					
SJSB023-W2	0 to 6 ft bgs	2,190	SW-B-3	SW-C1d	SW-C2d	SW-C3d	SW-C4d	SW-C5d			
		59.3	SW-B-3H	SW-C1e	SW-C2e	SW-C3e	SW-C4e	SW-C5e			
SJSB066	2 to 4 ft bgs	3,230	SW-B-4	SW-D1c	SW-D2c	SW-D3c	SW-D4c	SW-D5c			
		686	SW-B-4H1	SW-D1d	SW-D2d	SW-D3d	SW-D4d	SW-D5d			
		30.9	SW-B-4H2	SW-D1e	SW-D2e	SW-D3e	SW-D4e	SW-D5e			
SJSB066/SJSB067	2 to 4 ft bgs	702	SW-B-15	SW-Q1c	SW-Q2c	SW-Q3c	SW-Q4c	SW-Q5c			
		158	SW-B-15H1	SW-Q1d	SW-Q2d	SW-Q3d	SW-Q4d	SW-Q5d			
		14.9	SW-B-15H2	SW-Q1e	SW-Q2e	SW-Q3e	SW-Q4e	SW-Q5e			

Table 5

Southwest Excavation Area Confirmation Composite Samples
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

SJSB023-N1/SJSB023-E1	2/4 to 6 ft bgs	4,200	SW-B-5	SW-E1d	SW-E2d	SW-E3d	SW-E4d	SW-H1d	SW-H2d	SW-H3d	SW-H4d
		270	SW-B-5H	SW-E1e	SW-E2e	SW-E3e	SW-E4e	SW-H1e	SW-H2e	SW-H3e	SW-H4e
		3,060	SW-B-16	SW-R1d	SW-R2d	SW-R3d	SW-S1d	SW-S2d	SW-S3d		
		4.47	SW-B-16H	SW-R1e	SW-R2e	SW-R3e	SW-S1e	SW-S2e	SW-S3e		
		27,000	**SW-B-20**	**SW-R4d**	**SW-R5d**	**SW-R6d**					
		188	**SW-B-20H**	**SW-R4e**	**SW-R5e**	**SW-R6e**					
		11,800	**SW-B-24**	**SW-R7d**	**SW-R8d**	**SW-R9d**	**SW-R10d**	**SW-R11d**			
		98.8	**SW-B-24H**	**SW-R7e**	**SW-R8e**	**SW-R9e**	**SW-R10e**	**SW-R11e**			
SJSB023-W1/SJSB023/ SJSB023-S1	0/2 to 6 ft bgs	1,220	SW-B-6	SW-F1d	SW-F2d	SW-G1d	SW-I1d	SW-I2d			
		130	SW-B-6H	SW-F1e	SW-F2e	SW-G1e	SW-I1e	SW-I2e			
SJSB023-S2	0 to 4 ft bgs	2,690	SW-B-7	SW-J1c	SW-J2c	SW-J3c	SW-J4c	SW-J5c			
		55.6	SW-B-7H1	SW-J1d	SW-J2d	SW-J3d	SW-J4d	SW-J5d			
		2,400	SW-B-7H2	SW-J1e	SW-J2e	SW-J3e	SW-J4e	SW-J5e			
SJSB067	2 to 4 ft bgs	2,610	SW-B-8	SW-K1c	SW-K2c	SW-K3c	SW-K4c	SW-K5c			
		50.2	SW-B-8H1	SW-K1d	SW-K2d	SW-K3d	SW-K4d	SW-K5d			
		6.28	SW-B-8H2	SW-K1e	SW-K2e	SW-K3e	SW-K4e	SW-K5e			
		6,680	SW-B-9	SW-L1c	SW-L2c	SW-L3c	SW-L4c	SW-L5c			
		80.7	SW-B-9H1	SW-L1d	SW-L2d	SW-L3d	SW-L4d	SW-L5d			
		0.919	SW-B-9H2	SW-L1e	SW-L2e	SW-L3e	SW-L4e	SW-L5e			
		3,910	SW-B-17	SW-U1c	SW-U2c	SW-U3c	SW-U4c	SW-U5c			
		6.39	SW-B-17H1	SW-U1d	SW-U2d	SW-U3d	SW-U4d	SW-U5d			
		1.75	SW-B-17H2	SW-U1e	SW-U2e	SW-U3e	SW-U4e	SW-U5e			
		6,200	**SW-B-21**	**SW-Q6c**	**SW-Q7c**	**SW-Q8c**					
		328	**SW-B-21H1**	**SW-Q6d**	**SW-Q7d**	**SW-Q8d**					
		42.4	**SW-B-21H2**	**SW-Q6e**	**SW-Q7e**	**SW-Q8e**					
		2,110	**SW-B-25**	**SW-Q9c**	**SW-Q10c**	**SW-Q11c**	**SW-Q12c**	**SW-Q13c**			
		198	**SW-B-25H1**	**SW-Q9d**	**SW-Q10d**	**SW-Q11d**	**SW-Q12d**	**SW-Q13d**			
		3.40	**SW-B-25H2**	**SW-Q9e**	**SW-Q10e**	**SW-Q11e**	**SW-Q12e**	**SW-Q13e**			
		---	~~**SW-B-28**~~	~~**SW-Q14c**~~	~~**SW-Q15c**~~	~~**SW-Q16c**~~	~~(hold sample until results from SW-Q9 and SW-Q10)~~				
SJSB025-N1/SJSB025-N2	2 to 8 ft bgs	6.08	SW-B-10	SW-M1e	SW-M2e	SW-M3e	SW-M4e	SW-M5e			
		129	SW-B-11	SW-N1e	SW-N2e	SW-N3e	SW-N4e	SW-N5e			
SJSB067/SJSB025-N2	2 to 8 ft bgs	5.83	SW-B-18	SW-T1e	SW-T2e	SW-T3e	SW-T4e	SW-T5e	SW-T6e		
SJSB025-N2	2 to 8 ft bgs	1.88	**SW-B-22**	**SW-T7e**	**SW-T8e**	**SW-T9e**	**SW-T10e**	**SW-T11e**			
		3.66	**SW-B-26**	**SW-T12e**	**SW-T13e**	**SW-T14e**	**SW-T15e**	**SW-T16e**			
SJSB025/SJSB025-S1	2 to 6 ft bgs	225	SW-B-12	SW-O1d	SW-O2d	SW-O3d	SW-O4d	SW-O5d			
		30.3	SW-B-12H	SW-O1e	SW-O2e	SW-O3e	SW-O4e	SW-O5e			
		8.26	SW-B-19	SW-V1d	SW-V2d	SW-V3d	SW-V4d	SW-V5d			
		17	SW-B-19H1	SW-V1e	SW-V2e	SW-V3e	SW-V4e	SW-V5e			
		6.16	**SW-B-23**	**SW-V6d**	**(discrete sample only)**						
		2.97	**SW-B-23H**	**SW-V6e**	**(discrete sample only)**						
		1.24	**SW-B-27**	**SW-V7d**	**(discrete sample only)**						
		1.04	**SW-B-27H**	**SW-V7e**	**(discrete sample only)**						

Notes:
The depth intervals are denoted as ‘a’ for 0 to 2 ft bgs, ‘b’ for 2 to 4 ft bgs, ‘c’ for 4 to 6 ft bgs, 'd' for 6 to 8 ft bgs, and 'e' for 8 to 10 ft bgs.
Preemptive secondary sidewall step out borings were advanced during Round 3 and were only analyzed if the preceding sidewall sample exceeded 240 ng/kg. If sample analysis was not required the borings are st~~ruck through~~.
ft bgs = feet below ground surface
ng/kg = nanograms per kilogram
TCDD = 2,3,7,8 tetrachlorinated dibenzo p dioxin
TEQ = TCDD Toxicity Equivalent for Mammals
Red text indicates step out borings were advanced and samples collected in Round 1 of step out horizontal delineation.
Purple text indicates step out borings were advanced and samples collected in Round 2 of step out horizontal delineation.
Blue text indicates step out borings were advanced and samples collected in Round 3 of step out horizontal delineation.

Table 6

PC-FSE – Soil Analytical Results Summary
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Excavation Area:		North Central	North Central	North Central	North Central	North Central	North Central	North Central	North Central	North Central	North Central
Sample Location:		NC-A1, NC-A2, NC-A3, NC-A4	NC-B1, NC-B2, NC-B3, NC-C1, NC-C2, NC-C3	NC-I1, NC-J2, NC-J1, NC-J2, NC-J3, NC-K1	NC-L1, NC-L2, NC-L3, NC-M1, NC-M2, NC-M3	NC-O1, NC-02, NC-P1, NC-P2, NC-P3, NC-Q1	NC-W1, NC-W2, NC-W3, NC-Y1, NC-Y2, NC-X1	NC-AC1, NC-AC2, NC-AC3	NC-AC1, NC-AC2, NC-AC3	NC-AG1, NC-AG2	NC-AA1, NC-AA2, NC-AA3, NC-AB1, NC-AB2,
Sample Identification:	Units	11215131-121021-S-SS-NC-B-1	11215131-121021-S-JC-NC-B-2	11215131-120921-S-JC-NC-B-3	11215131-120921-S-SS-NC-B-4	11215131-121421-S-BN-NC-B-5	11215131-121321-S-SS-NC-B-6	11215131-011022-S-BN-DUP-12	11215131-011022-S-BN-NC-B-7	11215131-010822-S-BN-NC-B-8	11215131-011122-S-BN-NC-B-9
Sample Date:		12/10/2021	12/10/2021	12/09/2021	12/09/2021	12/14/2021	12/13/2021	01/10/2022	01/10/2022	01/08/2022	01/11/2022
Sample Type:		Excavation Bottom	Excavation Bottom	Excavation Bottom	Excavation Bottom	Excavation Bottom	Excavation Bottom	Duplicate	Excavation Bottom	Excavation Bottom	Excavation Bottom
Dioxins/Furans											
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	6990 J	4300 J	227 J	4960 J	4560	1510	4680	3660	462	4470
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	10700 J	7070 J	1140 J	10300 J	10700 J	2160	10000 J	6330	1680	7480
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	594	310	71.1	320	417	127 J	411	276	68.1	275
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	772	485	77.7	773	750	113 J	825	482 J+	120	536
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	179	82.8	23.3	102	115	13.1	115	73.7	14	48.7
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1330	660	190	651	951	81.3 J	924	593	111	310
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	5.73	3.78	0.695 J	5.27	4.2	1.39 J	3.89	2.14 J	1.04 J	2.85
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	323	168	46.8	160	227	21.9	215	144 J+	28	79
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	29.2	18.1	2.49	25.5	21.2	4.79	19.8	14.5	3.49	16
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	1.19 U	0.726 U	0.334 U	1.06 U	2.01 U	0.381 U	0.713 U	0.682 U	0.894 U	1.07 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	13	8.47	1.91 J	11.5	10.5	3.1	8.48	6.15	2.63	7.63
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	675	455	107	429	635	54.1	630	433	71.8	202
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	45.4	42.7	9.23	34.5	45.4	6.84	55.9	36.5	5.96	18.4
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	67.2	38.9	8.9	38.5	55.8	5.67	50.3	34.2	6.19	21.4
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	458 J+	356 J+	82.4 J+	307 J+	483	45.5 J+	501	352 J+	55.2	167
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	13300 J	12500 J	2770 J	9250 J	16000 J	1520 J	19500 J	12800 J	1940 J	5690 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	4710 J	4250 J	958	3560 J	4140 J	589	5010 J	3310 J	512	1630 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	1170 J	596 J	122 J	724 J	801 J	186 J	821 J	546 J	123 J	573 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	1600 J	965 J	184 J	1630 J	1520 J	271 J	2080 J	1020 J	306 J	1240 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	2130 J	1090 J	293 J	1110 J	1520 J	153 J	1510 J	987 J	187 J	604 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	257 J	156 J	58.4 J	268 J	222	71.7	224 J	134 J	49.6 J	163 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	1840 J	1320 J	301 J	1210 J	1800 J	174 J	1840 J	1280 J	205 J	662 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	96.4 J	80.2 J	20.5 J	81 J	86.3 J	20.9 J	96 J	65.1 J	9.52 J	49.3 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	25300 J	24000 J	5510 J	17800 J	30500 J	2940 J	39100 J	25800 J	3680 J	11100 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	5280 J	4770 J	1080 J	3980 J	4550 J	667 J	5580 J	3680 J	579 J	1820 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	**6440 J**	**5770 J**	**1300 J**	**4730 J**	**6090 J**	**779 J**	**7330 J**	**4840 J**	**749 J**	**2330 J**
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	**6440 J**	**5770 J**	**1300 J**	**4730 J**	**6090 J**	**779 J**	**7330 J**	**4840 J**	**749 J**	**2330 J**

Notes:

U - Not detected at the associated reporting limit

J - Estimated concentration

J- - Estimated concentration, result may be biased low

J+ - Estimated concentration, result may be biased high

ND - Not detected

TCDD - 2,3,7,8 tetrachlorinated dibenzo p dioxin

TEQ - TCDD Toxicity Equivalent for Mammals

pg/g - picogram per gram

Bold — Overburden and excavation bottom sample exceed 240 pg/g. These intervals may remain or be re-used within the excavated polygons if a depth weighted average below 240 pg/g can be achieved.

Bold (yellow) — Sidewall sample concentrations exceed 240 pg/g

Table 6

PC-FSE – Soil Analytical Results Summary
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Excavation Area: / Sample Location: / Sample Identification: / Sample Date: / Sample Type:	Units	North Central NC-AC4, NC-AC5, NC-AC6 11215131-012222-S-BN-DUP-14 01/22/2022 Duplicate	North Central NC-AC4, NC-AC5, NC-AC6 11215131-012222-S-BN-NC-B-10 01/22/2022 Excavation Bottom	North Central NC-AG3, NC-AG4 11215131-012122-S-BN-NC-B-11 01/21/2022 Excavation Bottom	North Central NC-AA4, NC-AA5, NC-AB4, NC-AB5 11215131-012222-S-BN-NC-B-12 01/22/2022 Excavation Bottom	North Central NC-AC7, NC-AC8, NC-AC9 11215131-020222-S-SB-NC-B-13 02/02/2022 Excavation Bottom	North Central NC-AA6, NC-AA7, NC-AA8 11215131-020222-S-SB-NC-B-14 02/02/2022 Excavation Bottom	North Central NC-AC10, NC-AC11, NC-AC12 11215131-021822-S-SB-NC-B-15 02/18/2022 Excavation Bottom	North Central NC-AC13, NC-AC14, NC-AC15 11215131-021822-S-SB-DUP-17 02/18/2022 Duplicate	North Central NC-AC13, NC-AC14, NC-AC15 11215131-021822-S-SB-NC-B-16 02/18/2022 Excavation Bottom	North Central NC-AC16, NC-AC17, NC-AC18 11215131-021822-S-SB-NC-B-17 02/18/2022 Excavation Bottom	North Central NC-A1, NC-A2, NC-A3, NC-A4 11215131-121021-S-SS-NC-O-1 12/10/2021 Overburden
Dioxins/Furans												
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	3690	3120	287	944	4460	792	7160	443	240	9.34	84.6 J
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	2730	2450	2500	2690	4760	1210	4380	1760	1420	851	1440 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	111	108	151	91.2	161	49.9	186 J-	71.5	58.6	12.8	19.9
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	178	156	188	180	294	65.9	282	107	89.5	73.8	99.4
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	11.5	11	57	20.8	23	3.4	18.9	21.5	17.4	4.53	2.12 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	41.1	25.5	468	174	100	4.1	29	164	142	35.4	5.97
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.12 J	1.68 J	0.804 J	1.1 J	3.19	1.04 J	4.01	1.25 J	0.645 J	0.992 J	1.54 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	11.1	6.94	119	45.1	27.1	1.32 J	9.24	41.2	35.1	11	1.51 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	8.4	7.33	4.94	5.65	12.6	2.75	14.4	3.93	2.76	2.01 J	4.92
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.402 U	0.413 U	0.26 U	0.29 U	0.392 U	0.202 U	0.696 U	0.358 U	0.611 U	0.274 U	0.215 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	5.25	5.12	2.68	2.97	7.04	2.51	7.62	2.55 J	2.05 J	4.53	3.04 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	36.2	13.9	284	116	66	2.66	18.8	83.7	78.6	23.3	2.27 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	3.41	3.39	24.8	12.7	9.25	0.992 J	5.5	8.69	8.85	2.77	0.863 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	5.27	3.3	26.2	10.2	9.53	1.05 J	7.17	9.09	6.78	4.45	1.2 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	28.4	15.1	217	92.1	59.7 J+	3.09 J+	23.2 J+	64.2	64.1	19.6 J+	2.29 J+
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	699	556	6890 J	3340 J	2110 J	105	820	2210 J	2300 J	454	37.5
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	229	185	2480 J	1240 J	748	34.2	265	818	841	162	12
Total heptachlorodibenzofuran (HpCDF)	pg/g	213 J	198 J	268 J	182 J	324 J	78.2 J	361 J	135 J	105 J	23.4 J	52.5 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	444 J	392 J	392 J	387 J	661 J	197 J	668 J	260 J	214 J	369 J	247 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	123 J	89.2 J	727 J	286 J	239 J	21.5 J	155 J	262 J	219 J	76 J	28.3 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	143 J	135 J	74.2 J	66.7 J	127 J	118 J	155 J	64 J	55.7 J	166 J	52.6 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	146 J	83.7 J	794 J	332 J	254 J	17.9 J	143 J	236 J	226 J	107 J	16.2 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	35.8 J	31.4 J	43 J	26.7 J	35.3 J	28.7 J	39 J	21.2 J	21.8 J	38.7 J	6.09 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	1360 J	1050 J	13400 J	6540 J	4190 J	170 J	1660 J	4290 J	4530 J	981 J	74.2 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	282 J	230 J	2720 J	1370 J	858 J	54.6 J	313 J	924 J	950 J	213 J	15.5 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	**324 J**	**258 J**	**3330 J**	**1650 J**	**1010 J**	49.8 J	**375 J**	**1090 J**	**1120 J**	224 J	20.9 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	**324 J**	**258 J**	**3330 J**	**1650 J**	**1010 J**	49.8 J	**376 J**	**1090 J**	**1120 J**	224 J	20.9 J

Notes:

U - Not detected at the associated reporting limit

J - Estimated concentration

J- - Estimated concentration, result may be biased low

J+ - Estimated concentration, result may be biased high

ND - Not detected

TCDD - 2,3,7,8 tetrachlorinated dibenzo p dioxin

TEQ - TCDD Toxicity Equivalent for Mammals

pg/g - picogram per gram

Bold — Overburden and excavation bottom sample exceed 240 pg/g. These intervals may remain or be re-used within the excavated polygons if a depth weighted average below 240 pg/g can be achieved.

Bold (yellow) — Sidewall sample concentrations exceed 240 pg/g

Table 6

PC-FSE – Soil Analytical Results Summary
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Excavation Area:		North Central	North Central	North Central	North Central	North Central	North Central	North Central	North Central	North Central	North Central	North Central
Sample Location:		NC-B1, NC-B2, NC-B3	NC-C1, NC-C2, NC-C3	NC-D1, NC-D2	NC-E1, NC-E2	NC-F1, NC-F2, NC-F3	NC-G1, NC-G2	NC-H1, NC-H2	NC-I1, NC-I2	NC-J1, NC-J2, NC-J3	NC-K1, NC-K2, NC-K3	NC-L1, NC-L2, NC-L3
Sample Identification:	Units	11215131-121021-S-JC-NC-O-2	11215131-121021-S-JC-NC-O-3	11215131-121321-S-SS-NC-O-4	11215131-121321-S-SS-NC-O-5	11215131-120721-S-JC-NC-O-6	11215131-120721-S-SS-NC-O-7	11215131-120721-S-SS-NC-O-8	11215131-120921-S-JC-NC-O-9	11215131-120921-S-JC-NC-O-10	11215131-120921-S-JC-NC-O-11	11215131-120921-S-SS-NC-O-12
Sample Date:		12/10/2021	12/10/2021	12/13/2021	12/13/2021	12/07/2021	12/07/2021	12/07/2021	12/09/2021	12/09/2021	12/09/2021	12/09/2021
Sample Type:		Overburden	Overburden	Overburden	Overburden	Overburden	Overburden	Overburden	Overburden	Overburden	Overburden	Overburden
Dioxins/Furans												
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	85 J	389 J	48.5	153	397	82.1	238	257	203 J	241 J	154
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	1460 J	5150 J	23900 J	3360	2790	7830	36500 J	2320 J	3210 J	3010 J	2780 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	20.3	89.2	15.5	51.7	87.7	38.6	123	85.7	62.5	57	43.3
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	101	435	193	209	198	219	925	170	240	250	234
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	2.88	12.3	3.07 J	14.6	24.2	10.1	42.2	28.2	14	7.72	8.72
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	7.28	33.1	26.9	99.3	173	82.4	321	220	95.7	22.2	22.1
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.11 J	4.09	0.984 J	1.26 J	2.6	1.49 J	5.34	1.93 J	2.31 J	2.3 J	3.35
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1.93 J	7.71	6.26	23.6	45.2	20.5	81.1	54.8	24.5	5.79	5.84
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	4.02	16.7	2.44 J	4.29	7.35	5.04	13.4	6.18	8.85	9.73	10.4
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.259 U	0.482 U	0.801 U	0.94 U	0.25 U	0.159 U	0.256 U	0.443 U	0.34 U	0.292 U	0.379 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.5	8.52	1.47 J	2.6	4.57	3.33	9.99	3.9	5.35	5.61	7.75
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	5.4	19.8	16.4	56.3	117	60.3	183	135	56.9	12.4	11.1
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	1.1 J	3.11	1.55 J	6.42	11.4	6.12	20.3	9.37	5.42	1.95 J	2.45 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1.44 J	5.54	1.65 J	5.92	10.8	5.22	17.3	12.4	6.85	3.68	3.41
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	3.86 J+	13 J+	13.3	48.2	87.3 J+	50.3 J+	138 J+	88.1 J+	41.6 J+	9.07 J+	9.92 J+
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	85.2	306	484	2170 J	2930 J	1640 J	5310 J	2530 J	1230 J	166	241
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	33.3	123	131	558	1020 J	538	1830 J	922	442	52.7	89.8
Total heptachlorodibenzofuran (HpCDF)	pg/g	64.4 J	296 J	31.5 J	111 J	203 J	89.8 J	262 J	184 J	166 J	174 J	120 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	246 J	979 J	487 J	654 J	439 J	524 J	2060 J	423 J	717 J	552 J	544 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	33.1 J	144 J	46.6 J	162 J	301 J	143 J	522 J	365 J	191 J	92.8 J	78.4 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	39.6 J	134 J	46.8	64.7	68.4 J	63.1 J	169 J	77.2 J	108 J	83.3 J	110 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	23.3 J	80.3 J	47.5 J	171 J	335 J	179 J	511 J	351 J	167 J	51.9 J	54 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	5.22 J	17.2 J	4.81 J	8.77 J	22.3 J	14.8 J	38.1 J	20.4 J	18.5 J	10.3 J	17.6 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	160 J	565 J	971 J	4250 J	5730 J	3270 J	10400 J	4890 J	2390 J	273 J	474 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	40.6 J	150 J	144 J	618 J	1140 J	607 J	2050 J	1030 J	502 J	63 J	106 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	47.8 J	176 J	199 J	**815 J**	**1380 J**	**742 J**	**2500 J**	**1250 J**	**603 J**	83.4 J	129 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	47.8 J	176 J	199 J	**815 J**	**1380 J**	**742 J**	**2500 J**	**1250 J**	**603 J**	83.4 J	129 J

Notes:

U - Not detected at the associated reporting limit

J - Estimated concentration

J- - Estimated concentration, result may be biased low

J+ - Estimated concentration, result may be biased high

ND - Not detected

TCDD - 2,3,7,8 tetrachlorinated dibenzo p dioxin

TEQ - TCDD Toxicity Equivalent for Mammals

pg/g - picogram per gram

Bold — Overburden and excavation bottom sample exceed 240 pg/g. These intervals may remain or be re-used within the excavated polygons if a depth weighted average below 240 pg/g can be achieved.

Bold (yellow) — Sidewall sample concentrations exceed 240 pg/g

Table 6

PC-FSE – Soil Analytical Results Summary
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Excavation Area: / Sample Location: / Sample Identification: / Sample Date: / Sample Type:	Units	North Central NC-M1, NC-M2, NC-M3 11215131-120921-S-SS-NC-O-13 12/09/2021 Overburden	North Central NC-N1, NC-N2, NC-N3 11215131-120921-S-SS-NC-O-14 12/09/2021 Overburden	North Central NC-O1, NC-02 11215131-121421-S-BN-NC-O-15 12/14/2021 Overburden	North Central NC-P1, NC-P2, NC-P3 11215131-121421-S-BN-NC-O-16 12/14/2021 Overburden	North Central NC-Q1, NC-Q2 11215131-121421-S-BN-NC-O-17 12/14/2021 Overburden	North Central NC-R1, NC-R2 11215131-121321-S-BN-NC-O-18 12/13/2021 Overburden	North Central NC-S1, NC-S2 11215131-121321-S-BN-NC-O-19 12/13/2021 Overburden	North Central NC-T1, NC-T2 11215131-121321-S-BN-DUP-8 12/13/2021 Duplicate	North Central NC-T1, NC-T2 11215131-121321-S-BN-NC-O-20 12/13/2021 Overburden	North Central NC-U1, NC-U2 11215131-121321-S-BN-NC-O-21 12/13/2021 Overburden	North Central NC-V1, NC-V2 11215131-121321-S-BN-NC-O-22 12/13/2021 Overburden
Dioxins/Furans												
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	87 J	220 J	135	40.6 J	123	244	155	131	115	117	104
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	1870 J	3340 J	2430	936	2260	3390	2520	2450	2330	2090	1980
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	24.5	55.6	27.9	11	30.6	66.9	36.1	31.5	30.1	34.4	26.4
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	144	259	190	118	212	300	201	167	179	147	152
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	2.88	7.34	3.77	0.939 J	3.91	4.88	2.68 U	3.82	3.46	3.02	2.94
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	7.54	17.8	10.4	2.3 J	15	8.14	8.51	10.9	9.77	7.29	6.48
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.59 J	2.99	1.31 J	1.25 J	1.92 J	1.91 J	1.9 J	2.04 J	1.93 J	1.89 J	1.86 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	2.69	4.96	2.8 J	0.536 J	3.67	3.08	2.45 J	3.12	2.48	2.43 J	2.1 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	5.65	9.45	4.88 J	2.42 J	7.16	15	6.43	7.93	5.75	6.73	5.75
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.293 U	0.334 U	0.804 U	0.613 U	0.905 U	1.14 U	0.947 U	0.309 U	0.245 U	0.262 U	0.218 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	3.75	6.28	3.41	2.23 J	4.05	7.35	3.59	4.72	3.97	4.64	4.2
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	4.76	8.44	5.24	1.64 J	10.4	4.09	4.43	5.59	4.88	3.86	2.96
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	1.26 J	1.88 J	0.762 U	0.682 U	1.4 J	1.53 J	1.07 J	1.55 J	1.28 J	1.74 J	1.25 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1.85 J	3.84	1.83 J	0.566 J	2.41 J	3.75	2.2 J	2.72	1.89 J	1.89 J	1.55 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	4.1 J+	7.21 J+	4.02	1.58 J	8	4.49	4.07	4.44 J+	3.81 J+	3.17 J+	2.62 J+
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	62.4	181	87.7	35.9	140	73.7	94.5	90.9	81.1	60.9	50
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	22.8	65.5	23.4	8.47	33.7	18.3	28.5	41.5	33.9	27.7	21.7
Total heptachlorodibenzofuran (HpCDF)	pg/g	78.2 J	168 J	83 J	32.8 J	94.9 J	210 J	101 J	96.6 J	85.8 J	95.6 J	69.9 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	336 J	611 J	533 J	491 J	538 J	610 J	500 J	420 J	427 J	374 J	369 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	41.8 J	81.9 J	40.3 J	13.6 J	53.5 J	68.2 J	46.3 J	51.8 J	42.6 J	42.2 J	32.7 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	54.8 J	100 J	69	57.4	80.9	112	74	80.8	73.9	78.6	74.6
Total pentachlorodibenzofuran (PeCDF)	pg/g	25.8 J	43 J	21.6 J	8.19 J	40.2 J	29.2 J	26.7 J	29.7 J	24.4 J	21.4 J	17.3 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	7.52 J	14.5 J	3.84 J	3.7 J	11.7 J	11.9 J	9.27 J	13.3 J	12.6 J	16.8 J	12.6 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	120 J	296 J	151 J	64.4 J	247 J	138 J	177 J	178 J	157 J	114 J	90.3 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	30.2 J	78.7 J	26.9 J	10.5 J	42.1 J	20.5 J	35.3 J	55.7 J	45.9 J	42.2 J	30 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	36.3 J	96.7 J	39.0 J	15.1 J	58.4 J	37.4 J	46.1 J	59.6 J	50.0 J	41.6 J	33.5 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	36.3 J	96.7 J	39.4 J	15.5 J	58.5 J	37.5 J	46.1 J	59.6 J	50.0 J	41.6 J	33.5 J

Notes:

U - Not detected at the associated reporting limit

J - Estimated concentration

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J+ - Estimated concentration, result may be biased high

ND - Not detected

TCDD - 2,3,7,8 tetrachlorinated dibenzo p dioxin

TEQ - TCDD Toxicity Equivalent for Mammals

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Bold — Sidewall sample concentrations exceed 240 pg/g

Table 6

PC-FSE – Soil Analytical Results Summary
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Excavation Area: / Sample Location: / Sample Identification: / Sample Date: / Sample Type:	Units	North Central NC-W1, NC-W2, NC-W3 11215131-121321-S-SS-NC-O-23 12/13/2021 Overburden	North Central NC-X1, NC-X2 11215131-121321-S-SS-NC-O-24 12/13/2021 Overburden	North Central NC-Y1, NC-Y2 11215131-121321-S-SS-DUP-7 12/13/2021 Duplicate	North Central NC-Y1, NC-Y2 11215131-121321-S-SS-NC-O-25 12/13/2021 Overburden	North Central NC-AC1, NC-AC2, NC-AC3 11215131-011022-S-BN-NC-O-26 01/10/2022 Overburden	North Central NC-AD1, NC-AD2, NC-AD3 11215131-011022-S-BN-NC-O-27 01/10/2022 Overburden	North Central NC-AE1, NC-AE2, NC-AE3 11215131-011122-S-BN-NC-O-28 01/11/2022 Overburden	North Central NC-AF1, NC-AF2 11215131-011022-S-BN-NC-O-29 01/10/2022 Overburden	North Central NC-AB1, NC-AB2, NC-AB3 11215131-011122-S-BN-NC-O-30 01/11/2022 Overburden	North Central NC-AG1, NC-AG2 11215131-010822-S-BN-NC-O-31 01/08/2022 Overburden	North Central NC-AA1, NC-AA2, NC-AA3 11215131-011122-S-BN-NC-O-32 01/11/2022 Overburden
Dioxins/Furans												
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	739	87.3	86.2	62	209	195	540	93.2	98.6	132	230
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	6960	2320	1880	1550	3020	2780	11700 J	18400 J	1590	2070	2800
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	113	23.2	22.6	16.7	48.6	48.3	139	123	22.7	28.9	41.5
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	564	130	129	111	228	213	250	270	118	151	178
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	14.5	2.91	3.01	1.87 J	5.69	6.61	47.3	42.9	2.92	3.54	5.23
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	63	7.1	8.31	4.78	14.1	20.8	423	382	12.2	9.93	26.9
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	4.91	1.49 J	1.8 J	2.37 J	1.77 J	1.09 U	1.44 J	1.33 J	1.33 J	1.34 J	1.36 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	16.2	1.92 J	2.4 J	1.44 J	4.03	6	105	89.2	3.15	2.84	6.74
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	16	4.44	4.45	4.06	7.76	8.04	7.16	5.33	3.9	5.21	5.88
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.522 U	0.271 U	0.211 U	0.193 U	0.651 U	0.89 U	0.871 U	0.747 U	0.776 U	0.713 U	0.738 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	8.79	2.93	3.77	4.12	4.01	3.82	3.47	2.6 J	2.53	3.24	3.75
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	37.6	3.31	4.22	2.81	7.86	13.2	245	227	7.38	6.33	17.2
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	4.8	0.734 J	1.23 J	1.28 J	1.71 J	1.89 J	17.8	16.6	1.09 J	1.15 J	1.82 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	6.87	1.44 J	1.58 J	1.07 J	2.93	3.02	23	17.9	1.28 J	1.85 J	2.98
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	30.1 J+	2.74 J+	3.45 J+	2.4 J+	6.05	9.33	179	167	5.08 J+	4.59 J+	13.3 J+
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	783	48.6	69.1	54.4	154	191	6260 J	5340 J	164	104	340
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	328	18.1	29.8	22.2	46.3	54.2	1710 J	1550 J	43.5	31	100
Total heptachlorodibenzofuran (HpCDF)	pg/g	288 J	60 J	63.6 J	43.6 J	149 J	137 J	290 J	233 J	65.6 J	87.5 J	104 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	2510 J	362 J	302 J	273 J	555 J	517 J	584 J	621 J	353 J	366 J	481 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	169 J	31.2 J	32.6 J	21.8 J	74.3 J	81.3 J	688 J	591 J	39 J	48.7 J	75.7 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	241	59.3	63.2	60	69.1 J	60.4 J	64.1 J	88.7 J	48.5 J	48.9 J	67.5 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	134 J	16.1 J	19.6 J	13.1 J	38.7 J	57.7 J	677 J	612 J	23.3 J	27.8 J	60.1 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	26.4 J	7.65 J	11.7 J	11 J	9.13 J	5.85 J	32.8 J	30.4 J	3.4 J	4.48 J	7.97 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	1490 J	91.3 J	134 J	106 J	278 J	340 J	12300 J	10800 J	275 J	180 J	635 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	378 J	24.1 J	38.3 J	29.3 J	53.7 J	60.4 J	1920 J	1750 J	48.5 J	36.3 J	115 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	**442 J**	28.8 J	43.5 J	33.3 J	72.7 J	86.1 J	**2480 J**	**2220 J**	67.1 J	49.1 J	148 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	**442 J**	28.8 J	43.5 J	33.3 J	72.7 J	86.2 J	**2480 J**	**2220 J**	67.2 J	49.1 J	148 J

Notes:

U - Not detected at the associated reporting limit

J - Estimated concentration

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TCDD - 2,3,7,8 tetrachlorinated dibenzo p dioxin

TEQ - TCDD Toxicity Equivalent for Mammals

pg/g - picogram per gram

Bold — Overburden and excavation bottom sample exceed 240 pg/g. These intervals may remain or be re-used within the excavated polygons if a depth weighted average below 240 pg/g can be achieved.

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Table 6

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100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Excavation Area: / Sample Location: / Sample Identification: / Sample Date: / Sample Type:	Units	North Central NC-AH1, NC-AH2 11215131-010822-S-BN-NC-O-33 01/08/2022 Overburden	North Central NC-AI1, NC-AI2 11215131-010822-S-BN-NC-O-34 01/08/2022 Overburden	North Central NC-AC4, NC-AC5, NC-AC6 11215131-012222-S-BN-NC-O-35 01/22/2022 Overburden	North Central NC-AE4, NC-AE5, NC-AE6 11215131-012222-S-BN-NC-O-36 01/22/2022 Overburden	North Central NC-AF3, NC-AF4 11215131-012122-S-BN-NC-O-37 01/21/2022 Overburden	North Central NC-AF5, NC-AF6 11215131-012122-S-BN-NC-O-38 01/21/2022 Overburden	North Central NC-AB4, NC-AB5 11215131-012222-S-BN-NC-O-39 01/22/2022 Overburden	North Central NC-AG3, NC-AG4 11215131-012122-S-BN-NC-O-40 01/21/2022 Overburden	North Central NC-AA4, NC-AA5 11215131-012222-S-BN-NC-O-41 01/22/2022 Overburden	North Central NC-AH3, NC-AH4 11215131-012122-S-BN-NC-O-42 01/21/2022 Overburden	North Central NC-AI3, NC-AI4 11215131-012122-S-BN-NC-O-43 01/21/2022 Overburden
Dioxins/Furans												
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	226	1260	92	31.2	253	88.1	206	100	1090	533	1180
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	3110	5810	1380	3730	13900 J	4050	5680	2420	4830	2350	2520
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	43	272	33.2	19.5	141	81.7	52.4	27.8	138	55.3	81.8
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	249	455	99.9	82.7	625	163	277	155	368	209	184
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	4.12	24.8	8.32	5.53	29.3	34.1	7.74	3.65	34.6	9.52	10.2
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	13.4	179	62.3	44.3	198	300	27.3	6.23	260	41.8	58.3
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.84 J	2.63	1.14 J	0.938 J	3.51	1.09 J	2.86	1.65 J	3.2	1.91 J	1.69 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	3.99	45.2	15	13.1	55.9	75.2	6.78	2.65	70.8	11.2	16.8
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	7.6	12.6	3.9	2.45 J	20.9	4.41	9.6	5.37	13.6	6.56	6.07
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.794 U	1.11 U	0.151 U	0.229 U	0.268 U	0.245 U	0.288 U	0.256 U	0.436 U	0.469 U	0.256 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	4.03	5.8 J	2.61	1.98 J	8.37	2.26 J	5.9	3.55	7.01	3.23	3.96
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	7.56	114	40.3	29.5	117	178	20.8	3.37	212	23.8	38.8
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	1.39 J	11.5	4.5	2.41 J	13.5	17.6	3.48	1.23 J	14.5	3.25	4.72
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	2.18 J	14.3	3.76	3.16	14.5	15.3	4.35	2.3 J	18.6	3.87	5.09
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	6.07 J+	90	31 J+	20.5 J+	87.7	137	12.5 J+	3.39	153	20.6 J+	32.7 J+
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	155	3240 J	1020 J	606	2910 J	4770 J	229	41.1	3610 J	644	1110 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	42.7	932	366	219	1060 J	1740 J	78.9	15.7	1330 J	239	395
Total heptachlorodibenzofuran (HpCDF)	pg/g	114 J	620 J	76.8 J	44.2 J	367 J	166 J	169 J	76.2 J	325 J	119 J	150 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	799 J	1030 J	242 J	192 J	1270 J	357 J	797 J	376 J	862 J	431 J	422 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	67.1 J	412 J	109 J	81.8 J	411 J	468 J	99.1 J	42.1 J	470 J	92.5 J	125 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	112 J	145 J	48.7 J	28.2 J	169 J	62 J	112 J	65.7 J	134 J	77.7 J	81.1 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	35.5 J	351 J	116 J	84.3 J	380 J	499 J	80.7 J	28.2 J	606 J	87.5 J	129 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	9.98 J	29.7 J	13.7 J	7.04 J	38 J	32.5 J	20.4 J	14.4 J	36.3 J	20.9 J	19.9 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	281 J	6430 J	2010 J	1210 J	5720 J	9170 J	411 J	85.2 J	7030 J	1310 J	2240 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	52 J	1050 J	416 J	247 J	1190 J	1930 J	96.4 J	25.6 J	1480 J	279 J	449 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	68.9 J	**1330 J**	**494 J**	**298 J**	**1440 J**	**2320 J**	120 J	27.0 J	**1800 J**	**324 J**	**535 J**
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	68.9 J	**1330 J**	**494 J**	**298 J**	**1440 J**	**2320 J**	120 J	27.0 J	**1800 J**	**324 J**	**535 J**

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San Jacinto River Waste Pits Site
Harris County, Texas

Excavation Area: / Sample Location: / Sample Identification: / Sample Date: / Sample Type:	Units	North Central NC-AC7, NC-AC8, NC-AC9 11215131-020222-S-SB-NC-O-44 02/02/2022 Overburden	North Central NC-AF7 11215131-020222-S-SB-NC-O-45 02/02/2022 Overburden	North Central NC-AA6, NC-AA7, NC-AA8 11215131-020222-S-SB-NC-O-46 02/02/2022 Overburden	North Central NC-AH5, NC-AH6 11215131-020222-S-SB-NC-O-47 02/02/2022 Overburden	North Central NC-AI5, NC-AI6 11215131-020222-S-SB-NC-O-48 02/02/2022 Overburden	North Central NC-AC10, NC-AC11, NC-AC12 11215131-021822-S-SB-NC-O-49 02/18/2022 Overburden	North Central NC-AC13, NC-AC14, NC-AC15 11215131-021822-S-SB-NC-O-50 02/18/2022 Overburden	North Central NC-AE7, NC-AE8 11215131-021922-S-SB-NC-O-51 02/19/2022 Overburden	North Central NC-AF8, NC-AF9 11215131-021722-S-SB-NC-O-52 02/17/2022 Overburden	North Central NC-AI7, NC-AI8 11215131-021922-S-SB-NC-O-53 02/19/2022 Overburden	North Central NC-AC16, NC-AC17, NC-AC18 11215131-021822-S-SB-NC-O-54 02/18/2022 Overburden
Dioxins/Furans												
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	387	163	161	115	4370	2520	36.1	308	159	71.2	160
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	2860	4290	2500	2400	8420	12000 J	751	11500 J	5040	1750	2390
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	71.1	228	49.2	31.4	180	541	14.2	147	39.1	42.7	35.7
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	192	193	215	180	496	743	53.6	726	336	124	172
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	11.5	91.3	9.32	2.96	26.6	173	1.68 J	19.4	7.03	11	4.61
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	62.9	736	53	6.12	118	1450	15.7	89.6	34.6	111	11.6
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.11 J	1.64 J	2.51	2.32 J	4.4	5.05	0.885 J	4.93	2.22 J	1.68 J	2.49
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	16.3	178	13.2	3.26	31.2	366	4.05	30.9	9.09	30.1	3.36
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	6.96	5.59	7.77	7.55	19.6	22.8	2.03 J	23.9	6.61	4.34	8.47
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.278 U	0.81 U	0.506 U	0.373 U	0.588 U	0.58 U	0.331 U	0.59 U	0.307 U	0.512 U	0.344 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	4.52	2.98 J	4.8	4.85	9.03	10.7	1.79 J	9.6	3.98	3.31	4.27
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	39.4	391	32.5	2.53	67.7	914	10.9	52	22.1	80.3	5.58
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	5.42	23.8	3.75	1.29 J	9.73	94	1.55 J	6.26	3.44	6.85	1.29 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	5.24	36.5	4.66	3.21	12.3	83	1.29 J	12.4	3.46	7.78	2.39 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	32.4 J+	248	23.7 J+	4 J+	56.9	704	9.8	42	18.5	59.8 J+	5.52 J+
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	1140 J	6300 J	744	23.5	1890 J	24900 J	317	1160 J	563	1960 J	108
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	437	2430 J	290	8.57	711	9490 J	114	336	219	595	34.4
Total heptachlorodibenzofuran (HpCDF)	pg/g	161 J	399 J	134 J	84 J	389 J	1010 J	29.6 J	423 J	134 J	85.8 J	87.4 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	436 J	424 J	510 J	425 J	1170 J	1570 J	157 J	1600 J	2120 J	285 J	432 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	132 J	1110 J	118 J	51.4 J	290 J	2290 J	34.8 J	308 J	88.1 J	192 J	53.5 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	75.1 J	68.7 J	88.5 J	96 J	217 J	228 J	46 J	187 J	135 J	61.8 J	81.7 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	126 J	989 J	99.8 J	44.4 J	246 J	2540 J	35.5 J	246 J	74.9 J	228 J	41.4 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	17.4 J	40.7 J	15.8 J	28.8 J	48.2 J	147 J	9.92 J	29 J	16 J	18 J	15.4 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	2240 J	12400 J	1460 J	81.1 J	3770 J	46700 J	608 J	2380 J	1140 J	3890 J	215 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	495 J	2710 J	331 J	31.3 J	812 J	10400 J	131 J	389 J	250 J	669 J	45.7 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	**581 J**	**3270 J**	**388 J**	19.1 J	**959 J**	**12500 J**	154 J	**502 J**	**296 J**	**836 J**	54.5 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	**581 J**	**3270 J**	**388 J**	19.1 J	**959 J**	**12500 J**	154 J	**502 J**	**296 J**	**836 J**	54.5 J

Notes:

U - Not detected at the associated reporting limit

J - Estimated concentration

J- - Estimated concentration, result may be biased low

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ND - Not detected

TCDD - 2,3,7,8 tetrachlorinated dibenzo p dioxin

TEQ - TCDD Toxicity Equivalent for Mammals

pg/g - picogram per gram

Bold — Overburden and excavation bottom sample exceed 240 pg/g. These intervals may remain or be re-used within the excavated polygons if a depth weighted average below 240 pg/g can be achieved.

Bold (yellow) — Sidewall sample concentrations exceed 240 pg/g

Table 6

PC-FSE – Soil Analytical Results Summary
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Excavation Area:		North Central	North Central	North Central	North Central	North Central	North Central	North Central	North Central	North Central	North Central	North Central	North Central
Sample Location:		NC-A1	NC-A2	NC-A3	NC-B1	NC-C1	NC-F1	NC-F2	NC-G1	NC-H1	NC-J1	NC-K1	NC-L1
Sample Identification:	Units	11215131-121021-S-SS-NC-S-1	11215131-121021-S-SS-NC-S-2	11215131-121021-S-SS-NC-S-3	11215131-121021-S-JC-NC-S-4	11215131-121021-S-JC-NC-S-5	11215131-120721-S-JC-NC-S-6	11215131-120721-S-JC-NC-S-7	11215131-120721-S-SS-NC-S-8	11215131-120721-S-SS-NC-S-9	11215131-120921-S-JC-NC-S-10	11215131-120921-S-JC-NC-S-11	11215131-120921-S-SS-NC-S-12
Sample Date:		12/10/2021	12/10/2021	12/10/2021	12/10/2021	12/10/2021	12/07/2021	12/07/2021	12/07/2021	12/07/2021	12/09/2021	12/09/2021	12/09/2021
Sample Type:		Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall
Dioxins/Furans													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	660 J	634 J	682 J	2510 J	2170 J	50.4	772	404 J	126 J	565 J	532 J	80.1
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	3630 J	5930 J	6070 J	6680 J	6170 J	1160	3110	12200 J	41500 J	5350 J	1860 J	1340 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	169	169	149	258	146	13.5	195	198	93.1	173	80.5	23.7
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	258	354	334	470	477	85.5	247	502	453	381	131	105
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	50.5	54.5	43.2	70.1	21.2	1.8	64.4	63.4	33.8	57.9	17.2	4.58
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	413	455	324	521	128	4.38	545	530	246	522	132	19.5
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.82 J	2.75	2.4 J	3.88	3.45	1.11 J	2.41	2.32	2.05	2.74	1.68 J	1.1 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	103	111	78.6	131	32.7	1.29 J	136	128	59.2	122	33.5	4.48
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	7.83	12.2	11	16.9	13.9	2.84	8.96	10.9	4.86	10.7	4.4 J	3.96
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.321 U	0.193 U	0.248 U	0.4 U	0.324 U	0.126 U	0.113 U	0.222 U	0.147 U	0.202 U	0.212 U	0.149 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	3.88	5.77	5.27	7.76	6.49	2.63	5.06	4.6	4.13	5.54	3.31	2.19 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	244	250	158	292	76.7	2.59	295	331	103	269	77.2	8.2
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	30.6	23.9	17.2	36	9.65	0.771 J	23.6	33.3	9.9	26	7.62	1.41 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	22.8	25.5	19.2	31	10.4	1.09 J	29.2	29.6	11.8	29.1	8.56	2.04 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	207 J+	180 J+	129 J+	229 J+	62.7 J+	2.03 J+	189	266 J+	71.1 J+	201 J+	56.9 J+	6.43 J+
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	8110 J	6150 J	4610 J	9370 J	2440 J	44	5530 J	9470 J	2220 J	7040 J	1870 J	177
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	2900 J	2150 J	1560 J	3250 J	816	16.7	2020 J	3140 J	829 J	2480 J	655	66.3
Total heptachlorodibenzofuran (HpCDF)	pg/g	312	395	348	548	340	38.7 J	370 J	412 J	167 J	359	143	65.4
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	521	769	717	1010	1870	229 J	532 J	1670 J	1010 J	1180	344	266
Total hexachlorodibenzofuran (HxCDF)	pg/g	653	738	542	874	275	20.2 J	854 J	835 J	373 J	822	223	47.4
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	72.4	97.8	89.2	150	179	55.7 J	82.5 J	147 J	77.8 J	128	71.5	60
Total pentachlorodibenzofuran (PeCDF)	pg/g	703	683	473	848	252	14 J	751 J	941 J	272 J	744	215	28.3
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	47.6	40.3	32.5	65.9	27.9	9.7 J	40.6 J	54.3 J	19.7 J	44	19.3	9.61
Total tetrachlorodibenzofuran (TCDF)	pg/g	15800	11700	9050	18100	4700	88.2 J	10700 J	18300 J	4260 J	13600	3640	336
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	3120	2340	1720	3540	900	33.6 J	2200 J	3480 J	910 J	2710	727	80.7
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	**3870 J**	**2920 J**	**2130 J**	**4380 J**	**1120 J**	25.3 J	**2740 J**	**4290 J**	**1140 J**	**3360 J**	**890 J**	92.7 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	**3870 J**	**2920 J**	**2130 J**	**4380 J**	**1120 J**	25.3 J	**2740 J**	**4290 J**	**1140 J**	**3360 J**	**890 J**	92.7 J

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TCDD - 2,3,7,8 tetrachlorinated dibenzo p dioxin

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pg/g - picogram per gram

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San Jacinto River Waste Pits Site
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Excavation Area:		North Central	North Central	North Central	North Central	North Central	North Central	North Central	North Central	North Central	North Central	North Central
Sample Location:		NC-M1	NC-N1	NC-P3	NC-T1	NC-U1	NC-V1	NC-W1	NC-AD1	NC-AE1	NC-AE2	NC-AF1
Sample Identification:	Units	11215131-120921-S-SS-NC-S-13	11215131-120921-S-SS-NC-S-14	11215131-121421-S-BN-NC-S-15	11215131-121321-S-BN-NC-S-16	11215131-121321-S-BN-NC-S-17	11215131-121321-S-BN-NC-S-18	11215131-121321-S-SS-NC-S-19	11215131-011022-S-BN-NC-S-20	11215131-011122-S-BN-NC-S-21	11215131-011122-S-BN-NC-S-22	11215131-011022-S-BN-NC-S-23
Sample Date:		12/09/2021	12/09/2021	12/14/2021	12/13/2021	12/13/2021	12/13/2021	12/13/2021	01/10/2022	01/11/2022	01/11/2022	01/10/2022
Sample Type:		Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall
Dioxins/Furans												
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	111	1320	1050	355	1110	3310	1900	82.3	99.4	2550	111
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	1650 J	5170 J	8830 J	3530	5010	4460	5950	1240	1680	31900 J	6690
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	25.2	413	118	62.4	131	126	114	21.2	96.3	499	155
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	119	388	970	236	371	311	485	96.5	109	666	169
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	2.56	165	20.2	13.6	12.5	14.9	20.3	2.74	37.8	174	69.3
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	7.5	855	125	97.7	54.2	47.7	101	10.8	348	1470	638
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.11 J	3.29	4.9	2.16 J	2.89	4.14	5.12	1.29 J	1.38 J	3.91 J	1.58 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	2.39 J	179	31.4	25.7	15.7	13.3	26.6	2.37 J	88.5	352	158
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	3.65	13.3	18.6	8.48	16.8	13.5	17	3.62	4.09	20.6	4.85
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.103 U	0.199 U	0.713 U	0.406 U	0.254 U	0.466 U	0.365 U	0.44 U	0.61 U	1.22 U	1.04 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.48	7.15	8.06	4.1	10.3	7.71	8.67	2.28 J	2.66	8.47	3.42
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	4.19	166	73.6	62.2	37.5	28.7	64.1	7.14	209	791	390
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.839 J	13.7	5.04 J	6.13	6.64	5.84	7.03	0.907 J	16.2	60.6	19.8
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1.32 J	27.4	9.34	7.37	6.92	6.75	9.62	1.46 J	19.8	72.5	31.5
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	3.17 J+	99.9 J+	52.2	44.7 J+	30.7 J+	28 J+	53.5 J+	3.8 J+	146 J+	577 J+	226 J+
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	73.1	3170 J	1650 J	1390 J	911	904	1530 J	87.7	4830 J	18700 J	5500 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	27	1190 J	414	516	339	297	542	33.2	1600 J	6700 J	1930 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	70.1	797	318	157	378	273	276	55.9 J	173 J	1000 J	291 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	326	868	3780	566	831	772	1560	254 J	231 J	1580 J	368 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	30.7	1230	264	183	179	151	226	32.7 J	543 J	2280 J	965 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	46.5	130	324	84	154	149	267	60.5 J	48.1 J	177 J	70.3 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	18.4	426	230	176	131	128	216	21.5 J	571 J	2160 J	930 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	7.07	34.3	25.6	18.5	33.4	32.1	37.5	10 J	35.9 J	100 J	36.2 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	145	6110	3160	2770	1770	1770	2930	162 J	9190 J	35700 J	10400 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	34.3	1300	466	574	391	342	609	52.2 J	1780 J	7410 J	2110 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	40.1 J	**1680 J**	**636 J**	**695 J**	**465 J**	**419 J**	**745 J**	48.0 J	**2200 J**	**9040 J**	**2670 J**
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	40.1 J	**1680 J**	**636 J**	**695 J**	**465 J**	**419 J**	**745 J**	48.0 J	**2200 J**	**9040 J**	**2670 J**

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Excavation Area:		North Central	North Central	North Central	North Central	North Central	North Central	North Central	North Central	North Central	North Central	North Central
Sample Location:		NC-AB1	NC-AB2	NC-AG1	NC-AA2	NC-AH1	NC-AI1	NC-AA1	NC-AC2	NC-AD3	NC-AC4	NC-AE4
Sample Identification:	Units	11215131-011122-S-BN-NC-S-24	11215131-011122-S-BN-NC-S-25	11215131-010822-S-BN-NC-S-26	11215131-011122-S-BN-NC-S-27	11215131-010822-S-BN-NC-S-28	11215131-010822-S-BN-NC-S-29	11215131-011122-S-BN-NC-S-30	11215131-011022-S-BN-NC-S-31	11215131-011022-S-BN-NC-S-32	11215131-012222-S-BN-NC-S-33	11215131-012222-S-BN-NC-S-34
Sample Date:		01/11/2022	01/11/2022	01/08/2022	01/11/2022	01/08/2022	01/08/2022	01/11/2022	01/10/2022	01/10/2022	01/22/2022	01/22/2022
Sample Type:		Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall
Dioxins/Furans												
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	293	60.2	423	630	953	1290	329	1560	71.6	905	102
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	2000	1000	4300	2740	4840	3010	1970	5950	1250	6020	2930
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	58.4	48.4	91.3	70.7	104	89.1	45.4	181	15.5	257	24.1
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	145	66.7	274	190	336	198	116	416	89.6	452	160
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	11.8	17	21.5	12.7	19.4	16.8	7.68	40.8	1.75 J	84.3	4.07
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	87.6	141	155	78.2	116	111	48.9	344	5	733	3.76
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.84 J	1 J	2.06 J	1.84 J	2.91	2.45	2.53	2.95	0.983 J	2.21	1.7 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	22.7	38	40.5	23.6	33.6	29.7	13	87.6	1.45 J	191	2.29
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	6.24	2.36 J	9.36	6.87	13.4	8.79	4.22	14.7	3.58 J	13.2	3.81
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.482 U	0.743 U	0.71 U	0.514 U	0.823 U	0.611 U	0.574 U	0.714 U	0.482 U	0.384 U	0.364 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	3.68	1.43 J	5.51	3.66	7.39	5.41	3.64	6.94	2.28 J	5.43	3.19
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	58.4	93.1	96.2	52.6	74.6	71.2	31.4	241	2.57 J	483	1.07 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	6.66	11	8.94	5.05	7.5	7.23	3.01	19.5	0.825 J	53.9	0.514 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	5.91	7.14	9.22	7.16	8.88	7.92	3.52	20.7	1.09 J	43.9	1.45 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	48.1 J+	76.9 J+	72.3 J+	40.3 J+	55.9 J+	51.8 J+	24.2 J+	190 J+	2.54 J	401	1.42 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	1760 J	2970 J	2450 J	1420 J	1960 J	1680 J	647	5650 J	51.2	15400 J	9.63
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	654	1080 J	852	461	670	608	242	2040 J	18.2	5570 J	2.61
Total heptachlorodibenzofuran (HpCDF)	pg/g	128 J	88.2 J	214 J	153 J	239 J	176 J	82.8 J	372 J	41 J	501 J	75.5 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	347 J	159 J	630 J	432 J	765 J	464 J	305 J	880 J	258 J	873 J	574 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	163 J	222 J	274 J	165 J	246 J	213 J	89.8 J	590 J	23.3 J	1170 J	34.2 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	72.9 J	40.7 J	96.1 J	68.5 J	159 J	100 J	66.8 J	128 J	50 J	121 J	72.5 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	178 J	268 J	279 J	159 J	230 J	214 J	92.9 J	708 J	14.8 J	1400 J	14.1 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	17 J	21.6 J	22.6 J	16.7 J	31.3 J	24.3 J	13.2 J	43.9 J	9.57 J	86.7 J	7.46 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	3400 J	5730 J	4700 J	2730 J	3870 J	3290 J	1270 J	11100 J	98.1 J	29700 J	22.1 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	739 J	1210 J	958 J	524 J	764 J	682 J	273 J	2250 J	22.8 J	6260 J	5.23 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	**868 J**	**1430 J**	**1160 J**	**638 J**	**917 J**	**822 J**	**328 J**	**2750 J**	27.9 J	**7410 J**	8.96 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	**869 J**	**1430 J**	**1160 J**	**638 J**	**917 J**	**822 J**	**328 J**	**2750 J**	27.9 J	**7410 J**	8.97 J

Notes:

U - Not detected at the associated reporting limit

J - Estimated concentration

J- - Estimated concentration, result may be biased low

J+ - Estimated concentration, result may be biased high

ND - Not detected

TCDD - 2,3,7,8 tetrachlorinated dibenzo p dioxin

TEQ - TCDD Toxicity Equivalent for Mammals

pg/g - picogram per gram

Bold — Overburden and excavation bottom sample exceed 240 pg/g. These intervals may remain or be re-used within the excavated polygons if a depth weighted average below 240 pg/g can be achieved.

Bold (yellow) — Sidewall sample concentrations exceed 240 pg/g

Table 6

PC-FSE – Soil Analytical Results Summary
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Excavation Area:		North Central	North Central	North Central	North Central	North Central	North Central	North Central	North Central	North Central	North Central	North Central
Sample Location:		NC-AE5	NC-AF3	NC-AB4	NC-AG3	NC-AH3	NC-AA4	NC-AC5	NC-AC7	NC-AC8	NC-AF7	NC-AH5
Sample Identification:	Units	11215131-012222-S-BN-NC-S-35	11215131-012122-S-BN-NC-S-36	11215131-012222-S-BN-NC-S-37	11215131-012122-S-BN-NC-S-38	11215131-012122-S-BN-NC-S-39	11215131-012222-S-BN-NC-S-40	11215131-012222-S-BN-NC-S-41	11215131-020222-S-SB-NC-S-42	11215131-020222-S-SB-NC-S-43	11215131-020222-S-SB-NC-S-44	11215131-020222-S-SB-NC-S-45
Sample Date:		01/22/2022	01/21/2022	01/22/2022	01/21/2022	01/21/2022	01/22/2022	01/22/2022	02/02/2022	02/02/2022	02/02/2022	02/02/2022
Sample Type:		Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall
Dioxins/Furans												
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	13.5	450	2360	303	1500	500	137	309	4740	118	170
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	949	9320 J	4520	4710	3530	4350	2110	2010	7280	1900	3390
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	4.42	94	205	112	137	122	63.3	43.6	454	120	40.7
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	46.3	324	295	349	232	288	138	149	490	116	279
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.478 U	17.6	37.1	24.4	19.5	25.5	6.36	8.62	129	48	4.22
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.769 J	112	247	160	136	195	43.5	44.9	782	406	23.2
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.926 J	3.06	2.79	3.45	2.06 J	2.57	1.53 J	2 J	4.82	0.841 U	2.12 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.304 U	34.3	69.3	45.3	38	51.8	10.4	10.6	187	88.8	6.5
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.55 J	10.4	10.2	15.3	7.64	8.79	5.78	4.95	18.4	3.48	7.11
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.417 U	0.386 U	0.518 U	0.389 U	0.508 U	0.526 U	0.507 U	0.289 U	0.655 U	0.867 U	0.66 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.7 J	5.63	5.53	7.62	3.9	4.97	3.61 J	3.97	9.1	1.81 J	4.28
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.68 U	73.1	143	90.5	77	119	22.9	29.7	230	201	14.4
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.455 U	5.94	15.5	9.89	8.1	10.6	2.57	3.68	23.1	9.29	1.9 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.351 U	9.86	15.8	13.5	9.66	14.4	4.15	3.8	29.3	18.8	3.52
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.69 U	54.8 J+	119	70.5	61.5	96.5	18.2	21.7	170	109 J+	12 J+
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	3.7	1490 J	3980 J	2060 J	1980 J	3110 J	470	695	5800 J	2540 J	339
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	1.35	535	1390 J	739 J	709	1020 J	176	261	2110 J	743	88.7
Total heptachlorodibenzofuran (HpCDF)	pg/g	7.51 J	221 J	379 J	258 J	236 J	266 J	136 J	109 J	811 J	223 J	115 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	144 J	730 J	817 J	814 J	550 J	720 J	354 J	351 J	1080 J	276 J	663 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	3.2 J	252 J	444 J	326 J	253 J	355 J	102 J	92 J	1220 J	599 J	72.8 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	35.8 J	110 J	120 J	155 J	102 J	92.6 J	97 J	63.9 J	183 J	33.1 J	83.7 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.81 J	231 J	436 J	293 J	240 J	353 J	71.2 J	88.5 J	685 J	469 J	62.3 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	4.81 J	19.3 J	38.3 J	44.5 J	27.1 J	25.7 J	19.4 J	13.9 J	61.1 J	11.1 J	11.7 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	12 J	2890 J	7630 J	4080 J	3910 J	6110 J	911 J	1330 J	11400 J	4950 J	663 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	5.34 J	605 J	1570 J	843 J	808 J	1160 J	203 J	296 J	2360 J	824 J	101 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	3.01 J	**733 J**	**1890 J**	**1010 J**	**961 J**	**1410 J**	**241 J**	**351 J**	**2890 J**	**1100 J**	138 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	3.41 J	**733 J**	**1890 J**	**1010 J**	**961 J**	**1410 J**	**241 J**	**351 J**	**2890 J**	**1100 J**	138 J

Notes:

U - Not detected at the associated reporting limit

J - Estimated concentration

J- - Estimated concentration, result may be biased low

J+ - Estimated concentration, result may be biased high

ND - Not detected

TCDD - 2,3,7,8 tetrachlorinated dibenzo p dioxin

TEQ - TCDD Toxicity Equivalent for Mammals

pg/g - picogram per gram

Bold — Overburden and excavation bottom sample exceed 240 pg/g. These intervals may remain or be re-used within the excavated polygons if a depth weighted average below 240 pg/g can be achieved.

Bold — Sidewall sample concentrations exceed 240 pg/g

Table 6

PC-FSE – Soil Analytical Results Summary
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Excavation Area:		North Central	North Central	North Central	North Central	North Central	North Central	Northeast	Northeast	Northeast	Northeast
Sample Location:		NC-AI5	NC-AA6	NC-AC13	NC-AF8	NC-AI7	NC-AC16	NE-F1, NE-F2, NE-F3, NE-G1, NE-G2, NE-G3	NE-F1, NE-F2, NE-F3, NE-G1, NE-G2, NE-G3	NE-H1, NE-H2, NE-H3, NE-H4, NE-I1, NE-I2	NE-K1, NE-K2
Sample Identification:	Units	11215131-020222-S-SB-NC-S-46	11215131-020222-S-SB-NC-S-47	11215131-021822-S-SB-NC-S-48	11215131-021722-S-SB-NC-S-49	11215131-021922-S-SB-NC-S-50	11215131-021822-S-SB-NC-S-51	11215131-120121-S-JC-NE-B-1	11215131-120121-S-JC-NE-B-1H	11215131-120121-S-SPS-NE-B-2	11215131-121621-S-BN-NE-B-3
Sample Date:		02/02/2022	02/02/2022	02/18/2022	02/17/2022	02/19/2022	02/18/2022	12/01/2021	12/01/2021	12/01/2021	12/16/2021
Sample Type:		Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Excavation Bottom	Excavation Bottom	Excavation Bottom	Excavation Bottom
Dioxins/Furans											
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	1230	814	841	989	5.71	25	1410	14.7	1750	7540
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	2000	4600	3410	42100 J	592	675	1440	2100	6550	6250
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	51.1	141	154	137	2.8	6.14	57.1	5.87	75	232
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	125	353	259	2510	28.3	47.3	77.9	79.8	165	462
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	7.56	31.3	5.68 U	15.6	0.627 J	0.624 J	6.38	0.284 U	5.79	29.4
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	39.4	192	255	8.98	4.7	0.923 J	6.38	1.02 J	5.86	53.4
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.932 U	3.72	2.13 J	9.34	0.359 J	0.679 J	0.746 J	1.66 J	1.65 J	3.7
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	9.75	51.7	66.9	2.75	1.33 J	0.303 J	1.9 J	0.844 J	2.21 J	15.6
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	4.29	12.5	9.96	30.1	0.75 J	1.53 J	3.05	2.46	4.76	16.1
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.776 U	0.327 U	0.326 U	0.194 U	0.173 U	0.205 U	0.463 U	0.277 U	0.655 U	1.62 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.42 J	7.18	4.09 J	13.7	1.91 J	2.55	2.11 J	3.27	2.9	7.56 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	23.3	110	153	2.61	2.93 J	0.437 J	4.68	0.712 J	3.65 J	33.2
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	2.2 J	14.4	17.8	2.89	0.551 J	0.407 U	0.893 J	0.75 J	1.32 J	6.23
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	3.45	12	15.9	3.79	0.518 J	0.403 J	1.35 J	0.803 J	1.81 J	9.71
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	20.9 J+	91.9	126	2.62	2.76 J+	0.214 U	5.34 J+	0.933 J	5.55 J+	35.2 J+
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	775	3460 J	4440 J	42.3	88.4	6.28	196	4.97	196	1400 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	213	1240 J	1610 J	16.2	33.7	2.1	45.5	1.87	44.1	351
Total heptachlorodibenzofuran (HpCDF)	pg/g	99 J	325 J	289 J	697 J	5.67 J	11.7 J	96.8 J	8.23 J	135 J	488 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	301 J	812 J	594 J	22600 J	84.7 J	129 J	210 J	225 J	425 J	998 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	82 J	358 J	444 J	131 J	9.51 J	6.48 J	30 J	9.5 J	38.8 J	212 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	69 J	127 J	105 J	833 J	57.7 J	50.5 J	52.9 J	71.2 J	73.4 J	157 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	85.4 J	337 J	460 J	22 J	9.8 J	3.2 J	33.7 J	11.8 J	37.8 J	184 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	11.6 J	33.5 J	40.8 J	26.5 J	10.2 J	8.89 J	10.4 J	13.9 J	11.8 J	35 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	1480 J	6680 J	8310 J	81.8 J	177 J	11.6 J	389 J	19.7 J	397 J	2460 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	240 J	1380 J	1800 J	23.5 J	44.7 J	10.8 J	59.4 J	10.7 J	56.7 J	399 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	**308 J**	**1670 J**	**2150 J**	70.6 J	45.5 J	4.13 J	71.6 J	5.92 J	73.7 J	**531 J**
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	**308 J**	**1670 J**	**2160 J**	70.6 J	45.5 J	4.38 J	71.6 J	5.93 J	73.7 J	**531 J**

Notes:

U - Not detected at the associated reporting limit

J - Estimated concentration

J- - Estimated concentration, result may be biased low

J+ - Estimated concentration, result may be biased high

ND - Not detected

TCDD - 2,3,7,8 tetrachlorinated dibenzo p dioxin

TEQ - TCDD Toxicity Equivalent for Mammals

pg/g - picogram per gram

Bold — Overburden and excavation bottom sample exceed 240 pg/g. These intervals may remain or be re-used within the excavated polygons if a depth weighted average below 240 pg/g can be achieved.

Bold — Sidewall sample concentrations exceed 240 pg/g

Table 6

PC-FSE – Soil Analytical Results Summary
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Excavation Area:		Northeast	Northeast	Northeast	Northeast	Northeast	Northeast	Northeast	Northeast	Northeast	Northeast	Northeast
Sample Location:		NE-K1, NE-K2	NE-M1, NE-M2, NE-M3	NE-M1, NE-M2, NE-M3	NE-L2, NE-L3, NE-L4	NE-A1, NE-A2	NE-B1, NE-B2, NE-B3	NE-C1, NE-C2, NE-C3, NE-C4	NE-D1, NE-D2	NE-E1, NE-E2, NE-E3	NE-F1, NE-F2, NE-F3	NE-G1, NE-G2, NE-G3, NE-G4
Sample Identification:	Units	11215131-121621-S-BN-NE-B-3H	11215131-121721-S-BN-NE-B-4	11215131-121721-S-BN-NE-B-4H	11215131-020522-S-SB-NE-B-5	11215131-113021-S-JC-NE-O-1	11215131-113021-S-JC-NE-O-2	11215131-120121-S-JC-NE-O-3	11215131-113021-S-SPS-NE-O-4	11215131-113021-S-SPS-NE-O-5	11215131-120121-S-JC-NE-O-6	11215131-120121-S-JC-NE-O-7
Sample Date:		12/16/2021	12/17/2021	12/17/2021	02/05/2022	11/30/2021	11/30/2021	12/01/2021	11/30/2021	11/30/2021	12/01/2021	12/01/2021
Sample Type:		Excavation Bottom	Excavation Bottom	Excavation Bottom	Excavation Bottom	Overburden	Overburden	Overburden	Overburden	Overburden	Overburden	Overburden
Dioxins/Furans												
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	1680	4700	6200	5950	87	198	90	146	72.6	64	33.4
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	2240	7360	5420	4590	3390	12900 J	8790	4330	2880	67600 J	26800 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	69.1	131	159	171	38.6	59.3	27.2	47.8	48.1	21.5	10.2
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	97.9	555	340	283	341	1000	248	326	235	1100	268
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	4.6	16	16.6	17.6	2.54	5.05	2.49	3.85	2.15 J	1.54 J	0.998 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	6.71	17.5	25.2	26	2.59	3.83	1.79 J	2.7	1.98 J	1.56 U	1.06 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.27 J	4.51	3.93	4.08	1.88 J	3.12 J	1.7 J	2.07 J	1.63 J	3.99	2.18 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	2.38 J	6.56	7.85	9.5	1.75 J	2.58	1.5 J	2.29 J	2.55	1.33 U	0.88 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	4.25	19.3	16.6	14.6	8.34	15.3	5.84	9.11	6.49	6.99	4.13
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.339 U	1.37 U	0.602 U	0.577 U	0.436 U	0.654 U	0.397 U	0.566 U	0.551 U	1.59 U	0.277 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	3.48	10.9	9.58	8.41	4.19	7.89	3.47	4.69	3.07	6.53 J	4.07
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	4.49	11.7	15.7	17.3	1.36 J	1.85 J	0.754 J	1.01 J	0.9 J	1.37 U	0.488 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	1.51 J	4.04	4.92	4.62 J	0.936 J	1.23 J	0.805 J	1.21 J	0.677 J	1.86 U	0.81 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1.95 J	6.35	6.7	8.77	2.54	3.84	1.92 J	3.35	2.28 J	1.39 J	0.872 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	5.65 J+	16 J+	20.2 J+	23.1	2.78 J+	5.12 J+	1.6 J	2.87 J+	2.36 J	1.43 U	1.23 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	198	533	724	741	3.29	12.9	3.79	3.52	3.75	5.04	3.13
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	57.8	116	229	239	0.498 J	2.19	0.811	0.446 J	0.594	1.71 U	0.573 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	113 J	302 J	348 J	332 J	105 J	219 J	90.4 J	152 J	117 J	63.5 J	26.6 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	262 J	1160 J	776 J	677 J	767 J	1910 J	591 J	685 J	500 J	2360 J	624 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	39.8 J	129 J	147 J	150 J	40.3 J	73.8 J	33.4 J	58.9 J	44.8 J	23.5 J	13.7 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	68.4 J	181 J	177 J	172 J	87.5 J	119 J	55.6 J	74.4 J	57.1 J	74 J	47.6 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	37.2 J	111 J	125 J	142 J	26.1 J	52.7 J	16.3 J	28.4 J	22.3 J	5.66 J	9.95 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	14.6 J	35.5 J	38.7 J	41.7 J	10.8 J	12.4 J	7.53 J	9.14 J	7.62 J	1.86 U	5.92 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	407 J	1060 J	1460 J	1510 J	28 J	67 J	16.9 J	22.2 J	23.4 J	11.1 J	11.9 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	75.8 J	143 J	279 J	294 J	3.66 J	5.14 J	1.67 J	1.53 J	2.08 J	1.71 U	1.01 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	85.8 J	196 J	**328 J**	**340 J**	9.63 J	24.5 J	9.56 J	10.4 J	7.92 J	33.9 J	14.2 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	85.9 J	196 J	**329 J**	**340 J**	9.65 J	24.6 J	9.58 J	10.5 J	7.95 J	36.2 J	14.3 J

Notes:

U - Not detected at the associated reporting limit

J - Estimated concentration

J- - Estimated concentration, result may be biased low

J+ - Estimated concentration, result may be biased high

ND - Not detected

TCDD - 2,3,7,8 tetrachlorinated dibenzo p dioxin

TEQ - TCDD Toxicity Equivalent for Mammals

pg/g - picogram per gram

Bold — Overburden and excavation bottom sample exceed 240 pg/g. These intervals may remain or be re-used within the excavated polygons if a depth weighted average below 240 pg/g can be achieved.

Bold — Sidewall sample concentrations exceed 240 pg/g

Table 6

PC-FSE – Soil Analytical Results Summary
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Excavation Area:		Northeast	Northeast	Northeast	Northeast	Northeast	Northeast	Northeast	Northeast	Northeast	Northeast	Northeast
Sample Location:		NE-H1, NE-H2, NE-H3, NE-H4	NE-I1, NE-I2, NE-I3	NE-J1, NE-J2	NE-K1, NE-K2	NE-M1, NE-M2, NE-M3	NE-L2, NE-L3, NE-L4	NE-L2, NE-L3, NE-L4	NE-A1	NE-A2	NE-B3	NE-C1
Sample Identification:	Units	11215131-120121-S-SPS-NE-O-8	11215131-120121-S-SPS-NE-O-9	11215131-121621-S-BN-NE-O-10	11215131-121621-S-BN-NE-O-11	11215131-121721-S-BN-NE-O-12	11215131-020522-S-SB-NE-O-13	11215131-020522-S-SB-NE-O-14	11215131-113021-S-JC-NE-S-1	11215131-113021-S-JC-NE-S-2	11215131-113021-S-JC-NE-S-3	11215131-120121-S-JC-NE-S-4
Sample Date:		12/01/2021	12/01/2021	12/16/2021	12/16/2021	12/17/2021	02/05/2022	02/05/2022	11/30/2021	11/30/2021	11/30/2021	12/01/2021
Sample Type:		Overburden	Overburden	Overburden	Overburden	Overburden	Overburden	Overburden	Sidewall	Sidewall	Sidewall	Sidewall
Dioxins/Furans												
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	186	69.3	1100	128	109	85.8	533	165	2690	8940 J	3010
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	12300 J	108000 J	7110	7580	15100 J	12600 J	9660	5670	3840	9310 J	6360 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	34.5	16	156	37.9	61.2	22.9	70.9	55.3	84.7	486	135
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	440	722	647	284	476	274	696	517	295	663	561
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	4.12 J	1.45 J	10.8	3.91 J	3.06	1.46 J	5.39	3.77	11.1	31.9	14.8
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1.81 J	1.22 J	5.58	4.26	2.05 J	1.87 J	7.15	2.76	25.9	65.5	25.1
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.6 J	2.79	2.68	1.48 J	2.87 J	1.23 J	4.13	2.85	1.98 J	5.48 J	4.1
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.844 J	0.61 J	3.15	2.39 J	1.77 J	1.17 J	5.53	1.91	8.1	20	9.01
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	5.81	4.55	15.7	6.05	10.8	4.6 J	17.6	11.7	8.82	23.9	16.3
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.657 U	0.533 U	1.12 U	1.07 U	1.41 U	0.325 U	0.535 U	0.692 U	0.738 U	1.36 U	1.23 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.85 J	4.43	6.1	2.56 J	6.16	2.8	9.09	6.71	4.92	13.1	8.34
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.478 J	0.535 J	2.52	2.05 J	1.45 J	1.13 J	4.13	1.35 J	17.7	44.5	16.9
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.866 J	0.937 J	1.34 J	1.15 J	1.04 U	0.656 J	2.58	1.29 J	3.15	7.95	3.93
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1.58 J	0.882 J	4.73 J	2.7	2.45 J	1.71 J	6.68	3.28	4.95	15.8	6.6
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	1.22 J	1.23 J	4.97 J+	3.28	2.29 J	1.74 J	6.85	3.2	18.3 J+	48.2 J+	19.2 J+
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	3.44	2.52	99.5	10.9	3.46 J	5.11	65	5.24	636 J	1620 J	589 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.277 J	0.313 U	22.9	1.5 J	0.851 U	0.386 U	20.5	1.21 J	166	425	151
Total heptachlorodibenzofuran (HpCDF)	pg/g	140 J	58.8 J	432 J	129 J	162 J	81.7 J	192 J	180 J	203 J	998 J	347 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	809 J	1570 J	1900 J	624 J	1030 J	542 J	1380 J	1120 J	638 J	1370 J	1320 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	32.3 J	18.4 J	133 J	48.5 J	56 J	28 J	97.6 J	62.5 J	102 J	340 J	150 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	54.9 J	58.3 J	179 J	53 J	96.9 J	45.6 J	169 J	115 J	96.5 J	270 J	150 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	10.1 J	11 J	55 J	30.9 J	19.7 J	16 J	66.5 J	32.4 J	95.1 J	279 J	113 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	4.7 J	5.38 J	19.2 J	8.19 J	3.68 J	4.97 J	30.2 J	11.9 J	19.8 J	58.3 J	26.4 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	11.1 J	10.8 J	192 J	50.2 J	19.8 J	15.9 J	189 J	36.1 J	1200 J	2960 J	1190 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	3.31 J	0.313 U	27.5 J	1.5 J	1.23 J	0.386 U	41.2 J	3.81 J	194 J	501 J	176 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	11.8 J	42.8 J	50.2 J	12.3 J	13.7 J	9.85 J	47.6	14.5 J	**250 J**	**642 J**	237 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	11.9 J	42.8 J	50.2 J	12.4 J	14.7 J	10.1 J	47.6	14.5 J	**250 J**	**642 J**	237 J

Notes:

U - Not detected at the associated reporting limit

J - Estimated concentration

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J+ - Estimated concentration, result may be biased high

ND - Not detected

TCDD - 2,3,7,8 tetrachlorinated dibenzo p dioxin

TEQ - TCDD Toxicity Equivalent for Mammals

pg/g - picogram per gram

Bold — Overburden and excavation bottom sample exceed 240 pg/g. These intervals may remain or be re-used within the excavated polygons if a depth weighted average below 240 pg/g can be achieved.

Bold — Sidewall sample concentrations exceed 240 pg/g

Table 6

PC-FSE – Soil Analytical Results Summary
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Excavation Area:		Northeast	Northeast	Northeast	Northeast	Northeast	Northeast	Northeast	Northeast	Northeast	Northeast	Northeast
Sample Location:		NE-C3	NE-E1	NE-E2	NE-F1	NE-G1	NE-G2	NE-H1	NE-H3	NE-I1	NE-I2	NE-J1
Sample Identification:	Units	11215131-120121-S-JC-NE-S-5	11215131-113021-S-SPS-NE-S-6	11215131-113021-S-SPS-NE-S-7	11215131-120121-S-JC-NE-S-8	11215131-120121-S-JC-NE-S-9	11215131-120121-S-JC-NE-S-10	11215131-120121-S-SPS-NE-S-11	11215131-120121-S-SPS-NE-S-12	11215131-120121-S-SPS-NE-S-13	11215131-120121-S-SPS-NE-S-14	11215131-121621-S-BN-NE-S-15
Sample Date:		12/01/2021	11/30/2021	11/30/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021	12/16/2021
Sample Type:		Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall
Dioxins/Furans												
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	49	124	203	534	198	1390	271	402	4340	29.4	101
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	4850	9210 J	6740	7450 J	2040	10500 J	4550	4820	38100 J	5020	4270
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	13.2	60.8	82.4	23.3	14.9	55.2	62.4	62	410	7.39 J	26
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	164	510	669	172	79.2	179	419	477	1730	152	328
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	1.32 J	5.16	5.06 J	4.3	2.83	7.26	8.1	4.13 J	28.1	0.979 J	2.74
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.982 J	4.69	4.42 J	3.15	12.2	6.78	28.7	5.54	28	3.42	1.71 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.09 J	3.04 J	3.63 J	1.62	0.988 J	1.8 J	3.74	2.1 J	6.24	0.792 U	2.61
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.846 J	5.6	3.31 J	1.4 J	3.69	2.34	9.29	4.88	14.9	1.18 J	1.18 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	4.5	12.5	14.9	4.17	2.42	5.24	11.3	9.96	32.6	2.44	6.71
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.525 U	1.46 J	1.31 U	0.135 U	0.0966 U	0.282 U	0.142 U	0.863 U	1.53 U	0.611 U	0.231 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.41 J	5.59 J	6.45 J	3.12	2.52	3.7	6.22	4.95 J	14.5	2.37 J	4.7
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.471 U	2.15	1.58 J	2.02	8.06	4.56	19	4.24	17.7	1.79 J	0.873 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.492 U	1.69	1.4 U	0.883 J	1.51 J	1.91	3.23	1.59 J	4.75	0.619 U	0.557 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.869 J	6.31	3.83 J	1.56	1.27 J	1.92	5.7	6.31	14	0.783 J	1.41 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.787 J	3.92	3.51 J	2.63 J+	7.03	5.46 J+	17.4	7.09 J+	22.8 J+	1.92 J	1.06 J+
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	3.71	10.4	5.36	65.7	226	182	485	45.5	525	22.1	17.5
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.979 J	1.79 J	1.31 U	20.6	86.3	56.7	191	10.1	136	5.46	5.75
Total heptachlorodibenzofuran (HpCDF)	pg/g	45.9 J	183 J	243 J	59.6 J	33.7 J	114 J	201 J	151 J	1480 J	20.8 J	81.5 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	392 J	1050 J	1410 J	397 J	209 J	420 J	885 J	891 J	3680 J	321 J	1200 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	15.6 J	78.4 J	76.5 J	26 J	28.2 J	38.8 J	113 J	76.7 J	362 J	14.5 J	27.4 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	61.6 J	118 J	142 J	54.4 J	62.6 J	67.1 J	108 J	91.9 J	257 J	31 J	119
Total pentachlorodibenzofuran (PeCDF)	pg/g	6.86 J	44.6 J	33.9 J	19.5 J	30.4 J	30.5 J	83.4 J	75.2 J	167 J	15.4 J	9.02 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	6.82 J	19.8 J	14.9 J	9.2 J	14.2 J	14.6 J	14.8 J	21.8 J	54.7 J	0.619 U	7.01 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	9.3 J	59.1 J	24.1 J	110 J	448 J	309 J	973 J	169 J	1140 J	54.5 J	40.6 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	4.75 J	6.99 J	1.31 U	28.4 J	109 J	67.9 J	216 J	19.1 J	182 J	9.4 J	10.9 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	5.91 J	18.2 J	14.9 J	34.8 J	117 J	86.7 J	**261**	28.9 J	**246 J**	12.4 J	15.1 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	6.19 J	18.2 J	16.4 J	34.8 J	117 J	86.8 J	**261**	28.9 J	**246 J**	12.8 J	15.1 J

Notes:

U - Not detected at the associated reporting limit

J - Estimated concentration

J- - Estimated concentration, result may be biased low

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ND - Not detected

TCDD - 2,3,7,8 tetrachlorinated dibenzo p dioxin

TEQ - TCDD Toxicity Equivalent for Mammals

pg/g - picogram per gram

Bold — Overburden and excavation bottom sample exceed 240 pg/g. These intervals may remain or be re-used within the excavated polygons if a depth weighted average below 240 pg/g can be achieved.

Bold (yellow) — Sidewall sample concentrations exceed 240 pg/g

Table 6

PC-FSE – Soil Analytical Results Summary
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Excavation Area: / Sample Location: / Sample Identification: / Sample Date: / Sample Type:	Units	Northeast NE-K1 11215131-121621-S-BN-NE-S-16 12/16/2021 Sidewall	Northeast NE-L1 11215131-121721-S-BN-NE-S-17 12/17/2021 Sidewall	Northeast NE-M1 11215131-121721-S-BN-NE-S-18 12/17/2021 Sidewall	South Central SC-A1, SC-A2, SC-A3, SC-A4, SC-A5 11215131-120621-S-JC-SC-B-1 12/06/2021 Excavation Bottom	South Central SC-A1, SC-A2, SC-A3, SC-A4, SC-A5 11215131-120621-S-JC-SC-B-1H 12/06/2021 Excavation Bottom	South Central SC-B1, SC-B2, SC-B3, SC-B4, SC-B5 11215131-120621-S-SS-SC-B-2 12/06/2021 Excavation Bottom	South Central SC-B1, SC-B2, SC-B3, SC-B4, SC-B5 11215131-120621-S-SS-SC-B-2H 12/06/2021 Excavation Bottom	South Central SC-C1, SC-C2, SC-C3, SC-E1, SC-E2 11215131-120721-S-JC-SC-B-3 12/07/2021 Excavation Bottom	South Central SC-D1, SC-D2, SC-D3, SC-D4, SC-E3 11215131-120721-S-SS-SC-B-4 12/07/2021 Excavation Bottom	South Central SC-F1, SC-F2, SC-F3, SC-F4, SC-F5 11215131-120421-S-JC-SC-B-5 12/04/2021 Excavation Bottom
Dioxins/Furans											
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	256	3250	1760	966	6130	9.85	0.634 U	5880	18.6	9.69
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	8980	13500 J	15900 J	61800 J	24400 J	658	347	10900 J	527	507 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	27.4	188	77.6	915	1720 J+	13.5	0.518 J+	492	3.63	3.2
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	274	527	274	3740	1610	46.2	14.4 J	758	24.8	30.5
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	4.03	33.2	7.42	200	615	7.02	0.517 U	118	0.826 J	0.817 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	3.09	222	15.4	1640	5020 J	63.9	0.366 U	960	7.62	6.6
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.08 J	3.94	3.16	28.3	11.5	0.659 J	0.614 U	5.47	0.495 J	0.334 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1.48 J	60.6	4.87	451	1270	15.2	0.322 U	254	1.79 J	1.54 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	5.16	17.8	9.07	136	58.8	1.38 J	0.591 J	29.1	0.914 J	0.892 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.192 U	0.345 U	0.254 U	0.592 U	2.23 U	0.205 U	0.499 U	0.718 U	0.17 U	0.224 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	3.88	9.31	5.57	53.7	20.1	1.54 J	1.07 J	12.6	1.25 J	1.54 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	1.81 J	160	9.47	1070	2760	30.4	0.363 U	566	4.8	4.03
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.891 J	20.2	2.75	115	235	2.97	0.472 U	48.7	0.579 J	0.607 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1.5 J	18.2	3.58	121	285	3.6	0.493 U	59.4	0.47 J	0.497 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	2.41 J+	132 J+	10.5 J+	864 J+	1960 J+	26.2 J+	0.418 U	426 J+	3.07 J+	3.01
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	49.9	4620 J	329	28500 J	68200 J	725	9.34	13600 J	63.2	104
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	15.4	1760 J	111	10500 J	24000 J	268	3.53	4610 J	23.5	37.4
Total heptachlorodibenzofuran (HpCDF)	pg/g	68.6 J	417 J	175 J	2070	3170 J	25.8 J	0.518 J	934 J	5.99 J	6.66
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	611 J	1160 J	633 J	7970	3200 J	143 J	90 J	1610 J	85.7 J	91.7
Total hexachlorodibenzofuran (HxCDF)	pg/g	26.1 J	448 J	78.2 J	3130	7870 J	99.3 J	0.408 U	1620 J	12.3 J	11.4
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	59.3	193	90.6	1070	463 J	53.8 J	46.9 J	250 J	35.1 J	30.6
Total pentachlorodibenzofuran (PeCDF)	pg/g	16.6 J	513 J	62.1 J	3280	7400 J	93.3 J	0.389 U	1640 J	12.1 J	10.5
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	7.54 J	56.3 J	17.7 J	266	341 J	13.3 J	9.81 J	105 J	6.8 J	5.43
Total tetrachlorodibenzofuran (TCDF)	pg/g	90.7 J	8890 J	679 J	53900	125000 J	1470 J	15.2 J	26100 J	126 J	208
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	19.2 J	1980 J	131 J	11800	27000 J	310 J	12.6 J	5190 J	31.7 J	45.3
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	29.6 J	**2330 J**	163 J	**14100 J**	**32400 J**	**362 J**	4.88 J	**6310 J**	33.2 J	51.0 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	29.6 J	**2330 J**	163 J	**14100 J**	**32400 J**	**362 J**	5.30 J	**6310 J**	33.2 J	51.1 J

Notes:

U - Not detected at the associated reporting limit

J - Estimated concentration

J- - Estimated concentration, result may be biased low

J+ - Estimated concentration, result may be biased high

ND - Not detected

TCDD - 2,3,7,8 tetrachlorinated dibenzo p dioxin

TEQ - TCDD Toxicity Equivalent for Mammals

pg/g - picogram per gram

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Bold (yellow) — Sidewall sample concentrations exceed 240 pg/g

Table 6

PC-FSE – Soil Analytical Results Summary
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Excavation Area:		South Central	South Central	South Central	South Central	South Central	South Central	South Central	South Central	South Central	South Central
Sample Location:		SC-I1, SC-I2, SC-I3, SC-J1, SC-J2, SC-J3	SC-I1, SC-I2, SC-I3, SC-J1, SC-J2, SC-J3	SC-K1, SC-K2, SC-K3, SC-K4	SC-K1, SC-K2, SC-K3, SC-K4	SC-N1, SC-N2, SC-N3, SC-N4, SC-N5	SC-N1, SC-N2, SC-N3, SC-N4, SC-N5	SC-N6	SC-N6	SC-O1, SC-O2	SC-P1, SC-P2, SC-P3
Sample Identification:	Units	11215131-120621-S-SS-SC-B-6	11215131-120621-S-SS-SC-B-6H	11215131-120421-S-SS-SC-B-7	11215131-120421-S-SS-SC-B-7H	11215131-122121-S-BN-SC-B-8	11215131-122121-S-BN-SC-B-8H	11215131-011222-S-BN-SC-B-8A	11215131-011222-S-BN-SC-B-8aH	11215131-122021-S-BN-SC-B-9	11215131-122021-S-BN-SC-B-10
Sample Date:		12/06/2021	12/06/2021	12/04/2021	12/04/2021	12/21/2021	12/21/2021	01/12/2022	01/12/2022	12/20/2021	12/20/2021
Sample Type:		Excavation Bottom	Excavation Bottom	Excavation Bottom	Excavation Bottom	Excavation Bottom	Excavation Bottom	Excavation Bottom	Excavation Bottom	Excavation Bottom	Excavation Bottom
Dioxins/Furans											
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	92.5	0.897 U	1420 J	7840	320	604	1.4 J	0.349 U	9760	1.16 J
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	1040	311	18200 J	6620	24700 J	31100 J	590	450	7720	448
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	161	0.513 J+	1850	310 J+	189	338	0.815 J	0.0992 U	515	1.07 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	67.5	16.6	1270	469	1270	1680	30.5	22.7	537	20.9
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	76.3	0.476 U	522 J	54.8	15.5	51.7	0.44 U	0.147 U	127	0.261 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	452	0.307 U	4260	291	14.6	321	1.06 J	0.232 J	951	1.42 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.757 J	0.64 U	5.65	5.97	7.35	9.67	0.661 J	0.411 J	4.74	0.454 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	106	0.302 U	1090	80.7	14.3	91.5	0.562 J	0.146 U	245	0.379 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.14 J	0.619 U	33.7	18.8	41.1	57	0.993 J	0.774 J	20.7	0.693 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.375 U	0.396 U	2.75 U	1.21 U	0.582 U	0.861 U	0.336 U	0.164 U	0.954 U	0.298 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.78 J	0.517 J	11.1	9.25	16.8	24.7	1.73 J	1.45 J	10.2	1.32 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	102	0.457 U	2250	166	3.87	208	1.26 J	0.321 J	500	0.675 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	11.3	0.402 U	213	21.4	3.76 J	26.8	0.52 U	0.401 J	28.2	0.567 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	14.1	0.461 U	213 J	20.2	11.2	33.4	0.287 U	0.146 U	49	0.375 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	78.3 J+	0.452 U	1760 J+	151	11.7 J+	176	0.875 J	0.228 U	280	0.554 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	3020 J	14	57200 J	5820 J	23.1	5680 J	22.1	2.58	8400 J	16.4
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	1080 J	5.32	21300 J	1980 J	6.23	2080 J	7.15	1.13	2260 J	5.17
Total heptachlorodibenzofuran (HpCDF)	pg/g	277 J	1.29 J	2940 J	595 J	552 J	880 J	1.3 J	0.12 U	960 J	1.37 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	184 J	64.6 J	2530 J	1250 J	2860 J	3630 J	98.4 J	72.7 J	1190 J	86.2 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	644 J	0.358 U	6490 J	602 J	325 J	831 J	2.3 J	0.232 J	1610 J	2.2 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	69.5 J	32.3 J	232 J	237 J	328 J	472 J	26 J	26.4 J	203 J	35.8 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	288 J	0.454 U	6200 J	584 J	164 J	794 J	5.03 J	0.321 J	1270 J	2.11 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	27 J	5.92 J	288 J	61.2 J	36.8 J	86.3 J	4.88 J	4.53 J	69.6 J	5.39 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	5930 J	28.1 J	99600 J	11700 J	140 J	11300 J	68.5 J	8.67 J	16500 J	32.4 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	1230 J	14.5 J	23800 J	2260 J	29.3 J	2370 J	9.97 J	5.21 J	2540 J	14.4 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	**1480 J**	7.04 J	**28400 J**	**2690 J**	48.7 J	**2820 J**	10.7 J	2.45 J	**3370 J**	7.77 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	**1480 J**	7.45 J	**28400 J**	**2690 J**	48.7 J	**2820 J**	10.9 J	2.51 J	**3370 J**	8.09 J

Notes:

U - Not detected at the associated reporting limit

J - Estimated concentration

J- - Estimated concentration, result may be biased low

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ND - Not detected

TCDD - 2,3,7,8 tetrachlorinated dibenzo p dioxin

TEQ - TCDD Toxicity Equivalent for Mammals

pg/g - picogram per gram

Bold — Overburden and excavation bottom sample exceed 240 pg/g. These intervals may remain or be re-used within the excavated polygons if a depth weighted average below 240 pg/g can be achieved.

Bold (yellow) — Sidewall sample concentrations exceed 240 pg/g

Table 6

PC-FSE – Soil Analytical Results Summary
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Excavation Area: Sample Location: Sample Identification: Sample Date: Sample Type:	Units	South Central SC-Q1, SC-Q2, SC-Q3, SC-Q4, SC-Q5 11215131-122021-S-BN-SC-B-11 12/20/2021 Excavation Bottom	South Central SC-Q1, SC-Q2, SC-Q3, SC-Q4, SC-Q5 11215131-122021-S-BN-SC-B-11H 12/20/2021 Excavation Bottom	South Central SC-P4, SC-P5, SC-P6 11215131-011222-S-BN-SC-B-12 01/12/2022 Excavation Bottom	South Central SC-Q5, SC-Q6, SC-Q7 11215131-011222-S-BN-SC-B-13 01/12/2022 Excavation Bottom	South Central SC-Q5, SC-Q6, SC-Q7 11215131-011222-S-BN-SC-B-13H 01/12/2022 Excavation Bottom	South Central SC-P7, SC-P8, SC-P9 11215131-020622-S-SB-SC-B-14 02/06/2022 Excavation Bottom	South Central SC-Q8, SC-Q9, SC-Q10, SC-Q11, SC-Q12 11215131-020622-S-SB-SC-B-15 02/06/2022 Excavation Bottom	South Central SC-Q8, SC-Q9, SC-Q10, SC-Q11, SC-Q12 11215131-020622-S-SB-DUP-16 02/06/2022 Duplicate	South Central SC-Q8, SC-Q9, SC-Q10, SC-Q11, SC-Q12 11215131-020622-S-SB-SC-B-15H 02/06/2022 Excavation Bottom	South Central SCW-QR1 11215131-020622-S-SB-SC-B-16 02/06/2022 Excavation Bottom
Dioxins/Furans											
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	636	2300	0.851 U	1340	2210	1.95 U	3200	3360	1320	2660
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	14600 J	2690	345	9620	2390	386	8540	8580	1650	3330
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	524	119	0.178 U	1230	94.1	0.233 U	566	533	64.2	360
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	1390	175	15	620	173	18	778	844	112	255
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	167	18.7	0.314 U	513	18.5	0.407 U	202	176	12.9	122
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1510	108	0.24 U	4630	86.2	0.255 U	1730	1620	69.4	991
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	3.95	1.64 J	0.33 U	3.98	1.66 J	0.376 J	5.32	7.51	1.17 J	2.47 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	380	29.9	0.218 U	1100	21.5	0.208 U	418	403	14.8	221
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	27.5	7.84	0.3 U	20.9	6.75	0.699 J	22	22.6	4.26	9.41
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.903 U	0.315 U	0.288 U	1.07 U	0.308 U	0.289 U	0.594 U	0.567 U	0.381 U	0.562 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	12.5	4.21	0.353 U	7.13	3.67	0.969 J	12.9	11.9	3.31	4.77
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	1040	60.6	0.361 U	2300	31.1	0.486 J	994	951	25.8	400
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	87.2	7.54	0.31 U	185	3.74	0.346 U	81.4	74.9	2.14 J	25.6
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	78.1 J-	7.28	0.238 U	235	5.43	0.223 U	87.6	84.7	3.75	43.1
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	793	52.5	0.335 U	1440 J+	23.6	0.263 U	682	598	14 J+	242
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	27600 J	1910 J	2.55 U	49700 J	765	7.49	21300 J	19000 J	341	6670 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	7710 J	628	0.465 U	18800 J	289	2.62 J	8140 J	7630 J	121	2450 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	979 J	228 J	0.23 U	2140 J	206 J	0.301 U	1030 J	988 J	122 J	626 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	2790 J	430 J	61.7 J	1240 J	436 J	83.6 J	2220 J	2540 J	282 J	663 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	2420 J	214 J	0.242 U	6940 J	168 J	0.239 U	2650 J	2510 J	123 J	1490 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	263 J	91.1 J	20 J	143 J	82.8 J	40.4 J	366 J	467 J	64.2 J	132 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	2920 J	211 J	0.348 U	5910 J	110 J	0.486 J	2630 J	2380 J	76.8 J	1020 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	132 J	27.3 J	3.99 J	231 J	16.7 J	7.4 J	132 J	137 J	13.4 J	50 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	55800 J	3820 J	2.17 J	88600 J	1550 J	14.1 J	39800 J	34800 J	696 J	13000 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	8410 J	717 J	6.95 J	21000 J	332 J	14.7 J	9120 J	8560 J	144 J	2760 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	**11100 J**	**865 J**	0.254	**25100 J**	**394 J**	3.88 J	**10800 J**	**10050 J**	175 J	**3360 J**
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	**11100 J**	**865 J**	0.926	**25100 J**	**394 J**	4.15 J	**10800 J**	**10050 J**	175 J	**3360 J**

Notes:

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TCDD - 2,3,7,8 tetrachlorinated dibenzo p dioxin

TEQ - TCDD Toxicity Equivalent for Mammals

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Table 6

PC-FSE – Soil Analytical Results Summary
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Excavation Area:		South Central	South Central	South Central	South Central	South Central	South Central	South Central	South Central	South Central	South Central	South Central
Sample Location:		SCW-QR1	SC-Q13, SC-Q14, SC-Q15	SC-Q13, SC-Q14, SC-Q15	SC-A1, SC-A2, SC-A3, SC-A4, SC-A5	SC-B1, SC-B2, SC-B3, SC-B4, SC-B5	SC-C1, SC-C2, SC-C3	SC-D1, SC-D2, SC-D3, SC-D4	SC-E1, SC-E2, SC-E3	SC-F1, SC-F2, SC-F3, SC-F4, SC-F5	SC-G1, SC-G2	SC-H1, SC-H2, SC-H3
Sample Identification:	Units	11215131-020622-S-SB-SC-B-16H	11215131-021722-S-SB-SC-B-17	11215131-021722-S-SB-SC-B-17H	11215131-120621-S-JC-SC-O-1	11215131-120621-S-SS-SC-O-2	11215131-120721-S-JC-SC-O-3	11215131-120721-S-SS-SC-O-4	11215131-120721-S-JC-SC-O-5	11215131-120421-S-JC-SC-O-6	11215131-120421-S-JC-SC-O-7	11215131-120421-S-SS-SC-O-8
Sample Date:		02/06/2022	02/17/2022	02/17/2022	12/06/2021	12/06/2021	12/07/2021	12/07/2021	12/07/2021	12/04/2021	12/04/2021	12/04/2021
Sample Type:		Excavation Bottom	Excavation Bottom	Excavation Bottom	Overburden	Overburden	Overburden	Overburden	Overburden	Overburden	Overburden	Overburden
Dioxins/Furans												
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	11.5	2.31 J	0.478 U	274	137	67.4	176	163	213	1510	413
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	356	732	508	16800 J	3750	5110	9890	9790	6540 J	15200 J	23500 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	4.92	1.52 J	0.362 J	147	40.7	38.2	102	104	70.5	597	236
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	20.6	48	26.4	957	259	263	712	671	463	1020	1730
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	2.15 J	0.381 J	0.216 U	11.7	5.24	3.71	8.9	8.47	6.52	206	18.6
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	15.5	2.34 J	0.967 J	16.5	8.54	9.2	15.8	10.6	10.5	2020	22.2
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.624 J	0.595 U	0.521 J	8.12	2.47	2.76	5.16	5.27	3.87	7.54	12.4
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	3.06 J	0.8 J	0.152 U	10.3	3.3	4.42	8.87	8.18	5.6	494	16.5 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.765 J	1.4 J	1.02 J	33.4	7.4	9.71	23.6	23.3	15.8	36.3	54.4
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.364 U	0.265 U	0.184 U	0.288 U	0.245 U	0.32 U	0.302 U	0.368 U	0.264 U	0.471 U	0.278 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.43 J	2.23 J	1.45 J	16.2	4.66	5.68	11.2	11.2	8.67	14.6	25.4
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	6.1	1.9 J	0.56 J	6.46	3.37	5.83	7.05	3	3.87	1090	5.45
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.702 J	0.635 J	0.315 U	3.57	1.1 J	1.57 J	2.95	2.88	2.25 J	74.7	5.14 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.829 J	0.239 U	0.158 U	13.1	3.25	5.09	10.9	11.2	6.75	105	23.8
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	4.25	1.51 J	0.629 J	10.9 J+	3.88 J+	6.43 J+	12.5 J+	7.99 J+	7.92 J+	675 J+	16.2 J+
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	114	58	17.7	89	38.9	12.7	39.8	14.8	53.7	20100 J	21.5
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	41.8	20.8	6.42	31	11.9	2.97	12.8	4.06	18	7500 J	4.9
Total heptachlorodibenzofuran (HpCDF)	pg/g	8.5 J	2.9 J	0.362 J	413	121 J	106 J	304 J	289 J	201	1220	681 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	70.2 J	152 J	95.9 J	2360	975 J	556 J	1560 J	1570 J	985	1970	3950 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	22 J	4.08 J	0.967 J	222	57.5 J	83.8 J	189 J	176 J	112	3150	375 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	31.9 J	61.3 J	40.6 J	310	98.4 J	82.2 J	200 J	206 J	134	239	447 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	15 J	5.24 J	1.19 J	94.1	29.5 J	63.6 J	126 J	107 J	75.2	2740	208 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	6.3 J	9.12 J	7 J	28.2	9.91 J	11.2 J	25.2 J	24.5 J	14.7	116	41.6 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	233 J	117 J	35.9 J	214	82 J	42.6 J	128 J	70.7 J	133	38700	127 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	51.9 J	36.9 J	16.7 J	43.1	15.4 J	5.84 J	23.7 J	11.1 J	24.8	8390	17.8 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	58.0 J	29.1 J	9.21 J	73.0 J	25.3 J	16.2 J	42.5 J	28.7 J	40.7 J	**10100 J**	59.7 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	58.0 J	29.2 J	9.39 J	73.0 J	25.3 J	16.2 J	42.5 J	28.7 J	40.7 J	**10100 J**	59.7 J

Notes:

U - Not detected at the associated reporting limit

J - Estimated concentration

J- - Estimated concentration, result may be biased low

J+ - Estimated concentration, result may be biased high

ND - Not detected

TCDD - 2,3,7,8 tetrachlorinated dibenzo p dioxin

TEQ - TCDD Toxicity Equivalent for Mammals

pg/g - picogram per gram

Bold — Overburden and excavation bottom sample exceed 240 pg/g. These intervals may remain or be re-used within the excavated polygons if a depth weighted average below 240 pg/g can be achieved.

Bold — Sidewall sample concentrations exceed 240 pg/g

Table 6

PC-FSE – Soil Analytical Results Summary
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Excavation Area:		South Central	South Central	South Central	South Central	South Central	South Central	South Central	South Central	South Central	South Central
Sample Location:		SC-I1, SC-I2, SC-I3	SC-J1, SC-J2, SC-J3, SC-J4	SC-K1, SC-K2, SC-K3, SC-K4	SC-L1, SC-L2, SC-L3, SC-L4, SC-L5	SC-M1, SC-M2, SC-M3, SC-M4, SC-M5	SC-M1, SC-M2, SC-M3, SC-M4, SC-M5	SC-N1, SC-N2, SC-N3, SC-N4, SC-N5	SC-N6	SC-O1, SC-O2	SC-P1, SC-P2, SC-P3
Sample Identification:		11215131-120621-S-SS-SC-O-9	11215131-120621-S-JC-SC-O-10	11215131-120421-S-SS-SC-O-11	11215131-120421-S-JC-SC-O-12	11215131-120421-S-SS-DUP-3	11215131-120421-S-SS-SC-O-13	11215131-122121-S-BN-SC-O-14	11215131-011222-S-BN-SC-O-14A	11215131-122021-S-BN-SC-O-15	11215131-122021-S-BN-SC-O-16
Sample Date:		12/06/2021	12/06/2021	12/04/2021	12/04/2021	12/04/2021	12/04/2021	12/21/2021	01/12/2022	12/20/2021	12/20/2021
Sample Type:	Units	Overburden	Overburden	Overburden	Overburden	Duplicate	Overburden	Overburden	Overburden	Overburden	Overburden
Dioxins/Furans											
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	392	197	195	595	297	270	48	22	40.8	257
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	19800 J	20800 J	6800	31700 J	17100 J	15300 J	1050	568	1870	8720
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	163	95.7	112	194	150	141	12.2	7.51	16.3	162
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	1160	709	622	3920	2030	2030	74.1	38	125	824
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	13.8	7.78	6.02	37.5	15.3	15.9	1.41 J	0.449 U	1.63 J	14.6
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	13.3	9.36	6.11	60.6	21.5	22.4	2.57	1.33 J	3.35	31.5
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	7.86	5.32	4.12	13.3	8.06	9.92	1.07 J	0.634 J	1.11 J	5.86
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	10.8	6.48	4.78	24.8	11.1	12.1	0.874 J	0.196 U	1.45 J	15.8
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	33.5	21	23.1	96.3	48.3	54	2.61 J	1.36 J	3.57	30.7
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.446 U	0.399 U	0.169 U	0.773 U	0.745 U	0.474 U	0.418 U	0.244 U	0.326 U	0.614 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	14.2	10.1	12	59.6	27.4	29.9	2.04 J	1.21 J	2.2 J	13.1
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	5.5	2.75	1.8 J	26.6	6.09	7.14	1.23 J	0.528 U	1.78 J	12.2
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	3.24	2.6	1.93 J	10.9	4.52	4.92	0.583 J	0.401 U	0.663 J	4.19 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	12	8.94	6.69	28.8	15	15.5	0.618 U	0.894 J	1.42 J	14.9
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	8.93 J+	7.42 J+	4.49 J+	58.5 J+	19 J+	23 J+	1.35 J	0.483 U	2.13 J	22.4 J+
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	16.1	21.5	14.3	105	37.8	40.1	15.7	3.82 U	16.1	140
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	3.45	5.45	3.72	6.65	5.68	2.9	4.54	1.47	4.02	22.6
Total heptachlorodibenzofuran (HpCDF)	pg/g	542 J	290 J	298 J	604	427 J	398 J	31.9 J	19.8 J	48.3 J	440 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	3240 J	1590 J	1330 J	7930	3940 J	3980 J	185 J	91.4 J	287 J	1650 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	232 J	153 J	123 J	370	204 J	217 J	16.4 J	10.1 J	26.5 J	313 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	358 J	182 J	198 J	963	457 J	487 J	36.5 J	15.2 J	34.5 J	208 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	103 J	79.6 J	50.3 J	366	133 J	159 J	9.24 J	1.65 J	18.5 J	233 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	25.5 J	17.6 J	22.5 J	113	53.9 J	54.8 J	4.85 J	0.401 U	4.69 J	21.1 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	58.9 J	70.2 J	49.5 J	640	163 J	193 J	31.4 J	7.02 J	37.1 J	310 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	8.35 J	8.89 J	9.78 J	62.8	30.6 J	27.1 J	6.49 J	1.47 J	5.25 J	25.4 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	39.7 J	33.1 J	23.7 J	126 J	60.2 J	59.9 J	9.26 J	2.64 J	10.3 J	71.8 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	39.8 J	33.1 J	23.7 J	126 J	60.2 J	59.9 J	9.31 J	3.14 J	10.3 J	71.8 J

Notes:

U - Not detected at the associated reporting limit

J - Estimated concentration

J- - Estimated concentration, result may be biased low

J+ - Estimated concentration, result may be biased high

ND - Not detected

TCDD - 2,3,7,8 tetrachlorinated dibenzo p dioxin

TEQ - TCDD Toxicity Equivalent for Mammals

pg/g - picogram per gram

Bold — Overburden and excavation bottom sample exceed 240 pg/g. These intervals may remain or be re-used within the excavated polygons if a depth weighted average below 240 pg/g can be achieved.

Bold — Sidewall sample concentrations exceed 240 pg/g

Table 6

PC-FSE – Soil Analytical Results Summary
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Excavation Area:		South Central	South Central	South Central	South Central	South Central	South Central	South Central	South Central	South Central	South Central	South Central
Sample Location:		SC-Q1, SC-Q2, SC-Q3, SC-Q4, SC-Q5	SC-Q1, SC-Q2, SC-Q3, SC-Q4, SC-Q5	SC-P4, SC-P5, SC-P6	SC-Q5, SC-Q6, SC-Q7	SC-P7, SC-P8, SC-P9	SC-Q8, SC-Q9, SC-Q10, SC-Q11, SC-Q12	SCW-QR1	SCW-QR1	SC-Q13, SC-Q14, SC-Q15	SC-A1	SC-A1
Sample Identification:	Units	11215131-122021-S-BN-DUP-9	11215131-122021-S-BN-SC-O-17	11215131-011222-S-BN-SC-O-18	11215131-011222-S-BN-SC-O-19	11215131-020622-S-SB-SC-O-20	11215131-020622-S-SB-SC-O-21	11215131-020622-S-SB-SC-O-22	11215131-020622-S-SB-SC-O-23	11215131-021722-S-SB-SC-O-24	11215131-120621-S-JC-DUP-4	11215131-120621-S-JC-SC-S-1
Sample Date:		12/20/2021	12/20/2021	01/12/2022	01/12/2022	02/06/2022	02/06/2022	02/06/2022	02/06/2022	02/17/2022	12/06/2021	12/06/2021
Sample Type:		Duplicate	Overburden	Overburden	Overburden	Overburden	Overburden	Overburden	Overburden	Overburden	Duplicate	Sidewall
Dioxins/Furans												
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	244	232	181	305	100	390	124	455	578	1030	1030
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	13200 J	12600 J	5500	14000 J	1590	26100 J	4450	28100 J	43000 J	28300 J	19900 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	91.8	93.6	69.4	306	21.4	161	33.1	157	217	731	557
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	1650	1780	429	1860	160	3170	388	2560	5520 J	1560	1130
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	18.5	16.9	6.54	90.4	2.31 J	34.7	3.16	23.5	33.5	220	162 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	35	27.8	13.4	777	3.77	92.6	4.82	34.8	48.3	1960	1520
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	4.45	5.08	4.64	9.15	1.87 J	8.52	1.86 J	9.95	16	7.21	4.66
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	14.5	12.5	6.39	198	1.91 J	35.9	2.8	17	25.6	501	408
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	32.4	43.3	14.2	72.4	4.94	71.5	7.93	57.2	143	46	30.7
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	1.17 U	0.755 J+	0.644 U	1.6 U	0.313 U	0.688 U	0.42 U	0.89 U	1.19 U	1.38 U	1.04 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	19.1	24.1	9.33	87.7	3.22	44.4	5.9	36.9	109	14.9	11.3
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	6.25 J	6.17	5.1 J	383	1.94 J	32.4	2.25 J	11	17.3	1240	965
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	3.22	3.46 J	1.91 J	47.4	0.764 J	9.84	1.22 J	6.94 J	19.7	101	69.6
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	14.2	13.2	6.34	43.8	2.47	28.2	2.3 J	20.8	29.8	106	91.5
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	22.3 J+	20.5 J+	7.82	265 J+	2.95	49.6	3.68	30.1 J+	41.7 J+	898	804 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	31.8	19.4	80.8	8240 J	34.4	510	21.7	68.4	82.6	30300 J	20800 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	2.22	1.55 J	22.9	2940 J	15.2	199	7.9	15.1	6.73	8810 J	5890 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	278 J	277 J	200 J	576 J	67.4 J	499 J	115 J	474 J	698 J	1440 J	1080 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	3340 J	3370 J	867 J	4150 J	505 J	5890 J	794 J	5000 J	10800 J	3170 J	2350 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	208 J	189 J	108 J	1290 J	33.5 J	399 J	47.1 J	279 J	418 J	3150 J	2480 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	334 J	419 J	125 J	1780 J	74.4 J	748 J	83.8 J	605 J	2130 J	325 J	228 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	150 J	145 J	65.9 J	1100 J	25 J	290 J	28.9 J	233 J	324 J	3390 J	2820 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	34.2 J	45.9 J	16.3 J	204 J	10.6 J	82.9 J	8.75 J	72.7 J	202 J	160 J	109 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	173 J	143 J	179 J	16300 J	80.8 J	1230 J	59.1 J	351 J	454 J	58900 J	40500 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	12.9 J	15.3 J	28.8 J	3320 J	19.5 J	261 J	7.9 J	51.5 J	79.6 J	9840 J	6600 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	49.1 J	48.7 J	47.6 J	**4050 J**	24.5 J	**345 J**	20.6 J	91.9 J	156 J	**12500 J**	**8540 J**
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	49.2 J	48.7 J	47.6 J	**4050 J**	24.5 J	**345 J**	20.7 J	91.9 J	156 J	**12500 J**	**8540 J**

Notes:

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100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Excavation Area:		South Central	South Central	South Central	South Central	South Central	South Central	South Central	South Central	South Central	South Central	South Central	South Central
Sample Location:		SC-A2	SC-A3	SC-B1	SC-B2	SC-B3	SC-C1	SC-D1	SC-D2	SC-F1	SC-F2	SC-F3	SC-I1
Sample Identification:	Units	11215131-120621-S-JC-SC-S-2	11215131-120621-S-JC-SC-S-3	11215131-120621-S-SS-SC-S-4	11215131-120621-S-SS-SC-S-5	11215131-120621-S-SS-SC-S-6	11215131-120721-S-JC-SC-S-7	11215131-120721-S-SS-SC-S-8	11215131-120721-S-SS-SC-S-9	11215131-120421-S-JC-SC-S-10	11215131-120421-S-JC-SC-S-11	11215131-120421-S-JC-SC-S-12	11215131-120621-S-SS-SC-S-13
Sample Date:		12/06/2021	12/06/2021	12/06/2021	12/06/2021	12/06/2021	12/07/2021	12/07/2021	12/07/2021	12/04/2021	12/04/2021	12/04/2021	12/06/2021
Sample Type:		Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall
Dioxins/Furans													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	2370	778	110 J	4.01 J	81.5 J	2920	67.2	144	18.6	25.5	1050	523
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	10900 J	27600 J	1610 J	492 J	2050 J	16300 J	3250 J	17800 J	1550	2020	5260	9890 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	304	686	36	2.26 J	21.7	453	30.1	103	13.9	33.9	285	173
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	705	1770	140	37	169	925	218	863	135	156	439	1740
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	62.7	190	6.97	0.469 J	2.87	150	3.16	6.91	1.19 J	8.07	88.9	13.4
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	383	1660	27.3	2.7	4.78	1230	7.48	11.9	2.03 J	70.6	925	9.6
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	5.22	9.76	1.93 J	0.828 J	1.59 J	6.16	1.74	5.24	1.5 U	0.994 J	3.45	17.1
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	105	417	7.61	0.912 J	2.29 J	305	3.03	7.44	1.2 J	17.2	226	5.84
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	23.3	54.1	4.82	1.2 J	4.22	29.9	6.62	25.1	3.72	5.03	20.6	33
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	1.06 U	1.41 U	0.115 U	0.106 U	0.172 U	0.368 U	0.106 U	0.145 U	0.708 U	0.729 U	1.32 U	0.288 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	8.5 J	20.8	3.71	1.94 J	3.48	13.3	4.08	11.3	2.23 J	2.34 J	6.3	20.7
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	237	978	9.65	1.69 J	3.15 J	840	4.06	3.62	0.874 U	43.9	384	4.42
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	22.7	69.7	1.41 J	0.56 J	0.826 J	51.2	1.05 J	2.71 J	0.723 U	4.39	23.6	2.94
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	30	93.4	3.12	0.386 J	2.23 J	77	3.4	9.31	1.98 J	5.62	51.5	8.48
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	197	688	7.61 J+	1.34 J	3.53 J+	575 J+	4.7 J+	8.43 J+	2.05 J	34.9	220	6.7 J+
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	6290 J	20600 J	191	38.5	30.2	14500 J	13.6	12.7	5.35	1080 J	7130 J	32.1
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	1640 J	5840 J	66.8	13.6	9.39	4840 J	3.22	3.1	1.33	281	1870 J	8.17
Total heptachlorodibenzofuran (HpCDF)	pg/g	642 J	1440 J	80.4 J	4.9 J	81.2 J	966 J	87.2 J	278 J	35.5 J	59.6 J	601 J	776 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	1510 J	3870 J	345 J	124 J	809 J	1830 J	480 J	1900 J	314 J	366 J	929 J	6760 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	743 J	2780 J	66.8 J	6.71 J	36 J	2020 J	60.7 J	176 J	26 J	124 J	1490 J	250 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	181 J	435 J	62.8 J	36.5 J	92.8 J	224 J	84.7 J	247 J	41.7 J	56 J	172 J	1160 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	754 J	2770 J	39.4 J	5.31 J	25.2 J	2280 J	43.2 J	92 J	18.5 J	131 J	963 J	64.5 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	46.4 J	118 J	9.35 J	5.3 J	11.2 J	94.9 J	14.3 J	45.9 J	0.723 U	9.05 J	43.8 J	65.1 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	12500 J	40400 J	391 J	82 J	74.4 J	28400 J	40.2 J	91.3 J	13.3 J	2150 J	13800 J	117 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	1860 J	6550 J	77.8 J	19.3 J	17 J	5280 J	12.9 J	28.1 J	3.47 J	314 J	2090 J	23.2 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	**2430 J**	**8470 J**	97.1 J	19.8 J	18.8 J	**6700 J**	13 J	32 J	5.57 J	**418 J**	**2820 J**	48 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	**2430 J**	**8470 J**	97.1 J	19.8 J	18.8 J	**6700 J**	13 J	32 J	6.05 J	**418 J**	**2820 J**	48 J

Notes:

U - Not detected at the associated reporting limit

J - Estimated concentration

J- - Estimated concentration, result may be biased low

J+ - Estimated concentration, result may be biased high

ND - Not detected

TCDD - 2,3,7,8 tetrachlorinated dibenzo p dioxin

TEQ - TCDD Toxicity Equivalent for Mammals

pg/g - picogram per gram

Bold — Overburden and excavation bottom sample exceed 240 pg/g. These intervals may remain or be re-used within the excavated polygons if a depth weighted average below 240 pg/g can be achieved.

Bold (yellow) — Sidewall sample concentrations exceed 240 pg/g

Table 6

PC-FSE – Soil Analytical Results Summary
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Excavation Area:		South Central	South Central	South Central	South Central	South Central	South Central	South Central	South Central	South Central	South Central	South Central
Sample Location:		SC-J1	SC-J2	SC-K2	SC-K3	SC-N1	SC-N2	SC-N3	SC-O1	SC-P1	SC-Q1	SC-Q2
Sample Identification:	Units	11215131-120621-S-JC-SC-S-14	11215131-120621-S-JC-SC-S-15	11215131-120421-S-SS-SC-S-16	11215131-120421-S-SS-SC-S-17	11215131-122121-S-BN-SC-S-18	11215131-122121-S-BN-SC-S-19	11215131-122121-S-BN-SC-S-20	11215131-122021-S-BN-SC-S-21	11215131-122021-S-BN-SC-S-22	11215131-122021-S-BN-SC-S-24	11215131-122021-S-BN-SC-S-25
Sample Date:		12/06/2021	12/06/2021	12/04/2021	12/04/2021	12/21/2021	12/21/2021	12/21/2021	12/20/2021	12/20/2021	12/20/2021	12/20/2021
Sample Type:		Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall
Dioxins/Furans												
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	123	50.7	103 J	4710 J	381	2650	3.75 J	17.5	1020	2820	15.6
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	7230 J	2250 J	2670 J	19200 J	53800 J	14700 J	657	828	4640	16800 J	1160
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	50.9	18.4	179	511	220	288	1.21 J	7.89	329	277	12.1
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	399	185	242	1590	1520	1030	28.2	61.5	288	1990	111
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	5.62	2.13	69.2	72.8	15.5	56.3	0.325 U	0.928 J	108	77.3	2.95
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	7.15	1.97	614	465	13.7	325	0.37 J	2.53	912	557	21.1
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.92 J	1.71 J	1.48 J	7.94	9.38	9.62	0.46 J	0.937 J	2.17 J	6.24	0.884 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	4.18	1.24 J	147	128	15.2	91.2	0.278 J	1.06 J	218	139	5.37
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	11.5	5.64	8.05	52.9	50.3	37.6	0.894 J	2.27 J	10.9	45.7	3.33
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.116 U	0.127 U	0.229 U	0.544 U	0.76 U	0.742 U	0.211 U	0.282 U	0.635 U	0.831 U	0.299 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	6.58	4.3	3.9	27.3	20.9	17.5	1.5 J	1.95 J	5.6	26.6	2.8
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	3.21	0.597 J	337	281	4.15	307	0.567 J	1.76 J	543	391	13.3
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	1.51 J	0.961 J	33.1	36.6	5.08	17.4	0.259 J	0.573 J	44.8	34.4	1.56 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	3.99	1.58 J	31.5	42.8	14.7	33.1	0.258 U	0.814 J	45	36.4	1.31 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	4.47 J+	1.49 J+	235 J+	233 J+	12.9 J+	225 J+	0.407 J	1.71 J	392 J+	304	10.8
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	64.3	6.83	7950 J	8310 J	14.3	3840 J	3.61	23.8	12600 J	9050 J	299
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	22.6	2.27	2950 J	2960 J	3.36	1330 J	0.95	8.11	4390 J	2980 J	114
Total heptachlorodibenzofuran (HpCDF)	pg/g	165 J	53 J	322 J	1350 J	672 J	715 J	2.42 J	22.3 J	573 J	614 J	26.3 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	962 J	473 J	516 J	3600 J	3340 J	2110 J	88.2 J	154 J	576 J	3670 J	237 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	76.9 J	28.6 J	938 J	1080 J	336 J	747 J	2.11 J	16.6 J	1400 J	985 J	37.9 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	142 J	79.9 J	88.9 J	527 J	423 J	303 J	26.3 J	30.8 J	100 J	466 J	47 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	38.4 J	14.5 J	888 J	939 J	192 J	962 J	3.96 J	14 J	1470 J	1180 J	40.6 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	17.3 J	9.02 J	51.3 J	114 J	50.6 J	59.1 J	4.05 J	3.71 J	73.6 J	98.6 J	10.1 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	142 J	21.4 J	15600 J	16400 J	128 J	7580 J	21.2 J	49.6 J	24400 J	18000 J	603 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	37 J	7.14 J	3180 J	3250 J	37.3 J	1510 J	4.98 J	10.3 J	4880 J	3360 J	134 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	42 J	8.82 J	**3950 J**	**4010 J**	60.1 J	**1880 J**	2.55 J	13.5 J	**5960 J**	**4130 J**	154 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	42 J	8.77 J	**3950 J**	**4010 J**	60.1 J	**1880 J**	2.58 J	13.6 J	**5960 J**	**4130 J**	154 J

Notes:

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TCDD - 2,3,7,8 tetrachlorinated dibenzo p dioxin

TEQ - TCDD Toxicity Equivalent for Mammals

pg/g - picogram per gram

Bold — Overburden and excavation bottom sample exceed 240 pg/g. These intervals may remain or be re-used within the excavated polygons if a depth weighted average below 240 pg/g can be achieved.

Bold (yellow) — Sidewall sample concentrations exceed 240 pg/g

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PC-FSE – Soil Analytical Results Summary
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Excavation Area: Sample Location: Sample Identification: Sample Date: Sample Type:	Units	South Central SC-N6 11215131-011222-S-BN-SC-S-26 01/12/2022 Sidewall	South Central SC-P5 11215131-011222-S-BN-SC-S-27 01/12/2022 Sidewall	South Central SC-Q5 11215131-011222-S-BN-SC-S-28 01/12/2022 Sidewall	South Central SC-Q6 11215131-011222-S-BN-SC-S-29 01/12/2022 Sidewall	South Central SC-P7, SC-P8, SC-P9 11215131-020622-S-SB-SC-S-30 02/06/2022 Sidewall	South Central SC-P7, SC-P8, SC-P9 11215131-020622-S-SB-SC-S-31 02/06/2022 Sidewall	South Central SC-Q8, SC-Q9, SC-Q10, SC-Q11, SC-Q12 11215131-020622-S-SB-SC-S-32 02/06/2022 Sidewall	South Central SC-Q13 11215131-021722-S-SB-SC-S-33 02/17/2022 Sidewall	Southwest SW-A1, SW-A2, SW-A3, SW-A4, SW-A5 11215131-120221-S-JC-SW-B-1 12/02/2021 Excavation Bottom	Southwest SW-B1, SW-B2, SW-B3, SW-B4, SW-B5 11215131-120221-S-JC-SW-B-2 12/02/2021 Excavation Bottom
Dioxins/Furans											
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	22.9	25.6	130	638	7.87	34.2	1780	163	83.7	201
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	1420	1280	2120	9610 J	454	1040	63300 J	9260	2350	2590
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	16.4	11.2	277	948	4.04	11.7	563	46.8	90.2	134
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	80.5	131	139	913	28.4	79.3	5760 J	1050	143	218
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	3.41	1.24 J	87.2	383	0.827 J	1.12 J	174	8.66	35.5	47.3
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	27.8	6.07	777	3880	7.14	2.22 J	1010	12.3	336	399
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.789 U	1.19 J	0.966 J	3.52	0.484 U	0.877 J	15.9	3.45 J	0.897 J	2.78
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	7.15	1.88 J	190	952	2.03 J	1.09 J	247	6.25	83.8	94.6
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.15	2.82 J	3.86	20.9	0.811 J	2.18 J	120	30	3.85	10
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.596 U	0.357 U	0.422 U	0.692 U	0.328 U	0.269 U	0.68 U	0.311 U	0.713 U	0.78 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.68 J	3.06	2.17	8.22	1.16 J	2.02 J	82.1	29	2.55	5.08
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	20.1	3.94	389	2310	3.82	0.752 J	425	4.68	213	223
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	2.38	0.82 J	29	115	0.601 J	0.372 J	39.1	5.55	16.7	12.6
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	2.04 J	1.3 J	32.1	207	0.406 J	1.2 J	88.1	6.36	16.4	19.1
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	15.8	3.74	268	1340 J+	3.04 J+	1.28 J	292	9.51 J+	168	146
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	491	66.1	9440 J	34200 J	90.8	5.52	7180 J	55.7	5540 J	4260 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	129	6.89	2680 J	9900 J	33.9	1.96	2710 J	16.2	1520 J	1180 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	41.2 J	28.3 J	426 J	1620 J	9.75 J	34.5 J	1440 J	153 J	162 J	239
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	179 J	361 J	302 J	1670 J	79.7 J	267 J	10900 J	2190 J	304 J	415
Total hexachlorodibenzofuran (HxCDF)	pg/g	55.2 J	23.1 J	1150 J	5860 J	12.8 J	18.3 J	1970 J	90 J	505 J	616
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	25.4 J	60.7 J	43.5 J	171 J	20 J	65.6 J	1260 J	573 J	48.5 J	81.1
Total pentachlorodibenzofuran (PeCDF)	pg/g	61.7 J	18.3 J	1010 J	5670 J	9.93 J	10.1 J	1330 J	67.3 J	595 J	584
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	3.98 J	6.3 J	41.3 J	159 J	3 J	10.6 J	163 J	50.2 J	28.1 J	32.1
Total tetrachlorodibenzofuran (TCDF)	pg/g	936 J	132 J	18800 J	67200 J	185 J	19.4 J	14400 J	165 J	11200 J	8630
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	145 J	13.6 J	2960 J	10900 J	38.6 J	10.7 J	3040 J	37.3 J	1690 J	1300
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	191 J	19.0 J	**3850 J**	**14400 J**	46.2 J	5.49 J	**3810 J**	52.9 J	**2200 J**	**1730 J**
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	191 J	19.0 J	**3850 J**	**14400 J**	46.3 J	5.51 J	**3810 J**	52.9 J	**2200 J**	**1730 J**

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100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Excavation Area:		Southwest	Southwest	Southwest	Southwest	Southwest	Southwest	Southwest	Southwest	Southwest
Sample Location:		SW-B1, SW-B2, SW-B3, SW-B4, SW-B5	SW-C1, SW-C2, SW-C3, SW-C4, SW-C5	SW-C1, SW-C2, SW-C3, SW-C4, SW-C5	SW-D1, SW-D2, SW-D3, SW-D4, SW-D5	SW-D1, SW-D2, SW-D3, SW-D4, SW-D5	SW-D1, SW-D2, SW-D3, SW-D4, SW-D5	SW-E1, SW-E2, SW-E3, SW-E4, SW-H1, SW-H2	SW-E1, SW-E2, SW-E3, SW-E4, SW-H1, SW-H2	SW-F1, SW-F2, SW-G1, SW-I1, SW-I2
Sample Identification:		11215131-120221-S-JC-SW-B-2H	11215131-120321-S-JC-SW-B-3	11215131-120321-S-JC-SW-B-3H	11215131-120221-S-SPS-SW-B-4	11215131-120221-S-SPS-SW-B-4H1	11215131-120221-S-SPS-SW-B-4H2	11215131-120321-S-SPS-SW-B-5	11215131-120321-S-SPS-SW-B-5H	11215131-120321-S-JC-SW-B-6
Sample Date:		12/02/2021	12/03/2021	12/03/2021	12/02/2021	12/02/2021	12/02/2021	12/03/2021	12/03/2021	12/03/2021
Sample Type:	Units	Excavation Bottom	Excavation Bottom	Excavation Bottom	Excavation Bottom	Excavation Bottom	Excavation Bottom	Excavation Bottom	Excavation Bottom	Excavation Bottom
Dioxins/Furans										
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	14.7	54.4	2.45 J	2830	1130	593	5830	2040	4560
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	448	1770	352	4780	1530	725	6510	2560	3880 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	6.13	85.7	2.29 J+	223	63.2 J+	43.3	390	87.7 J+	185
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	29.7	120	18.3	326	93.6	44.2	436	162	260
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	1.12 J	35.9	0.485 U	47.9	9.46	1.67 J	91.1	8.16	41.7
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	4.8	354	7.93	359	68.1	2.28 J	684	26.9	162
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.379 U	0.695 J	0.82 U	2.39 J	1.55 J	0.913 J	3.79	1.35 J	3.51
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1.31 J	85.8	2.3 J	84.3	19.1	0.794 J	175	8.21	41.2
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.998 J	2.98	0.706 U	10.7	4.16	1.77 J	15.9	6.86	13.6
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.229 U	0.913 U	0.604 U	1.03 U	0.559 U	0.233 U	1.47 U	0.5 U	0.597 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.15 J	1.85 J	0.71 U	4.92 J	2.77	1.62 J	7.42	4.24	7.35
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	2.2 J	233	4.91	235	42.5	1.56 J	424	17.9	78.2
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.295 U	16.2	0.761 U	25.3	4.81 J	0.82 J	33	2.76	11
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.591 J	18.1	0.546 U	21.5	4.04	0.71 J	38.1	4	12.4
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	1.63 J	179	3.17 J	205	36.7	2.21 J	302	17.6 J+	70.3 J+
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	47.2	5490 J	128	7980 J	1430 J	68.9	10600 J	579	2650 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	18.9	1510 J	43.5	2280 J	513	20.4	2900 J	194	888
Total heptachlorodibenzofuran (HpCDF)	pg/g	13.8 J	158	3.3 J	398	113 J	57.8 J	702	170 J	387
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	94.2 J	262	58.3 J	740	233 J	136 J	1040	463 J	642
Total hexachlorodibenzofuran (HxCDF)	pg/g	13.5 J	532	11.2 J	594	130 J	14.4 J	1140	97.3 J	334
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	33.3 J	47.3	18.3 J	105	54.1 J	33.2 J	166	103 J	146
Total pentachlorodibenzofuran (PeCDF)	pg/g	7.9 J	648	12 J	744	143 J	13.8 J	1210	97.3 J	283
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	6.51 J	27.2	2.28 J	49.3	13.7 J	7.39 J	70.3	23 J	41
Total tetrachlorodibenzofuran (TCDF)	pg/g	96.5 J	11100	265 J	16000	2900 J	145 J	21000	1160 J	5280
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	28.4 J	1670	50.4 J	2530	583 J	28.5 J	3220	228 J	1020
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	25.6 J	**2190 J**	58.7 J	**3230 J**	**686 J**	30.9 J	**4200 J**	**270 J**	**1220 J**
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	25.7 J	**2190 J**	59.3 J	**3230 J**	**686 J**	30.9 J	**4200 J**	**270 J**	**1220 J**

Notes:

U - Not detected at the associated reporting limit

J - Estimated concentration

J- - Estimated concentration, result may be biased low

J+ - Estimated concentration, result may be biased high

ND - Not detected

TCDD - 2,3,7,8 tetrachlorinated dibenzo p dioxin

TEQ - TCDD Toxicity Equivalent for Mammals

pg/g - picogram per gram

Bold — Overburden and excavation bottom sample exceed 240 pg/g. These intervals may remain or be re-used within the excavated polygons if a depth weighted average below 240 pg/g can be achieved.

Bold (highlighted) — Sidewall sample concentrations exceed 240 pg/g

Table 6

PC-FSE – Soil Analytical Results Summary
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Excavation Area:		Southwest	Southwest	Southwest	Southwest	Southwest	Southwest	Southwest	Southwest
Sample Location:		SW-F1, SW-F2, SW-G1, SW-I1, SW-I2	SW-J1, SW-J2, SW-J3, SW-J3, SW-J4, SW-J5	SW-J1, SW-J2, SW-J3, SW-J3, SW-J4, SW-J5	SW-J1, SW-J2, SW-J3, SW-J3, SW-J4, SW-J5	SW-K1, SW-K2, SW-K3, SW-K3, SW-K4, SW-K5	SW-K1, SW-K2, SW-K3, SW-K3, SW-K4, SW-K5	SW-K1, SW-K2, SW-K3, SW-K3, SW-K4, SW-K5	SW-L1, SW-L2, SW-L3, SW-L4, SW-L5
Sample Identification:		11215131-120321-S-JC-SW-B-6H	11215131-120321-S-SS-SW-B-7	11215131-120321-S-SS-SW-B-7H1	11215131-120321-S-SS-SW-B-7H2	11215131-120821-S-JC-SW-B-8	11215131-120821-S-JC-SW-B-8H1	11215131-120821-S-JC-SW-B-8H2	11215131-120221-S-SPS-SW-B-9
Sample Date:		12/03/2021	12/03/2021	12/03/2021	12/03/2021	12/08/2021	12/08/2021	12/08/2021	12/02/2021
Sample Type:	Units	Excavation Bottom	Excavation Bottom	Excavation Bottom	Excavation Bottom	Excavation Bottom	Excavation Bottom	Excavation Bottom	Excavation Bottom
Dioxins/Furans									
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	2100	213	904	6030	1100	82.4	1.59 J	2460
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	2060	1840	1220	5090	3240	639	499	5490
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	96 J+	135	53.7 J+	216	155	7.95 J+	0.342 J	677
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	147	145	70.7	344	243	33.3	25.6	384 J-
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	8.78	49.7	2.61	38.8	50.3	1.02 J	0.292 U	270 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	19.8	436	4.3 J	234	401	6.52	0.511 J	2390
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.35 J	1.32 J	0.933 J	3.33	1.95 J	0.887 U	0.359 U	2.38 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	9.53	105	1.76 J	62.7	97.2	1.73 J	0.184 U	578
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	8.11	4.09	3.16	15.8	7.42	1.09 J	0.76 J	11.3
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.604 U	0.167 U	0.667 U	0.693 U	0.213 U	0.324 U	0.238 U	3.19 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	4.49	3	2.06 J	7.44	4.22	1.51 J	1.26 J	5.56
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	9.16	280	3.06	158	225	3.62	1.13 J	889
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	3.64	19.8	0.794 J	19.9	20	0.937 U	0.346 U	50.1 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	6.48	22.5	0.935 J	17	20.3	0.432 U	0.192 U	84.7 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	16.3	200 J+	3.89	141	165 J+	2.78 J	0.619 J	509
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	294	5720 J	122	5250 J	5460 J	98.6	13.1	15700 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	83.4	1970 J	38.1	1760 J	1930 J	37.1	3.86	4560 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	185 J	234 J	76.8 J	436 J	281 J	11.5 J	0.731 J	1160 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	364 J	385 J	190 J	829 J	623 J	100 J	79.7 J	772 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	109 J	660 J	20.5 J	461 J	627 J	11.6 J	0.511 J	3450 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	96.7 J	112 J	44.5 J	168 J	119 J	29.8 J	23 J	105 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	136 J	761 J	20.3 J	538 J	625 J	10.2 J	2.58 J	2130 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	50.1 J	44.2 J	9.09 J	54.9 J	42.5 J	6.07 J	4.83 J	78.3 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	708 J	11300 J	250 J	10100 J	10700 J	215 J	39.6 J	30100 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	135 J	2220 J	52.1 J	2000 J	2170 J	46.8 J	6.14 J	4980 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	130 J	**2690 J**	55.6 J	**2400 J**	**2610 J**	49.6 J	6.05 J	**6680 J**
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	130 J	**2690 J**	55.6 J	**2400 J**	**2610 J**	50.2 J	6.28 J	**6680 J**

Notes:

U - Not detected at the associated reporting limit

J - Estimated concentration

J- - Estimated concentration, result may be biased low

J+ - Estimated concentration, result may be biased high

ND - Not detected

TCDD - 2,3,7,8 tetrachlorinated dibenzo p dioxin

TEQ - TCDD Toxicity Equivalent for Mammals

pg/g - picogram per gram

Bold — Overburden and excavation bottom sample exceed 240 pg/g. These intervals may remain or be re-used within the excavated polygons if a depth weighted average below 240 pg/g can be achieved.

Bold — Sidewall sample concentrations exceed 240 pg/g

Table 6

PC-FSE – Soil Analytical Results Summary
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Excavation Area:		Southwest	Southwest	Southwest	Southwest	Southwest	Southwest	Southwest	Southwest	Southwest	Southwest
Sample Location:		SW-L1, SW-L2, SW-L3, SW-L4, SW-L5	SW-L1, SW-L2, SW-L3, SW-L4, SW-L5	SW-M1, SW-M2, SW-M3, SW-M4, SW-M5	SW-N1, SW-N2, SW-N3, SW-N4, SW-N5	SW-O1, SW-O2, SW-O3, SW-O4, SW-O5	SW-O1, SW-O2, SW-O3, SW-O4, SW-O5	SW-P1, SW-P2	SW-P3, SW-P4, SW-P5	SW-P3, SW-P4, SW-P5	SW-Q1, SW-Q2, SW-Q3, SW-Q4, SW-Q5
Sample Identification:		11215131-120221-S-SPS-SW-B-9H1	11215131-120221-S-SPS-SW-B-9H2	11215131-120821-S-JC-SW-B-10	11215131-120821-S-SS-SW-B-11	11215131-120821-S-SS-SW-B-12	11215131-120821-S-SS-SW-B-12H	11215131-010622-S-BN-SW-B-13	11215131-010622-S-BN-SW-B-14	11215131-010622-S-BN-SW-B-14H	11215131-010622-S-BN-DUP-10
Sample Date:		12/02/2021	12/02/2021	12/08/2021	12/08/2021	12/08/2021	12/08/2021	01/06/2022	01/06/2022	01/06/2022	01/06/2022
Sample Type:	Units	Excavation Bottom	Excavation Bottom	Excavation Bottom	Excavation Bottom	Excavation Bottom	Excavation Bottom	Excavation Bottom	Excavation Bottom	Excavation Bottom	Duplicate
Dioxins/Furans											
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	884	0.546 U	0.535 U	3.89 J	5.7	1.47 J	3.35 J	166	14.2	3520
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	1310	350	422 J	605	743	608	1510	3340	474	4430
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	46.9 J+	0.162 U	0.289 J	5.05	7.49	0.937 J	1.32 J	126	3.41	264
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	69.4	18.1	20.4	42.1	55.3	29.8	39.4	280	27.6	254
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	3.44	0.257 U	0.157 U	1.67 J	2.68	0.257 U	0.239 U	42.8	0.45 J	37.6
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	7.81	0.159 U	0.539 J	16.3	24.1	2.53 J	0.225 U	363	2.54	269
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.647 U	0.426 U	0.449 J	0.835 J	1.01 J	0.711 J	0.8 J	3.22	0.333 J	3.1
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	2.91	0.147 U	0.139 J	3.81	5.94	0.582 J	0.223 U	108	0.776 J	74.5
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.62	0.846 J	0.631 J	1.34 J	1.75 J	1.04 J	1.1 J	11.5	0.686 J	11.5
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.515 U	0.168 U	0.098 U	0.211 U	0.161 U	0.156 U	0.244 U	0.278 U	0.186 U	0.716 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.29 J	1.19 J	1.28 J	2.23 J	2.51	1.98 J	1.77 J	7.61	0.91 J	6.84
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	5.16	0.18 U	0.517 J	9.71	16	2.09 J	0.271 U	197	1.64 J	137
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	1.26 J	0.331 U	0.232 J	1.29 J	2.12 J	0.742 J	0.269 U	7.6	0.255 J	10.2
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1.51 J	0.141 U	0.111 U	0.754 J	1.25 J	0.144 U	0.282 U	23.5	0.243 J	18.6
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	5.92	0.176 U	0.463 J	7.43	13.6 J+	1.6 J	0.274 U	120	1.26 J	92.3 J+
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	176	0.207 U	11.6	258	454	56.5	4.92	1910 J	36.8	2520 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	56.3	0.341 U	3.88	96.4	168	22.2	2.27	703	14.7	914
Total heptachlorodibenzofuran (HpCDF)	pg/g	80.8 J	0.203 U	0.289 J	8.95 J	14 J	1.47 J	2.17 J	232 J	5.87 J	425 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	188 J	52.6 J	85.3 J	117 J	146 J	92.7 J	127 J	590 J	66.7 J	610 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	37.6 J	0.152 U	0.803 J	24.1 J	37 J	3.39 J	0.241 U	618 J	5.2 J	544 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	49.6 J	15.3 J	47.6 J	33.5 J	41.9 J	37.6 J	31.1 J	103 J	21.7 J	136 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	38.8 J	0.178 U	1.55 J	27.1 J	46.7 J	5.6 J	0.273 U	491 J	4.93 J	434 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	11.3 J	0.886 J	8.25 J	6.73 J	9.74 J	8.14 J	3.72 J	26.6 J	3.5 J	33 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	342 J	0.765 J	26 J	530 J	929 J	118 J	10.8 J	3850 J	81.4 J	4820 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	65.5 J	1.24 J	17.1 J	113 J	195 J	33 J	4.72 J	803 J	19.4 J	1030 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	80.7 J	0.490 J	6.06 J	129 J	225 J	30.3 J	3.99 J	**1000 J**	20.1 J	**1250 J**
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	80.7 J	0.919 J	6.08 J	129 J	225 J	30.3 J	4.22 J	**1000 J**	20.1 J	**1250 J**

Notes:

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ND - Not detected

TCDD - 2,3,7,8 tetrachlorinated dibenzo p dioxin

TEQ - TCDD Toxicity Equivalent for Mammals

pg/g - picogram per gram

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100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Excavation Area: / Sample Location: / Sample Identification: / Sample Date: / Sample Type:	Units	Southwest SW-Q1, SW-Q2, SW-Q3, SW-Q4, SW-Q5 11215131-010622-S-BN-SW-B-15 01/06/2022 Excavation Bottom	Southwest SW-Q1, SW-Q2, SW-Q3, SW-Q4, SW-Q5 11215131-010622-S-BN-SW-B-15H1 01/06/2022 Excavation Bottom	Southwest SW-Q1, SW-Q2, SW-Q3, SW-Q4, SW-Q5 11215131-010622-S-BN-SW-B-15H2 01/06/2022 Excavation Bottom	Southwest SW-R1, SW-R2, SW-R3, SW-S1, SW-S2, SW-S3 11215131-010722-S-BN-SW-B-16 01/07/2022 Excavation Bottom	Southwest SW-R1, SW-R2, SW-R3, SW-S1, SW-S2, SW-S3 11215131-010722-S-BN-SW-B-16H 01/07/2022 Excavation Bottom	Southwest SW-U1, SW-U2, SW-U3, SW-U4, SW-U5 11215131-010522-S-BN-SW-B-17 01/05/2022 Excavation Bottom	Southwest SW-U1, SW-U2, SW-U3, SW-U4, SW-U5 11215131-010522-S-BN-SW-B-17H1 01/05/2022 Excavation Bottom	Southwest SW-U1, SW-U2, SW-U3, SW-U4, SW-U5 11215131-010522-S-BN-SW-B-17H2 01/05/2022 Excavation Bottom	Southwest SW-T1, SW-T2, SW-T3, SW-T4, SW-T5 11215131-010722-S-BN-SW-B-18 01/07/2022 Excavation Bottom
Dioxins/Furans										
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	1690	2350	123	302	0.481 U	91.5	1.75 J	0.543 U	1.36 U
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	2690	2560	549	1250	477	2800	388	756	477
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	110	227	15.3	93.6	0.472 J	159	0.655 J	0.138 U	0.325 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	153	170	28.7	75.4	25.5	163	16.2	27.1	21.6
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	20.7	10.8	0.269 U	36.6	0.266 U	67.1	0.339 U	0.25 U	0.531 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	138	28.1	2.59	290	0.763 J	583	1.1 J	0.157 U	0.526 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.61 J	2.22 J	0.54 J	0.793 J	0.449 U	1.11 J	0.418 J	0.513 J	0.71 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	38.2	11.5	0.597 J	76.4	0.331 J	150	0.209 U	0.136 U	0.482 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	6	7.98	0.969 J	2.59	0.695 J	4.95	0.682 J	0.889 J	0.808 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.431 U	0.488 U	0.248 U	0.284 U	0.188 U	0.452 U	0.249 U	0.183 U	0.679 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	3.67	4.75	1.23 J	2.18 J	1.39 J	2.91	1.22 J	1.68 J	1.05 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	78	13.5	1.51 J	157	0.533 J	329	0.622 J	0.15 U	0.882 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	5.56	2.47	0.332 U	23.3	0.537 J	28.8	0.202 U	0.281 U	0.6 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	9.43	5.37	0.206 U	13.6	0.152 U	27.6	0.174 U	0.149 U	0.959 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	59	14.7 J+	1.12 J	129	0.198 U	240	0.554 J	0.153 U	0.54 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	1400 J	345	28.2	6420 J	7.07	8040 J	11.9	1.34 J	12.7
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	513	105	10.3	2310 J	2.42	2910 J	4.25	0.615	3.44
Total heptachlorodibenzofuran (HpCDF)	pg/g	204 J	325 J	17.9 J	173 J	0.472 J	294 J	0.655 J	0.183 U	0.4 U
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	382 J	477 J	90.8 J	186 J	83.1 J	327 J	61.7 J	93.4 J	85.5 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	259 J	118 J	5.75 J	451 J	1.09 J	893 J	1.1 J	0.154 U	0.622 U
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	81.1 J	110 J	27 J	42 J	33.8 J	58.3 J	23 J	32.5 J	30.1 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	245 J	108 J	4.24 J	449 J	0.533 J	871 J	1.55 J	0.151 U	0.882 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	16.4 J	25.6 J	4.01 J	32.9 J	8.5 J	42.2 J	4.34 J	4.79 J	6.43 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	2780 J	698 J	54.3 J	12500 J	21.1 J	15500 J	25.2 J	4.26 J	24.4 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	581 J	133 J	13.9 J	2600 J	18.8 J	3270 J	6.85 J	4.12 J	9.85 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	**702 J**	158 J	14.7 J	**3060 J**	4.40 J	**3910 J**	6.25 J	1.56 J	5.28 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	**702 J**	158 J	14.9 J	**3060 J**	4.47 J	**3910 J**	6.39 J	1.75 J	5.83 J

Notes:

U - Not detected at the associated reporting limit

J - Estimated concentration

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ND - Not detected

TCDD - 2,3,7,8 tetrachlorinated dibenzo p dioxin

TEQ - TCDD Toxicity Equivalent for Mammals

pg/g - picogram per gram

Bold — Overburden and excavation bottom sample exceed 240 pg/g. These intervals may remain or be re-used within the excavated polygons if a depth weighted average below 240 pg/g can be achieved.

Bold (yellow) — Sidewall sample concentrations exceed 240 pg/g

Table 6

PC-FSE – Soil Analytical Results Summary
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Excavation Area: Sample Location: Sample Identification: Sample Date: Sample Type:	Units	Southwest SW-V1, SW-V2, SW-V3, SW-V4, SW-V5 11215131-010522-S-BN-SW-B-19 01/05/2022 Excavation Bottom	Southwest SW-V1, SW-V2, SW-V3, SW-V4, SW-V5 11215131-010522-S-BN-SW-B-19H1 01/05/2022 Excavation Bottom	Southwest SW-R4, SW-R5, SW-R6 11215131-011922-S-BN-SW-B-20 01/19/2022 Excavation Bottom	Southwest SW-R4, SW-R5, SW-R6 11215131-011922-S-BN-SW-B-20H 01/19/2022 Excavation Bottom	Southwest SW-Q6, SW-Q7, SW-Q8 11215131-011922-S-BN-SW-B-21 01/19/2022 Excavation Bottom	Southwest SW-Q6, SW-Q7, SW-Q8 11215131-011922-S-BN-SW-B-21H1 01/19/2022 Excavation Bottom	Southwest SW-Q6, SW-Q7, SW-Q8 11215131-011922-S-BN-SW-B-21H2 01/19/2022 Excavation Bottom	Southwest SW-T7, SW-T8, SW-T9, SW-T10, SW-T11 11215131-012022-S-BN-SW-B-22 01/20/2022 Excavation Bottom	Southwest SW-V6 11215131-011922-S-BN-SW-B-23 01/19/2022 Excavation Bottom	Southwest SW-V6 11215131-011922-S-BN-SW-B-23H 01/19/2022 Excavation Bottom
Dioxins/Furans											
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.74 U	1.39 J	1820	2660	4980	2970	581	0.807 U	0.557 U	2.83 J
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	445	423	15900 J	2810	5770	3200	1040	439	525	349
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.277 J	1.16 J	1250	88.9	595	120	35.7	0.17 U	0.403 J	0.817 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	22.1	22.5	965	166	372	191	55	21.6	18.6	16.8
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.331 U	0.3 J	493	10.7	218 J-	14	2.89	0.358 U	0.665 U	0.265 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.957 J	2.82	4830	15.3	2040	31.7	4.59	0.288 U	0.986 J	0.56 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.488 U	0.405 J	5.19	1.82 J	3.64	2.01 J	0.881 J	0.493 U	0.483 U	0.25 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.231 U	0.672 J	1150	4.79	545	8.76	1.35 J	0.267 U	0.251 U	0.17 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.773 J	0.833 J	27.2	7.47	14.1	8.97	2.27 J	0.558 J	0.421 U	0.228 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.313 U	0.22 U	1.12 U	0.351 U	0.854 U	0.407 U	0.417 U	0.346 U	0.324 U	0.222 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.32 J	0.998 J	8.06	4.67	7.4	5.48	2.17 J	1.09 J	1.34 J	1.11 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.349 U	1.5 J	3060	9.61	1000	20.7	2.99	0.278 U	0.385 U	0.159 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.467 U	0.464 J	196	2.5	45.9	3.6	1.03 J	0.414 U	0.757 U	0.341 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.272 U	0.188 U	257	4.19	111	4.95	1.42 J	0.246 U	0.229 U	0.184 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.346 U	0.796 J	1880 J+	13.1 J+	512	21.7 J+	3.59 J+	0.298 U	0.68 J	0.157 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	14.3	31	53700 J	408	12300 J	682	91.1	2.14	10.4	4.85
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	5.81	12.2	20100 J	132	4450 J	238	28.4	0.815	3.86 J	1.79
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.277 J	1.89 J	2200 J	184 J	1080 J	230 J	59 J	0.24 U	0.403 J	2.27 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	70.1 J	71 J	2030 J	403 J	794 J	449 J	146 J	74.7 J	67.1 J	53.6 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.957 J	3.96 J	7290 J	83.1 J	3210 J	117 J	22.6 J	0.28 U	0.986 J	0.56 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	21.3 J	23.4 J	235 J	88.3 J	150 J	105 J	39.2 J	26.2 J	20.6 J	23.8 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.347 U	3.51 J	7530 J	79.8 J	2330 J	115 J	22.9 J	0.288 U	0.68 J	0.158 U
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	2.19 J	4.35 J	267 J	20.8 J	82.4 J	24 J	8.11 J	3.21 J	3.16 J	4.2 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	28.9 J	66.7 J	91400 J	824 J	23500 J	1350 J	188 J	3.88 J	22.7 J	8.19 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	8.63 J	19.6 J	22500 J	163 J	5020 J	280 J	36.8 J	7.1 J	6.49 J	7.38 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	7.90 J	17.0 J	**27000 J**	188 J	**6200 J**	**328 J**	42.4 J	1.54 J	5.68 J	2.729 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	8.26 J	17.0 J	**27000 J**	188 J	**6200 J**	**328 J**	42.4 J	1.88 J	6.16 J	2.97 J

Notes:

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J- - Estimated concentration, result may be biased low

J+ - Estimated concentration, result may be biased high

ND - Not detected

TCDD - 2,3,7,8 tetrachlorinated dibenzo p dioxin

TEQ - TCDD Toxicity Equivalent for Mammals

pg/g - picogram per gram

Bold — Overburden and excavation bottom sample exceed 240 pg/g. These intervals may remain or be re-used within the excavated polygons if a depth weighted average below 240 pg/g can be achieved.

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100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Excavation Area:		Southwest	Southwest	Southwest	Southwest	Southwest	Southwest	Southwest	Southwest	Southwest
Sample Location:		SW-R7, SW-R8, SW-R9, SW-R10, SW-R11	SW-R7, SW-R8, SW-R9, SW-R10, SW-R11	SW-R7, SW-R8, SW-R9, SW-R10, SW-R11	SW-Q9, SW-Q10, SW-Q11, SW-Q12, SW-Q13	SW-Q9, SW-Q10, SW-Q11, SW-Q12, SW-Q13	SW-Q9, SW-Q10, SW-Q11, SW-Q12, SW-Q13	SW-T12, SW-T13, SW-T14, SW-T15, SW-T16	SW-V7	SW-V7
Sample Identification:		11215131-020422-S-SB-SW-B-24	11215131-020422-S-SB-DUP-15	11215131-020422-S-SB-SW-B-24H	11215131-020422-S-SB-SW-B-25	11215131-020422-S-SB-SW-B-25H1	11215131-020422-S-SB-SW-B-25H2	11215131-020522-S-SB-SW-B-26	11215131-020422-S-SB-SW-B-27	11215131-020422-S-SB-SW-B-27H
Sample Date:		02/04/2022	02/04/2022	02/04/2022	02/04/2022	02/04/2022	02/04/2022	02/05/2022	02/04/2022	02/04/2022
Sample Type:	Units	Excavation Bottom	Duplicate	Excavation Bottom	Excavation Bottom	Excavation Bottom	Excavation Bottom	Excavation Bottom	Excavation Bottom	Excavation Bottom
Dioxins/Furans										
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	741	1300	1260	164	122	1.37 J	0.612 U	3 J	0.492 U
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	4520	1880	2280	2850	519	310	539	390	329
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	594	70.1	85.7	194	24	0.513 J	0.199 U	0.409 J	0.119 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	313	136	130	78.2	29	12.6	27.5	20	14.4
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	207	15.3	4.91	102	6.94	0.261 U	0.333 U	0.279 U	0.206 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1750	142	12.2	840	58.9	1.11 J	0.49 J	0.178 U	0.19 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.24 J	1.74 J	1.17 J	0.677 J	0.414 U	0.432 J	0.689 J	0.574 J	0.458 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	471	31.7	3.83	206	14.5	0.244 J	0.194 U	0.169 U	0.173 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	10.7	4.93 J	5.09	1.71 J	0.986 J	0.436 J	1.16 J	0.685 J	0.66 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.473 U	0.522 U	0.31 U	1.43 U	0.429 U	0.26 U	0.3 U	0.269 U	0.276 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	4.81	3.08	3.04	1.16 J	1 J	0.679 J	1.96 J	1.16 J	0.865 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	1050	84.1	7.75	412	27.6	0.624 J	0.839 J	0.57 J	0.21 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	85.7	1.59 J	1.63 J	14.3	1.97 J	0.314 U	0.441 J	0.31 U	0.313 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	93.7	8.74	2.52	37.3	2.77	0.221 U	0.234 U	0.232 U	0.243 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	707	36.4	6.78	258	17.3	0.387 J	0.647 J	0.363 J	0.226 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	23000 J	216	200	4800 J	454	6.53	4.1	1.71	0.186 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	8910 J	69.1	68.8	1420 J	136	1.92	1.72	0.36 U	0.387 U
Total heptachlorodibenzofuran (HpCDF)	pg/g	968 J	148 J	158 J	354 J	38.2 J	0.513 J	0.254 U	0.409 J	0.15 U
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	612 J	401 J	315 J	195 J	90.1 J	47.9 J	95.7 J	64.4 J	69 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	2690 J	242 J	54.7 J	1240 J	89.3 J	1.35 J	0.894 J	0.206 U	0.214 U
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	88.1 J	82.4 J	66.8 J	30.1 J	21.9 J	21.1 J	37.2 J	17.5 J	33.4 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	2690 J	197 J	41.3 J	1040 J	68.7 J	1.29 J	4.87 J	2.18 J	0.217 U
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	114 J	13.3 J	14 J	21 J	4.98 J	3.09 J	6.14 J	2.32 J	6.18 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	39700 J	437 J	405 J	9280 J	895 J	11.9 J	20.1 J	20.3 J	0.224 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	9960 J	84.9 J	84.4 J	1580 J	151 J	9.46 J	6.77 J	2.03 J	8.61 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	**11800 J**	128 J	98.7 J	**2120 J**	198 J	3.22 J	3.66 J	0.861 J	0.754 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	**11800 J**	128 J	98.8 J	**2120 J**	198 J	3.40 J	3.66 J	1.24 J	1.04 J

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San Jacinto River Waste Pits Site
Harris County, Texas

Excavation Area: Sample Location: Sample Identification: Sample Date: Sample Type:	Units	Southwest SW-A1, SW-A2, SW-A3, SW-A4, SW-A5 11215131-120221-S-JC-SW-DUP-1 12/02/2021 Duplicate	Southwest SW-A1, SW-A2, SW-A3, SW-A4, SW-A5 11215131-120221-S-JC-SW-O-1 12/02/2021 Overburden	Southwest SW-B1, SW-B2, SW-B3, SW-B4, SW-B5 11215131-120221-S-JC-SW-O-2 12/02/2021 Overburden	Southwest SW-D1, SW-D2, SW-D3, SW-D4, SW-D5 11215131-120221-S-SPS-SW-O-3 12/02/2021 Overburden	Southwest SW-E1, SW-E2, SW-E3, SW-E4 11215131-120321-S-SPS-SW-O-4 12/03/2021 Overburden	Southwest SW-H1, SW-H2, SW-H3, SW-H4 11215131-120321-S-SPS-SW-O-5 12/03/2021 Overburden	Southwest SW-K1, SW-K2, SW-K3, SW-K3, SW-K4, SW-K5 11215131-120821-S-JC-SW-O-6 12/08/2021 Overburden	Southwest SW-L1, SW-L2, SW-L3, SW-L4, SW-L5 11215131-120221-S-SPS-DUP2 12/02/2021 Duplicate	Southwest SW-L1, SW-L2, SW-L3, SW-L4, SW-L5 11215131-120221-S-SPS-SW-O-7 12/02/2021 Overburden
Dioxins/Furans										
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	136	122	79.7	92.3	83.3	14.6	80.7	25.3	48.6
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	3850	3630 J	3610	5210	5000	2170	1600	4710	3260
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	39.9	35.6	39.7	128	27.1	15.6	79.9	11.5	27.6
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	227	208	208	108	227	74.2	139	93	111
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	4.49	4.59	5.27	58.9	1.94 J	7.2	27.9	2.37 J	6.42
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	13.6	16	24.8	480	2.35 J	65.7	187	21.6	58.3
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.41 J	2.08 J	2.28 J	1.11 J	1.78 J	0.673 J	1.48 J	0.827 U	1.03 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	5.21	5.51	9.47	115	1.35 J	15.6	45.1	5.66	14.9
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	6.46	6.18	6.08	3.02	4.84	1.79 J	3.93	1.59 J	2.85 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.541 U	0.555 U	0.699 U	0.922 U	0.464 U	0.608 U	0.154 U	0.837 U	0.617 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	4.5	4.14	4.01	2.5	3.6	2.27 J	3.01	1.59 J	2.35 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	7.93	9.36	15.2	205	1.04 J	36.4	104	11.7	34.4
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	1.62 J	1.77 J	2.32 J	13.7	0.69 J	3.32	9.55	1.26 J	3.8
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	4.38	3.73	5.73	21.4	1.79 J	3.26	8.67	0.962 J	3.86
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	7.95	9.25	15.6	141	1.77 J	33.8	80.6 J+	9.53	26.6
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	146	196	294	4370 J	13.9	1180 J	2630 J	260 J	943 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	33.1	47.7 J-	71.8	1220 J	2.71 J	330	938	65.5 J	264 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	100 J	92.9 J	92.5	226	73.4	30.6	142 J	23.7 J	56.4 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	541 J	476 J	467	240	730	203	319 J	251 J	283 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	64.3 J	61.1 J	84.7	706	29.9	99.8	288 J	38.3 J	101 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	71.1 J	63 J	64.9	36.3	90.3	47	48.5 J	48.9 J	39 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	52.9 J	56.5 J	90.8	530	14.6	112	292 J	35.3 J	103 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	9.35 J	10.3 J	15	20.6	7.05	10.6	18.5 J	7.3 J	7.22 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	305 J	410 J	610	8820	30.7	2390	5260 J	516 J	1850 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	39.8 J	56.4 J	84.9	1350	4.64	373	1050 J	75.3 J	295 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	59.5 J	79.5 J	118 J	**1790 J**	11.0 J	**473 J**	**1270 J**	102 J	**382 J**
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	59.5 J	79.5 J	118 J	**1790 J**	11.0 J	**473 J**	**1270 J**	102 J	**382 J**

Notes:

U - Not detected at the associated reporting limit

J - Estimated concentration

J- - Estimated concentration, result may be biased low

J+ - Estimated concentration, result may be biased high

ND - Not detected

TCDD - 2,3,7,8 tetrachlorinated dibenzo p dioxin

TEQ - TCDD Toxicity Equivalent for Mammals

pg/g - picogram per gram

Bold — Overburden and excavation bottom sample exceed 240 pg/g. These intervals may remain or be re-used within the excavated polygons if a depth weighted average below 240 pg/g can be achieved.

Bold (yellow) — Sidewall sample concentrations exceed 240 pg/g

Table 6

PC-FSE – Soil Analytical Results Summary
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Excavation Area:		Southwest	Southwest	Southwest	Southwest	Southwest	Southwest	Southwest	Southwest	Southwest
Sample Location:		SW-M1, SW-M2, SW-M3, SW-M4, SW-M5	SW-M1, SW-M2, SW-M3, SW-M4, SW-M5	SW-N1, SW-N2, SW-N3, SW-N4, SW-N5	SW-O1, SW-O2, SW-O3, SW-O4, SW-O5	SW-O1, SW-O2, SW-O3, SW-O4, SW-O5	SW-P1, SW-P2, SW-P3, SW-P4, SW-P5	SW-Q1, SW-Q2, SW-Q3, SW-Q4, SW-Q5	SW-R1, SW-R2, SW-R3	SW-S1, SW-S2, SW-S3
Sample Identification:	Units	11215131-120821-S-JC-DUP-6	11215131-120821-S-JC-SW-O-8	11215131-120821-S-SS-SW-O-9	11215131-120821-S-SS-DUP-5	11215131-120821-S-SS-SW-O-10	11215131-010622-S-BN-SW-O-11	11215131-010622-S-BN-SW-O-12	11215131-010722-S-BN-SW-O-13	11215131-010722-S-BN-SW-O-14
Sample Date:		12/08/2021	12/08/2021	12/08/2021	12/08/2021	12/08/2021	01/06/2022	01/06/2022	01/07/2022	01/07/2022
Sample Type:		Duplicate	Overburden	Overburden	Duplicate	Overburden	Overburden	Overburden	Overburden	Overburden
Dioxins/Furans										
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	18	39.1	9.84	18.7	28.1	103	127	90	11.5
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	4430 J	2560 J	1750 J	8340	8470	2850	10000 J	3000	1170
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	7.63	9.12	4.08	6.41	13.1	35.3	44.1	14	11.5
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	76.6	64.6	49.7	144	185	245	232	114	63.2
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	1.69 J	1.31 J	0.561 J	0.946 J	2.13 J	3.3 J	9.57	1.17 J	3.72 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	7.3	5.51	1.58 J	3.19 J	14.1 J	8.14	58.1	1.88 J	36.3
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.801 J	0.673 J	0.675 J	1.6 J	2.23 J	2.85	1.97 J	0.916 J	0.587 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1.79 J	1.56 J	0.451 J	1.04 J	3.86	3.42	16.7	1.04 J	9.68
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.59 J	2.1 J	1.29 J	2.53	4.65	6.05 J	6.3	2.41 J	1.66 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.178 U	0.218 U	0.129 U	0.147 U	0.289 U	0.433 U	0.339 U	0.384 U	0.355 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.52 J	1.62 J	1.21 J	2.73	3.91	5.29	4.05	1.73 J	2.08 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	3.99	3.55	0.919 J	1.74 J	10.7 J	3.2	27.4	1.03 J	25.1
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.903 J	0.749 J	0.39 J	1.04 J	2.22 J	1.01 J	2.48	0.664 J	2.34 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.74 J	0.774 J	0.285 J	0.61 J	1.3 J	3.34	5.13	0.874 J	2.15 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	3.66 J+	3.27 J+	0.678 J	1.65 J+	9.45 J+	4.43	19.6 J+	1.27 J	20.4
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	114	89.8	11.9	37.1 J	299 J	22.6	424	26.5	653
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	42.5	34.1 J+	4.48	12.4 J	107 J	5.72	145	9.2	238
Total heptachlorodibenzofuran (HpCDF)	pg/g	18.7 J	24 J	11.8 J	15.2 J	34.2 J	94.8 J	119 J	37.6 J	24 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	172 J	150 J	117 J	350 J	446 J	574 J	602 J	327 J	168 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	17.1 J	17.2 J	6.73 J	10.6 J	32.4 J	56 J	123 J	16.6 J	60 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	22 J	26.9 J	17.2 J	29.4 J	49.4 J	75.1 J	69.9 J	35.9 J	53.7 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	15.2 J	14.9 J	3.75 J	8.72 J	37.5 J	37.6 J	85.8 J	10.3 J	70.8 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	3.79 J	3.5 J	1.88 J	4.32 J	7.23 J	10.7 J	12.1 J	4.4 J	11.4 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	225 J	181 J	22.1 J	72.5 J	602 J	64.5 J	900 J	55.9 J	1320 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	47.5 J	38 J	4.78 J	14 J	120 J	8.29 J	167 J	11.5 J	277 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	59.6 J	47.7 J	7.91 J	22.9 J	150 J	17.0 J	212 J	16.0 J	**318 J**
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	59.6 J	47.7 J	7.92 J	22.9 J	150 J	17.1 J	212 J	16.0 J	**319 J**

Notes:

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J+ - Estimated concentration, result may be biased high

ND - Not detected

TCDD - 2,3,7,8 tetrachlorinated dibenzo p dioxin

TEQ - TCDD Toxicity Equivalent for Mammals

pg/g - picogram per gram

Bold — Overburden and excavation bottom sample exceed 240 pg/g. These intervals may remain or be re-used within the excavated polygons if a depth weighted average below 240 pg/g can be achieved.

Bold — Sidewall sample concentrations exceed 240 pg/g

Table 6

PC-FSE – Soil Analytical Results Summary
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Excavation Area: / Sample Location: / Sample Identification: / Sample Date: / Sample Type:	Units	Southwest SW-U1, SW-U2, SW-U3, SW-U4, SW-U5 11215131-010522-S-BN-SW-O-15 01/05/2022 Overburden	Southwest SW-T1, SW-T2, SW-T3, SW-T4, SW-T5 11215131-010722-S-BN-SW-O-16 01/07/2022 Overburden	Southwest SW-V1, SW-V2, SW-V3, SW-V4, SW-V5 11215131-010522-S-BN-SW-O-17 01/05/2022 Overburden	Southwest SW-R4, SW-R5, SW-R6 11215131-011922-S-BN-SW-O-18 01/19/2022 Overburden	Southwest SW-Q6, SW-Q7, SW-Q8 11215131-011922-S-BN-DUP-13 01/19/2022 Duplicate	Southwest SW-Q6, SW-Q7, SW-Q8 11215131-011922-S-BN-SW-O-19 01/19/2022 Overburden	Southwest SW-T7, SW-T8, SW-T9, SW-T10, SW-T11 11215131-012022-S-BN-SW-O-20 01/20/2022 Overburden	Southwest SW-V6 11215131-011922-S-BN-SW-O-21 01/19/2022 Sidewall	Southwest SW-R7, SW-R8, SW-R9, SW-R10, SW-R11 11215131-020422-S-SB-SW-O-22 02/04/2022 Overburden	Southwest SW-Q9, SW-Q10, SW-Q11, SW-Q12, SW-Q13 11215131-020422-S-SB-SW-O-23 02/04/2022 Overburden
Dioxins/Furans											
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	13.4	13.6	4.56 J	102	4450	42.3	61.6	208	80	23.6
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	12300 J	337	8190	4260	7360	17000 J	1150	6440	3640	21000 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	3.38 J	4.3	2.34 J	31.9	621	29.1	29.4	267	27	15.1
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	94.4	26.4	76.3	483	535	186	76.7	440	460	196
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.7 J	0.929 U	0.396 J	3.78	159	9.42	3.06 J	96.7	3.03	5.72
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	2.53 J	3.64	1.83 J	6.5	1370	88.2	3.44	777	4.47	57.8
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.09 J	0.723 U	1.13 J	2.17 J	4.22	1.63 J	0.491 U	2.23 J	2.25 J	1.32 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.671 J	1.45 J	0.259 U	3.76	360	21.9	1.78 J	208	2.68	13.3
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.53 J	1.03 J	1.31 J	10.7	19.1	2.07 J	3.45	10.7	12.3	2.2 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.338 U	0.809 U	0.369 U	0.516 U	0.724 U	0.298 U	0.327 U	0.418 U	0.409 U	0.296 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.69 J	0.941 J	1.42 J	6.73	9.71	1.96 J	1.39 J	4.62	7.79	2.23 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	1.62 J	2.58	0.961 J	3.26 J	831	43.7	0.586 J	470	1.66 J	21.5
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.495 J	0.84 U	0.769 J	1.29 J	62.6	4.39	0.461 U	49.4	1.36 J	1.4 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.352 J	1.19 U	0.344 U	3.88	77.1	4.12 J	2.33 J	40.2	2.9 J	2.4 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	1.55 J	2.81	0.713 J	8.49	543 J+	32.2	0.944 J	371	4.12	9.75
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	47.1	76.7	10.6	68.3	16600 J	906	2.13 J	11600 J	10.4	192
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	17.6	22.4	3.8	7.97	6040 J	330	1.1 J	4940 J	2.76	52.4
Total heptachlorodibenzofuran (HpCDF)	pg/g	10.7 J	10.5 J	5.16 J	103 J	1030 J	53.8 J	97.8 J	501 J	83.9 J	32.6 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	232 J	83.7 J	198 J	937 J	1120 J	459 J	140 J	1160 J	863 J	492 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	6.33 J	17 J	2.9 J	54.5 J	2200 J	134 J	52.7 J	1190 J	44.8 J	89.5 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	21.5 J	9.2 J	18.3 J	103 J	197 J	28.8 J	13.8 J	117 J	123 J	32.8 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	5.2 J	14.7 J	1.67 J	42.5 J	2190 J	120 J	7.75 J	1320 J	34.8 J	49.7 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.495 J	0.84 U	2.35 J	9.34 J	113 J	8.47 J	0.461 U	71 J	12.2 J	5.14 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	97.8 J	150 J	17.3 J	132 J	31400 J	1720 J	2.9 J	22500 J	43.8 J	390 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	19.1 J	23.9 J	3.8 J	9.24 J	6780 J	366 J	1.1 J	5480 J	5.82 J	59.4 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	28.8 J	32.1 J	9.69 J	28.6 J	**8150 J**	**455 J**	4.31 J	**6390 J**	15.7 J	93.0 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	28.8 J	32.7 J	9.74 J	28.6 J	**8150 J**	**455 J**	4.58 J	**6390 J**	15.7 J	93.0 J

Notes:

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ND - Not detected

TCDD - 2,3,7,8 tetrachlorinated dibenzo p dioxin

TEQ - TCDD Toxicity Equivalent for Mammals

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Bold — Overburden and excavation bottom sample exceed 240 pg/g. These intervals may remain or be re-used within the excavated polygons if a depth weighted average below 240 pg/g can be achieved.

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100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Excavation Area:		Southwest	Southwest	Southwest	Southwest	Southwest	Southwest	Southwest	Southwest	Southwest	Southwest	Southwest	Southwest
Sample Location:		SW-T12, SW-T13, SW-T14, SW-T15, SW-T16	SW-V7	SW-A1	SW-A2	SW-B1	SW-B2	SW-C1	SW-D1	SW-D2	SW-E1	SW-E2
Sample Identification:	Units	11215131-020522-S-SB-SW-O-24	11215131-020422-S-SB-SW-O-25	11215131-120221-S-JC-SW-S-1	11215131-120221-S-JC-SW-S-2	11215131-120221-S-JC-SW-S-3	11215131-120221-S-JC-SW-S-4	11215131-120321-S-JC-SW-S-5	11215131-120221-S-SPS-SW-S-6	11215131-120221-S-SPS-SW-S-7	11215131-120321-S-SPS-SW-S-8	11215131-120321-S-SPS-SW-S-9
Sample Date:		02/05/2022	02/04/2022	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/03/2021	12/02/2021	12/02/2021	12/03/2021	12/03/2021
Sample Type:		Overburden	Overburden	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall
Dioxins/Furans												
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	35.4	45.5	73.9	51.6	129	72.3	35.2	32.8	236	124	358
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	1160	975	1770	6150	3190	1520	1160	634	3650	2170 J	17800 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	11.4	8.02	35.9	29	58.9	22.2	12.5	7.66	130	25.3	153
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	69.5	37.4	136	161	225	102	85.6	47.2	258	165	503
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	1.62 J	0.849 J	10.9	9.23	11.4	3.09	1.82	0.713 J	42.9	3.08	52.1
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	4.82	1.99 J	76.3	69.8	77.6	13.3	8.71	4.21	435	6.42	513
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.785 J	0.493 J	1.89	1.25 J	2.07	1.14 J	0.847 J	0.641 U	1.44 J	0.909 U	3.78
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	2.12 J	0.62 J	19.6	18.8	18.1	3.86	2.05 J	1.24 J	113	2.92	122
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.22 J	0.916 J	6.25	3.12	9.32	3.69	3.02	1.86	5.82	4.22 J	9.37
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.282 U	0.386 U	0.091 U	0.118 U	0.703 U	0.326 U	0.305 U	0.471 U	0.552 U	0.533 U	1.42 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.41 J	1 J	4.33	3.39	5.22	2.41	1.94	1.82	2.51 J	2.97	6.93
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	5.91	0.834 J	47.3	43.5	39.1	7.45	4.64	2.15	324	3.07	323
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	1.4 J	0.283 U	5.29	4.17	3.92	0.948 J	0.601 J	0.445 J	29.6	1.04 J	26.9
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1.57 J	0.336 U	4.65	4.41	4.94	2	1.06 J	0.459 U	26.9	2.5	24.9
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	5.55	0.756 J	39.4	33.6	30.7	6.48 J+	4.48	1.78	278	3.83 J	235
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	63.1	19.7	1300 J	1050 J	1030 J	152	115	63.6	9470 J	54.2	8390 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	19.9	5.82	468	383	295	43.1	34.8	18.3	2800 J	13.7	2360 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	32 J	15 J	68.2 J	55.5 J	118 J	58.4 J	30.3 J	14.1 J	239 J	61.4 J	292 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	167 J	120 J	266 J	358 J	459 J	266 J	212 J	124 J	527 J	475 J	1430 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	23.4 J	6.57 J	132 J	118 J	147 J	42.8 J	25.4 J	10.2 J	679 J	37.7 J	784 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	22.5 J	34.8 J	73.2 J	65 J	80.4 J	45.6 J	51.3 J	23.1 J	83.8 J	67.5 J	127 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	46.1 J	3.31 J	148 J	128 J	132 J	36 J	23.2 J	7.95 J	942 J	31 J	861 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	6.26 J	4.8 J	19.8 J	15.6 J	16.9 J	6.59 J	7.9 J	3.92 J	50.5 J	10 J	41.5 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	217 J	37.1 J	2680 J	2120 J	2090 J	302 J	237 J	133 J	18600 J	137 J	16600 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	28.9 J	12.5 J	535 J	440 J	339 J	50.6 J	42 J	22 J	3150 J	21.3 J	2650 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	31.9 J	9.31 J	**630 J**	**517 J**	**428 J**	65.8 J	51.5 J	27.4 J	**3930 J**	25.9 J	**3390 J**
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	31.9 J	9.49 J	**630 J**	**517 J**	**428 J**	65.8 J	51.5 J	27.5 J	**3930 J**	25.9 J	**3390 J**

Notes:

U - Not detected at the associated reporting limit

J - Estimated concentration

J- - Estimated concentration, result may be biased low

J+ - Estimated concentration, result may be biased high

ND - Not detected

TCDD - 2,3,7,8 tetrachlorinated dibenzo p dioxin

TEQ - TCDD Toxicity Equivalent for Mammals

pg/g - picogram per gram

Bold — Overburden and excavation bottom sample exceed 240 pg/g. These intervals may remain or be re-used within the excavated polygons if a depth weighted average below 240 pg/g can be achieved.

Bold — Sidewall sample concentrations exceed 240 pg/g

Table 6

PC-FSE – Soil Analytical Results Summary
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Excavation Area:		Southwest	Southwest	Southwest	Southwest	Southwest	Southwest	Southwest	Southwest	Southwest	Southwest	Southwest
Sample Location:		SW-E3	SW-H1	SW-H2	SW-I1	SW-J1	SW-K1	SW-K2	SW-L1	SW-L2	SW-L3	SW-M1
Sample Identification:	Units	11215131-120321-S-SPS-SW-S-10	11215131-120321-S-SPS-SW-S-11	11215131-120321-S-SPS-SW-S-12	11215131-120321-S-JC-SW-S-13	11215131-120321-S-SS-SW-S-14	11215131-120821-S-JC-SW-S-15	11215131-120821-S-JC-SW-S-16	11215131-120221-S-SPS-SW-S-17	11215131-120221-S-SPS-SW-S-18	11215131-120221-S-SPS-SW-S-19	11215131-120821-S-JC-SW-S-20
Sample Date:		12/03/2021	12/03/2021	12/03/2021	12/03/2021	12/03/2021	12/08/2021	12/08/2021	12/02/2021	12/02/2021	12/02/2021	12/08/2021
Sample Type:		Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall
Dioxins/Furans												
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	1040	2410	7.89	4.47 J	3.22 J	11.3 J	5.97 J	2600	11.9	38.7	26.5
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	6550 J	4800 J	708 J	628	482 J	773 J	489 J	6110	1470	1200	1110 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	199	492	6.65	4.89 J	1.42 J	11.5	5.12	344	8.94	38.4	31.7
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	247	343	40.5	32.5	32.2	62.4	37.3	439	73.6	87.4	83.9
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	74	160	2.33	1.04 J	0.122 U	4.95	1.79 J	105	3.31	19.8	11.3
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	642	1380	19.8	14.4	1.36 J	40.7	17.2	832	26.7	141	96.4
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.56 J	1.96	0.424 U	1.22 U	0.625 J	0.74 J	0.591 J	3.31 J	0.812 J	0.832 J	0.823 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	151	331	5.08	3.39	0.34 J	9.66	4.14	206	6.84	35.1	24.5
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	6.66	10.7	1.18 J	1.11 U	0.971 J	1.44 J	0.963 J	14.4	1.56 J	2.16 J	2.33 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	1.12 U	0.614 U	0.347 U	0.716 U	0.0913 U	0.123 U	0.0735 U	0.42 U	0.161 U	0.119 U	0.144 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	3.92	4.38	1.08 J	1.08 U	1.47 J	2.12	1.31 J	7.46	1.79	2.89	1.89 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	386	744	13.6	9.87	0.871 J	23.4	8.83	497	16.1	75.9	57.9
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	23.2	75.8	1.81	1.36 J	0.382 J	2.63	0.846 J	59	1.8	6.72	6.51
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	31.3	62.2	1.07 J	0.696 J	0.0884 J	2.2	1 J	46.9	1.54 J	7.17	5.54
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	245	529	11.5	7.98	0.688 J	20.3 J+	5.06 J+	389 J+	12.7	58.1	49.6 J+
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	7240 J	22500 J	428	302	16.1	557	99.3	13600 J	330	1590 J	1780 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	2000 J	6820 J	127	87.6	5.52	207	43.9	5360 J	114	573	639
Total heptachlorodibenzofuran (HpCDF)	pg/g	369 J	826 J	13.5 J	8.99 J	3.38 J	23.3 J	11.2 J	624 J	17.8 J	75 J	61.3
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	550 J	712 J	127 J	109 J	117 J	175 J	148 J	881 J	171 J	213 J	190
Total hexachlorodibenzofuran (HxCDF)	pg/g	968 J	2070 J	31.8 J	22.3 J	2.8 J	62.5 J	28.3 J	1320 J	43.6 J	216 J	153
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	72.9 J	105 J	34.2 J	36.8 J	38.9 J	51.2 J	30.4 J	173 J	29 J	85.4 J	40.3
Total pentachlorodibenzofuran (PeCDF)	pg/g	970 J	2000 J	39.4 J	25.8 J	2.02 J	69.3 J	22.5 J	1430 J	47.4 J	214 J	170
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	37.4 J	107 J	6.39 J	7.48 J	7.92 J	10.3 J	5.95 J	100 J	6.81 J	22.8 J	15.2
Total tetrachlorodibenzofuran (TCDF)	pg/g	14300 J	42700 J	859 J	591 J	30.9 J	1130 J	221 J	26000 J	678 J	3180 J	3500
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	2260 J	7640 J	146 J	99.6 J	12.7 J	232 J	54.4 J	5940 J	132 J	654 J	704
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	**2920 J**	**9520 J**	179 J	124 J	8.72 J	**279 J**	59.6 J	**7030 J**	158 J	**779 J**	**855 J**
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	**2920 J**	**9520 J**	179 J	124 J	8.72 J	**279 J**	59.6 J	**7030 J**	158 J	**779 J**	**855 J**

Notes:

U - Not detected at the associated reporting limit

J - Estimated concentration

J- - Estimated concentration, result may be biased low

J+ - Estimated concentration, result may be biased high

ND - Not detected

TCDD - 2,3,7,8 tetrachlorinated dibenzo p dioxin

TEQ - TCDD Toxicity Equivalent for Mammals

pg/g - picogram per gram

Bold — Overburden and excavation bottom sample exceed 240 pg/g. These intervals may remain or be re-used within the excavated polygons if a depth weighted average below 240 pg/g can be achieved.

Bold — Sidewall sample concentrations exceed 240 pg/g

Table 6

PC-FSE – Soil Analytical Results Summary
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Excavation Area:		Southwest	Southwest	Southwest	Southwest	Southwest	Southwest	Southwest	Southwest	Southwest	Southwest	Southwest
Sample Location:		SW-M2	SW-M3	SW-N1	SW-N2	SW-O1	SW-O3	SW-O4	SW-P1	SW-P3	SW-Q1	SW-R1
Sample Identification:	Units	11215131-120821-S-JC-SW-S-21	11215131-120821-S-JC-SW-S-22	11215131-120821-S-SS-SW-S-23	11215131-120821-S-SS-SW-S-24	11215131-120821-S-SS-SW-S-25	11215131-120821-S-SS-SW-S-26	11215131-120821-S-SS-SW-S-27	11215131-010622-S-BN-SW-S-28	11215131-010622-S-BN-SW-S-29	11215131-010622-S-BN-SW-S-30	11215131-010722-S-BN-SW-S-31
Sample Date:		12/08/2021	12/08/2021	12/08/2021	12/08/2021	12/08/2021	12/08/2021	12/08/2021	01/06/2022	01/06/2022	01/06/2022	01/07/2022
Sample Type:		Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall
Dioxins/Furans												
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	23.9	25.9 J	7.14	31.5	27	43.2	13.6	81.7	27.4	5.1	113
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	1530 J	1040 J	668 J	3070 J	1260	3040	1440	1950	1750	550	7990
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	29.8	28.8	9.82	40.1	36.7	63.4	19.7	14.9	8.64	1.71 J	81
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	86.9	80.6	43.7	130	90	179	86	94	79.1	27.1	79.3
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	12.5	11.9	3.43	13.5	14.4	24.7	7.61	1.48 J	0.804 J	0.576 U	34.7
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	108	100	30.3	117	121	216	64.2	3.91	2.55	2.9	318
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.657 J	0.721 J	0.703 J	1.36 J	0.763 J	1.23 J	1.09 J	0.897 J	0.82 J	0.886 U	0.916 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	26.2	24.1	7.38	29.2	31.3	53.8	16.1	1.34 J	1.16 J	1 J	78.9
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.24 J	2.35 J	1.37 J	3.06 J	2.13	4.21	2.23	3.42 J	2.34 J	0.753 J	2.24 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.117 U	0.0937 U	0.14 U	0.15 U	0.0937 U	0.309 U	0.105 U	0.266 U	0.175 U	0.522 U	0.513 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.38 J	1.94 J	1.82 J	2.67	2.06	2.77	3.05	2.47	1.51 J	0.971 J	1.82 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	65.8	55.9	18.3	62.7	71.8	168	41.9	1.54 J	1.17 J	1.66 J	158
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	6.42	7.4	2.63	7.1	7.09	13.8	5.35	0.894 J	0.316 J	0.753 U	21.8
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	6.34	5.56	1.49 J	6.38	6.96	13	3.46	1.27 J	1 J	0.323 U	14.1
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	54.1 J+	50.6 J+	15.3 J+	52.9 J+	57.8 J+	146 J+	37.5 J+	2.16 J+	1.47 J	1.02 J	120 J+
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	1750 J	1910 J	559	1720 J	1860 J	3600 J	1270 J	25.2	20.9	24.4	5700 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	603	657	214	617	680	1310 J	484	9.86	8.49	6.79	2200 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	58.7	55	18.3	75.8	70.4 J	119 J	38 J	40.6 J	23.2 J	4.09 J	141 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	212	186	124	342	219 J	386 J	256 J	232 J	183 J	95.5 J	219 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	169	155	46.4	183	190 J	337 J	99.6 J	23.9 J	15.2 J	4.55 J	476 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	113	42.5	35.4	57.6	49.8 J	46.4 J	84.3 J	40.6 J	27.5 J	23.4 J	56 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	190	169	53.2	182	203 J	500 J	126 J	18.4 J	10.6 J	3.94 J	440 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	23.7	17.3	9.05	16.3	17.2 J	25 J	19.7 J	6.2 J	3.55 J	2.14 J	34.5 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	3500	3740	1120	3380	3670 J	7040 J	2520 J	59.7 J	46.1 J	57.6 J	11000 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	667	727	243	686	739 J	1420 J	537 J	12.1 J	10.6 J	8.91 J	2390 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	**819 J**	**887 J**	**283 J**	**833 J**	**911 J**	**1770 J**	**639 J**	17.0 J	13.7 J	10.6 J	**2880 J**
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	**819 J**	**887 J**	**283 J**	**833 J**	**911 J**	**1770 J**	**639 J**	17.0 J	13.7 J	11.1 J	**2880 J**

Notes:

U - Not detected at the associated reporting limit

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Bold — Sidewall sample concentrations exceed 240 pg/g

Table 6

PC-FSE – Soil Analytical Results Summary
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Excavation Area:		Southwest	Southwest	Southwest	Southwest	Southwest	Southwest	Southwest	Southwest	Southwest	Southwest	Southwest	Southwest
Sample Location:		SW-S1	SW-S2	SW-T1	SW-T1	SW-Q3	SW-U1	SW-T2	SW-T3	SW-T4	SW-V1	SW-V2
Sample Identification:	Units	11215131-010722-S-BN-SW-S-32	11215131-010722-S-BN-SW-S-33	11215131-010722-S-BN-DUP-11	11215131-010722-S-BN-SW-S-34	11215131-010622-S-BN-SW-S-35	11215131-010522-S-BN-SW-S-36	11215131-010722-S-BN-SW-S-37	11215131-010722-S-BN-SW-S-38	11215131-010722-S-BN-SW-S-39	11215131-010522-S-BN-SW-S-40	11215131-010522-S-BN-SW-S-41
Sample Date:		01/07/2022	01/07/2022	01/07/2022	01/07/2022	01/06/2022	01/05/2022	01/07/2022	01/07/2022	01/07/2022	01/05/2022	01/05/2022
Sample Type:		Sidewall	Sidewall	Duplicate	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall
Dioxins/Furans												
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	8.59	4.89 J	35.8	64.1 U	1320	11.5 J	57.9 U	58.8 U	77.4	29	68.2
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	1420	680	1890	2750	4170	2260	1570	1540	2400	890	8420
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	4.92	3.18	6.43	19.7 U	331	10.7	82.8	61.2	100	47.5	106
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	64	35.3	225	340	242	47	116	107	179	57.9	172
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.593 J	0.586 J	0.752 J	1.79 J	122	4.86	29.6	18.4	36.6	19.4	45.7
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	3.73	5.91	6.68	11.7	1100	36.4	259	153	330	183	353
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.78 J	0.794 J	0.625 J	1.1 J	2.06 J	0.798 U	0.764 J	0.853 J	0.953 J	0.565 U	1.34 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1.26 J	1.72 J	1.36 J	2.94	269	9.63	63.5	39.3	80.8	45.6	89.1
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.65 J	1.08 J	2.76	4.42	7.04 J	1.24 J	3.19	2.93	5.19	1.5 J	3.18 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.25 U	0.172 U	0.586 U	0.197 U	1.52 U	0.869 U	0.427 U	0.355 U	0.394 U	0.774 U	0.84 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.77 J	1.73 J	2.06 J	2.43	3.75 J	0.945 J	1.73 J	2.35	2.76	1.67 J	2.12 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	2.44 J	3.49	4.88	5.93	704	20.4	143	90.9	202	97.1	196
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.454 J	0.73 J	0.704 U	0.968 J	37.9	2.24 J	12.7	9.88	21.2	7.32	17.2
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.512 J	0.466 J	0.99 U	0.87 J	51.5 J+	1.96 J+	13.5	8.63	17.8	7.86 J+	15.6
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	2.19 J	3.24 J+	3.99	4.93 J+	462	15	115 J+	81.2 J+	174 J+	64.5	145
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	64.9	92.9	159	165 J	10700 J	426	3740 J	2760 J	6060 J	1940 J	4650 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	27.3	36.2	37.6	60.1	3100 J	114	1270 J	970 J	2280 J	549	1420 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	12 J	6.25 J	28.2 J	57 J	570 J	21.1 J	147 J	107 J	187 J	83 J	194 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	157 J	119 J	721 J	1020 J	602 J	130 J	223 J	223 J	353 J	135 J	378 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	11.7 J	11.2 J	13.3 J	26.7 J	1630 J	54.4 J	397 J	245 J	514 J	265 J	517 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	37.8 J	40.9 J	97 J	112 J	75.8 J	28.9 J	34.1 J	55.4 J	70 J	24.8 J	45.6 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	9.93 J	12.6 J	12.8 J	19.5 J	1800 J	52.8 J	406 J	279 J	593 J	240 J	520 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	5.65 J	8.25 J	11.9 J	9.21 J	55.6 J	6.11 J	22.8 J	23.1 J	40 J	10.9 J	25.1 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	134 J	185 J	312 J	335 J	20400 J	813 J	7210 J	5380 J	11700 J	3770 J	9130 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	38.7 J	49.2 J	58.4 J	77.5 J	3400 J	126 J	1390 J	1080 J	2470 J	617 J	1590 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	37.1 J	49.1 J	59.1 J	85.8 J	**4520 J**	170 J	**1730 J**	**1310 J**	**3010 J**	**798 J**	**2000 J**
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	37.1 J	49.1 J	59.5 J	85.9 J	**4520 J**	170 J	**1730 J**	**1310 J**	**3010 J**	**798 J**	**2000 J**

Notes:

U - Not detected at the associated reporting limit

J - Estimated concentration

J- - Estimated concentration, result may be biased low

J+ - Estimated concentration, result may be biased high

ND - Not detected

TCDD - 2,3,7,8 tetrachlorinated dibenzo p dioxin

TEQ - TCDD Toxicity Equivalent for Mammals

pg/g - picogram per gram

Bold — Overburden and excavation bottom sample exceed 240 pg/g. These intervals may remain or be re-used within the excavated polygons if a depth weighted average below 240 pg/g can be achieved.

Bold (yellow) — Sidewall sample concentrations exceed 240 pg/g

Table 6

PC-FSE – Soil Analytical Results Summary
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Excavation Area:		Southwest	Southwest	Southwest	Southwest	Southwest	Southwest	Southwest	Southwest	Southwest	Southwest
Sample Location:		SW-R4	SW-Q6	SW-T7	SW-T8	SW-V6	SW-R7	SW-R11	SW-Q9	SW-Q10	SW-T12, SW-T13, SW-T14, SW-T15, SW-T16
Sample Identification:	Units	11215131-011922-S-BN-SW-S-42	11215131-011922-S-BN-SW-S-43	11215131-012022-S-BN-SW-S-44	11215131-012022-S-BN-SW-S-45	11215131-011922-S-BN-SW-S-46	11215131-020422-S-SB-SW-S-47	11215131-020422-S-SB-SW-S-48	11215131-020422-S-SB-SW-S-49	11215131-020422-S-SB-SW-S-50	11215131-020522-S-SB-SW-S-51
Sample Date:		01/19/2022	01/19/2022	01/20/2022	01/20/2022	01/19/2022	02/04/2022	02/04/2022	02/04/2022	02/04/2022	02/05/2022
Sample Type:		Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall	Sidewall
Dioxins/Furans											
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	898	1670	65.7	123	29.5 J	7.71	113	11.3	9.32	2.65 J
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	4060	8140	2490	2550	2590	417	3700	389	428	349
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	287	281	86.7	79.3	32.3	2.77	88.4	10.1	1.32 J	1.33 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	322	225	167	186	48.7	29.5	349	22	19.9	20.9
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	93.3	87.6	35.2	30.3	14.5	0.255 J	13.2	4.82	0.165 U	0.211 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	812	1070	258	248	117	0.453 J	35.1	32.8	0.204 J	1.59 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.8 J	1.8 J	0.853 J	1.28 J	0.455 U	0.509 J	1.97 J	0.562 J	0.505 J	0.416 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	206	265	71.3	65.5	32	0.222 J	12.7	8.33	0.197 J	0.45 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	7.99 J	6.92	4.19	5.51	1.22 J	0.919 J	10.3	0.638 J	0.628 J	0.773 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.534 U	0.642 U	0.436 U	0.352 U	0.355 U	0.117 U	0.533 U	0.21 U	0.244 J	0.208 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	4.55	4.16	2.69	3.12	1.23 J	0.775 J	7.08	0.972 J	1.19 J	1.01 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	412	950	123	145	60.3	0.261 J	17.1	12	0.171 J	0.981 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	38.3	20.6	13.2	14.8	5.62	0.144 U	3.41	1.02 J	0.375 J	0.309 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	38.4	62.6	12.2	14.3	5.45	0.296 J	12.7	1.74 J	0.0823 U	0.176 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	307	477	111	122	44.8 J+	0.346 J	17.4 J+	7.94 J+	0.18 U	1.24 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	11400 J	5540 J	3970 J	4450 J	1280 J	3.84	329	155	1.46 J	31.7
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	3950 J	1860 J	1360 J	1560 J	443	1.43	125	57.6	0.467 J	12.2
Total heptachlorodibenzofuran (HpCDF)	pg/g	491 J	469 J	159 J	145 J	60.9 J	7.93 J	156 J	19 J	1.65 J	2.52 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	643 J	552 J	340 J	383 J	170 J	97.2 J	670 J	70.4 J	69.9 J	77.3 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	1240 J	1670 J	398 J	399 J	180 J	3.42 J	120 J	50.9 J	1 J	4.83 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	91 J	68.8 J	52.2 J	52.8 J	31.6 J	18.4 J	134 J	18.3 J	20.8 J	43.4 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	1130 J	2200 J	366 J	426 J	161 J	2.18 J	99.1 J	31.7 J	0.171 J	5.58 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	60 J	34.6 J	25.5 J	25.5 J	9.42 J	1.77 J	26.6 J	3.52 J	3.85 J	8.01 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	21500 J	10400 J	7600 J	8650 J	2500 J	11 J	734 J	330 J	6.83 J	67.4 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	4470 J	2070 J	1530 J	1760 J	498 J	2.89 J	156 J	67 J	3.75 J	18.8 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	**5350 J**	**2760 J**	**1850 J**	**2100 J**	**609 J**	2.70 J	181 J	81.9 J	1.63 J	16.8 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	**5350 J**	**2760 J**	**1850 J**	**2100 J**	**609 J**	2.77 J	181 J	81.9 J	1.67 J	16.8 J

Notes:

U - Not detected at the associated reporting limit

J - Estimated concentration

J- - Estimated concentration, result may be biased low

J+ - Estimated concentration, result may be biased high

ND - Not detected

TCDD - 2,3,7,8 tetrachlorinated dibenzo p dioxin

TEQ - TCDD Toxicity Equivalent for Mammals

pg/g - picogram per gram

Bold — Overburden and excavation bottom sample exceed 240 pg/g. These intervals may remain or be re-used within the excavated polygons if a depth weighted average below 240 pg/g can be achieved.

Bold — Sidewall sample concentrations exceed 240 pg/g

Table 6

PC-FSE – Soil Analytical Results Summary
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Excavation Area: Sample Location: Sample Identification: Sample Date: Sample Type:	Units	Southwest SW-T12, SW-T13, SW-T14, SW-T15, SW-T16 11215131-020522-S-SB-SW-S-52 02/05/2022 Sidewall	Southwest SW-T12, SW-T13, SW-T14, SW-T15, SW-T16 11215131-020522-S-SB-SW-S-53 02/05/2022 Sidewall	Southwest SW-V7 11215131-020422-S-SB-SW-S-54 02/04/2022 Sidewall
Dioxins/Furans				
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	4.45 J	21.7	462
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	756	960	717
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	2.64 J	24.9	63.3
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	37.3	78	42.4
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.686 J	8.57	1.95
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	7.95	61.5	2.3
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.578 J	0.961 J	0.671 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	2.08 J	15.8	1.16 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.16 J	2.37 J	1.69 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.147 U	0.237 U	0.232 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.75 J	2.15 J	1.42 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	5.75	34	1.4 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.8 J	3.63	0.599 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.7 J	2.89	1.24 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	4.83 J+	28.8 J+	2.15
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	165	920	50.1
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	63.1	346	11.3
Total heptachlorodibenzofuran (HpCDF)	pg/g	5.91 J	47.2 J	77 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	113 J	222 J	132 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	14 J	94.8 J	17.4 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	59.7 J	48.9 J	30.4 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	17.8 J	99.5 J	13 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	12.4 J	13.3 J	5.67 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	349 J	1890 J	80 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	81.6 J	401 J	15.8 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	84.1 J	**461 J**	19.9 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	84.1 J	**461 J**	19.9 J

Notes:

U - Not detected at the associated reporting limit

J - Estimated concentration

J- - Estimated concentration, result may be biased low

J+ - Estimated concentration, result may be biased high

ND - Not detected

TCDD - 2,3,7,8 tetrachlorinated dibenzo p dioxin

TEQ - TCDD Toxicity Equivalent for Mammals

pg/g - picogram per gram

Bold — Overburden and excavation bottom sample exceed 240 pg/g. These intervals may remain or be re-used within the excavated polygons if a depth weighted average below 240 pg/g can be achieved.

Bold — Sidewall sample concentrations exceed 240 pg/g

Table 7

PC-FSE Rinsate Blank Analytical Results Summary
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Sample Location: Sample Identification: Sample Date:	Units	Rinsate 11215131-120221-S-JC-RB-1 12/02/2021	Rinsate 11215131-120421-S-SS-RB-3 12/04/2021	Rinsate 11215131-120621-S-JC-RB-4 12/06/2021	Rinsate 11215131-120821-S-JC-RB-6 12/08/2021	Rinsate 11215131-120821-S-SS-RB-5 12/08/2021	Rinsate 11215131-121321-S-BN-RB-8 12/13/2021	Rinsate 11215131-121321-S-SS-RB-7 12/13/2021	Rinsate 11215131-122121-S-BN-RB-9 12/21/2021
Dioxins/Furans									
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/L	9.9 U	7.63 U	8.58 U	15.1 J	5.19 U	5.49 U	3.92 U	7.55 U
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/L	10.5 U	12.8 U	11.9 U	7.48 U	10.8 U	7.66 U	5.52 U	10.2 U
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/L	3.51 U	2.79 U	2.37 U	11.2 J	1.37 U	1.58 J	1.2 J	2.19 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/L	4.83 U	5.23 U	4.95 U	2.76 U	2.71 U	3.22 U	1.7 U	3.87 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/L	4.03 U	3.52 U	2.94 U	2.89 U	2.24 U	1.78 U	1.21 U	2.86 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	3.84 U	2.87 U	2.86 U	3.78 J	1.35 U	1.15 U	0.706 U	3.35 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	6.11 U	4.3 U	4.65 U	3.01 U	1.89 U	1.55 U	1.07 U	3.85 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	3.8 U	2.75 U	2.73 U	2.19 U	1.32 U	1.03 U	0.645 U	2.34 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	5.96 U	4.3 U	4.91 U	2.95 U	1.65 U	1.46 U	1 U	3.87 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/L	4.81 U	3.17 U	3.18 U	3.04 U	1.45 U	1.17 U	0.737 U	4.03 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	5.92 U	4.01 U	4.36 U	3.19 U	1.67 U	1.55 U	0.991 U	3.98 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/L	3.88 U	3.86 U	3.19 U	2.68 U	1.33 U	0.883 U	0.922 U	3.71 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/L	4.61 U	5.16 U	4.07 U	3.61 U	1.48 U	1.46 U	1.2 U	4.41 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	4.59 U	2.98 U	3.09 U	3.05 U	1.54 U	1.19 U	0.847 U	2.51 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/L	4.04 U	3.32 U	3.06 U	2.5 U	1.33 U	0.863 U	0.903 U	3.67 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/L	3.74 U	3.84 U	3.41 U	3.74 U	1.39 U	1.08 U	0.945 U	5.23 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/L	4.82 U	3.92 U	3.37 U	4.11 U	2.64 U	2.46 U	2.04 U	5.28 U
Total heptachlorodibenzofuran (HpCDF)	pg/L	3.75 U	3.12 U	2.64 U	11.2	1.75 U	1.58	1.2	2.5 U
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/L	4.83 U	5.23 U	4.95 U	2.76 U	2.71 U	3.22 U	1.7 U	3.87 U
Total hexachlorodibenzofuran (HxCDF)	pg/L	4.23 U	2.93 U	2.95 U	7.67	1.41 U	4.58	0.728 U	2.93 U
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	5.99 U	4.19 U	4.62 U	3.05 U	1.73 U	1.52 U	1.02 U	3.9 U
Total pentachlorodibenzofuran (PeCDF)	pg/L	3.96 U	3.59 U	3.12 U	2.59 U	1.33 U	0.873 U	0.913 U	3.69 U
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/L	4.61 U	5.16 U	4.07 U	3.61 U	1.48 U	1.46 U	1.2 U	4.41 U
Total tetrachlorodibenzofuran (TCDF)	pg/L	3.74 U	3.84 U	3.41 U	3.74 U	1.39 U	1.08 U	0.945 U	5.23 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/L	4.82 U	3.92 U	3.37 U	4.11 U	2.64 U	2.46 U	2.04 U	5.28 U
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/L	0	0	0	0.495 J	0	0.0158 J	0.012 J	0
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/L	7.38	6.57	5.74	5.86 J	2.93	2.65 J	2.14 J	6.96

Notes:
U - Not detected at the associated reporting limit
J - Estimated concentration
ND - Not detected
TCDD - 2,3,7,8 tetrachlorinated dibenzo p dioxin
TEQ - TCDD Toxicity Equivalent for Mammals
pg/L - picogram per liter

Table 7

PC-FSE Rinsate Blank Analytical Results Summary
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Sample Location: Sample Identification: Sample Date:	Units	Rinsate 11215131-010622-S-BN-RB-10 01/06/2022	Rinsate 11215131-010722-S-BN-RB-11 01/07/2022	Rinsate 11215131-011022-S-BN-RB-12 01/10/2022	Rinsate 11215131-011922-S-BN-RB-13 01/19/2022	Rinsate 11215131-012222-S-BN-RB-14 01/22/2022	Rinsate 11215131-020522-S-SB-RB-15 02/05/2022	Rinsate 11215131-020622-S-SB-RB-16 02/06/2022	Rinsate 11215131-021822-S-SB-RB-17 02/18/2022
Dioxins/Furans									
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/L	12.7 U	7.08 U	6.01 U	12.6 U	5.08 U	2.65 U	5.28 U	4.01 U
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/L	10.6 U	8.59 U	7.41 U	94	9.44 J	4.83 U	4.58 U	7.13 U
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/L	3.13 U	2.36 U	2.38 U	2.75 U	1.78 U	1.33 U	1.66 U	1.45 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/L	5.29 U	3.54 U	3.67 U	5.79 U	2.78 U	2.34 U	2.54 U	2.21 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/L	5.15 U	3.4 U	3.73 U	5.89 U	2.38 U	1.86 U	2.24 U	2.06 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	3.25 U	2.55 U	2.53 U	2.54 U	1.68 U	1.11 U	1.64 U	1.5 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	4.73 U	4.16 U	4.14 U	4.19 U	2.91 U	1.54 U	2.57 U	2.12 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	3.06 U	2.26 U	2.22 U	2.47 U	1.48 U	0.974 U	1.5 U	1.39 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	4.23 U	3.7 U	3.27 U	4.04 U	2.55 U	1.49 U	2.47 U	2.2 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/L	4.3 U	3.04 U	3.07 U	3.83 U	1.72 U	1.17 U	1.84 U	1.64 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	4.55 U	4.26 U	4.04 U	4.5 U	2.99 U	1.44 U	2.37 U	2.11 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/L	4.32 U	4.44 U	3.42 U	3 U	2.31 U	1.25 U	1.66 U	1.43 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/L	5.03 U	3.6 U	3.2 U	3.94 U	2.52 U	2.67 U	2.66 U	2.07 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	3.78 U	2.77 U	2.81 U	2.98 U	1.24 U	0.989 U	1.46 U	1.39 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/L	4.42 U	4.14 U	3.38 U	2.61 U	2.11 U	1.29 U	1.58 U	1.35 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/L	5.51 U	2.84 U	3.76 U	2.94 U	1.96 U	1.64 U	1.5 U	1.06 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/L	8.55 U	5.68 U	5.39 U	3.42 U	3.75 U	2.17 U	3.83 U	1.86 U
Total heptachlorodibenzofuran (HpCDF)	pg/L	4 U	2.81 U	2.96 U	3.94 U	2.05 U	1.58 U	1.93 U	1.72 U
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/L	5.29 U	3.54 U	3.67 U	5.79 U	2.78 U	2.34 U	2.54 U	2.21 U
Total hexachlorodibenzofuran (HxCDF)	pg/L	3.52 U	2.62 U	2.61 U	2.86 U	1.49 U	1.05 U	1.59 U	1.47 U
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	4.49 U	4.03 U	3.78 U	4.24 U	2.81 U	1.49 U	2.47 U	2.14 U
Total pentachlorodibenzofuran (PeCDF)	pg/L	4.37 U	4.29 U	3.4 U	2.81 U	2.21 U	1.27 U	1.62 U	1.39 U
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/L	5.03 U	3.6 U	3.2 U	3.94 U	2.52 U	2.67 U	2.66 U	2.07 U
Total tetrachlorodibenzofuran (TCDF)	pg/L	5.51 U	2.84 U	3.76 U	2.94 U	1.96 U	1.64 U	1.5 U	1.06 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/L	8.55 U	5.68 U	5.39 U	3.42 U	3.75 U	2.17 U	3.83 U	1.86 U
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/L	0	0	0	0.0282	0.00283 J	0	0	0
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/L	9.26	6.67	6.20	5.60	4.35 J	3.18	4.31	2.89

Notes:
U - Not detected at the associated reporting limit
J - Estimated concentration
ND - Not detected
TCDD - 2,3,7,8 tetrachlorinated dibenzo p dioxin
TEQ - TCDD Toxicity Equivalent for Mammals
pg/L - picogram per liter

Table 8

PC-FSE Discrete Waste Characterization Analytical Results Summary
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Sample Location: Sample Identification: Sample Date: Sample Depth:	Units	NE-D1 11215131-113021-WC-SPS-NE-D1(6-8) 11/30/2021 (6-8) ft bgs	NE-G4 11215131-120121-WC-JC-NE-G4(4-6) 12/01/2021 (4-6) ft bgs	SW-B4 11215131-120221-WC-JC-SW-B4(2-4) 12/02/2021 (2-4) ft bgs	SC-B4 11215131-120621-WC-SS-SC-B4(2-4) 12/06/2021 (2-4) ft bgs	NC-Y2 11215131-121321-WC-SS-NC-Y2(6-8) 12/13/2021 (6-8) ft bgs	NC-E2 11215131-121321-WC-SS-NC-E2(8-10) 12/13/2021 (8-10) ft bgs
TCLP-Herbicides							
2,4,5-TP (Silvex)	mg/L	0.00020 U	0.00020 U	0.00020 U	0.00020 U	0.00020 U	0.00020 U
2,4-Dichlorophenoxyacetic acid (2,4-D)	mg/L	0.00098 U	0.00098 U	0.00098 U	0.00098 U	0.00098 U	0.00098 U
Dinoseb	mg/L	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U
TCLP-Metals							
Antimony	mg/L	0.0053 J	0.016 J	0.0047 U	0.0052 J	0.046 J	0.0047 U
Arsenic	mg/L	0.014 J	0.011 J	0.0091 J	0.0028 U	0.0028 U	0.034 J
Barium	mg/L	1.1	0.98	0.91	1.2	0.31	2.7
Beryllium	mg/L	0.00050 U	0.00050 U	0.00070 J	0.00050 U	0.010 U	0.0023
Cadmium	mg/L	0.0010 U	0.0023 J	0.0039 J	0.010	0.0076	0.016
Chromium	mg/L	0.0020 U	0.0068 J	0.0087 J	0.0032 J	0.095	0.0020 U
Lead	mg/L	0.0052 J	0.013 J	0.011 J	0.0018 U	0.0018 U	0.27
Mercury	mg/L	0.00037	0.000095 U	0.000095 U	0.00011 J	0.000095 U	0.000095 U
Nickel	mg/L	0.067	0.086	0.035	0.032	0.067	0.099
Selenium	mg/L	0.0049 U	0.0049 U	0.0049 U	0.0070 J	0.042 J	0.0049 U
Silver	mg/L	0.0056 J	0.0069 J	0.0072 J	0.0034 J	0.013	0.0019 U
Vanadium	mg/L	0.0018 U	0.0062 J	0.011 J	0.0018 U	0.015 J	0.040 J
PCBs							
Aroclor-1016 (PCB-1016)	mg/kg	0.023 U	0.020 U	0.018 U	0.018 U	0.037 U	0.028 U
Aroclor-1221 (PCB-1221)	mg/kg	0.031 U	0.027 U	0.023 U	0.024 U	0.049 U	0.037 U
Aroclor-1232 (PCB-1232)	mg/kg	0.032 U	0.027 U	0.024 U	0.024 U	0.050 U	0.038 U
Aroclor-1242 (PCB-1242)	mg/kg	0.020 U	0.018 U	0.015 U	0.016 U	0.032 U	0.025 U
Aroclor-1248 (PCB-1248)	mg/kg	0.044 U	0.038 U	0.034 U	0.303	0.070 U	0.054 U
Aroclor-1254 (PCB-1254)	mg/kg	0.027 U	0.0448	0.020 U	0.552	0.042 U	0.032 U
Aroclor-1260 (PCB-1260)	mg/kg	0.021 U	0.018 U	0.016 U	0.210	0.034 U	0.026 U
TCLP-Pesticides							
4,4'-DDD	mg/L	0.000038 U	0.000038 U	0.000038 U	0.000038 U	0.000038 U	0.000038 U
4,4'-DDE	mg/L	0.000034 U	0.000034 U	0.000034 U	0.000034 U	0.000034 U	0.000034 U
4,4'-DDT	mg/L	0.000046 U	0.000046 U	0.000046 U	0.000046 U	0.000046 U	0.000046 U
Chlordane, technical	mg/L	--	0.0014 U	0.0014 U	0.0014 U	0.0014 U	0.0014 U
Dieldrin	mg/L	0.000051 U	0.000051 U	0.000051 U	0.000051 U	0.000051 U	0.000051 U
Endosulfan I	mg/L	0.000035 U	0.000035 U	0.000035 U	0.000035 U	0.000035 U	0.000035 U
Endosulfan II	mg/L	0.000033 U	0.000033 U	0.000033 U	0.000033 U	0.000033 U	0.000033 U
Endrin	mg/L	0.000040 U	0.000040 U	0.000040 U	0.000040 U	0.000040 U	0.000040 U
gamma-BHC (lindane)	mg/L	0.000040 U	0.000040 U	0.000040 U	0.000040 U	0.000040 U	0.000040 U
Heptachlor	mg/L	0.000030 U	0.000030 U	0.000030 U	0.000030 U	0.000030 U	0.000030 U
Heptachlor epoxide	mg/L	0.000040 U	0.000040 U	0.000040 U	0.000040 U	0.000040 U	0.000040 U
Methoxychlor	mg/L	0.000045 U	0.000045 U	0.000045 U	0.000045 U	0.000045 U	0.000045 U
Mirex	mg/L	0.000031 U	0.000031 U	0.000031 U	0.000031 U	0.000031 U	0.000031 U
Toxaphene	mg/L	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U
TCLP-Semi-Volatile Organic Compounds (SVOCs)							
1,4-Dichlorobenzene	mg/L	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0017 U
2,4,5-Trichlorophenol	mg/L	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
2,4,6-Trichlorophenol	mg/L	0.0092 U	0.0092 U	0.0092 U	0.0092 U	0.0092 U	0.0092 U
2,4-Dinitrotoluene	mg/L	0.0055 U	0.0055 U	0.0055 U	0.0055 U	0.0055 U	0.0055 U
2-Methylphenol	mg/L	0.0089 U	0.0089 U	0.0089 U	0.0089 U	0.0089 U	0.0089 U
3&4-Methylphenol	mg/L	0.0088 U	0.0088 U	0.0088 U	0.0088 U	0.0088 U	0.0088 U
Hexachlorobenzene	mg/L	0.0033 U	0.0033 U	0.0033 U	0.0033 U	0.0033 U	0.0033 U
Hexachlorobutadiene	mg/L	0.0049 U	0.0049 U	0.0049 U	0.0049 U	0.0049 U	0.0049 U
Hexachloroethane	mg/L	0.0039 U	0.0039 U	0.0039 U	0.0039 U	0.0039 U	0.0039 U
Nitrobenzene	mg/L	0.0064 U	0.0064 U	0.0064 U	0.0064 U	0.0064 U	0.0064 U
Pentachlorophenol	mg/L	0.014 U	0.014 U	0.014 U	0.014 U	0.014 U	0.014 U
Pyridine	mg/L	0.0039 U	0.0039 U	0.0039 U	R	0.0039 U	0.0039 U
TCLP-Volatile Organic Compounds (VOCs)							
1,1,1,2-Tetrachloroethane	mg/L	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U

Table 8

PC-FSE Discrete Waste Characterization Analytical Results Summary
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Sample Location: Sample Identification: Sample Date: Sample Depth:	Units	NE-D1 11215131-113021-WC-SPS-NE-D1(6-8) 11/30/2021 (6-8) ft bgs	NE-G4 11215131-120121-WC-JC-NE-G4(4-6) 12/01/2021 (4-6) ft bgs	SW-B4 11215131-120221-WC-JC-SW-B4(2-4) 12/02/2021 (2-4) ft bgs	SC-B4 11215131-120621-WC-SS-SC-B4(2-4) 12/06/2021 (2-4) ft bgs	NC-Y2 11215131-121321-WC-SS-NC-Y2(6-8) 12/13/2021 (6-8) ft bgs	NC-E2 11215131-121321-WC-SS-NC-E2(8-10) 12/13/2021 (8-10) ft bgs
1,1,1-Trichloroethane	mg/L	0.0027 U	0.0027 U	0.0027 U	0.0027 U	0.0027 U	0.0027 U
1,1,2,2-Tetrachloroethane	mg/L	0.0033 U	0.0033 U	0.0033 U	0.0033 U	0.0033 U	0.0033 U
1,1,2-Trichloroethane	mg/L	0.0027 U	0.0027 U	0.0027 U	0.0027 U	0.0027 U	0.0027 U
1,1-Dichloroethene	mg/L	0.0030 U	0.0030 U	0.0030 U	0.0030 U	0.0030 U	0.0030 U
1,2,3-Trichloropropane	mg/L	0.0035 U	0.0035 U	0.0035 U	0.0035 U	0.0035 U	0.0035 U
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.0024 U	0.0024 U	0.0024 U	0.0024 U	0.0024 U	0.0024 U
1,2-Dichloroethane	mg/L	0.0030 U	0.0030 U	0.0030 U	0.0030 U	0.0030 U	0.0030 U
1,3-Dichloropropene	mg/L	0.0022 U	0.0022 U	0.0022 U	0.0022 U	0.0022 U	0.0022 U
1,4-Dichlorobenzene	mg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/L	0.0093 U	0.0093 U	0.0093 U	0.0093 U	0.0093 U	0.0093 U
Acetone	mg/L	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U
Acetonitrile	mg/L	0.037 U	0.037 U	0.037 U	0.037 U	0.037 U	0.037 U
Acrylonitrile	mg/L	0.0052 U	0.0052 U	0.0052 U	0.0052 U	0.0052 U	0.0052 U
Benzene	mg/L	0.0021 U	0.0021 U	0.0021 U	0.0021 U	0.0021 U	0.0021 U
Bromodichloromethane	mg/L	0.0029 U	0.0029 U	0.0029 U	0.0029 U	0.0029 U	0.0029 U
Bromoform	mg/L	0.0032 U	0.0032 U	0.0032 U	0.0032 U	0.0032 U	0.0032 U
Bromomethane (Methyl bromide)	mg/L	0.0082 U	0.0082 U	0.0082 U	0.0082 U	0.0082 U	0.0082 U
Carbon disulfide	mg/L	0.0048 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U
Carbon tetrachloride	mg/L	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U
Chlorobenzene	mg/L	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U
Chloroform (Trichloromethane)	mg/L	0.0073 U	0.0109 U	0.0108 U	0.0084 U	0.0102 U	0.0095 U
Dichlorodifluoromethane (CFC-12)	mg/L	0.0068 U	0.0068 U	0.0068 U	0.0068 U	0.0068 U	0.0068 U
Ethylbenzene	mg/L	0.0030 U	0.0030 U	0.0030 U	0.0030 U	0.0030 U	0.0030 U
Hexachlorobutadiene	mg/L	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U
Isobutanol (isobutyl alcohol)	mg/L	0.061 U	0.061 U	0.061 U	0.061 U	0.061 U	0.061 U
m&p-Xylenes	mg/L	0.0039 U	0.0039 U	0.0039 U	0.0039 U	0.0039 U	0.0039 U
Methyl acrylonitrile	mg/L	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Methylene chloride	mg/L	0.0024 J	0.00050 U	0.0024 J	0.00050 U	0.00050 U	0.00050 U
o-Xylene	mg/L	0.0030 U	0.0030 U	0.0030 U	0.0030 U	0.0030 U	0.0030 U
Styrene	mg/L	0.0035 U	0.0035 U	0.0035 U	0.0035 U	0.0035 U	0.0035 U
Tetrachloroethene	mg/L	0.0045 U	0.0045 U	0.0045 U	0.0045 U	0.0045 U	0.0045 U
Toluene	mg/L	0.0027 U	0.0027 U	0.0027 U	0.0027 U	0.0027 U	0.0027 U
trans-1,3-Dichloropropene	mg/L	0.0022 U	0.0022 U	0.0022 U	0.0022 U	0.0022 U	0.0022 U
Trichloroethene	mg/L	0.0026 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
Trichlorofluoromethane (CFC-11)	mg/L	0.0042 U	0.0042 U	0.0042 U	0.0042 U	0.0042 U	0.0042 U
Vinyl chloride	mg/L	0.0039 U	0.0039 U	0.0039 U	0.0039 U	0.0039 U	0.0039 U
Xylenes (total)	mg/L	0.0039 U	0.0039 U	0.0039 U	0.0039 U	0.0039 U	0.0039 U
General Chemistry							
Cyanide (total)	mg/kg	0.23 U	0.19 U	0.17 J-	0.17 UJ	0.36 UJ	0.19 UJ
Ignitability	Deg F	200 U	200 U	200 U	200 U	200 U	200 U
Moisture content (dry weight)	%	50.6	37.8	26.2	22.3	139	88.6
Paint filter	mL/100g	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
pH corrosivity	s.u.	7.54 J	7.31 J	7.43 J	7.38 J	11.03 J	7.02 J
Reactive cyanide	mg/kg	11 U	9.6 U	9.2 U	8.9 UJ	16 U	14 U
Reactive sulfide	mg/kg	85 U	81 U	72 U	70 U	130 U	110 U
Sulfide	mg/kg	193	16.4	4.5 U	4.3 U	8.5 U	6.7 U

Notes:
U - Not detected at the associated reporting limit
J - Estimated concentration
UJ - Not detected; associated reporting limit is estimated
R - Rejected
J- - Estimated concentration, result may be biased low
mg/L - milligram per liter
mg/kg - milligram per kilogram
TCLP - Toxicity Characteristic Leaching Procedure
Deg F - Degrees in Fahrenheit
s.u. - standard unit

Table 9

PC-FSE Composite IDW Analytical Results Summary
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Sample Location: Sample Identification: Sample Date: Sample Type:	Units	Decon Water Drums 11215131-120121-IDW-SPS-NE DECON 12/01/2021	Decon Water Drums 11215131-120721-IDW-SS-DECON2 12/07/2021	SS Purge 11215131-122021-IDW-SS-PURGE 12/20/2021	NE Soil Cutting Drums 11215131-120121-IDW-SS-NE 12/01/2021	SC Soil Cutting Drums 11215131-120721-IDW-SS-SC 12/07/2021	SW Soil Cutting Drums 11215131-120821-IDW-SS-SW 12/08/2021	NC Soil Cutting Drums 11215131-121421-IDW-BN-NC 12/14/2021
TCLP-Dioxins/Furans								
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/L	11.1 J	5.84 U	5.06 U	4.86 J	4.43 U	10.7 U	86.5
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/L	153	8.17 U	39.9 J	25.9 U	11.1 U	11.5 U	199
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/L	2.75 U	1.62 J	8.31 U	1.47 U	3.03 J	4.36 U	8.32 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/L	7.89 J	2.06 U	3.74 U	2.23 J	3.93 J	5.96 U	14.2 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/L	1.43 U	1.66 U	2.72 U	1.01 U	2.17 U	4.95 U	3.98 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	0.859 U	1.04 U	2.64 U	1.06 U	1.97 J	5.04 U	3.43 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	1.04 U	1.52 U	3.25 U	1.3 U	2.53 U	7.01 U	4.52 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	0.811 U	0.994 U	2.79 U	1.08 U	2.34 J	5.25 U	2.99 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	1.05 U	1.36 U	3.21 U	1.26 U	2.21 U	6.34 U	4.93 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/L	0.838 U	1.13 U	3.53 U	1.07 U	1.94 J	6.28 U	4.26 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	0.969 U	1.39 U	3.04 U	1.33 J	2.76 J	6.63 U	5.16 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/L	0.919 U	0.902 U	3.26 U	1.25 U	2.57 J	6.3 U	3.35 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/L	1.42 U	1.39 U	2.88 U	2.31 U	1.59 U	7.3 U	3.87 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	0.84 U	1.24 U	4.49 U	1.03 U	2.05 J	5.82 U	3.01 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/L	0.945 U	0.92 U	3.42 U	1.32 U	2.03 J	6.27 U	3.67 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/L	6.57 J	6.55 J	77.2 U	9.8	3.83 J	52.1	58.2
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/L	2.9 J	2.09 U	21.6 U	1.43 U	2.48 U	14.2 J	13.4
Total heptachlorodibenzofuran (HpCDF)	pg/L	5.71 J	1.62 J	5.55 J	1.32 J	3.03 J	4.64 U	15.1 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/L	16.8 J	2.06 U	3.74 U	4.84 J	3.93 J	5.96 U	35.7 J
Total hexachlorodibenzofuran (HxCDF)	pg/L	0.835 U	1.09 U	3.22 U	1.06 U	12.8 J	5.56 U	3.35 U
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	1.69 J	1.42 U	3.16 U	1.33 J	2.76 J	6.65 U	4.87 U
Total pentachlorodibenzofuran (PeCDF)	pg/L	0.932 U	0.911 U	3.34 U	1.29 U	4.6 J	6.29 U	3.51 U
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/L	1.42 U	1.39 U	2.88 U	2.31 U	1.59 U	7.3 U	3.87 U
Total tetrachlorodibenzofuran (TCDF)	pg/L	10.4 J	10.2 J	126 J	15.8 J	6.48 J	77 J	86.3 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/L	2.9 J	2.09 U	21.6 J	1.43 U	2.48 U	14.2 J	13.4 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/L	3.69 J	0.671 J	0.012 J	1.14 J	2.24 J	19.4 J	19.5 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/L	4.89 J	3.02 J	17.9 J	3.58 J	4.53 J	26.3 J	23.5 J
TCLP-Herbicides								
2,4,5-TP (Silvex)	mg/L	0.00039 J	0.00020 U	0.00020 U	0.00020 U	0.00020 U	0.00020 U	0.00020 U
2,4-Dichlorophenoxyacetic acid (2,4-D)	mg/L	0.00098 U	0.00098 U	0.00098 U	0.00098 U	0.00098 U	0.00098 U	0.00098 U
Dinoseb	mg/L	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U
TCLP-Metals								
Antimony	mg/L	0.0047 U	0.0047 U	0.0047 U	0.0053	0.0047 U	0.0047 U	0.0047 U
Arsenic	mg/L	0.0042	0.0028 U	0.0028 U	0.012	0.0049	0.0028 U	0.0028 U
Barium	mg/L	0.057	0.10	0.21	1.2	0.60	1.1	0.40
Beryllium	mg/L	0.00050 U	0.00050 U	0.00050 U	0.00050 U	0.00050 U	0.00050 U	0.00050 U
Cadmium	mg/L	0.0010 U	0.0010 U	0.0019	0.0026	0.0043	0.0010	0.0011
Chromium	mg/L	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U
Lead	mg/L	0.0026	0.0018 U	0.0040	0.0093	0.0018 U	0.0018 U	0.0053
Mercury	mg/L	0.000095 U	0.000095 U	0.000095 U	0.000095 U	0.000095 U	0.000095 U	0.000095 U
Nickel	mg/L	0.0045	0.0035	0.0022	0.050	0.044	0.018	0.020
Selenium	mg/L	0.0049 U	0.0049 U	0.0049 U	0.0049 U	0.0055	0.0065	0.0049 U
Silver	mg/L	0.0019 U	0.0019 U	0.0040	0.0049	0.0019 U	0.0019 U	0.0019 U
Vanadium	mg/L	0.0030	0.0018 U	0.0018 U	0.0029	0.011	0.0055	0.0018 U
TCLP-Pesticides								
4,4'-DDD	mg/L	0.000038 U	0.000038 U	0.000038 U	0.000038 U	0.000038 U	0.000038 U	0.000038 U
4,4'-DDE	mg/L	0.000034 U	0.000034 U	0.000034 U	0.000034 U	0.000034 U	0.000034 U	0.000034 U
4,4'-DDT	mg/L	0.000046 U	0.000046 U	0.000046 U	0.000046 U	0.000046 U	0.000046 U	0.000046 U
Chlordane, technical	mg/L	0.0014 U	0.0014 U	0.0014 U	0.0014 U	0.0014 U	0.0014 U	0.0014 U
Dieldrin	mg/L	0.000051 U	0.000051 U	0.000051 U	0.000051 U	0.000051 U	0.000051 U	0.000051 U
Endosulfan I	mg/L	0.000035 U	0.000035 U	0.000035 U	0.000035 U	0.000035 U	0.000035 U	0.000035 U
Endosulfan II	mg/L	0.000033 U	0.000033 UJ	0.000033 U	0.000033 UJ	0.000033 UJ	0.000033 UJ	0.000033 U
Endrin	mg/L	0.000040 U	0.000040 U	0.000040 U	0.000040 U	0.000040 U	0.000040 U	0.000040 U
gamma-BHC (lindane)	mg/L	0.000040 U	0.000040 U	0.000040 U	0.000040 U	0.000040 U	0.000040 U	0.000040 U
Heptachlor	mg/L	0.000030 U	0.000030 U	0.000030 U	0.000030 U	0.000030 U	0.000030 U	0.000030 U
Heptachlor epoxide	mg/L	0.000040 U	0.000040 U	0.000040 U	0.000040 U	0.000040 U	0.000040 U	0.000040 U
Methomyl	mg/L	0.01 U	0.025 UJ	0.05 U	0.01 U	0.01 UJ	0.025 U	0.05 U
Methoxychlor	mg/L	0.000045 U	0.000045 U	0.000045 U	0.000045 U	0.000045 U	0.000045 U	0.000045 U
Mirex	mg/L	0.000031 U	0.000031 U	0.000031 U	0.000031 U	0.000031 U	0.000031 U	0.000031 U
Toxaphene	mg/L	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U

Table 9

PC-FSE Composite IDW Analytical Results Summary
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Sample Location: Sample Identification: Sample Date: Sample Type:	Units	Decon Water Drums 11215131-120121-IDW-SPS-NE DECON 12/01/2021	Decon Water Drums 11215131-120721-IDW-SS-DECON2 12/07/2021	SS Purge 11215131-122021-IDW-SS-PURGE 12/20/2021	NE Soil Cutting Drums 11215131-120121-IDW-SS-NE 12/01/2021	SC Soil Cutting Drums 11215131-120721-IDW-SS-SC 12/07/2021	SW Soil Cutting Drums 11215131-120821-IDW-SS-SW 12/08/2021	NC Soil Cutting Drums 11215131-121421-IDW-BN-NC 12/14/2021
Total Petroleum Hydrocarbons (TPH)								
Total Petroleum Hydrocarbons (>C12-C28)	mg/kg	–	–	–	12 UJ	31.6 J	7.0 U	13.1 J
Total Petroleum Hydrocarbons (>C28-C35)	mg/kg	–	–	–	12 UJ	68.5 J	7.0 U	27.2 J
Total Petroleum Hydrocarbons (C6-C12)	mg/kg	–	–	–	17 UJ	23 U	9.7 U	12 U
Total Petroleum Hydrocarbons (C6-C35)	mg/kg	–	–	–	12 UJ	100 J	7.0 U	40.3 J
Total Petroleum Hydrocarbons (>C12-C28)	mg/L	2.78	1.37 J	0.56 UJ	–	–	–	–
Total Petroleum Hydrocarbons (>C28-C35)	mg/L	2.05 J	0.61 U	0.56 UJ	–	–	–	–
Total Petroleum Hydrocarbons (C6-C12)	mg/L	0.907 J	1.02 J	0.73 UJ	–	–	–	–
Total Petroleum Hydrocarbons (C6-C35)	mg/L	5.74	2.39 J	0.56 UJ	–	–	–	–
TCLP-Glycol								
2-Ethoxyethanol	mg/L	1.0 U	25.0 U	1.0 U	1.0 U	25.0 U	25.0 U	1.0 U
Ethylene glycol	mg/L	5.2 U	14.7 U	12.7	4.8 U	14.7 U	14.7 U	24.1
Ethylene glycol monomethyl ether (2-methyoxyethanol)	mg/L	1.0 U	25.0 U	1.0 U	1.0 U	25.0 U	25.0 U	1.0 U
TCLP-Semi-Volatile Organic Compounds (SVOCs)								
1,2,4-Trichlorobenzene	mg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
1,2-Diphenylhydrazine	mg/L	0.0019 U	0.0019 U	0.0019 U	0.0019 U	0.0019 U	0.0019 U	0.0019 U
1,3-Dinitrobenzene	mg/L	0.015 U	0.015 U	0.015 U	0.015 U	0.015 U	0.015 U	0.015 U
1,4-Dioxane	mg/L	0.0066 U	0.0066 U	0.0066 U	0.0066 U	0.0066 U	0.0066 U	0.0066 U
2,3,4,6-Tetrachlorophenol	mg/L	0.015 U	0.015 U	0.015 U	0.015 U	0.015 U	0.015 U	0.015 U
2,4,5-Trichlorophenol	mg/L	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
2,4,6-Trichlorophenol	mg/L	0.0092 U	0.0092 U	0.0092 U	0.0092 U	0.0092 U	0.0092 U	0.0092 U
2,4-Dichlorophenol	mg/L	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U	0.013 UJ
2,4-Dimethylphenol	mg/L	0.024 U	0.024 U	0.024 U	0.024 U	0.024 U	0.024 U	0.024 UJ
2,4-Dinitrophenol	mg/L	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U
2,4-Dinitrotoluene	mg/L	0.0055 U	0.0055 U	0.0055 U	0.0055 U	0.0055 U	0.0055 U	0.0055 U
2,6-Dinitrotoluene	mg/L	0.0048 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U
2-Chlorophenol	mg/L	0.0082 U	0.0082 U	0.0082 U	0.0082 U	0.0082 U	0.0082 U	0.0082 UJ
2-Methylphenol	mg/L	0.0089 U	0.0089 U	0.0089 U	0.0089 U	0.0089 U	0.0089 U	0.0089 U
3&4-Methylphenol	mg/L	0.0088 U	0.0088 U	0.0088 U	0.0088 U	0.0088 U	0.0088 U	0.0088 U
3,3'-Dichlorobenzidine	mg/L	0.0051 U	0.0051 U	0.0051 U	0.0051 U	0.0051 U	0.0051 U	0.0051 U
4-Chloro-3-methylphenol	mg/L	0.0089 U	0.0089 U	0.0089 U	0.0089 U	0.0089 U	0.0089 U	0.0089 UJ
Acenaphthene	mg/L	0.0019 U	0.0019 U	0.0019 U	0.0019 U	0.0019 U	0.0019 U	0.0019 U
Acetophenone	mg/L	0.0021 U	0.0021 U	0.0021 U	0.0021 U	0.0021 U	0.0021 U	0.0021 UJ
Aniline	mg/L	R	0.0032 U	0.0032 U	0.0032 U	0.0032 U	0.0032 U	0.0032 U
Anthracene	mg/L	0.0021 U	0.0021 U	0.0021 U	0.0021 U	0.0021 U	0.0021 U	0.0021 U
Benzidine	mg/L	R	R	R	R	R	R	R
bis(2-Chloroethyl)ether	mg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.017 U	0.017 U	0.017 U	0.017 U	0.017 U	0.017 U	0.017 U
Butyl benzylphthalate (BBP)	mg/L	0.0046 U	0.0046 U	0.0046 U	0.0046 U	0.0046 U	0.0046 U	0.0046 U
Diethyl phthalate	mg/L	0.0026 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
Dimethoate	mg/L	0.0024 U	0.0024 U	0.0024 U	0.0024 UJ	0.0024 U	0.0024 U	0.0024 U
Dimethyl phthalate	mg/L	0.0022 U	0.0022 U	0.0022 U	0.0022 U	0.0022 U	0.0022 U	0.0022 U
Diphenylamine	mg/L	0.0058 U	0.0058 U	0.0058 U	0.0058 U	0.0058 U	0.0058 U	0.0058 U
Disulfoton	mg/L	0.0047 U	0.0047 U	0.0047 U	0.0047 U	0.0047 U	0.0047 U	0.0047 U
Ethyl parathion	mg/L	0.0051 U	0.0051 U	0.0051 U	0.0051 U	0.0051 U	0.0051 U	0.0051 U
Fluoranthene	mg/L	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0017 U
Fluorene	mg/L	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0017 U
Hexachlorobenzene	mg/L	0.0033 U	0.0033 U	0.0033 U	0.0033 U	0.0033 U	0.0033 U	0.0033 U
Hexachlorocyclopentadiene	mg/L	0.028 U	0.028 U	0.028 U	0.028 U	0.028 U	0.028 U	0.028 U
Hexachloroethane	mg/L	0.0039 U	0.0039 U	0.0039 U	0.0039 U	0.0039 U	0.0039 U	0.0039 U
Hexachlorophene (HCP)	mg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Isophorone	mg/L	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 UJ
Methyl parathion	mg/L	0.0040 U	0.0040 U	0.0040 U	0.0040 U	0.0040 U	0.0040 U	0.0040 U
Nitrobenzene	mg/L	0.0064 U	0.0064 U	0.0064 U	0.0064 U	0.0064 U	0.0064 U	0.0064 U
N-Nitrosodimethylamine	mg/L	0.0082 U	0.0082 U	0.0082 U	0.0082 U	0.0082 U	0.0082 U	0.0082 U
N-Nitrosodi-n-butylamine	mg/L	0.0060 U	0.0060 U	0.0060 U	0.0060 U	0.0060 U	0.0060 U	0.0060 U
N-Nitrosodi-n-propylamine	mg/L	0.0048 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U
N-Nitrosomethylethylamine	mg/L	0.014 U	0.014 U	0.014 U	0.014 U	0.014 U	0.014 U	0.014 U
N-Nitrosopyrrolidine	mg/L	0.0073 U	0.0073 U	0.0073 U	0.0073 U	0.0073 U	0.0073 U	0.0073 U
Pentachlorobenzene	mg/L	0.0024 U	0.0024 U	0.0024 U	0.0024 U	0.0024 U	0.0024 U	0.0024 U
Pentachloronitrobenzene	mg/L	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U
Pentachlorophenol	mg/L	0.014 U	0.014 U	0.014 U	0.014 U	0.014 U	0.014 U	0.014 U

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Phenol	mg/L	0.0039 U	0.0039 U	0.0039 U	0.0039 U	0.0039 U	0.0039 U	0.0039 U
p-Phenylenediamine	mg/L	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U
Pronamide	mg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Pyrene	mg/L	0.0022 U	0.0022 U	0.0022 U	0.0022 U	0.0022 U	0.0022 U	0.0023 J
Pyridine	mg/L	0.0039 U	0.0039 U	0.0039 U	0.0039 U	0.0039 U	0.0039 U	0.0039 U
TCLP-Volatile Organic Compounds (VOCs)								
1,1,1,2-Tetrachloroethane	mg/L	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U
1,1,1-Trichloroethane	mg/L	0.0027 U	0.0027 U	0.0027 U	0.0027 U	0.0027 U	0.0027 U	0.0027 U
1,1,2,2-Tetrachloroethane	mg/L	0.0033 U	0.0033 U	0.0033 U	0.0033 U	0.0033 U	0.0033 U	0.0033 U
1,1,2-Trichloroethane	mg/L	0.0027 U	0.0027 U	0.0027 U	0.0027 U	0.0027 U	0.0027 U	0.0027 U
1,1-Dichloroethene	mg/L	0.0030 U	0.0030 U	0.0030 U	0.0030 U	0.0030 U	0.0030 U	0.0030 U
1,2,3-Trichloropropane	mg/L	0.0035 U	0.0035 U	0.0035 U	0.0035 U	0.0035 U	0.0035 U	0.0035 U
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.0024 U	0.0024 U	0.0024 U	0.0024 U	0.0024 U	0.0024 U	0.0024 U
1,2-Dichloroethane	mg/L	0.0030 U	0.0030 U	0.0030 U	0.0030 U	0.0030 U	0.0030 U	0.0030 U
1,3-Dichloropropene	mg/L	0.0022 U	0.0022 U	0.0022 U	0.0022 U	0.0022 U	0.0022 U	0.0022 U
1,4-Dichlorobenzene	mg/L	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/L	0.0093 U	0.0093 U	0.0093 U	0.0093 U	0.0093 U	0.0093 U	0.0093 U
Acetone	mg/L	0.177 J+	0.0564	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U
Acetonitrile	mg/L	0.037 U	0.037 U	0.037 U	0.037 U	0.037 U	0.037 U	0.037 U
Acrylamide	mg/L	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U	0.013 UJ
Acrylonitrile	mg/L	0.0052 U	0.0345 J	0.0052 U	0.0052 U	0.0052 U	0.0052 U	R
Benzene	mg/L	0.0021 U	0.0021 U	0.0021 U	0.0021 U	0.0021 U	0.0021 U	0.0052
Bromodichloromethane	mg/L	0.0029 U	0.0029 U	0.0029 U	0.0029 U	0.0029 U	0.0029 U	0.0029 U
Bromoform	mg/L	0.0032 U	0.0032 U	0.0032 U	0.0032 U	0.0032 U	0.0032 U	0.0032 U
Bromomethane (Methyl bromide)	mg/L	0.0082 U	0.0082 U	0.0082 UJ	0.0082 U	0.0082 U	0.0082 U	0.0082 U
Carbon disulfide	mg/L	0.0048 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U
Carbon tetrachloride	mg/L	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U
Chlorobenzene	mg/L	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U
Chloroform (Trichloromethane)	mg/L	0.0025 U	0.0025 U	0.0025 U	0.0102 U	0.0058 U	0.0070 U	0.0080 U
Dichlorodifluoromethane (CFC-12)	mg/L	0.0068 U	0.0068 U	0.0068 U	0.0068 U	0.0068 U	0.0068 U	0.0068 U
Ethylbenzene	mg/L	0.0030 U	0.0030 U	0.0030 U	0.0030 U	0.0030 U	0.0030 U	0.0044 J
Hexachlorobutadiene	mg/L	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U
Isobutanol (isobutyl alcohol)	mg/L	0.061 U	0.061 U	0.061 U	0.061 U	0.061 U	0.061 U	0.061 U
m&p-Xylenes	mg/L	0.0039 U	0.0039 U	0.0039 U	0.0039 U	0.0039 U	0.0039 U	0.0168
Methyl acrylonitrile	mg/L	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Methylene chloride	mg/L	0.0021 J	0.00050 U	0.00050 U	0.0016 J	0.00050 U	0.00050 U	0.00050 U
o-Xylene	mg/L	0.0030 U	0.0030 U	0.0030 U	0.0030 U	0.0030 U	0.0030 U	0.0070
Styrene	mg/L	0.0035 U	0.0035 U	0.0035 U	0.0035 U	0.0035 U	0.0035 U	0.0035 U
Tetrachloroethene	mg/L	0.0045 U	0.0045 U	0.0045 U	0.0045 U	0.0045 U	0.0045 U	0.0045 U
Toluene	mg/L	0.0027 U	0.0043 J	0.0027 U	0.0027 U	0.0027 U	0.0027 U	0.0279
trans-1,3-Dichloropropene	mg/L	0.0022 U	0.0022 U	0.0022 U	0.0022 U	0.0022 U	0.0022 U	0.0022 U
Trichloroethene	mg/L	0.0026 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U	0.0026 U
Trichlorofluoromethane (CFC-11)	mg/L	0.0042 U	0.0042 U	0.0042 U	0.0042 U	0.0042 U	0.0042 U	0.0042 U
Vinyl chloride	mg/L	0.0039 U	0.0039 U	0.0039 U	0.0039 U	0.0039 U	0.0039 U	0.0039 U
Xylenes (total)	mg/L	0.0039 U	0.0039 U	0.0039 U	0.0039 U	0.0039 U	0.0039 U	0.0238
General Chemistry								
Ignitability	Deg F	200 U	200 U	200 U	200 U	200 U	200 U	200 U
Percent solids	%	–	–	–	74.4	79.4	78.0	76.8
Reactive cyanide	mg/kg	–	–	–	9.2 U	9.1 U	8.9 U	9.6 UJ
Reactive cyanide	mg/L	10 U	10 U	10 UJ	–	–	–	–
Reactive sulfide	mg/kg	–	–	–	73 U	72 U	70 U	76 UJ
Reactive sulfide	mg/L	42 U	43 U	43 UJ	–	–	–	–

Notes:
U - Not detected at the associated reporting limit
J - Estimated concentration
UJ - Not detected; associated reporting limit is estimated
R - Rejected
J+ - Estimated concentration, result may be biased high
mg/L - milligram per liter
mg/kg - milligram per kilogram
pg/L - picogram per liter

Table 10

PC-FSE Water Analytical Results Summary
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Sample Location: Sample Identification: Sample Date: Sample Type:	Units	PZ-SW 11215131-012022-GW-BN-PZ-SW 01/20/2022	PZ-NC 11215131-012022-GW-BN-PZ-NC 01/20/2022	PZ-NE 11215131-012022-GW-BN-PZ-NE 01/20/2022	PZ-NE 11215131-012022-GW-BN-DUP-1 01/20/2022 Duplicate	PZ-SC 11215131-012022-GW-BN-PZ-SC 01/20/2022	PZ-SW 11215131-121621-GW-SS-PZ-SW 12/16/2021	PZ-SC 11215131-121621-GW-SS-PZ-SC 12/16/2021	PZ-NC 11215131-121621-GW-SS-PZ-NC 12/16/2021	PZ-NE 11215131-121721-GW-SS-PZ-NE 12/17/2021	PZ-NE 11215131-121721-GW-SS-DUP-1 12/17/2021 Duplicate
Dioxins/Furans											
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/L	4 U	2.32 U	3.44 U	2.77 U	4.11 J	--	--	--	--	--
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/L	9.47 J	16.5 J	14.4 J	14.7 J	15.7 J	--	--	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/L	1.71 J	0.964 U	0.795 U	1.13 U	0.817 U	--	--	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/L	1.66 U	1.72 U	1.84 U	1.49 U	1.53 U	--	--	--	--	--
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/L	1.83 U	1.39 U	1.17 U	1.67 U	1.21 U	--	--	--	--	--
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	1.31 U	1.19 U	0.989 U	1.34 U	0.791 U	--	--	--	--	--
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	1.62 U	1.58 U	1.94 U	1.37 U	1.56 U	--	--	--	--	--
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	1.27 U	1.21 U	0.979 U	1.18 U	0.799 U	--	--	--	--	--
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	1.44 U	1.34 U	1.77 U	1.25 U	1.44 U	--	--	--	--	--
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/L	1.36 U	1.38 U	1.23 U	1.51 U	0.904 U	--	--	--	--	--
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	1.56 U	1.36 U	1.82 U	1.27 U	1.51 U	--	--	--	--	--
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/L	1.1 U	1.1 U	1.13 U	0.827 U	0.829 U	--	--	--	--	--
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/L	1.6 U	1.87 U	1.97 U	2 U	1.4 U	--	--	--	--	--
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	1.17 U	0.979 U	0.854 U	1.13 U	0.742 U	--	--	--	--	--
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/L	1 U	1.17 U	1.03 U	0.787 U	0.784 U	--	--	--	--	--
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/L	1.05 U	4.02 J	4.11 J	4.65 J	16.6	--	--	--	--	--
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/L	2.19 U	1.84 U	1.95 U	2.11 U	3.52 J	--	--	--	--	--
Total heptachlorodibenzofuran (HpCDF)	pg/L	1.71 J	1.15 U	0.961 U	1.37 U	0.995 U	--	--	--	--	--
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/L	1.66 U	1.72 U	1.84 U	1.49 U	2.92 J	--	--	--	--	--
Total hexachlorodibenzofuran (HxCDF)	pg/L	1.27 U	1.17 U	0.998 U	1.27 U	0.802 U	--	--	--	--	--
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	1.54 U	1.42 U	1.84 U	1.3 U	1.5 U	--	--	--	--	--
Total pentachlorodibenzofuran (PeCDF)	pg/L	1.05 U	1.14 U	1.08 U	0.807 U	0.806 U	--	--	--	--	--
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/L	1.6 U	1.87 U	1.97 U	2 U	1.4 U	--	--	--	--	--
Total tetrachlorodibenzofuran (TCDF)	pg/L	1.05 U	6.81 J	4.11 J	7.15 J	32.2 J	--	--	--	--	--
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/L	2.19 U	1.84 U	1.95 U	2.11 U	3.52 J	--	--	--	--	--
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/L	0.02 J	0.407 J	0.415 J	0.469 J	5.16 J	--	--	--	--	--
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/L	2.64 J	2.93 J	3.05 J	3.13 J	6.42 J	--	--	--	--	--
Dioxins/Furans (Dissolved)											
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF) (dissolved)	pg/L	3.37 U	3.27 U	3.33 U	2.89 U	2.77 U	--	--	--	--	--
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD) (dissolved)	pg/L	15.1 U	5.83 U	14.2 U	7.96 J	10.9 U	--	--	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF) (dissolved)	pg/L	2.63 J	1.19 U	1.21 U	1.34 U	0.95 U	--	--	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD) (dissolved)	pg/L	1.95 U	2.61 U	2.17 U	2.08 U	3.69 U	--	--	--	--	--
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF) (dissolved)	pg/L	1.9 U	1.85 U	1.91 U	1.91 U	1.41 U	--	--	--	--	--
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF) (dissolved)	pg/L	1.43 U	1.27 U	1.04 U	1.15 U	1.14 U	--	--	--	--	--
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD) (dissolved)	pg/L	1.55 U	1.54 U	1.64 U	1.84 U	1.78 U	--	--	--	--	--
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF) (dissolved)	pg/L	1.44 U	1.24 U	0.902 U	1.13 U	1.18 U	--	--	--	--	--
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD) (dissolved)	pg/L	1.54 U	1.36 U	1.52 U	1.71 U	1.48 U	--	--	--	--	--
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF) (dissolved)	pg/L	1.68 U	1.48 U	1.11 U	1.22 U	1.36 U	--	--	--	--	--
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD) (dissolved)	pg/L	1.56 U	1.36 U	1.53 U	1.7 U	1.68 U	--	--	--	--	--
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF) (dissolved)	pg/L	1.34 U	1.26 U	1.02 U	1.28 U	1.43 U	--	--	--	--	--
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD) (dissolved)	pg/L	1.86 U	2 U	1.67 U	1.58 U	1.65 U	--	--	--	--	--
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF) (dissolved)	pg/L	1.37 U	1.3 U	0.896 U	1.11 U	1.17 U	--	--	--	--	--
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF) (dissolved)	pg/L	1.24 U	1.22 U	0.991 U	1.23 U	1.43 U	--	--	--	--	--
2,3,7,8-Tetrachlorodibenzofuran (TCDF) (dissolved)	pg/L	1.2 U	1.15 U	1.32 U	1.16 U	3.12 J	--	--	--	--	--
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) (dissolved)	pg/L	2.13 U	2.37 U	2.27 U	1.73 U	2.09 U	--	--	--	--	--
Total heptachlorodibenzofuran (HpCDF) (dissolved)	pg/L	2.63 J	1.48 U	1.51 U	1.59 U	1.15 U	--	--	--	--	--
Total heptachlorodibenzo-p-dioxin (HpCDD) (dissolved)	pg/L	1.95 U	2.61 U	2.17 U	2.08 U	3.98 J	--	--	--	--	--
Total hexachlorodibenzofuran (HxCDF) (dissolved)	pg/L	3.55 J	1.31 U	0.979 U	1.15 U	1.2 U	--	--	--	--	--
Total hexachlorodibenzo-p-dioxin (HxCDD) (dissolved)	pg/L	1.55 U	1.42 U	1.56 U	1.75 U	1.64 U	--	--	--	--	--
Total pentachlorodibenzofuran (PeCDF) (dissolved)	pg/L	1.29 U	1.24 U	1.01 U	1.25 U	1.43 U	--	--	--	--	--
Total pentachlorodibenzo-p-dioxin (PeCDD) (dissolved)	pg/L	1.86 U	2 U	1.67 U	1.58 U	1.65 U	--	--	--	--	--
Total tetrachlorodibenzofuran (TCDF) (dissolved)	pg/L	1.2 U	1.15 U	1.32 U	1.16 U	3.12 J	--	--	--	--	--
Total tetrachlorodibenzo-p-dioxin (TCDD) (dissolved)	pg/L	2.13 U	2.37 U	2.27 U	1.73 U	2.09 U	--	--	--	--	--
Total WHO Dioxin TEQ(Human/Mammal)(ND=0) (dissolved)	pg/L	0.0263 J	0	0	0.00239 J	0.312 J	--	--	--	--	--
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5) (dissolved)	pg/L	2.84 J	2.95	2.66	2.44 J	2.94 J	--	--	--	--	--
Metals											
Aluminum	ug/L	--	--	--	--	--	150 U	150 U	191 J	150 U	150 U
Antimony	ug/L	--	--	--	--	--	4.7 U	4.7 U	6.4	4.7 U	4.7 U
Arsenic	ug/L	--	--	--	--	--	5.4	2.8 U	2.8 U	3.0	4.6
Barium	ug/L	--	--	--	--	--	686	420	115 J	425	432
Beryllium	ug/L	--	--	--	--	--	0.70 J	0.50 U	2.6	0.50 U	0.50 U
Boron	ug/L	--	--	--	--	--	759	816	628	418	420
Cadmium	ug/L	--	--	--	--	--	2.3 J	2.5 J	1.2 J	2.1 J	2.1 J
Calcium	ug/L	--	--	--	--	--	163000 J-	285000 J-	250000	125000 J-	126000 J-
Chromium	ug/L	--	--	--	--	--	2.0 U	2.9 J	2.4 J	2.0 J	2.7 J
Cobalt	ug/L	--	--	--	--	--	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U
Copper	ug/L	--	--	--	--	--	5.9 U	5.9 U	5.9 U	5.9 U	5.9 U
Iron	ug/L	--	--	--	--	--	2330	1000	10700	20000	20600
Lead	ug/L	--	--	--	--	--	1.8 U	1.9 J	2.4 J	1.8 U	1.8 U
Magnesium	ug/L	--	--	--	--	--	186000	55100	141000	52400	52700
Manganese	ug/L	--	--	--	--	--	2360	1290	731	676	649
Mercury	ug/L	--	--	--	--	--	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U
Molybdenum	ug/L	--	--	--	--	--	3.6 U	3.6 U	5.4 J	3.6 U	3.6 U
Nickel	ug/L	--	--	--	--	--	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U
Potassium	ug/L	--	--	--	--	--	63400	128000	75800	35800	35900
Selenium	ug/L	--	--	--	--	--	4.9 U	4.9 U	5.9 J	4.9 U	4.9 U
Silver	ug/L	--	--	--	--	--	6.1 U	6.7 J	6.1 U	6.1 U	6.1 U
Sodium	ug/L	--	--	--	--	--	1270000	156000	421000	154000	155000
Strontium	ug/L	--	--	--	--	--	1890	1200	1800	894	896
Thallium	ug/L	--	--	--	--	--	1.8 U	1.8 U	5.5 J	1.8 U	1.8 U
Tin	ug/L	--	--	--	--	--	3.7 U	3.7 U	3.7 U	3.7 U	3.7 U
Titanium	ug/L	--	--	--	--	--	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Vanadium	ug/L	--	--	--	--	--	2.8 J	2.6 J	2.5 J	1.8 U	1.8 U
Zinc	ug/L	--	--	--	--	--	13.9 J	13.5 J	22.8	13.7 J	13.7 J

Table 10

PC-FSE Water Analytical Results Summary
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Sample Location: / Sample Identification: / Sample Date: / Sample Type:	Units	PZ-SW 11215131-012022-GW-BN-PZ-SW 01/20/2022	PZ-NC 11215131-012022-GW-BN-PZ-NC 01/20/2022	PZ-NE 11215131-012022-GW-BN-PZ-NE 01/20/2022	PZ-NE 11215131-012022-GW-BN-DUP-1 01/20/2022 Duplicate	PZ-SC 11215131-012022-GW-BN-PZ-SC 01/20/2022	PZ-SW 11215131-121621-GW-SS-PZ-SW 12/16/2021	PZ-SC 11215131-121621-GW-SS-PZ-SC 12/16/2021	PZ-NC 11215131-121621-GW-SS-PZ-NC 12/16/2021	PZ-NE 11215131-121721-GW-SS-PZ-NE 12/17/2021	PZ-NE 11215131-121721-GW-SS-DUP-1 12/17/2021 Duplicate
Metals (Dissolved)											
Aluminum (dissolved)	ug/L	--	--	--	--	--	150 U	150 U	150 U	150 U	--
Antimony (dissolved)	ug/L	--	--	--	--	--	4.7 U	4.7 U	6.8	4.7 U	--
Arsenic (dissolved)	ug/L	--	--	--	--	--	5.1	3.4	3.3	4.2	--
Barium (dissolved)	ug/L	--	--	--	--	--	681	426	117 J	439	--
Beryllium (dissolved)	ug/L	--	--	--	--	--	0.80 J	0.50 U	2.6	0.50 U	--
Boron (dissolved)	ug/L	--	--	--	--	--	757	837	643	426	--
Cadmium (dissolved)	ug/L	--	--	--	--	--	2.2 J	2.4 J	1.3 J	2.2 J	--
Calcium (dissolved)	ug/L	--	--	--	--	--	164000 J-	289000 J-	249000	128000 J-	--
Chromium (dissolved)	ug/L	--	--	--	--	--	2.0 U	2.7 J	2.4 J	2.0 U	--
Cobalt (dissolved)	ug/L	--	--	--	--	--	2.6 U	2.6 U	2.6 U	2.6 U	--
Copper (dissolved)	ug/L	--	--	--	--	--	5.9 U	5.9 U	5.9 U	5.9 U	--
Iron (dissolved)	ug/L	--	--	--	--	--	6270	1220	10500	21100	--
Lead (dissolved)	ug/L	--	--	--	--	--	1.8 U	1.8 U	1.8 U	1.8 U	--
Magnesium (dissolved)	ug/L	--	--	--	--	--	188000	56600	143000	53600	--
Manganese (dissolved)	ug/L	--	--	--	--	--	2310	1360	743	631	--
Mercury (dissolved)	ug/L	--	--	--	--	--	0.095 U	0.095 U	0.095 U	0.095 U	--
Molybdenum (dissolved)	ug/L	--	--	--	--	--	3.6 U	3.6 U	5.6 J	3.6 U	--
Nickel (dissolved)	ug/L	--	--	--	--	--	2.0 J	1.7 U	1.7 U	1.7 U	--
Potassium (dissolved)	ug/L	--	--	--	--	--	64000	130000	77300	36500	--
Selenium (dissolved)	ug/L	--	--	--	--	--	4.9 U	4.9 U	5.8 J	4.9 U	--
Silver (dissolved)	ug/L	--	--	--	--	--	6.1 U	6.2 J	6.1 U	6.1 U	--
Sodium (dissolved)	ug/L	--	--	--	--	--	1270000	163000	425000	155000	--
Strontium (dissolved)	ug/L	--	--	--	--	--	1910	1220	1820	909	--
Thallium (dissolved)	ug/L	--	--	--	--	--	1.8 J	1.8 J	5.8 J	1.8 U	--
Tin (dissolved)	ug/L	--	--	--	--	--	3.7 U	3.7 U	3.7 U	3.7 U	--
Titanium (dissolved)	ug/L	--	--	--	--	--	2.5 U	2.5 U	2.5 U	2.5 U	--
Vanadium (dissolved)	ug/L	--	--	--	--	--	3.7 J	2.3 J	1.8 J	1.8 U	--
Zinc (dissolved)	ug/L	--	--	--	--	--	18.7 J	6.9 U	7.9 J	10.6 J	--
General Chemistry											
Alkalinity, total (as CaCO3)	mg/L	--	--	--	--	--	717	1120	1140	598	607
Ammonia-N	mg/L	--	--	--	--	--	0.11 J	7.1	5.6	3.5	3.3
Biochemical oxygen demand (BOD)	mg/L	--	--	--	--	--	6.0 U	1.0 U	6.0 U	1.0 U	6.0 U
Bromide	mg/L	--	--	--	--	--	8.3 J-	3.4 J-	1.0 J-	2.6 J-	4.1 J-
Chemical oxygen demand (COD)	mg/L	--	--	--	--	--	200	133	66.7	37.5	32.5
Chloride	mg/L	--	--	--	--	--	2680	133	185	209	205
Fluoride	mg/L	--	--	--	--	--	0.75	0.61	0.61	2.3	2.3
Nitrate	mg/L	--	--	--	--	--	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U
Nitrite	mg/L	--	--	--	--	--	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Nitrite/Nitrate	mg/L	--	--	--	--	--	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U
pH	s.u.	--	--	--	--	--	7.05 J	6.08 J	6.89 J	8.15 J	7.04 J
Phosphorus	mg/L	--	--	--	--	--	0.74	0.97	0.34	0.24	0.25
Sulfate	mg/L	--	--	--	--	--	241	32.1	714	6.9	9.0
Sulfide	mg/L	--	--	--	--	--	0.48 U	4.3	0.48 U	0.48 U	0.48 U
Total dissolved solids (TDS)	mg/L	--	--	--	--	--	4730	1500	2130	340	540
Total organic carbon (TOC)	mg/L	--	--	--	--	--	16.8	37.0	17.3	12.0	12.1
Total suspended solids (TSS)	mg/L	--	--	--	--	--	16.0	1.5 U	16.0	28.0	30.0

Notes:
U - Not detected at the associated reporting limit
J - Estimated concentration
UJ - Not detected; associated reporting limit is estimated
J- - Estimated concentration, result may be biased low
mg/L - milligram per liter
pg/L - picogram per liter
ug/L - microgram per liter

Table 11

ARAR Requirements
100% Remedial Design Addendum Southern Impoundment
Southern Impoundment
Harris, County, Texas

Media/Topic	Status, Regulations, Standards, or Requirements	Citations or References	Description	Comment
Surface Water	Clean Water Act (CWA): Criteria and standards for imposing technology- based treatment requirements under § 402	33 U.S.C. §1342; 40 CFR Part 125 Subpart A	Both on-site and off-site discharges from CERCLA sites to surface waters are required to meet the substantive CWA (National Pollutant Discharge Elimination System) NPDES requirements (USEPA 1988).	On-site discharges to surface water must comply with the substantive technical requirements of the CWA but do not require a permit (USEPA 1988). Off-site discharges to a Publicly Owned Treatment Work (POTW) would be regulated under the conditions of a NPDES permit (USEPA 1988). Water that is generated during RA excavation activities in the Southern Impoundment will be treated and batch discharged to the San Jacinto River (Segment 1005) following receipt of analytical data. The discharge locations will be on-site along the shoreline along the western border of the Southern Impoundment, so only the substantive requirements of an NPDES permit, but not an NPDES permit, will be required. Water quality-based effluent limitations using TexTox menu # 5 for bay or wide tidal river were calculated and considered for the water treatment design. Development of the treatment system discharge limits are discussed further below.
Surface Water	CWA: Sections 303 and 304: Federal Water Quality Criteria	33 U.S.C. §1313 and 1314 (304(a) list at date of ROD)	Under §303 (33 U.S.C. §1313), individual states have established water quality standards to protect existing and attainable uses (USEPA 1988). CWA §301(b)(1)(C) requires that pollutants contained in direct discharges be controlled beyond BCT/BAT equivalents (USEPA 1988).CERCLA §121(d)(2)(B)(i) establishes conditions under which water quality criteria, which were developed by USEPA as guidance for states to establish location-specific water quality standards, are to be considered relevant and appropriate. Two kinds of water quality criteria have been developed under CWA §304 (33 U.S.C. §1314): one for protection of human health, and another for protection of aquatic life. These requirements include establishment of total maximum daily loads (TMDL).	Per the 2020 Texas Integrated Report - Texas 303(d) list, San Jacinto River Segment 1005 is classified as impaired body of water for dioxin and PCBs in edible tissues as category 5; therefore it is suitable for development of a TMDL. A TMDL for dioxin and PCBs in edible tissues for San Jacinto River Segment 1005 has not been developed yet.The Texas Surface Water Quality Standard (TSWQS) for dioxins is applicable for surface water discharge from the Southern Impoundment, in accordance with EPA's February 18, 2020, e-mail which states that: *"EPA has determined that compliance with the TSWQS ARAR will be attained as follows:* *- The state surface water quality standard for Dioxins/Furans is 7.97 x 10-8 µg/L [0.0797 pg/L] (as TCDD equivalents).* *- Compliance with the TSWQS will be determined by using minimum level of the EPA approved method (1613B), cited in 40 CFR Part 136 (GUIDELINES ESTABLISHING TEST PROCEDURES FOR THE ANALYSIS OF POLLUTANTS), in sampling of surface water discharges during the Site remedial action.* *- If an effluent sample analyzed for dioxin is below the minimum level using the EPA approved method, the sample result would be identified as non-detect and the discharge would be determined to be in compliance with the ARAR.* *This approach is consistent with the state's guidance and other permits issued by TCEQ. EPA's determination is contingent on the water treatment facility using a 1 micron final filtration step in the water treatment process."*
Surface Water	Clean Water Act (CWA): Section 307(b): Pretreatment standards	33 U.S.C. §1317(b)	CERCLA §121(e) states that no federal, state, or local permit for direct discharges is required for the portion of any removal or remedial action conducted entirely on-site (the aerial extent of contamination and all suitable areas in close proximity to the contamination necessary for implementation of the response action) (USEPA 1988).	If off-site discharges from a CERCLA response activity were to enter receiving waters directly or indirectly, through treatment at a POTW, they must comply with applicable federal, state, and local substantive requirements and formal administrative permitting requirements (USEPA 1988). RA excavation activities will not be discharging to a POTW; therefore, this regulation does not apply.
Surface Water	Clean Water Act (CWA)	Section 401: Water Quality Certification 33 U.S.C. §1341 30 TAC Chapter 279	Requires applicants to apply for federal permits for projects that involve a discharge into navigable waters of the U.S. to obtain certification from state or regional regulatory agencies that the proposed discharge will comply with CWA Sections 301, 302, 303, 306, and 307.	Water Quality Certification is a requirement of projects that involve discharge of dredge/fill or would impact waters of the U.S. or wetland. The ~260 linear foot bulkhead to be installed in the Southern Impoundment southwest corner is considered "fill material"; therefore, Section 401 would apply to the project. The project will comply with substantive requirements of Section 401.
Surface Water	Clean Water Act (CWA)	CWA Section 404 and 404(b)(1): Dredge and Fill; 33 U.S.C. §1344 (b)(1); 33 CFR 320 and 330; 40 CFR 230)	Section 404 of the Clean Water Act (CWA) establishes a program to regulate the discharge of dredged or fill material into waters of the United States, including wetlands. Activities in waters of the United States regulated under this program include fill for development, water resource projects (such as dams and levees), infrastructure development (such as highways and airports) and mining projects.	The work must comply with substantive requirements of the Section 404. Under Section 404, "Fill material" is identified as any material used to create any structure in waters of the U.S. The ~260 linear foot bulkhead to be installed in the Southern Impoundment's southwest corner is considered "fill material"; therefore, Section 404 would apply to the project. The work will follow the substantive requirements of a Nationwide Permit 38 for Clean-Up of Hazardous and Toxic Waste.
Surface Water	Stormwater Discharge from Construction Activities	40 CFR 450; 30 TAC Chapter 205	Requires new construction project that will disturb 5 or more acres to request coverage under a Texas Commission on Environmental Quality (TCEQ) construction general permit (TX15000) and develop a stormwater pollution prevention plan (SWPPP) to control discharges of stormwater associated with construction activities in accordance with the NPDES program.	The work must comply with the substantive technical requirements of these regulations. A Stormwater Pollution Prevention Plan (SWPPP) will be developed and implemented using best management practices (BMPs) to minimize erosion and entrainment of sediments in stormwater runoff.

Table 11

ARAR Requirements
100% Remedial Design Addendum Southern Impoundment
Southern Impoundment
Harris, County, Texas

Media/Topic	Status, Regulations, Standards, or Requirements	Citations or References	Description	Comment
Surface Water	Texas Surface Water Quality Standards	30 TAC §307.4-7, 10	These state regulations provide: • General narrative criteria • Anti-degradation Policy • Numerical criteria for pollutants • Numerical and narrative criteria for water-quality related uses (e.g., human use) • Site specific criteria for San Jacinto basin	The Texas Surface Water Quality Standard (TSWQS) for dioxins is applicable for surface water discharge from the Southern Impoundment and the EPA's February 18, 2020, e-mail states as follows: *"EPA has determined that compliance with the TSWQS ARAR will be attained as follows:* *- The state surface water quality standard for Dioxins/Furans is 7.97 x 10-8 µg/L [0.0797 pg/L] (as TCDD equivalents).* *- Compliance with the TSWQS will be determined by using minimum level of the EPA approved method (1613B), cited in 40 CFR Part 136 (GUIDELINES ESTABLISHING TEST PROCEDURES FOR THE ANALYSIS OF POLLUTANTS), in sampling of surface water discharges during the Site remedial action."* *- If an effluent sample analyzed for dioxin is below the minimum level using the EPA approved method, the sample result would be identified as non-detect and the discharge would be determined to be in compliance with the ARAR.* *This approach is consistent with the state's guidance and other permits issued by TCEQ. EPA's determination is contingent on the water treatment facility using a 1 micron final filtration step in the water treatment process."*
Surface Water	Texas Water Quality: Pollutant Discharge Elimination System (TPDES)	30 TAC §279.10	These state regulations require stormwater discharge permits for either industrial discharge or construction-related discharge. The State of Texas was authorized by USEPA to administer the NPDES program in Texas on September 14, 1998 (Texas Commission on Environmental Quality 2009).	No permit is required for on-site activities. A SWPPP will be developed and implemented using BMPs to minimize erosion and entrainment of sediments in stormwater runoff.
Surface Water	Texas Water Quality: Water Quality Certification	30 TAC §279.10	These state regulations establish procedures and criteria for applying for, processing, and reviewing state certifications under CWA, §401. It is the purpose of this chapter, consistent with the Texas Water Code and the federal CWA, to maintain the chemical, physical, and biological integrity of the state's waters.	Water Quality Certification is a requirement of projects that involve discharge of dredge/fill or would impact waters of the U.S. or wetland. The ~260 linear feet bulkhead to be installed in the Southern Impoundment's southwest corner is considered "fill material"; therefore, Section 401 would apply to the project. The project will comply with substantive requirements of Section 401.
Waste	Resource Conservation And Recovery Act (RCRA): Hazardous Waste Management	42 U.S.C. §6921, et seq.; 40 CFR Parts 260 - 268	RCRA Subtitle C and its implementing regulations contain the federal requirements for the management of hazardous wastes.	This requirement would apply to certain activities if the waste materials or affected soils contain RCRA listed hazardous waste or exhibit a hazardous waste characteristic The waste management in the Southern Impoundment will be required to comply with these regulations. Based on the results of the pre-design investigations for the remedial design (PDIs) and the Pre-Construction Field Sampling Event (PC-FSE), the Southern Impoundment waste/soils sampled to date are not listed hazardous waste, do not contain listed hazardous waste above RCRA-thresholds, and are not classified as characteristic hazardous waste. If hazardous waste, as defined in 40 CFR Part 261, is identified, it will be managed and disposed of in accordance with RCRA regulations.
Waste	Toxic Substances Control Act (TSCA)	15 USC §2601, et. seq.; 40 CFR 761.61 (c)	40 CFR 761.61 provides TSCA clean-up and disposal options for PCB remediation waste, which includes PCB- contaminated soil, sediment, sewage or industrial sludge, and building material. 761.61(c) is the risk- based option for PCB remediation waste.	Total PCB concentrations in the Southern Impoundment are below the regulatory threshold of 50 mg/kg, calculated as specified in 40 CFR 761 that could require management of any waste/soils as a TSCA waste.
Waste	RCRA: General Requirements for Solid Waste Management	42 U.S.C. §6941, et seq.; 40 CFR 258)	Requirements for construction for municipal solid waste landfills that receive RCRA Subtitle D wastes, including industrial solid waste. Requirements for run- on/run-off control systems, groundwater monitoring systems, surface water requirements, etc.	The Southern Impoundment remedial activities do not involve the construction of a municipal landfill; therefore, this regulation does not apply.
Waste	30 Texas Administrative Code (TAC) Part 1: Industrial Solid Waste and Municipal Hazardous Waste General Terms	30 TAC §335.1 - 335.15	Substantive requirements for the transportation of industrial solid and hazardous wastes; requirements for the location, design, construction, operation, and closure of solid waste management facilities.	Guidelines to promote the proper collection, handling, storage, processing, and disposal of industrial solid waste or municipal hazardous waste in a manner consistent with the purposes of Texas Health and Safety Code, Chapter 361. These regulations also define the classification of the Industrial Solid Waste from the Southern Impoundment. They are applicable and will be followed for waste/soils from the Southern Impoundment that are transported to off-site landfills.
Waste	30 TAC Part 1: Industrial Solid Waste and Municipal Hazardous Waste: Notification	30 TAC Chapter 335 Subchapter P	Requires placement of warning signs in contaminated and hazardous areas if a determination is made by the executive director of the Texas Water Commission a potential hazard to public health and safety exists which will be eliminated or reduced by placing a warning sign on the contaminated property.	It is not expected that warning signs will be necessary based on this regulation. The Southern Impoundment will be protected with appropriate signage and other site controls per Health and Safety Plan.
Waste	30 TAC Part 1: Industrial Solid Waste and Municipal Hazardous Waste: Generators	30 TAC Chapter 335, Subchapter C	Standards for hazardous waste generators either disposing of waste on-site or shipping off-site with the exception of conditionally exempt small quantity generators. The definition of hazardous involves state and federal standards.	The waste management activities for the Southern Impoundment will be required to comply with these regulations. Based on the results of the PDIs and PC-FSE, the Southern Impoundment waste/soils sampled to date are not listed hazardous waste, do not contain listed hazardous waste above RCRA-thresholds, and are not classified as characteristic hazardous waste. If hazardous waste is identified as defined in 40 CFR Part 261, the disposal of any hazardous material would be in managed in accordance with RCRA regulations.

Table 11

ARAR Requirements
100% Remedial Design Addendum Southern Impoundment
Southern Impoundment
Harris, County, Texas

Media/Topic	Status, Regulations, Standards, or Requirements	Citations or References	Description	Comment
Waste	Hazardous Materials Transportation Act	49 U.S.C. §1801, et seq.; 49 CFR Subchapter C	Establishes standards for packaging, documenting, and transporting hazardous materials.	These requirements will apply to all hazardous material transported to and from the Southern Impoundment work site. Based on the results of the PDIs and PC-FSE, it is not expected that the waste/soils transported off-site will be classified as hazardous material and these requirements will not apply to them. If hazardous waste was identified as defined in 40 CFR Part 261, the disposal of any hazardous material would be in managed in accordance with RCRA regulations.
Air	Clean Air Act (CAA)	42 U.S.C. §7401, et seq.	Authorization of potential emissions of dust, VOCs, and/or HAP resulting from the excavation and solidification and stabilization of the soil in the Southern Impoundment.	Any air discharges must comply with the substantive technical requirements of the CAA and the work will be required to comply with any applicable TCEQ requirements regarding such emissions.
Air	Texas Air Quality Rules	30 TAC Chapter 116	Authorization of potential emissions of dust, VOCs, and/or HAP resulting from the excavation and solidification and stabilization of the soil in the Southern Impoundment. Authorization is not required for remedial action, but project should comply with regulation.	TCEQ is the designated regulatory authority in Texas. Emissions generated from equipment used to extract, handle, process, condition, reclaim or destroy contaminants for the purpose of remediation are covered by a TCEQ's permit by rule (PBR) as long as emissions are limited to 5 tons per year or 1 pound per hour for the site activities (30 TAC 106.533). Prior to commencing construction, emission calculations would be performed with respect to compliance with the PBR.
Dredging/Floodplain	Rivers And Harbors Act of 1899: Obstruction of navigable waters (generally, wharves; piers, etc.); excavation and fill	33 U.S.C. §401	Controls the alteration of navigable waters (i.e., waters subject to ebb and flow of the tide shoreward to the mean high water mark). Activities controlled include construction of structures such as piers, berms, and installation of pilings as well as excavation and fill. Section 10 may be applicable for any action that may obstruct or alter a navigable waterway. No permit is required for on-site activities. However, substantive requirements might limit in-water construction activities.	The ~260 linear feet bulkhead to be installed in the Southern Impoundment's southwest corner is considered "fill material"; therefore, Section 10 of the Rivers and Harbors Act of 1899 would apply to the project and will comply with substantive requirements of the Section 10.
Dredging/Floodplain	Coastal Zone Management Act	16 USC §1451, et seq.; 15 CFR 930	Federal activities must be consistent with, to the maximum extent practicable, state coastal zone management programs. Federal agencies must supply the state with a consistency determination (USEPA 1989).	The San Jacinto River lies within the Coastal Zone Boundary according to the Texas Coastal Management Plan (TCMP) prepared by the General Land Office (GLO). The EPA is required to determine whether the Southern Impoundment remedial activities will be consistent with the state's TCMP (USEPA 1989).
Dredging/Floodplain	FEMA (Federal Emergency Management Agency), Department of Homeland Security (Operating Regulations)	42 U.S.C. 4001, et seq.; 44 CFR Chapter 1	Prohibits alterations to river or floodplains that may increase potential for flooding.	The FEMA flood insurance rate map ID 48201C074M, effective on January 6, 2017, indicates that the Southern Impoundment is located within a designed coastal zone (Zone VE) and a special flood hazard area or 1 percent annual chance of flooding (Zone AE). The project is not expected to alter the floodplain.
Dredging/Floodplain	National Flood Insurance Program (NFIP) Regulations	42 U.S.C. Subchapter III, §4101, et seq.	Provides federal flood insurance to local authorities and requires that the local authorities not allow fill in the river that would cause an increase in water levels associated with floods.	The floodplain will not be altered during the implementation of the Southern Impoundment remedy.
Dredging/Floodplain	Floodplain Management and Wetlands Protection	Executive Orders (EO) 11988 and 11990	Requires federal agencies to conduct their activities to avoid, if possible, adverse impacts associated with the destruction or modification of wetlands and occupation or modification of floodplains. Executive Orders 11988 and 11990 require federal projects to avoid adverse effects and minimize potential harm to wetlands and within flood plains. The EO 11990 requires federal agencies to avoid to the extent possible the long and short-term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative (USEPA 1994).	The floodplain is not expected to be altered during the implementation of the Southern Impoundment remedy. A Biological Assessment (BA) is being completed for the Southern Impoundment to provide a technical basis to determine to what extent (if any) the proposed RA Construction may affect wetlands. The United States Fish and Wildlife Service's (USFWS) National Wetland Inventory (NWI) mapping database did not show any wetlands or surface waters within the Southern Impoundment. However GHD's wetlands specialist inspected the site in November 2021 and identified and delineated the boundaries of five (5). . A submission will be made to the USACE with respect to the presence of wetlands at the site.
Dredging/Floodplain	Texas Coastal Coordination Council Policies for Development in Critical Areas	31 TAC §501.23	Dredging in critical areas is prohibited if activities have adverse effects or degradation on shellfish and/or jeopardize the continued existence of endangered species or results in an adverse effect on a coastal natural resource area (CNRA); prohibit the location of facilities in coastal natural resource areas unless adverse effects are prevented and/or no practicable alternative. Specifies compensatory mitigation.	Dredging is not planned for the Southern Impoundment; therefore, this regulation does not apply.
Dredging/Floodplain	Texas Coastal Management Plan (CMP) Consistency	31 TAC, §506.12	Specifies federal actions within the CMP boundary that may adversely affect CNRAs; specifically, selection of remedial actions.	The San Jacinto River lies within the Coastal Zone Boundary (GLO TCMP). During the RI/FS, an evaluation was made as to whether remedial alternatives may affect (adversely or not) the coastal zone and provides a technical basis for the lead agency to determine whether the activity will be consistent with the state's CMP.
Dredging/Floodplain	Texas State Code - obstructions to navigation	Natural Resources Code §51.302 Prohibition and Penalty	Prohibits construction or maintenance of any structure or facility on land owned by the state without an easement, lease, permit, or other instrument from the state.	Dredging is not planned for the Southern Impoundment; therefore, this regulation does not apply.
Dredging/Floodplain	Floodplain Management of Harris County, Texas	Texas Code Section 240.901 and TTC Sections 251.001-251.059 and Sections 254.001-254.019	Establishes construction requirements along the segment of the San Jacinto River at or near the Southern Impoundment.	The FEMA flood insurance rate map ID 48201C074M, effective on January 6, 2017, indicates that the Southern Impoundment is located within a designated coastal zone (Zone VE) and a special flood hazard area or 1 percent annual chance of flooding (Zone AE). Harris County's Floodplain Management regulations requires finish floor for any structure on-site would be about 16 feet above natural ground. Temporary offices such as trailers on wheels would not need to be elevated as long as they can be moved off-site if needed. These regulations will also require that fuel tanks be engineered with anchoring to secure against flotation and lateral movement.

Table 11

ARAR Requirements
100% Remedial Design Addendum Southern Impoundment
Southern Impoundment
Harris, County, Texas

Media/Topic	Status, Regulations, Standards, or Requirements	Citations or References	Description	Comment
Wildlife Protection	Endangered Species Act	16 U.S.C. §1531, et seq.	Federal agencies must ensure that actions they authorize, fund, or carry out are not likely to adversely modify or destroy critical habitat of endangered or threatened species. Actions authorized, funded, or carried out by federal agencies may not jeopardize the continued existence of endangered or threatened species as well as adversely modify or destroy their critical habitats.	Based on 2010 and 2021 evaluations, as well as a desktop review of photographs and USFWS and NMFS species and habitat maps, no federally listed threatened or endangered (T&E) species or their critical habitat are present on the Southern Impoundment or utilize areas in the vicinity of the Southern Impoundment.
Wildlife Protection	Fish and Wildlife Coordination Act	16 U.S.C. §661, et seq.; 16 U.S.C. §742a; 16 U.S.C. §2901	Requires adequate provision for protection of fish and wildlife resources. This title has been expanded to include requests for consultation with USFWS for water resources development projects (Mueller 1980). Any modifications to rivers and channels require consultation with the USFWS, Department of Interior, and state wildlife resources agency. Project-related losses (including discharge of pollutants to water bodies) may require mitigation or compensation.	The remedy for the Southern Impoundment will not alter any river or channel; therefore, mitigation or compensation would not be required.
Wildlife Protection	Bald and Golden Eagle Protection Act	16 U.S.C. §668a-d	Makes it unlawful to take, import, export, possess, buy, sell, purchase, or barter any bald or golden eagle, nest, or egg. “Take” is defined as pursuing, hunting, shooting, poisoning, wounding, killing, capturing, trapping and collecting, molesting, or disturbing.	No readily available information suggests bald or golden eagles frequent the Southern Impoundment; however, if bald or golden eagles are identified prior to or during construction, activities will be designed to conserve the species and their habitat.
Wildlife Protection	Migratory Bird Treaty Act	16 U.S.C. §703-712; 50 CFR §10.12	Makes it unlawful to take, import, export, possess, buy, sell, purchase, or barter any migratory bird. “Take” is defined as pursuing, hunting, shooting, poisoning, wounding, killing, capturing, and trapping and collecting.	The Southern Impoundment remedy will be carried out in a manner to avoid adversely affecting migratory bird species, including individual birds or their nests.
Wildlife Protection	State of Texas Threatened and Endangered (T&E) Species Regulations	31 TAC 65.171 - 65.176	No person may take, possess, propagate, transport, export, sell or offer for sale, or ship any species of fish or wildlife listed as threatened or endangered.	Based on a GHD’s site visit on November 18, 2021, as well as a database and literature search, it has been determined that the Southern Impoundment occurs within the potential range of 28 Federal Endangered Species Act (ESA) listed, proposed, or candidate species, of which only two could potentially be present in or near the Southern Impoundment. A submission will be made to the USACE with respect to the presence of these species and the applicability of the Marine Mammal Protection Act (MMPA).
Historic Preservation	National Historic Preservation Act	16 U.S.C. §470, et seq.; 36 CFR 800	Section 106 of this statute requires federal agencies to consider effects of their undertakings on historic properties. Historic properties may include any district, site, building, structure, or object included in or eligible for the National Register of Historic Places (NRHP), including artifacts, records, and material remains related to such a property.	According to the San Jacinto River Waste Pits Remedial Investigation/Feasibility Study (RI/FS) cultural resources assessment, “no NRHP-eligible properties are documented in the area of concern. Because of the extensive disturbance to the Site and minimal ground disturbance that will likely occur for the project, it is not likely that NRHP eligible historic properties will be affected by RI/FS or eventual Site remediation activities” (Anchor QEA 2009). This was further confirmed by a cultural resources assessment completed in December 2021. This requirement is therefore not applicable.
Historic Preservation	Natural Resources Code, Antiquities Code of Texas	Texas Parks and Wildlife Commission Regulations 191.092-171	Requires that the Texas Historical Commission staff review any action that has the potential to disturb historic and archeological sites on public land. Actions that need review include any construction program that takes place on land owned or controlled by a state agency or a state political subdivision, such as a city or a county. Without local control, this requirement does not apply.	Assessment of historical resources during the RI/FS produced no known eligible properties and determined that disturbance of any archaeological or historic resources is unlikely within the Southern Impoundment. This was further confirmed by a cultural resources assessment completed in December 2021. This requirement is therefore not expected to be applicable.
Historic Preservation	Practice and Procedure, Administrative Code of Texas	13 TAC Part 2, Chapter 26	Regulations implementing the Antiquities Code of Texas. Describes criteria for evaluating archaeological sites and permit requirements for archaeological excavation.	This requirement is only applicable if an archaeological site is found; based on evaluations during the RI/FS and PC-FSE, it is unlikely that archaeological resources would be found on the Southern Impoundment. This requirement is therefore not expected to be applicable.
Noise	Noise Control Act	42 U.S.C. §4901, et seq.; 40 CFR Subchapter G §201, et seq.	Noise Control Act remains in effect but unfunded (USEPA 2010).	Noise is regulated at the state level.
Noise	Noise Regulations	Texas Penal Code Chapter 42, Section 42.01	The Texas Penal Code regulates any noise that exceeds 85 decibels after the noise is identified as a public nuisance.	A noise is presumed to be unreasonable if the noise exceeds a decibel level of 85 after the person making the noise receives notice from a magistrate or peace officer that the noise is a public nuisance. An offense under this section is a Class C misdemeanor. Most activities are likely to not exceed the 85 decibel level beyond the immediate work area. With the exception of pile driving for the bulkhead, the activities are not anticipated to constitute a public nuisance due to the isolation of the work, its location adjacent to a freeway with high volumes of traffic during normal working hours, and the industrial nature of activities on the Southern impoundment. Pile driving would be limited to normal working hours, to the extent possible, to minimize impacts.

Table 12

Sample Interval Results
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Sample Location	Sample Depth	Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Pre-Excavation DWA		Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)	Weighting	Post-Excavation DWA
Remedial Investigation									
SJSB001	(0-0.5) ft bgs	1.59		5%	37.17		Based on pre-excavation DWA, excavation not required.		
	(0.5-1) ft bgs	3.53		5%					
	(1-2) ft bgs	5.32		10%					
	(2-4) ft bgs	1.16		20%					
	(4-6) ft bgs	5.15		20%					
	(6-8) ft bgs	11.5		20%					
	(8-10) ft bgs	164.1		20%					
SJSB002	(0-0.5) ft bgs	7.29		5%	14.77		Based on pre-excavation DWA, excavation not required.		
	(0.5-1) ft bgs	3.4		5%					
	(1-2) ft bgs	2.74		10%					
	(2-4) ft bgs	2.81		20%					
	(4-6) ft bgs	49.5		20%					
	(6-8) ft bgs	16.7		20%					
	(8-10) ft bgs	0.819		20%					
SJSB003	(0-0.5) ft bgs	16.6		6.25%	21.84		Based on pre-excavation DWA, excavation not required.		
	(0.5-1) ft bgs	8.55		6.25%					
	(1-2) ft bgs	7.58		12.5%					
	(2-4) ft bgs	0.244		25%					
	(6-8) ft bgs	4.13		25%					
	(8-10) ft bgs	72.9		25%					
SJSB004	(0-0.5) ft bgs	3.25		5%	16.11		Based on pre-excavation DWA, excavation not required.		
	(0.5-1) ft bgs	4.84		5%					
	(1-2) ft bgs	1.57		10%					
	(2-4) ft bgs	6.4		20%					
	(4-6) ft bgs	1.26		20%					
	(6-8) ft bgs	28.2		20%					
	(8-10) ft bgs	41.9		20%					
SJSB005	(0-0.5) ft bgs	3.91		5%	12.06		Based on pre-excavation DWA, excavation not required.		
	(0.5-1) ft bgs	9.38		5%					
	(1-2) ft bgs	3.59		10%					
	(2-4) ft bgs	35.1		20%					
	(4-6) ft bgs	9.4		20%					
	(6-8) ft bgs	6.14		20%					
	(8-10) ft bgs	4.54		20%					

Sample Interval Results
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Sample Location	Sample Depth	Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Pre-Excavation DWA		Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Post-Excavation DWA	
SJSB006	(0-0.5) ft bgs	23.7		5%	136.95		Based on pre-excavation DWA, excavation not required.				
	(0.5-1) ft bgs	38.8		5%							
	(1-2) ft bgs	15		10%							
	(2-4) ft bgs	59.3		20%							
	(4-6) ft bgs	21.5		20%							
	(6-8) ft bgs	513.1		20%							
	(8-10) ft bgs	67.7		20%							
SJSB007	(0-0.5) ft bgs	6.59		6.25%	22.80		Based on pre-excavation DWA, excavation not required.				
	(0.5-1) ft bgs	2.16		6.25%							
	(1-2) ft bgs	2.86		12.5%							
	(2-4) ft bgs	38.5		25%							
	(4-6) ft bgs	35.8		25%							
	(6-8) ft bgs	13.3		25%							
SJSB008	(0-2) ft bgs	3.26		20%	402.81		Parent polygon to be excavated as follows.				
	(2-4) ft bgs	32.1		20%							
	(4-6) ft bgs	13.6		20%							
	(6-8) ft bgs	1880.2		20%							
	(8-10) ft bgs	84.9		20%							
NC-A1/A2/A3/A4	(0-2) ft bgs	20.9		60%	1676.58		0		20%	12.54	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						20.9		60%		
	(6-8) ft bgs	*1880.2*		20%							
	(8-10) ft bgs	6440		20%							
NC-AC1/AC2/AC3 (AD1/AD2/AD3)	(0-2) ft bgs	72.7		60%	1387.66		0		20%	43.62	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						72.7		60%		
	(6-8) ft bgs	*1880.2*		20%							
	(8-10) ft bgs	4840		20%							
NC-AC4/AC5/AC6	(0-2) ft bgs	494		60%	724.04		0		20%	51.60	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						0		20%		
	(6-8) ft bgs	*1880.2*		20%			0		20%		
	(8-10) ft bgs	258		20%			258		20%		
NC-AC7/AC8/AC9	(0-2) ft bgs	581		60%	926.64		0		20%	202.0	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						0		20%		
	(6-8) ft bgs	*1880.2*		20%			0		20%		
	(8-10) ft bgs	1010		20%			1010		20%		

Table 12

Sample Interval Results
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Sample Location	Sample Depth	Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Pre-Excavation DWA		Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Post-Excavation DWA	
NC-AC10/AC11/AC12	(0-2) ft bgs	12500		60%	7951.24		0		20%	75.20	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						0		20%		
	(6-8) ft bgs	*1880.2*		20%			0		20%		
	(8-10) ft bgs	376		20%			376		20%		
NC-AC13/AC14/AC15	(0-2) ft bgs	154		60%	692.44		0		20%	92.40	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						154		60%		
	(6-8) ft bgs	*1880.2*		20%							
	(8-10) ft bgs	1120		20%							
NC-AC16/AC17/AC18	(0-2) ft bgs	54.5		60%	453.54		0		20%	77.50	
	(2-4) ft bgs						54.5		60%		
	(4-6) ft bgs										
	(6-8) ft bgs	*1880.2*		20%							
	(8-10) ft bgs	224		20%			224		20%		
NC-AD1/AD2/AD3 (AC1/AC2/AC3)	(0-2) ft bgs	86.2		60%	1395.76		0		20%	51.72	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						86.2		60%		
	(6-8) ft bgs	*1880.2*		20%							
	(8-10) ft bgs	4840		20%							
SJSB009	(0-2) ft bgs	11.1		20%	199.52		Based on pre-excavation DWA, excavation not required.				
	(2-4) ft bgs	26.8		20%							
	(4-6) ft bgs	26.2		20%							
	(6-8) ft bgs	514.9		20%							
	(8-10) ft bgs	418.6		20%							
SJSB012	(0.5-1) ft bgs	12.6		5.26%	2544.46		Parent polygon to be excavated as follows.				
	(1-2) ft bgs	0.1338		10.53%							
	(2-4) ft bgs	5.77		21.05%							
	(4-6) ft bgs	6528		21.05%							
	(6-8) ft bgs	4992		21.05%							
	(8-10) ft bgs	557.3		21.05%							
NE-H1/H2/H3/H4(I1/I2/I3)	(0-2) ft bgs	11.9		40%	2323.48		0		20%	19.50	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs	*6528*		20%			11.9		40%		
	(6-8) ft bgs	*4992*		20%							
	(8-10) ft bgs	73.7		20%			73.7		20%		

Table 12

Sample Interval Results
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Sample Location	Sample Depth	Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Pre-Excavation DWA		Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Post-Excavation DWA	
NE-I1/I2/I3(H1/H2/H3/H4)	(0-2) ft bgs	42.8		40%	2335.84		0		20%	31.86	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs	*6528*		20%			42.8		40%		
	(6-8) ft bgs	*4992*		20%							
	(8-10) ft bgs	73.7		20%			73.7		20%		
SJSB013	(0.5-1) ft bgs	12.8		5.26%	226.08		Based on pre-excavation DWA, excavation not required.				
	(1-2) ft bgs	12.6		10.53%							
	(2-4) ft bgs	13		21.05%							
	(4-6) ft bgs	300		21.05%							
	(6-8) ft bgs	489.1		21.05%							
	(8-10) ft bgs	262.3		21.05%							
SJSB014	(0-0.5) ft bgs	31.7		6.25%	24.29		Based on pre-excavation DWA, excavation not required.				
	(0.5-1) ft bgs	26.8		6.25%							
	(1-2) ft bgs	6.99		12.5%							
	(2-4) ft bgs	9.08		25.0%							
	(4-5) ft bgs	15.2		12.5%							
	(7-8) ft bgs	33.7		12.5%							
	(8-10) ft bgs	45.5		25.0%							
SJSB015	(0-0.5) ft bgs	15.6		5%	39.82		Based on pre-excavation DWA, excavation not required.				
	(0.5-1) ft bgs	4.64		5%							
	(1-2) ft bgs	2.91		10%							
	(2-4) ft bgs	15.5		20%							
	(4-6) ft bgs	78.4		20%							
	(6-8) ft bgs	44.6		20%							
	(8-10) ft bgs	54.1		20%							
SJSB016	(0-0.5) ft bgs	6.22		8.33%	81.83		Based on pre-excavation DWA, excavation not required.				
	(0.5-1) ft bgs	8.77		8.33%							
	(1-2) ft bgs	0.674		16.67%							
	(2-3) ft bgs	13.4		16.67%							
	(7-8) ft bgs	50.2		16.67%							
	(8-10) ft bgs	209.6		33.33%							
SJSB017	(0.5-1) ft bgs	19.3		8.33%	20.79		Based on pre-excavation DWA, excavation not required.				
	(1-2) ft bgs	15.7		16.67%							
	(2-4) ft bgs	27		33.33%							
	(4-6) ft bgs	20.2		33.33%							
	(6-6.5) ft bgs	9.99		8.33%							

Table 12

Sample Interval Results
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Sample Location	Sample Depth	Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Pre-Excavation DWA		Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Post-Excavation DWA	
SJSB018	(0-0.5) ft bgs	14.2		8.33%	31.85		Based on pre-excavation DWA, excavation not required.				
	(0.5-1) ft bgs	29.6		8.33%							
	(1-2) ft bgs	62.4		16.67%							
	(2-4) ft bgs	22.2		33.33%							
	(6-8) ft bgs	31.2		33.33%							
SJSB019	(0.5-1) ft bgs	12.8		6.41%	11573.63		Parent polygon to be excavated as follows.				
	(1-2) ft bgs	12.6		12.82%							
	(2-4) ft bgs	13		25.64%							
	(4-6) ft bgs	13.4		25.64%							
	(6-6.5) ft bgs	26.7		6.41%							
	(8.2-10) ft bgs	50105.1		23.08%							
SC-G1/G2	(0-2) ft bgs	10100		80%	18101.02		0		20%	0.00	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						0		20%		
	(6-8) ft bgs						0		20%		
	(8-10) ft bgs	*50105.1*		20%			0		20%		
SJSB020	(0.5-1) ft bgs	24.9		7.14%	6.90		Based on pre-excavation DWA, excavation not required.				
	(1-2) ft bgs	11.6		14.29%							
	(2-4) ft bgs	0.9579		28.57%							
	(4-5) ft bgs	8.29		14.29%							
	(7.5-8) ft bgs	6.79		7.14%							
	(8-10) ft bgs	5.32		28.57%							
SJSB021	(0.5-1) ft bgs	9.28		5.26%	9.33		Based on pre-excavation DWA, excavation not required.				
	(1-2) ft bgs	3.49		10.53%							
	(2-4) ft bgs	1.12		21.05%							
	(4-6) ft bgs	3.45		21.05%							
	(6-8) ft bgs	8.99		21.05%							
	(8-10) ft bgs	26.7		21.05%							
SJSB022	(0.5-1) ft bgs	4.58		5.26%	5.87		Based on pre-excavation DWA, excavation not required.				
	(1-2) ft bgs	6.64		10.53%							
	(2-4) ft bgs	11.6		21.05%							
	(4-6) ft bgs	8.58		21.05%							
	(6-8) ft bgs	2.08		21.05%							
	(8-10) ft bgs	1.14		21.05%							

Table 12

Sample Interval Results
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Sample Location	Sample Depth	Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Pre-Excavation DWA		Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Post-Excavation DWA	
SJSB023	(0-0.5) ft bgs	36.9		5%	7760.39		Parent polygon to be excavated as follows.				
	(0.5-1) ft bgs	36.8		5%							
	(1-2) ft bgs	303.2		10%							
	(2-4) ft bgs	2381		20%							
	(4-6) ft bgs	35465.9		20%							
	(6-8) ft bgs	331.5		20%							
	(8-10) ft bgs	453.5		20%							
SW-E1/G1 (I1/I2/F1/F2)	(0-2) ft bgs	11		20%	7841.58		0		20%	28.20	
	(2-4) ft bgs	*2381*		20%			0		20%		
	(4-6) ft bgs	*35465.9*		20%			0		20%		
	(6-8) ft bgs	1220		20%			11		20%		
	(8-10) ft bgs	130		20%			130		20%		
SJSB024	(0.5-1) ft bgs	14.1		5.26%	89.07		Based on pre-excavation DWA, excavation not required.				
	(1-2) ft bgs	3		10.53%							
	(2-4) ft bgs	79.4		21.05%							
	(4-6) ft bgs	272.3		21.05%							
	(6-8) ft bgs	64.4		21.05%							
	(8-10) ft bgs	1.96		21.05%							
SJSB025	(0.5-1) ft bgs	6.74		5.26%	597.49		Parent polygon to be excavated as follows.				
	(1-2) ft bgs	2.1		10.53%							
	(2-4) ft bgs	717.4		21.05%							
	(4-6) ft bgs	2052		21.05%							
	(6-8) ft bgs	65.4		21.05%							
	(8-10) ft bgs	0.5517		21.05%							
SW-O1/O2	(0-2) ft bgs	150		20%	634.94		0		20%	81.06	
	(2-4) ft bgs	*717.4*		20%			0		20%		
	(4-6) ft bgs	*2052*		20%			150		20%		
	(6-8) ft bgs	225		20%			225		20%		
	(8-10) ft bgs	30.3		20%			30.3		20%		
SW-V1/V2/V3/V4/V5[b]	(0-2) ft bgs	9.74		20%	560.88		0		20%	72.40	
	(2-4) ft bgs	*717.4*		20%			9.74		20%		
	(4-6) ft bgs	*2052*		20%			327		20%		
	(6-8) ft bgs	8.26		20%			8.26		20%		
	(8-10) ft bgs	17		20%			17		20%		
SW-V6	(0-2) ft bgs	6390		20%	1833.71		0		20%	1.83	
	(2-4) ft bgs	*717.4*		20%			0		20%		
	(4-6) ft bgs	*2052*		20%			0		20%		
	(6-8) ft bgs	6.16		20%			6.16		20%		
	(8-10) ft bgs	2.97		20%			2.97		20%		

Sample Interval Results
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Sample Location	Sample Depth	Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Pre-Excavation DWA		Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Post-Excavation DWA	
SW-V7	(0-2) ft bgs	9.49		20%	556.23		0		20%	2.35	
	(2-4) ft bgs	*717.4*		20%			0		20%		
	(4-6) ft bgs	*2052*		20%			9.49		20%		
	(6-8) ft bgs	1.24		20%			1.24		20%		
	(8-10) ft bgs	1.04		20%			1.04		20%		
SJSB026	(0-0.5) ft bgs	11.2		5.56%	108.32		Based on pre-excavation DWA, excavation not required.				
	(0.5-1) ft bgs	21.1		5.56%							
	(1-2) ft bgs	23.5		11.11%							
	(2-4) ft bgs	22		22.22%							
	(4-5) ft bgs	194.6		11.11%							
	(6-8) ft bgs	324.8		22.22%							
	(8-10) ft bgs	23.5		22.22%							
SJSB027	(0-0.5) ft bgs	20.8		6.25%	5.70		Based on pre-excavation DWA, excavation not required.				
	(0.5-1) ft bgs	14.9		6.25%							
	(1-2) ft bgs	9.05		12.5%							
	(2-4) ft bgs	4.43		25.0%							
	(4-5) ft bgs	0.524		12.5%							
	(7-8) ft bgs	4.37		12.5%							
	(8-10) ft bgs	2.47		25.0%							
First Phase Pre-Design Investigation											
SJSB008-E1[a]	(0-10) ft bgs	83.2		100%	83.20		Based on pre-excavation DWA, excavation not required.				
SJSB008-N1[a]	(0-10) ft bgs	9.47		100%	9.47		Based on pre-excavation DWA, excavation not required.				
SJSB008-S1	(0-2) ft bgs	35.3		20%	5236.74		Parent polygon to be excavated as follows.				
	(2-4) ft bgs	12.4		20%							
	(4-6) ft bgs	115		20%							
	(6-8) ft bgs	25300		20%							
	(8-10) ft bgs	721		20%							
NC-B1/B2/B3 (C1/C2/C3)	(0-2) ft bgs	47.8		60%	6242.68		0		20%	28.68	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						47.8		60%		
	(6-8) ft bgs	*25300*		20%							
	(8-10) ft bgs	5770		20%							
NC-C1/C2/C3 (B1/B2/B3)	(0-2) ft bgs	176		60%	6319.60		0		20%	105.60	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						176		60%		
	(6-8) ft bgs	*25300*		20%							
	(8-10) ft bgs	5770		20%							

Sample Interval Results
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
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Sample Location	Sample Depth	Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Pre-Excavation DWA		Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Post-Excavation DWA	
SJSB008-S2	(0-2) ft bgs	18.1		20%	9821.70		Parent polygon to be excavated as follows.				
	(2-4) ft bgs	17		20%							
	(4-6) ft bgs	33.8		20%							
	(6-8) ft bgs	39.6		20%							
	(8-10) ft bgs	49000		20%							
NC-D1/D2	(0-2) ft bgs	199		80%	9959.20		0		20%	159.20	
	(2-4) ft bgs						199		80%		
	(4-6) ft bgs										
	(6-8) ft bgs										
	(8-10) ft bgs	*49000*		20%							
NC-E1/E2	(0-2) ft bgs	815		80%	10452.00		0		20%	0.00	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						0		20%		
	(6-8) ft bgs						0		20%		
	(8-10) ft bgs	*49000*		20%			0		20%		
NC-F1/F2/F3	(0-2) ft bgs	1380		80%	10904.00		0		20%	0.00	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						0		20%		
	(6-8) ft bgs						0		20%		
	(8-10) ft bgs	*49000*		20%			0		20%		
NC-AE1/AE2/AE3	(0-2) ft bgs	2480		80%	11784.00		0		20%	0.00	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						0		20%		
	(6-8) ft bgs						0		20%		
	(8-10) ft bgs	*49000*		20%			0		20%		
NC-AE4/AE5/AE6	(0-2) ft bgs	298		80%	10038.40		0		20%	0.00	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						0		20%		
	(6-8) ft bgs						0		20%		
	(8-10) ft bgs	*49000*		20%			0		20%		
NC-AE7/AE8	(0-2) ft bgs	502		80%	10201.60		0		20%	0.00	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						0		20%		
	(6-8) ft bgs						0		20%		
	(8-10) ft bgs	*49000*		20%			0		20%		

Table 12

Sample Interval Results
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Sample Location	Sample Depth	Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Pre-Excavation DWA		Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Post-Excavation DWA	
NC-G1/G2	(0-2) ft bgs	742		80%	10393.60		0		20%	0.00	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						0		20%		
	(6-8) ft bgs						0		20%		
	(8-10) ft bgs	*49000*		20%			0		20%		
NC-H1/H2	(0-2) ft bgs	2500		80%	11800.00		0		20%	0.00	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						0		20%		
	(6-8) ft bgs						0		20%		
	(8-10) ft bgs	*49000*		20%			0		20%		
NC-AF1/AF2	(0-2) ft bgs	2220		80%	11576.00		0		20%	0.00	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						0		20%		
	(6-8) ft bgs						0		20%		
	(8-10) ft bgs	*49000*		20%			0		20%		
NC-AF3/AF4	(0-2) ft bgs	1440		80%	10952.00		0		20%	0.00	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						0		20%		
	(6-8) ft bgs						0		20%		
	(8-10) ft bgs	*49000*		20%			0		20%		
NC-AF5/AF6	(0-2) ft bgs	2320		80%	11656.00		0		20%	0.00	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						0		20%		
	(6-8) ft bgs						0		20%		
	(8-10) ft bgs	*49000*		20%			0		20%		
NC-AF7	(0-2) ft bgs	3270		80%	12416.00		0		20%	0.00	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						0		20%		
	(6-8) ft bgs						0		20%		
	(8-10) ft bgs	*49000*		20%			0		20%		
NC-AF8/AF9	(0-2) ft bgs	296		80%	10036.80		0		20%	0.00	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						0		20%		
	(6-8) ft bgs						0		20%		
	(8-10) ft bgs	*49000*		20%			0		20%		
SJSB008-W1[a]	(0-10) ft bgs	62.7		100%	62.70		Based on pre-excavation DWA, excavation not required.				
SJSB012-E1[a]	(0-10) ft bgs	123		100%	123.00		Based on pre-excavation DWA, excavation not required.				

Table 12

Sample Interval Results
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Sample Location	Sample Depth	Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Pre-Excavation DWA		Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Post-Excavation DWA	
SJSB012-N1	(0-2) ft bgs	27.3		20%	236.35		Parent polygon to be excavated as follows.				
	(2-4) ft bgs	6.24		20%							
	(4-6) ft bgs	36.2		20%							
	(6-8) ft bgs	707		20%							
	(8-10) ft bgs	405		20%							
NE-L2/L3/L4	(0-2) ft bgs	10.1		40%	222.96		0		20%	81.56	
	(2-4) ft bgs						10.1		40%		
	(4-6) ft bgs	47.6		20%							
	(6-8) ft bgs	*707*		20%			47.6		20%		
	(8-10) ft bgs	340		20%			340		20%		
SJSB012-N2	(0-2) ft bgs	13.8		20%	5589.57		Parent polygon to be excavated as follows.				
	(2-4) ft bgs	8.43		20%							
	(4-6) ft bgs	25.6		20%							
	(6-8) ft bgs	15700		20%							
	(8-10) ft bgs	12200		20%							
NE-A1/A2	(0-2) ft bgs	9.65		60%	5585.79		0		20%	5.79	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						9.65		60%		
	(6-8) ft bgs	*15700*		20%							
	(8-10) ft bgs	*12200*		20%							
NE-J1/J2	(0-2) ft bgs	50.2		60%	5610.12		0		20%	30.12	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						50.2		60%		
	(6-8) ft bgs	*15700*		20%							
	(8-10) ft bgs	*12200*		20%							
NE-B1/B2/B3	(0-2) ft bgs	24.6		60%	5594.76		0		20%	14.76	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						24.6		60%		
	(6-8) ft bgs	*15700*		20%							
	(8-10) ft bgs	*12200*		20%							
NE-C1/C2/C3/C4	(0-2) ft bgs	9.58		60%	5585.75		0		20%	5.75	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						9.58		60%		
	(6-8) ft bgs	*15700*		20%							
	(8-10) ft bgs	*12200*		20%							

Table 12

Sample Interval Results
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Sample Location	Sample Depth	Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Pre-Excavation DWA		Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Post-Excavation DWA	
NE-D1/D2	(0-2) ft bgs	10.5		60%	5586.30		0		20%	6.30	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						10.5		60%		
	(6-8) ft bgs	*15700*		20%							
	(8-10) ft bgs	*12200*		20%							
NE-E1/E2/E3	(0-2) ft bgs	7.95		60%	5584.77		0		20%	4.77	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						7.95		60%		
	(6-8) ft bgs	*15700*		20%							
	(8-10) ft bgs	*12200*		20%							
SJSB012-S1[a]	(0-10) ft bgs	6.85		100%	6.85		Based on pre-excavation DWA, excavation not required.				
SJSB012-W1	(0-2) ft bgs	22.7		25%	2223.65		Parent polygon to be excavated as follows.				
	(4-6) ft bgs	4410		25%							
	(6-8) ft bgs	4460		25%							
	(8-10) ft bgs	1.88		25%							
NE-H1/H2/H3/H4(I1/I2/I3)	(0-2) ft bgs	11.9		40%	1793.50		0		20%	19.50	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs	*4410*		20%			11.9		40%		
	(6-8) ft bgs	*4460*		20%							
	(8-10) ft bgs	73.7		20%			73.7		20%		
NE-I1/I2/I3(H1/H2/H3/H4)	(0-2) ft bgs	42.8		40%	1805.86		0		20%	31.86	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs	*4410*		20%			42.8		40%		
	(6-8) ft bgs	*4460*		20%							
	(8-10) ft bgs	73.7		20%			73.7		20%		
SJSB012-W2	(0-2) ft bgs	14.5		20%	3607.91		Parent polygon to be excavated as follows.				
	(2-4) ft bgs	3.06		20%							
	(4-6) ft bgs	18000		20%							
	(6-8) ft bgs	15.8		20%							
	(8-10) ft bgs	6.21		20%							
NE-F1/F2/F3(G1/G2/G3)	(0-2) ft bgs	36.2		40%	3629.99		0		20%	29.99	
	(2-4) ft bgs						36.2		40%		
	(4-6) ft bgs	*18000*		20%							
	(6-8) ft bgs	71.6		20%			71.6		20%		
	(8-10) ft bgs	5.93		20%			5.93		20%		

Sample Interval Results
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Sample Location	Sample Depth	Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Pre-Excavation DWA		Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Post-Excavation DWA	
NE-K1/K2	(0-2) ft bgs	12.4		40%	3728.34		0		20%	128.34	
	(2-4) ft bgs						12.4		40%		
	(4-6) ft bgs	*18000*		20%							
	(6-8) ft bgs	531.0		20%			531		20%		
	(8-10) ft bgs	85.9		20%			85.9		20%		
NE-G1/G2/G3/G4(F1/F2/F3)	(0-2) ft bgs	14.3		40%	3621.23		0		20%	21.23	
	(2-4) ft bgs						14.3		40%		
	(4-6) ft bgs	*18000*		20%							
	(6-8) ft bgs	71.6		20%			71.6		20%		
	(8-10) ft bgs	5.93		20%			5.93		20%		
NE-M1/M2/M3	(0-2) ft bgs	14.7		40%	3710.88		0		20%	110.88	
	(2-4) ft bgs						14.7		40%		
	(4-6) ft bgs	*18000*		20%							
	(6-8) ft bgs	196		20%			196		20%		
	(8-10) ft bgs	329		20%			329		20%		
SJSB019-E1	(0-2) ft bgs	7.31		20%	44892.92		Parent polygon to be excavated as follows.				
	(2-4) ft bgs	609		20%							
	(4-6) ft bgs	48.3		20%							
	(6-8) ft bgs	206000		20%							
	(8-10) ft bgs	17800		20%							
SC-H1/H2/H3	(0-2) ft bgs	59.7		20%	44903.40		0		20%	11.94	
	(2-4) ft bgs	*609*		20%			0		20%		
	(4-6) ft bgs	*48.3*		20%			0		20%		
	(6-8) ft bgs	*206000*		20%			0		20%		
	(8-10) ft bgs	*17800*		20%			59.7		20%		
SJSB019-E2	(0-2) ft bgs	25.8		20%	1021.62		Parent polygon to be excavated as follows.				
	(2-4) ft bgs	47.3		20%							
	(4-6) ft bgs	5010		20%							
	(6-8) ft bgs	16.7		20%							
	(8-10) ft bgs	8.31		20%							
SC-I1/I2/I3(J1/J2/J3/J4)	(0-2) ft bgs	39.8		40%	1315.41		0		20%	17.41	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs	*5010*		20%			39.8		40%		
	(6-8) ft bgs	1480		20%							
	(8-10) ft bgs	7.45		20%			7.45		20%		

Table 12

Sample Interval Results
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Sample Location	Sample Depth	Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Pre-Excavation DWA		Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Post-Excavation DWA	
SC-J1/J2/J3/J4(I1/I2/I3)	(0-2) ft bgs	33.1		40%	1312.73		0		20%	14.73	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs	*5010*		20%			33.1		40%		
	(6-8) ft bgs	1480		20%							
	(8-10) ft bgs	7.45		20%			7.45		20%		
SJSB019-N1	(0-2) ft bgs	14.6		20%	9884.36		Parent polygon to be excavated as follows.				
	(2-4) ft bgs	48.7		20%							
	(4-6) ft bgs	5720		20%							
	(6-8) ft bgs	43600		20%							
	(8-10) ft bgs	38.5		20%							
SC-E1/E2(C1/C2/C3)	(0-2) ft bgs	28.7		40%	11137.48		0		20%	11.48	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs	*5720*		20%			0		20%		
	(6-8) ft bgs	*43600*		20%			28.7		40%		
	(8-10) ft bgs	6310		20%							
SC-E3(D1/D2/D3/D4)	(0-2) ft bgs	28.7		40%	9882.12		0		20%	18.12	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs	*5720*		20%			28.7		40%		
	(6-8) ft bgs	*43600*		20%							
	(8-10) ft bgs	33.2		20%			33.2		20%		
SJSB019-N2	(0-2) ft bgs	10.6		20%	42258.70		Parent polygon to be excavated as follows.				
	(2-4) ft bgs	220		20%							
	(4-6) ft bgs	199000		20%							
	(6-8) ft bgs	12000		20%							
	(8-10) ft bgs	62.9		20%							
SC-C1/C2/C3(E1/E2)	(0-2) ft bgs	16.2		40%	43468.48		0		20%	6.48	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs	*199000*		20%			0		20%		
	(6-8) ft bgs	*12000*		20%			16.2		40%		
	(8-10) ft bgs	6310		20%							
SC-O1/O2	(0-2) ft bgs	10.3		40%	42878.12		0		20%	4.12	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs	*199000*		20%			0		20%		
	(6-8) ft bgs	*12000*		20%			10.3		40%		
	(8-10) ft bgs	3370		20%							

Sample Interval Results
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Sample Location	Sample Depth	Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Pre-Excavation DWA		Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Post-Excavation DWA	
SC-D1/D2/D3/D4(E3)	(0-2) ft bgs	42.5		40%	42223.64		0		20%	23.64	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs	*199000*		20%			42.5		40%		
	(6-8) ft bgs	*12000*		20%							
	(8-10) ft bgs	33.2		20%			33.2		20%		
SJSB019-S1	(0-2) ft bgs	16.1		20%	37711.42		Parent polygon to be excavated as follows.				
	(2-4) ft bgs	471		20%							
	(4-6) ft bgs	187000		20%							
	(6-8) ft bgs	678		20%							
	(8-10) ft bgs	392		20%							
SC-K1/K2/K3/K4	(0-2) ft bgs	23.7		40%	43627.48		0		20%	9.48	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs	*187000*		20%			0		20%		
	(6-8) ft bgs	28400		20%			23.7		40%		
	(8-10) ft bgs	2690		20%							
SC-Q1/Q2/Q3/Q4	(0-2) ft bgs	48.7		40%	39812.48		0		20%	192.48	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs	*187000*		20%			48.7		40%		
	(6-8) ft bgs	11100		20%							
	(8-10) ft bgs	865		20%			865		20%		
SC-Q5/Q6/Q7	(0-2) ft bgs	4050		40%	44118.80		0		40%	78.80	
	(2-4) ft bgs										
	(4-6) ft bgs	*187000*		20%			0		20%		
	(6-8) ft bgs	25100		20%			0		20%		
	(8-10) ft bgs	394		20%			394		20%		
SC-Q8/Q9/Q10/Q11/Q12	(0-2) ft bgs	345		40%	39733.00		0		20%	173.00	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs	*187000*		20%			345		40%		
	(6-8) ft bgs	10800		20%							
	(8-10) ft bgs	175		20%			175		20%		
SC-Q13/Q14/Q15	(0-2) ft bgs	156		40%	37470.12		0		20%	70.12	
	(2-4) ft bgs						156		40%		
	(4-6) ft bgs	*187000*		20%							
	(6-8) ft bgs	29.2		20%			29.2		20%		
	(8-10) ft bgs	9.39		20%			9.39		20%		
SCW-QR1	(0-2) ft bgs	20.7		20%	38106.12		0		20%	34.12	
	(2-4) ft bgs	91.9		20%			0		20%		
	(4-6) ft bgs	*187000*		20%			20.7		20%		
	(6-8) ft bgs	3360		20%			91.9		20%		
	(8-10) ft bgs	58		20%			58		20%		

Table 12

Sample Interval Results
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Sample Location	Sample Depth	Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Pre-Excavation DWA		Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Post-Excavation DWA	
SJSB019-S2	(0-2) ft bgs	393		20%	126.98		Parent polygon to be excavated as follows.				
	(2-4) ft bgs	14.6		20%							
	(4-6) ft bgs	9.48		20%							
	(6-8) ft bgs	198		20%							
	(8-10) ft bgs	19.8		20%							
SC-L1/L2/L3/L4/L5	(0-2) ft bgs	126		20%	73.58		126		20%	73.58	
	(2-4) ft bgs	*14.6*		20%			*14.6*		20%		
	(4-6) ft bgs	*9.48*		20%			*9.48*		20%		
	(6-8) ft bgs	*198*		20%			*198*		20%		
	(8-10) ft bgs	*19.8*		20%			*19.8*		20%		
SC-M1/M2/M3/M4/M5	(0-2) ft bgs	59.9		20%	60.36		Sub polygon does not require excavation.				
	(2-4) ft bgs	*14.6*		20%							
	(4-6) ft bgs	*9.48*		20%							
	(6-8) ft bgs	*198*		20%							
	(8-10) ft bgs	*19.8*		20%							
SJSB019-W1	(0-2) ft bgs	58		20%	27407.12		Parent polygon to be excavated as follows.				
	(2-4) ft bgs	20800		20%							
	(4-6) ft bgs	115000		20%							
	(6-8) ft bgs	1160		20%							
	(8-10) ft bgs	17.6		20%							
SC-F1/F2/F3/F4	(0-2) ft bgs	40.7		20%	27410.36		0		20%	18.36	
	(2-4) ft bgs	*20800*		20%			0		20%		
	(4-6) ft bgs	*115000*		20%			0		20%		
	(6-8) ft bgs	*1160*		20%			40.7		20%		
	(8-10) ft bgs	51.1		20%			51.1		20%		
SC-P1/P2/P3	(0-2) ft bgs	71.8		20%	27407.98		0		20%	15.98	
	(2-4) ft bgs	*20800*		20%			0		20%		
	(4-6) ft bgs	*115000*		20%			0		20%		
	(6-8) ft bgs	*1160*		20%			71.8		20%		
	(8-10) ft bgs	8.09		20%			8.09		20%		
SC-P4/P5/P6	(0-2) ft bgs	47.6		20%	27401.71		0		20%	9.71	
	(2-4) ft bgs	*20800*		20%			0		20%		
	(4-6) ft bgs	*115000*		20%			0		20%		
	(6-8) ft bgs	*1160*		20%			47.6		20%		
	(8-10) ft bgs	0.926		20%			0.926		20%		

Table 12

Sample Interval Results
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Sample Location	Sample Depth	Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Pre-Excavation DWA		Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Post-Excavation DWA	
SC-P7/P8/P9	(0-2) ft bgs	24.5		20%	27397.73		0		20%	5.73	
	(2-4) ft bgs	*20800*		20%			0		20%		
	(4-6) ft bgs	*115000*		20%			0		20%		
	(6-8) ft bgs	*1160*		20%			24.5		20%		
	(8-10) ft bgs	4.15		20%			4.15		20%		
SJSB019-W2	(0-2) ft bgs	65.8		20%	17.15		Based on pre-excavation DWA, excavation not required.				
	(2-4) ft bgs	14.5		20%							
	(4-6) ft bgs	1.83		20%							
	(6-8) ft bgs	1.74		20%							
	(8-10) ft bgs	1.89		20%							
SJSB023-E1	(0-2) ft bgs	130		20%	415.08		Parent polygon to be excavated as follows.				
	(2-4) ft bgs	481		20%							
	(4-6) ft bgs	1250		20%							
	(6-8) ft bgs	203		20%							
	(8-10) ft bgs	11.4		20%							
SW-H1/H2/H3/H4 (E1/E2/E3/E4)	(0-2) ft bgs	473		40%	1333.20		0		20%	54.00	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs	*1250*		20%			0		20%		
	(6-8) ft bgs	4200		20%			0		20%		
	(8-10) ft bgs	270		20%			270		20%		
SW-S1/S2/S3	(0-2) ft bgs	319		40%	990.49		0		20%	128.49	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs	*1250*		20%			319		40%		
	(6-8) ft bgs	3060		20%							
	(8-10) ft bgs	4.47		20%			4.47		20%		
SJSB023-E2	(0-2) ft bgs	111		20%	79.55		Based on pre-excavation DWA, excavation not required.				
	(2-4) ft bgs	260		20%							
	(4-6) ft bgs	9.6		20%							
	(6-8) ft bgs	6.94		20%							
	(8-10) ft bgs	10.2		20%							
SJSB023-N1	(0-2) ft bgs	46.7		20%	18594.18		Parent polygon to be excavated as follows.				
	(2-4) ft bgs	3880		20%							
	(4-6) ft bgs	88300		20%							
	(6-8) ft bgs	709		20%							
	(8-10) ft bgs	35.2		20%							

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Sample Location	Sample Depth	Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Pre-Excavation DWA		Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Post-Excavation DWA	
SW-E1/E2/E3/E4/G1 (H1/H2/H3/H4)	(0-2) ft bgs	11		20%	19332.20		0		20%	56.20	
	(2-4) ft bgs	*3880*		20%			0		20%		
	(4-6) ft bgs	*88300*		20%			0		20%		
	(6-8) ft bgs	4200		20%			11		20%		
	(8-10) ft bgs	270		20%			270		20%		
SW-R1/R2/R3	(0-2) ft bgs	16		20%	19052.09		0		20%	4.09	
	(2-4) ft bgs	*3880*		20%			0		20%		
	(4-6) ft bgs	*88300*		20%			0		20%		
	(6-8) ft bgs	3060		20%			16		20%		
	(8-10) ft bgs	4.47		20%			4.47		20%		
SW-R4/R5/R6	(0-2) ft bgs	28.6		20%	23879.32		0		20%	43.32	
	(2-4) ft bgs	*3880*		20%			0		20%		
	(4-6) ft bgs	*88300*		20%			0		20%		
	(6-8) ft bgs	27000		20%			28.6		20%		
	(8-10) ft bgs	188		20%			188		20%		
SW-R7/R8/R9/R10/R11	(0-2) ft bgs	15.7		20%	20818.90		0		20%	22.90	
	(2-4) ft bgs	*3880*		20%			0		20%		
	(4-6) ft bgs	*88300*		20%			0		20%		
	(6-8) ft bgs	11800		20%			15.7		20%		
	(8-10) ft bgs	98.8		20%			98.8		20%		
SJSB023-N2	(0-2) ft bgs	28.6		20%	36.27		Based on pre-excavation DWA, excavation not required.				
	(2-4) ft bgs	141		20%							
	(4-6) ft bgs	4.43		20%							
	(6-8) ft bgs	3.7		20%							
	(8-10) ft bgs	3.64		20%							
SJSB023-S1	(0-2) ft bgs	1570		20%	17098.00		Parent polygon to be excavated as follows.				
	(2-4) ft bgs	47800		20%							
	(4-6) ft bgs	35800		20%							
	(6-8) ft bgs	139		20%							
	(8-10) ft bgs	181		20%							
SW-I1/I2 (G1/F1/F2)	(0-2) ft bgs	*1570*		20%	17304.00		0		20%	26.00	
	(2-4) ft bgs	*47800*		20%			0		20%		
	(4-6) ft bgs	*35800*		20%			0		20%		
	(6-8) ft bgs	1220		20%			0		20%		
	(8-10) ft bgs	130		20%			130		20%		

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Sample Location	Sample Depth	Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Pre-Excavation DWA		Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Post-Excavation DWA	
SJSB023-S2	(0-2) ft bgs	13700		20%	12338.24		Parent polygon to be excavated as follows.				
	(2-4) ft bgs	47700		20%							
	(4-6) ft bgs	212		20%							
	(6-8) ft bgs	46.6		20%							
	(8-10) ft bgs	32.6		20%							
SW-J1/J2/J3/J4/J5	(0-2) ft bgs	*13700*		20%	13309.12		0		20%	0.00	
	(2-4) ft bgs	*47700*		20%			0		20%		
	(4-6) ft bgs	2690		20%			0		20%		
	(6-8) ft bgs	55.6		20%			0		20%		
	(8-10) ft bgs	2400		20%			0		20%		
SJSB023-W1	(0-2) ft bgs	8110		22.22%	24713.11		Parent polygon to be excavated as follows.				
	(2-4) ft bgs	71300		22.22%							
	(5-6) ft bgs	63500		11.11%							
	(6-8) ft bgs	26.2		22.22%							
	(8-10) ft bgs	22.8		22.22%							
SW-F1/F2 (G1/I1/I2)	(0-2) ft bgs	*8110*		20%	28852.00		0		20%	26.00	
	(2-4) ft bgs	*71300*		20%			0		20%		
	(5-6) ft bgs	*63500*		20%			0		20%		
	(6-8) ft bgs	1220		20%			0		20%		
	(8-10) ft bgs	130		20%			130		20%		
SJSB023-W2	(0-2) ft bgs	8600		20%	5344.17		Parent polygon to be excavated as follows.				
	(2-4) ft bgs	16900		20%							
	(4-6) ft bgs	1200		20%							
	(6-8) ft bgs	18.3		20%							
	(8-10) ft bgs	2.54		20%							
SW-C1/C2/C3/C4/C5	(0-2) ft bgs	*8600*		20%	5789.86		0		20%	11.86	
	(2-4) ft bgs	*16900*		20%			0		20%		
	(4-6) ft bgs	*1200*		20%			0		20%		
	(6-8) ft bgs	2190		20%			0		20%		
	(8-10) ft bgs	59.3		20%			59.3		20%		
SJSB025-E2[a]	(0-10) ft bgs	14		100%	14.00		Based on pre-excavation DWA, excavation not required.				
SJSB025-N1	(0-2) ft bgs	198		20%	5056.52		Parent polygon to be excavated as follows.				
	(2-4) ft bgs	16100		20%							
	(4-6) ft bgs	6930		20%							
	(6-8) ft bgs	1970		20%							
	(8-10) ft bgs	84.6		20%							

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Sample Location	Sample Depth	Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Pre-Excavation DWA		Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Post-Excavation DWA	
SW-N1/N2/N3/N4/N5	(0-2) ft bgs	7.92		20%	5027.38		0		20%	27.38	
	(2-4) ft bgs	*16100*		20%			0		20%		
	(4-6) ft bgs	*6930*		20%			0		20%		
	(6-8) ft bgs	*1970*		20%			7.92		20%		
	(8-10) ft bgs	129		20%			129		20%		
SJSB025-N2	(0-2) ft bgs	25.7		20%	3049.82		Parent polygon to be excavated as follows.				
	(2-4) ft bgs	3770		20%							
	(4-6) ft bgs	10100		20%							
	(6-8) ft bgs	1320		20%							
	(8-10) ft bgs	33.4		20%							
SW-M1/M2/M3/M4/M5	(0-2) ft bgs	47.7		20%	3048.76		0		20%	10.76	
	(2-4) ft bgs	*3770*		20%			0		20%		
	(4-6) ft bgs	*10100*		20%			0		20%		
	(6-8) ft bgs	*1320*		20%			47.7		20%		
	(8-10) ft bgs	6.08		20%			6.08		20%		
SW-T1/T2/T3/T4/T5/T6	(0-2) ft bgs	32.7		20%	3045.71		0		20%	7.71	
	(2-4) ft bgs	*3770*		20%			0		20%		
	(4-6) ft bgs	*10100*		20%			0		20%		
	(6-8) ft bgs	*1320*		20%			32.7		20%		
	(8-10) ft bgs	5.83		20%			5.83		20%		
SW-T7/T8/T9/T10/T11	(0-2) ft bgs	4.58		20%	3039.29		0		20%	1.29	
	(2-4) ft bgs	*3770*		20%			0		20%		
	(4-6) ft bgs	*10100*		20%			0		20%		
	(6-8) ft bgs	*1320*		20%			4.58		20%		
	(8-10) ft bgs	1.88		20%			1.88		20%		
SW-T12/T13/T14/T15/T16	(0-2) ft bgs	31.9		20%	3045.11		0		20%	7.11	
	(2-4) ft bgs	*3770*		20%			0		20%		
	(4-6) ft bgs	*10100*		20%			0		20%		
	(6-8) ft bgs	*1320*		20%			31.9		20%		
	(8-10) ft bgs	3.66		20%			3.66		20%		
SJSB025-S1	(0-2) ft bgs	145		22.22%	3112.10		Parent polygon to be excavated as follows.				
	(2-4) ft bgs	13500		22.22%							
	(5-6) ft bgs	84.3		11.11%							
	(6-8) ft bgs	316		22.22%							
	(8-10) ft bgs	1.3		22.22%							

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Sample Location	Sample Depth	Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Pre-Excavation DWA		Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Post-Excavation DWA	
SW-O1/O2/O3/O4/O5	(0-2) ft bgs	150		20%	2797.92		0		20%	81.06	
	(2-4) ft bgs	*13500*		20%			0		20%		
	(5-6) ft bgs	*84.3*		20%			150		20%		
	(6-8) ft bgs	225		20%			225		20%		
	(8-10) ft bgs	30.3		20%			30.3		20%		
SJSB025-S2	(4-6) ft bgs	94.9		33.33%	32.34		Based on pre-excavation DWA, excavation not required.				
	(6-8) ft bgs	1.32		33.33%							
	(8-10) ft bgs	0.795		33.33%							
SJSB025-W1[a]	(0-10) ft bgs	186		100%	186.00		Based on pre-excavation DWA, excavation not required.				
SJSB039	(0-2) ft bgs	17.1		20%	1620.96		Parent polygon to be excavated as follows.				
	(2-4) ft bgs	21.4		20%							
	(4-6) ft bgs	866		20%							
	(6-8) ft bgs	7190		20%							
	(8-10) ft bgs	10.3		20%							
NC-I1/I2 (J1/J2/J3/K1/K2/K3)	(0-2) ft bgs	1250		60%	2448.00		0		20%	0.00	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						0		20%		
	(6-8) ft bgs	*7190*		20%			0		20%		
	(8-10) ft bgs	1300		20%			0		20%		
NC-J1/J2/J3 (I1/I2/K1/K2/K3)	(0-2) ft bgs	603		60%	2059.80		0		20%	0.00	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						0		20%		
	(6-8) ft bgs	*7190*		20%			0		20%		
	(8-10) ft bgs	1300		20%			0		20%		
NC-K1/K2/K3 (I1/I2/J1/J2/J3)	(0-2) ft bgs	83.4		60%	1748.04		0		20%	50.04	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						83.4		60%		
	(6-8) ft bgs	*7190*		20%							
	(8-10) ft bgs	1300		20%							
NC-AB1/AB2/AB3	(0-2) ft bgs	67.2		60%	1944.32		0		20%	40.32	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						67.2		60%		
	(6-8) ft bgs	*7190*		20%							
	(8-10) ft bgs	2330		20%							
NC-AB4/AB5	(0-2) ft bgs	120		60%	1840.00		0		20%	72.00	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						120		60%		
	(6-8) ft bgs	*7190*		20%							
	(8-10) ft bgs	1650		20%							

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Sample Location	Sample Depth	Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Pre-Excavation DWA		Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Post-Excavation DWA	
NC-L1/L2/L3 (M1/M2/M3/N1/N2/N3)	(0-2) ft bgs	129		60%	2461.40		0		20%	77.40	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						129		60%		
	(6-8) ft bgs	*7190*		20%							
	(8-10) ft bgs	4730		20%							
NC-M1/M2/M3 (L1/L2/L3/N1/N2/N3)	(0-2) ft bgs	36.3		60%	2405.78		0		20%	21.78	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						36.3		60%		
	(6-8) ft bgs	*7190*		20%							
	(8-10) ft bgs	4730		20%							
NC-N1/N2/N3 (L1/L2/L3/M1/M2/M3)	(0-2) ft bgs	96.7		60%	2442.02		0		20%	58.02	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						96.7		60%		
	(6-8) ft bgs	*7190*		20%							
	(8-10) ft bgs	4730		20%							
NC-AG1/AG2	(0-2) ft bgs	49.1		60%	1617.26		0		20%	29.46	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						49.1		60%		
	(6-8) ft bgs	*7190*		20%							
	(8-10) ft bgs	749		20%							
NC-AG3/AG4	(0-2) ft bgs	27		60%	2120.20		0		20%	16.20	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						27		60%		
	(6-8) ft bgs	*7190*		20%							
	(8-10) ft bgs	3330		20%							
SJSB009	(0-2) ft bgs	11.1		20%	199.52		0		20%	12.82	
	(2-4) ft bgs	26.8		20%			0		20%		
	(4-6) ft bgs	26.2		20%			11.1		20%		
	(6-8) ft bgs	514.9		20%			26.8		20%		
	(8-10) ft bgs	418.6		20%			26.2		20%		
SJSB040	(0-2) ft bgs	23.4		20%	418.48		Parent polygon to be excavated as follows.				
	(2-4) ft bgs	33.3		20%							
	(4-6) ft bgs	59.5		20%							
	(6-8) ft bgs	76.2		20%							
	(8-10) ft bgs	1900		20%							

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NC-R1/R2	(0-2) ft bgs	37.5		80%	410.00		0		20%	30.00	
	(2-4) ft bgs						37.5		80%		
	(4-6) ft bgs										
	(6-8) ft bgs										
	(8-10) ft bgs	*1900*		20%							
NC-S1/S2	(0-2) ft bgs	46.1		80%	416.88		0		20%	36.88	
	(2-4) ft bgs						46.1		80%		
	(4-6) ft bgs										
	(6-8) ft bgs										
	(8-10) ft bgs	*1900*		20%							
NC-T1/T2	(0-2) ft bgs	50		80%	420.00		0		20%	40.00	
	(2-4) ft bgs						50		80%		
	(4-6) ft bgs										
	(6-8) ft bgs										
	(8-10) ft bgs	*1900*		20%							
NC-AH1/AH2	(0-2) ft bgs	68.9		80%	435.12		0		20%	55.12	
	(2-4) ft bgs						68.9		80%		
	(4-6) ft bgs										
	(6-8) ft bgs										
	(8-10) ft bgs	*1900*		20%							
NC-AH3/AH4	(0-2) ft bgs	324		80%	639.20		0		20%	0.00	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						0		20%		
	(6-8) ft bgs						0		20%		
	(8-10) ft bgs	*1900*		20%			0		20%		
NC-AH5/AH6	(0-2) ft bgs	19.1		80%	395.28		0		20%	15.28	
	(2-4) ft bgs						19.1		80%		
	(4-6) ft bgs										
	(6-8) ft bgs										
	(8-10) ft bgs	*1900*		20%							
NC-U1/U2	(0-2) ft bgs	41.6		80%	413.28		0		20%	33.28	
	(2-4) ft bgs						41.6		80%		
	(4-6) ft bgs										
	(6-8) ft bgs										
	(8-10) ft bgs	*1900*		20%							

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Sample Location	Sample Depth	Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Pre-Excavation DWA		Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Post-Excavation DWA	
NC-AI1/AI2	(0-2) ft bgs	1330		80%	1444.00		0		20%	0.00	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						0		20%		
	(6-8) ft bgs						0		20%		
	(8-10) ft bgs	*1900*		20%			0		20%		
NC-AI3/AI4	(0-2) ft bgs	535		80%	808.00		0		20%	0.00	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						0		20%		
	(6-8) ft bgs						0		20%		
	(8-10) ft bgs	*1900*		20%			0		20%		
NC-AI5/AI6	(0-2) ft bgs	959		80%	1147.20		0		20%	0.00	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						0		20%		
	(6-8) ft bgs						0		20%		
	(8-10) ft bgs	*1900*		20%			0		20%		
NC-AI7/AI8	(0-2) ft bgs	836		80%	1048.80		0		20%	0.00	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						0		20%		
	(6-8) ft bgs						0		20%		
	(8-10) ft bgs	*1900*		20%			0		20%		
NC-V1/V2	(0-2) ft bgs	33.5		80%	406.80		0		20%	26.80	
	(2-4) ft bgs										
	(4-6) ft bgs						33.5		80%		
	(6-8) ft bgs										
	(8-10) ft bgs	*1900*		20%							
SJSB041	(0-2) ft bgs	20.9		20%	4797.70		Parent polygon to be excavated as follows.				
	(2-4) ft bgs	19500		20%							
	(4-6) ft bgs	4320		20%							
	(6-8) ft bgs	61.1		20%							
	(8-10) ft bgs	86.5		20%							
SC-A1/A2/A3/A4/A5	(0-2) ft bgs	73.0		20%	14078.60		0		20%	14.60	
	(2-4) ft bgs	*19500*		20%			0		20%		
	(4-6) ft bgs	*4320*		20%			0		20%		
	(6-8) ft bgs	14100		20%			0		20%		
	(8-10) ft bgs	32400		20%			73.0		20%		

Sample Interval Results
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Sample Location	Sample Depth	Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Pre-Excavation DWA		Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Post-Excavation DWA	
SC-B1/B2/B3/B4/B5	(0-2) ft bgs	25.3		20%	4842.52		0		20%	78.52	
	(2-4) ft bgs	*19500*		20%			0		20%		
	(4-6) ft bgs	*4320*		20%			25.3		20%		
	(6-8) ft bgs	362		20%			362		20%		
	(8-10) ft bgs	5.3		20%			5.3		20%		
SC-N1/N2/N3/N4/N5	(0-2) ft bgs	9.49		20%	5339.64		0		20%	1.90	
	(2-4) ft bgs	*19500*		20%			0		20%		
	(4-6) ft bgs	*4320*		20%			0		20%		
	(6-8) ft bgs	48.7		20%			0		20%		
	(8-10) ft bgs	2820		20%			9.49		20%		
SC-N6	(0-2) ft bgs	3.14		20%	4767.31		0		20%	0.63	
	(2-4) ft bgs	*19500*		20%			0		20%		
	(4-6) ft bgs	*4320*		20%			0		20%		
	(6-8) ft bgs	10.90		20%			0		20%		
	(8-10) ft bgs	2.51		20%			3.14		20%		
SJSB042[a]	(0-10) ft bgs	16.7		100%	16.70		Based on pre-excavation DWA, excavation not required.				
SJSB043[a]	(0-10) ft bgs	13.5		100%	13.50		Based on pre-excavation DWA, excavation not required.				
SJSB044[a]	(0-9) ft bgs	24		100%	24.00		Based on pre-excavation DWA, excavation not required.				
Second Phase Pre-Design Investigation											
SJSB059	(0-2) ft bgs	9.45		20%	211.15		Based on pre-excavation DWA, excavation not required.				
	(2-4) ft bgs	1.67		20%							
	(4-6) ft bgs	3.51		20%							
	(6-8) ft bgs	1000		20%							
	(8-10) ft bgs	41.1		20%							
SJSB060	(0-2) ft bgs	34.1		20%	9633.25		Parent polygon to be excavated as follows.				
	(2-4) ft bgs	10.4		20%							
	(4-6) ft bgs	3.74		20%							
	(6-8) ft bgs	47400		20%							
	(8-10) ft bgs	718		20%							
NC-Y1/Y2 (X1/X2/W1/W2/W3)	(0-2) ft bgs	33.3		60%	9655.78		0		20%	19.98	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						33.3		60%		
	(6-8) ft bgs	*47400*		20%							
	(8-10) ft bgs	779		20%							

Sample Interval Results
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San Jacinto River Waste Pits Site
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Sample Location	Sample Depth	Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Pre-Excavation DWA		Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Post-Excavation DWA	
SJSB060-C1	(0-2) ft bgs	2.28		20%	2740.38		Parent polygon to be excavated as follows.				
	(2-4) ft bgs	0.924		20%							
	(4-6) ft bgs	14.7		20%							
	(6-8) ft bgs	12700		20%							
	(8-10) ft bgs	984		20%							
NC-X1/X2 (Y1/Y2/W1/W2/W3)	(0-2) ft bgs	28.8		60%	9653.08		0		20%	17.28	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						28.8		60%		
	(6-8) ft bgs	*47400*		20%							
	(8-10) ft bgs	779		20%							
SJSB060-C2	(0-2) ft bgs	10.6		20%	14.24		Based on pre-excavation DWA, excavation not required.				
	(2-4) ft bgs	29.5		20%							
	(4-6) ft bgs	21.9		20%							
	(6-8) ft bgs	5.87		20%							
	(8-10) ft bgs	3.35		20%							
SJSB060-C3	(0-2) ft bgs	12.2		20%	4.78		Based on pre-excavation DWA, excavation not required.				
	(2-4) ft bgs	9.36		20%							
	(4-6) ft bgs	0.835		20%							
	(6-8) ft bgs	1.14		20%							
	(8-10) ft bgs	0.38		20%							
SJSB061	(0-2) ft bgs	2.69		20%	378.12		Parent polygon to be excavated as follows.				
	(2-4) ft bgs	8.43		20%							
	(4-6) ft bgs	115		20%							
	(6-8) ft bgs	1730		20%							
	(8-10) ft bgs	34.5		20%							
NC-O1/O2 (P1/P2/P3/Q1/Q2)	(0-2) ft bgs	39.4		60%	1587.64		0		20%	23.64	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						39.4		60%		
	(6-8) ft bgs	*1730*		20%							
	(8-10) ft bgs	6090		20%							
NC-P1/P2/P3 (O1/O2/Q1/Q2)	(0-2) ft bgs	15.5		60%	1573.30		0		20%	9.30	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						15.5		60%		
	(6-8) ft bgs	*1730*		20%							
	(8-10) ft bgs	6090		20%							

Sample Interval Results
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Sample Location	Sample Depth	Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Pre-Excavation DWA		Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Post-Excavation DWA	
NC-Q1/Q2 (P1/P2/P3/O1/O2)	(0-2) ft bgs	58.5		60%	1599.10		0		20%	35.10	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						58.5		60%		
	(6-8) ft bgs	*1730*		20%							
	(8-10) ft bgs	6090		20%							
NC-AA1/AA2/AA3 (AB1/AB2/AB3)	(0-2) ft bgs	148		60%	900.80		0		20%	88.80	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						148		60%		
	(6-8) ft bgs	*1730*		20%							
	(8-10) ft bgs	2330		20%							
NC-AA4/AA5 (AB4/AB5)	(0-2) ft bgs	1800		60%	1756.00		0		20%	0.00	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						0		20%		
	(6-8) ft bgs	*1730*		20%			0		20%		
	(8-10) ft bgs	1650		20%			0		20%		
NC-AA6/AA7/AA8	(0-2) ft bgs	388		60%	588.76		0		20%	9.96	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						0		20%		
	(6-8) ft bgs	*1730*		20%			0		20%		
	(8-10) ft bgs	49.8		20%			49.8		20%		
SJSB061-C1	(0-2) ft bgs	35.1		20%	1031.76		Parent polygon to be excavated as follows.				
	(2-4) ft bgs	114		20%							
	(4-6) ft bgs	51.5		20%							
	(6-8) ft bgs	4930		20%							
	(8-10) ft bgs	28.2		20%							
NC-W1/W2/W3 (X1/X2/Y1/Y2)	(0-2) ft bgs	442		60%	1407.00		0		20%	0.00	
	(2-4) ft bgs						0		20%		
	(4-6) ft bgs						0		20%		
	(6-8) ft bgs	*4930*		20%			0		20%		
	(8-10) ft bgs	779		20%			0		20%		
SJSB061-C2	(0-2) ft bgs	2.22		20%	5.77		Based on pre-excavation DWA, excavation not required.				
	(2-4) ft bgs	2.54		20%							
	(4-6) ft bgs	11.7		20%							
	(6-8) ft bgs	5.08		20%							
	(8-10) ft bgs	7.32		20%							

Sample Interval Results
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Sample Location	Sample Depth	Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Pre-Excavation DWA		Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Post-Excavation DWA	
SJSB062	(0-2) ft bgs	19.8		20%	8.37		Based on pre-excavation DWA, excavation not required.				
	(2-4) ft bgs	13.7		20%							
	(4-6) ft bgs	3.69		20%							
	(6-8) ft bgs	1.65		20%							
	(8-10) ft bgs	2.99		20%							
SJSB063	(0-2) ft bgs	12.8		20%	17.11		Based on pre-excavation DWA, excavation not required.				
	(2-4) ft bgs	31		20%							
	(4-6) ft bgs	14.8		20%							
	(6-8) ft bgs	22.5		20%							
	(8-10) ft bgs	4.43		20%							
SJSB064	(0-2) ft bgs	6.83		20%	76.20		Based on pre-excavation DWA, excavation not required.				
	(2-4) ft bgs	3.28		20%							
	(4-6) ft bgs	18.2		20%							
	(6-8) ft bgs	325		20%							
	(8-10) ft bgs	27.7		20%							
SJSB065	(0-2) ft bgs	194		20%	1879.10		Parent polygon to be excavated as follows.				
	(2-4) ft bgs	5060		20%							
	(4-6) ft bgs	4130		20%							
	(6-8) ft bgs	10.6		20%							
	(8-10) ft bgs	0.887		20%							
SW-B1/B2/B3/B4/B5	(0-2) ft bgs	118		20%	2212.74		0		20%	28.74	
	(2-4) ft bgs	*5060*		20%			0		20%		
	(4-6) ft bgs	*4130*		20%			0		20%		
	(6-8) ft bgs	1730		20%			118		20%		
	(8-10) ft bgs	25.7		20%			25.7		20%		
SW-P3/P4/P5	(0-2) ft bgs	17.1		20%	2045.44		0		20%	7.44	
	(2-4) ft bgs	*5060*		20%			0		20%		
	(4-6) ft bgs	*4130*		20%			0		20%		
	(6-8) ft bgs	1000		20%			17.1		20%		
	(8-10) ft bgs	20.1		20%			20.1		20%		
SJSB065-C1	(0-2) ft bgs	825		20%	1347.63		Parent polygon to be excavated as follows.				
	(2-4) ft bgs	2620		20%							
	(4-6) ft bgs	1960		20%							
	(6-8) ft bgs	1330		20%							
	(8-10) ft bgs	3.13		20%							

Sample Interval Results
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Sample Location	Sample Depth	Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Pre-Excavation DWA		Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Post-Excavation DWA	
SW-A1/A2/A3/A4/A5	(0-2) ft bgs	79.5		20%	1637.90		0		20%	15.90	
	(2-4) ft bgs	*2620*		20%			0		20%		
	(4-6) ft bgs	*1960*		20%			0		20%		
	(6-8) ft bgs	*1330*		20%			0		20%		
	(8-10) ft bgs	2200		20%			79.5		20%		
SW-P1/P2	(0-2) ft bgs	17.1		20%	1186.26		0		20%	4.26	
	(2-4) ft bgs	*2620*		20%			0		20%		
	(4-6) ft bgs	*1960*		20%			0		20%		
	(6-8) ft bgs	*1330*		20%			17.1		20%		
	(8-10) ft bgs	4.22		20%			4.22		20%		
SJSB066	(0-2) ft bgs	262		20%	12895.87		Parent polygon to be excavated as follows.				
	(2-4) ft bgs	63900		20%							
	(4-6) ft bgs	291		20%							
	(6-8) ft bgs	23.2		20%							
	(8-10) ft bgs	3.14		20%							
SW-D1/D2/D3/D4/D5	(0-2) ft bgs	1790		20%	13927.38		0		20%	143.38	
	(2-4) ft bgs	*63900*		20%			0		20%		
	(4-6) ft bgs	3230		20%			0		20%		
	(6-8) ft bgs	686		20%			686		20%		
	(8-10) ft bgs	30.9		20%			30.9		20%		
SW-Q1/Q2/Q3/Q4/Q5	(0-2) ft bgs	212		20%	12997.38		0		20%	76.98	
	(2-4) ft bgs	*63900*		20%			0		20%		
	(4-6) ft bgs	702		20%			212		20%		
	(6-8) ft bgs	158		20%			158		20%		
	(8-10) ft bgs	14.9		20%			14.9		20%		
SW-Q6/Q7/Q8	(0-2) ft bgs	455		20%	14185.08		0		20%	165.08	
	(2-4) ft bgs	*63900*		20%			0		20%		
	(4-6) ft bgs	6200		20%			455		20%		
	(6-8) ft bgs	328		20%			328		20%		
	(8-10) ft bgs	42.4		20%			42.4		20%		
SW-Q9/Q10/Q11/Q12/Q13	(0-2) ft bgs	93		20%	13260.88		0		20%	58.88	
	(2-4) ft bgs	*63900*		20%			0		20%		
	(4-6) ft bgs	2110		20%			93		20%		
	(6-8) ft bgs	198		20%			198		20%		
	(8-10) ft bgs	3.4		20%			3.4		20%		

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Sample Location	Sample Depth	Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Pre-Excavation DWA		Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Post-Excavation DWA	
SJSB066-C1	(0-2) ft bgs	57.9		20%	37.00		Based on pre-excavation DWA, excavation not required.				
	(2-4) ft bgs	110		20%							
	(4-6) ft bgs	14.1		20%							
	(6-8) ft bgs	0.558		20%							
	(8-10) ft bgs	2.44		20%							
SJSB067	(0-2) ft bgs	4.29		20%	436.15		Parent polygon to be excavated as follows.				
	(2-4) ft bgs	2170		20%							
	(4-6) ft bgs	3.31		20%							
	(6-8) ft bgs	1.36		20%							
	(8-10) ft bgs	1.77		20%							
SW-K1/K2/K3/K4/K5	(0-2) ft bgs	1270		20%	1221.30		0		20%	11.30	
	(2-4) ft bgs	*2170*		20%			0		20%		
	(4-6) ft bgs	2610		20%			0		20%		
	(6-8) ft bgs	50.2		20%			50.2		20%		
	(8-10) ft bgs	6.28		20%			6.28		20%		
SW-L1/L2/L3/L4/L5	(0-2) ft bgs	382		20%	1862.72		0		20%	92.72	
	(2-4) ft bgs	*2170*		20%			0		20%		
	(4-6) ft bgs	6680		20%			382		20%		
	(6-8) ft bgs	80.7		20%			80.7		20%		
	(8-10) ft bgs	0.919		20%			0.919		20%		
SW-U1/U2/U3/U4/U5	(0-2) ft bgs	28.8		20%	1223.39		0		20%	7.39	
	(2-4) ft bgs	*2170*		20%			0		20%		
	(4-6) ft bgs	3910		20%			28.8		20%		
	(6-8) ft bgs	6.39		20%			6.39		20%		
	(8-10) ft bgs	1.75		20%			1.75		20%		
SJSB067-C1	(0-2) ft bgs	189		20%	38.43		Based on pre-excavation DWA, excavation not required.				
	(2-4) ft bgs	1.66		20%							
	(4-6) ft bgs	0.732		20%							
	(6-8) ft bgs	0.375		20%							
	(8-10) ft bgs	0.4		20%							
SJSB068[b]	(0-2) ft bgs	327		20%	66.19		0		20%	0.79	
	(2-4) ft bgs	1.84		20%			1.84		20%		
	(4-6) ft bgs	0.665		20%			0.665		20%		
	(6-8) ft bgs	0.771		20%			0.771		20%		
	(8-10) ft bgs	0.687		20%			0.687		20%		

Table 12

Sample Interval Results
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Sample Location	Sample Depth	Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)		Weighting	Pre-Excavation DWA		Total WHO Dioxin TEQ (Human/Mammal) (ND=0.5) (ng/kg)	Weighting	Post-Excavation DWA
SJSB068-C1	(0-2) ft bgs	5.75		20%	143.21		Based on pre-excavation DWA, excavation not required.		
	(2-4) ft bgs	46		20%					
	(4-6) ft bgs	8.38		20%					
	(6-8) ft bgs	639		20%					
	(8-10) ft bgs	16.9		20%					
SJSB069	(0-2) ft bgs	79.3		20%	17.22		Based on pre-excavation DWA, excavation not required.		
	(2-4) ft bgs	3.22		20%					
	(4-6) ft bgs	1.2		20%					
	(6-8) ft bgs	1.93		20%					
	(8-10) ft bgs	0.437		20%					

Notes:
ft bgs - feet below ground surface
DWA - Depth Weighted Average
ng/kg - nanograms per kilogram
ND - Not detected
TCDD - 2,3,7,8 tetrachlorinated dibenzo p dioxin
TEQ - TCDD Toxicity Equivalent for Mammals

[a] - These samples did not have a composite sample result greater than 240 ng/kg $TEQ_{DF,M}$; therefore, no co-located archived two-foot interval samples were analyzed.

[b] - The 0-2 ft bgs overburden (327 ng/kg) from polygon SJSB068 (on Kirby property) is being re-used onto the site (SJSB025).

1. The parent polygon (left justified) DWAs were calculated from RI, PDI-1, and PDI-2 investigation data. During the PC-FSE event, overburden and excavation bottom samples were collected within each sub polygon and are shown in the subsequent rows (right justified). The impacted soil interval numbers included within the sub polygons are from the parent polygon and are *italicized.*
2. In the sub polygon, excavation bottom samples may have extended over multiple polygons due to the surface area of those intervals. If the excavation bottom sample included an additional polygon's borings, those are referenced in parenthesis.
3. To determine the post excavation soil profile for the each polygon and sub polygon requiring excavation, it was evaluated if overburden could be re-used and still maintain DWA of < 240 ng/kg and accounting for the excavation bottom intervals. It is assumed that the imported backfill material will not have D/F concentrations but will be confirmed via sampling to ensure that all imported backfill used on-site is clean so as not to impact the post-excavation DWAs of < 240 ng/kg.

- Value is less than 240 ng/kg
- Value is equal to or greater than 240 ng/kg
- Value is equal to or greater than 240 ng/kg but does not require removal because the DWA does not exceed 240 ng/kg (or will not exceed 240 ng/kg after removal of other contaminated intervals)

Table 13

Southern Impoundment Water Treatment Basis of Sizing
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Equipment/Process Description	Sizing/Selection Criteria Assumptions	Preliminary Design Value	Notes
Remediation Cell Dewatering Pump	Dewater excavation after largest expected rain event within 8 hours after rain event stops	Dewatering flowrate of up to 600 gpm	
Influent Tank	Working volume to hold 6.2-inch, 24-hour rain event in excavation area, containment area, truck wash, overburden storage, and dewatering area	668,000 gallons (~550,000 gallons working volume)	Lake Tank B-16 portable storage tank was used for design
Dewatering/Overburden Sump Pump	Contractor shall select pump to dewater Dewatering and Overburden areas after a rain event to allow work to resume.	TBD by contractor. Preliminary flowrate provided on project drawings.	Largest 24-hour rain event for the construction period (November to April) for the years 1930-2019 was ~6.2"
Truck Wash Sump Pump	Contractor shall select pump to convey wash and rainwater to the Influent Tank. Preliminary flowrate provided on project drawings.	TBD by contractor. Preliminary flowrate provided on project drawings.	
Containment Area Sump Pump(s)	Contractor shall select pump to dewater Containment Area after a rain event to allow work to resume. Preliminary flowrate provided on project drawings.	TBD by contractor. Preliminary flowrate provided on project drawings.	Largest 24-hour rain event for the construction period (November to April) for the years 1930-2019 was ~6.2"
Sludge Dewater Sump	Contractor shall select pump to ensure the contact water draining from the Sludge Dewatering Boxes and any rain water is discharged to the Influent Tank with backing up in the sump. Preliminary flowrate provided on project drawings.	TBD by contractor. Preliminary flowrate provided on project drawings.	
Treatment Feed Pump	300 GPM base treatment flow	300 GPM to accommodate return streams	Pump will operate on VFD to adjust treatment rate, as required. Pump will shutdown on high level in Inclined Plate Clarifier
Rapid Mix Tank	Minimum retention time: 7 minutes	Minimum working volume of 2,100 gallon capacity	Provide mixing at high enough velocity to full mix coagulant, organonsulfides, acid and/or caustic, and polymer. Overflow of tank shall be set above the operating level of the Inclined Plate Clarifier to allow for gravity flow
Flocculation Tank	Minimum retention time: 7 minutes	Minimum working volume of 2,100 gallon capacity	Tank will include baffles to prevent vortexing. Tank will be mixed by top entry mixer(s) with paddle-type blades to prevent shearing solids. Mixer shall be variable speed. Overflow of tank shall be set above the operating level of the Inclined Plate Clarifier to allow for gravity flow
Inclined Plate Clarifier	Maximum Hydraulic Loading rate: 0.25 GPM/ft^2	3,200 ft^2 of inclined plate separation area	Clarifier shall include integral sludge hopper to allow for sludge withdrawal. Overflow shall be set above the operating level of the Filter Feed Tank to allow for gravity flow
Filter Feed Tank	Nominal retention time: 20 minutes	Minimum working volume of 6,000 gallon capacity	Overflow of tank shall be set above the operating level of the Inclined Plate Clarifier
Filter Feed Pump	300 GPM base treatment flow	Up to 400 GPM	Pump will operate on VFD and controlled by level in Filter Feed Tank.
Multimedia Filtration System	5 GPM/ft^2 Hydraulic Loading	Minimum of 60 ft^2 of active media filter area	Minimum of three vessels, forward-feed automated backwash

Southern Impoundment Water Treatment Basis of Sizing
100% Remedial Design Addendum Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Equipment/Process Description	Sizing/Selection Criteria Assumptions	Preliminary Design Value	Notes
10-micron Filtration System	10-micron filter with minimum 95% removal efficiency	1-micron bag or cartridge filters, 95% Efficient (Rosedale Filter Cartridge Model PL-POMF-R1-1-P2 or equal), 25 gpm/cartridge elements with total system capacity of 400 gpm	Filtration system configured in multiple bag pressure vessels. Allow for bag changeouts without shutting down system. N+1 minimum
1-micron Filtration System	1-micron filter with minimal 95% removal efficiency	10-micron bag or cartridge filters, 95% Efficient (Rosedale Filter Cartridge Model PL-POMF-R1-1-P2 or equal), 25 gpm/cartridge elements with total system capacity of 400 gpm	Filteration system configured in multiple pressure vessels. Allow for cartridge changeouts without shutting down system. N+1 minimum
Granular Activated Carbon	10 minute Empty Bed Contact Time (min) per stage 5 GPM/ft^2 Hydraulic Loading	400 ft^3 Bed Volume; 60 ft^2 of active bed area	GAC vessels will be configured in a lead-lag configuration providing a total contact time up to 20 minutes (total).
Effluent Holding Tanks	Three (3) Effluent Tanks to allow for batch discharge of treated effluent	668,000 gallons (~550,000 gallons working volume)	Lake Tank B-16 portable storage tank.
Sludge Wasting/Recycle Pump	75 gpm (~25% of Influent Feed Pump)	50 GPM to 150 GPM	Sludge Wasting/Recycle pump will be positive displacement pump (e.g, air diaphragm). Flowrate will depend on solids accumulation rate and will be adjusted during start-up and operations.
Sludge Dewater Boxes	Allow for dewatering of sludge from Inclined Plate Clarifier. Filter fabric over a false bottom to trap solids and allow contact water to drain into sump.	25-CY filter box	25-CY Filter Box are available.
Coagulant Feed Pumps	Flow paced at dosage of 50 ppm coagulant solution - treatability study used 100 ppm	Up to 2 GPH - 100 ppm assuming SG of 1.0 for PAC (used in treatability study) gives 1.8 gph	Peristaltic type chemical metering pumps. (or diaphragm type)
Organosulfide Feed Pumps (if needed)	Flow paced at dose of 50 ppm organosulfide solution	Up to 2 GPH	Peristaltic type chemical metering pumps. (or diaphragm type)
Acid/Caustic Feed Pumps (if needed)	Flow paced based on measured pH of contact water in Rapid Mixing Tank	Up to 2 GPH	Chemical metering pumps.
Polymer Feed Pumps	Flow paced at dose of 25 ppm (neat polymer)	Up to 15 GPH (dilute polymer solution)	Peristaltic type chemical metering pumps (or diaphragm type); polymer activation/aging equipment will be provided, as needed.

Notes:

GPM - Gallons per minute
VFD - Variable frequency drive
ft^2 - Square feet
ft^3 - Cubic feet
ppm - Parts per million
GPH - Gallons per hour
CY - Cubic yard

Paper Size ANSI B

0 30 60 90 120

Feet

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

N

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SAN JACINTO RIVER WASTE PITS SITE
HARRIS COUNTY, TEXAS
100% REMEDIAL DESIGN ADDENDUM
SOUTHERN IMPOUNDMENT

WASTE CHARACTERIZATION SAMPLING LOCATIONS

Project No. **11215131**
Revision No. **-**
Date **May 26, 2022**

FIGURE 1

Q:\GIS\PROJECTS\11215000s\11215131\REPORT005\11215131_202204_REPORT005_GIS004.mxd
Print date: 26 May 2022 - 10:18

Data source: Google Earth

Paper Size ANSI B

0 30 60 90 120

Feet

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

N

GHD

SAN JACINTO RIVER WASTE PITS SITE
HARRIS COUNTY, TEXAS
100% REMEDIAL DESIGN ADDENDUM
SOUTHERN IMPOUNDMENT

SOUTHERN IMPOUNDMENT

Project No. 11215131
Revision No. -
Date May 26, 2022

FIGURE 2

Data source: Google Earth

Q:\GIS\PROJECTS\11215000s\11215131\REPORT005\11215131_202204_REPORT005_GIS003.mxd
Print date: 26 May 2022 - 10:21

SAMPLING RESULTS

EXCEEDANCE (>240 ng/kg)

NON-EXCEEDANCE (<240 ng/kg)

SOURCE:

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

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

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LEGEND

- PROPERTY BOUNDARY
- PROPERTY EASEMENT
- EXISTING CONTOUR INTERVAL
- FENCELINE
- SHORELINE
- TOP OF BANK
- TOE OF SLOPE
- OVERHEAD ELECTRICAL
- GUARDRAIL
- UNDERGROUND CCTV LINE
- SJSB002 PDIRI BORING LOCATION
- MW MONITORING WELL
- P.P. POWER POLE
- L.P. LIGHT POLE
- WELL
- AREA OF IMPACT
- ASPHALT
- CONCRETE
- GRAVEL
- EXCAVATION CONTOUR INTERVAL
- EXCAVATION TOP OF BANK
- EXCAVATION TOE OF SLOPE
- PRE-CONSTRUCTION SIDEWALL CONFIRMATION BORING LOCATIONS

Client
SAN JACINTO RIVER WASTE PITS

Project
SOUTHERN IMPOUNDMENT PRE-CONSTRUCTION FIELD SAMPLING PLAN HARRIS COUNTY, TEXAS

No.	Issue	Drawn	Approved	Date

Drawn **MW**	Designer **RH**
Drafting Check **BP**	Design Check **LL**
Project Coordinator **CM**	Date **May 27, 2022**
This document shall not be used for construction unless signed and sealed for construction.	Scale **1" = 20'**
Original Size **Arch D**	Bar is one inch on original size drawing 0 — 1"

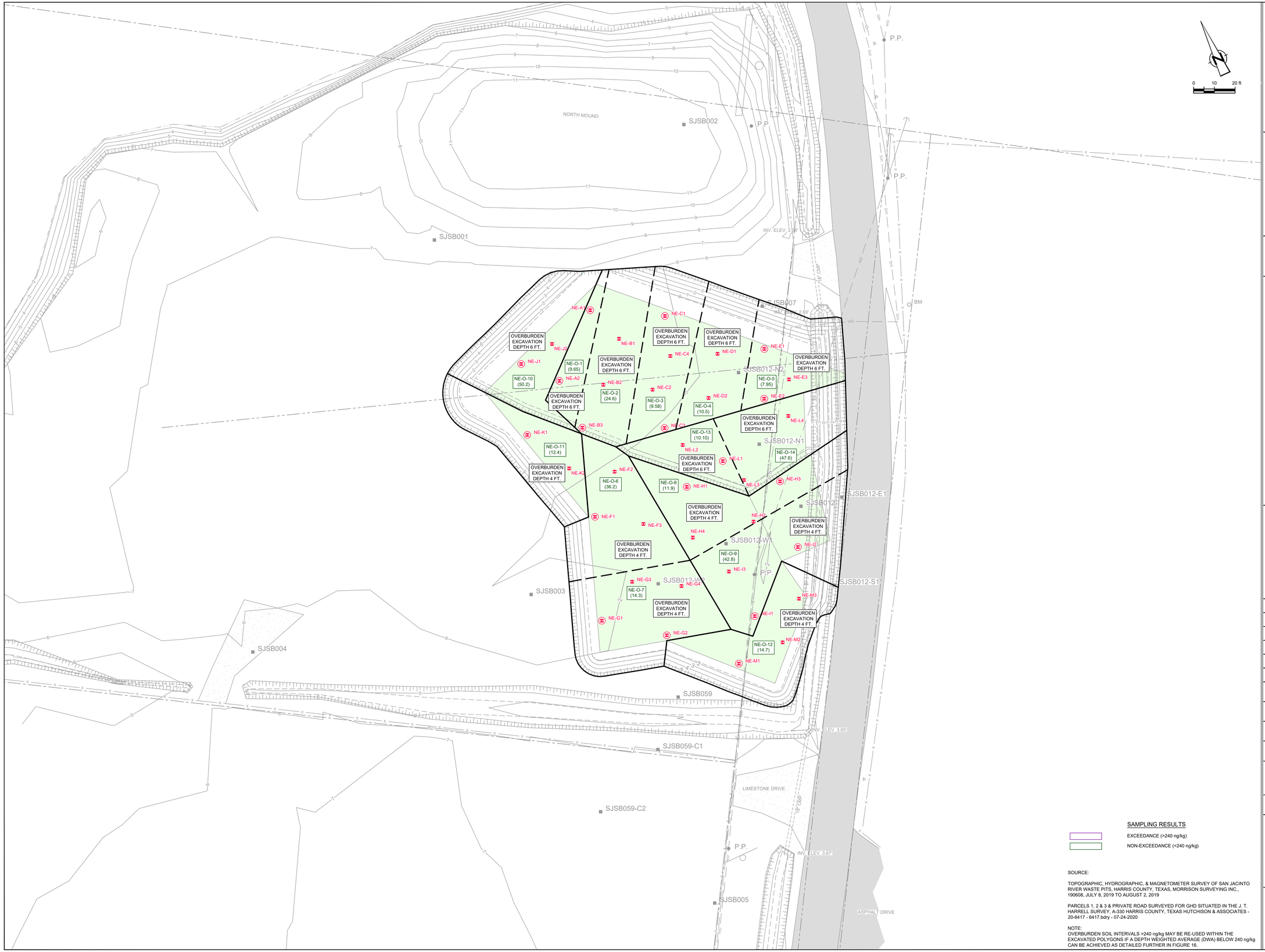
Project No. **11215131**

Title
PC-FSE NORTHEAST SIDEWALL INVESTIGATION RESULTS

Sheet No.
FIGURE 3

Sheet - of -

Plot Date: 30 May 2022 - 2:50 PM Plotted By: Taylor Nancekivell Filename: N:\US\Baton Rouge\Projects\562\11215131\Digital_Design\ACAD 2019\Figures\11215131-02-DWG-G-507.dwg



SAMPLING RESULTS

- EXCEEDANCE (>240 ng/kg)
- NON-EXCEEDANCE (<240 ng/kg)

SOURCE:

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

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NOTE:
OVERBURDEN SOIL INTERVALS >240 ng/kg MAY BE RE-USED WITHIN THE EXCAVATED POLYGONS IF A DEPTH WEIGHTED AVERAGE (DWA) BELOW 240 ng/kg CAN BE ACHIEVED AS DETAILED FURTHER IN FIGURE 16.

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LEGEND

- PROPERTY BOUNDARY
- PROPERTY EASEMENT
- EXISTING CONTOUR INTERVAL
- FENCELINE
- SHORELINE
- TOP OF BANK
- TOE OF SLOPE
- OVERHEAD ELECTRICAL
- GUARDRAIL
- UNDERGROUND CCTV LINE
- SJSB002 PDIRI BORING LOCATION
- MW MONITORING WELL
- P.P. POWER POLE
- L.P. LIGHT POLE
- WELL
- AREA OF IMPACT
- ASPHALT
- CONCRETE
- GRAVEL
- EXCAVATION CONTOUR INTERVAL
- EXCAVATION TOP OF BANK
- EXCAVATION TOE OF SLOPE
- POLYGON LIMITS (WITH ADDITIONAL SIDE SLOPE AREAS)
- SAMPLING GRIDS (~500 CY) WITHIN POLYGONS
- PRE-CONSTRUCTION SIDEWALL/ OVERBURDEN CONFIRMATION BORING LOCATIONS
- PRE-CONSTRUCTION OVERBURDEN CONFIRMATION BORING LOCATIONS

Client
SAN JACINTO RIVER WASTE PITS

Project
SOUTHERN IMPOUNDMENT PRE-CONSTRUCTION FIELD SAMPLING PLAN HARRIS COUNTY, TEXAS

No.	Issue	Drawn	Approved	Date

Drawn **MW**	Designer **RH**
Drafting Check **BP**	Design Check **LL**
Project Coordinator **CM**	Date **May 30, 2022**
This document shall not be used for construction unless signed and sealed for construction.	Scale **1" = 20'**
Original Size **Arch D**	Bar is one inch on original size drawing 0 1"

Project No. **11215131**

Title
PC-FSE NORTHEAST OVERBURDEN INVESTIGATION RESULTS

Sheet No.
FIGURE 4
Sheet - of -

Plot Date: 30 May 2022 - 2:45 PM
Plotted By: Taylor Nancekivell
Filename: N:\US\Baton Rouge\Projects\562\11215131\Digital_Design\ACAD 2019\Figures\11215131-02-DWG-G-506.dwg

SAMPLING RESULTS

EXCEEDANCE (>240 ng/kg)

NON-EXCEEDANCE (<240 ng/kg)

SOURCE:

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

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

NOTE:
EXCAVATION BOTTOM SOIL INTERVALS >240 ng/kg MAY BE LEFT IN PLACE IF A DEPTH WEIGHTED AVERAGE (DWA) BELOW 240 ng/kg CAN BE ACHIEVED AS DETAILED FURTHER IN FIGURE 16.

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LEGEND

- PROPERTY BOUNDARY
- PROPERTY EASEMENT
- EXISTING CONTOUR INTERVAL
- FENCELINE
- SHORELINE
- TOP OF BANK
- TOE OF SLOPE
- OVERHEAD ELECTRICAL
- GUARDRAIL
- UNDERGROUND CCTV LINE
- PDIRI BORING LOCATION
- MONITORING WELL
- POWER POLE
- LIGHT POLE
- WELL
- AREA OF IMPACT
- ASPHALT
- CONCRETE
- GRAVEL
- EXCAVATION CONTOUR INTERVAL
- EXCAVATION TOP OF BANK
- EXCAVATION TOE OF SLOPE
- SAMPLING GRIDS (MAX. 500 CY)
- PRE-CONSTRUCTION SIDEWALL/ BASE OF EXCAVATION CONFIRMATION BORING LOCATIONS
- PRE-CONSTRUCTION BASE OF EXCAVATION CONFIRMATION BORING LOCATIONS

Client
SAN JACINTO RIVER WASTE PITS

Project
SOUTHERN IMPOUNDMENT PRE-CONSTRUCTION FIELD SAMPLING PLAN HARRIS COUNTY, TEXAS

No.	Issue	Drawn	Approved	Date

Drawn **MW**	Designer **RH**
Drafting Check **BP**	Design Check **LL**
Project Coordinator **CM**	Date **May 30, 2022**
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Original Size **Arch D**	Bar is one inch on original size drawing 0 — 1"

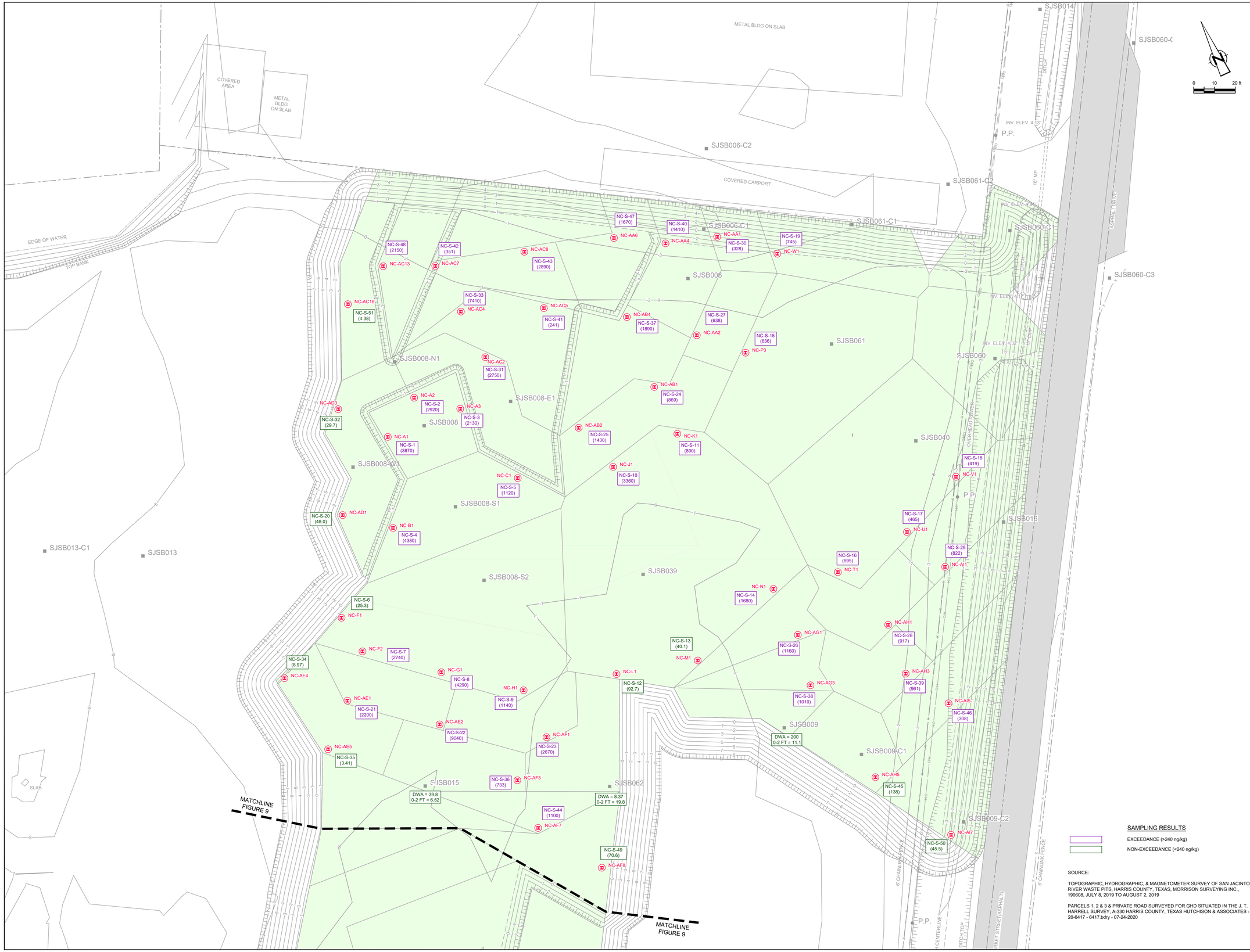
Project No. **11215131**

Title
PC-FSE NORTHEAST EXCAVATION BOTTOM INVESTIGATION RESULTS

Sheet No.
FIGURE 5

Sheet - of -

Plot Date: 31 May 2022 - 8:07 AM Plotted By: Taylor Nancekivell Filename: N:\US\Baton Rouge\Projects\562\11215131\Digital_Design\ACAD 2019\Figures\11215131-02-DWG-G-508.dwg



0 10 20 ft

SAMPLING RESULTS

EXCEEDANCE (>240 ng/kg)

NON-EXCEEDANCE (<240 ng/kg)

SOURCE:

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

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LEGEND

- PROPERTY BOUNDARY
- PROPERTY EASEMENT
- 620 EXISTING CONTOUR INTERVAL
- X FENCELINE
- SHORELINE
- TOP OF BANK
- TOE OF SLOPE
- OHP OVERHEAD ELECTRICAL
- GUARDRAIL
- UE UNDERGROUND CCTV LINE
- SJSB002 PDIRI BORING LOCATION
- MW MONITORING WELL
- P.P. POWER POLE
- L.P. LIGHT POLE
- WELL
- AREA OF IMPACT
- ASPHALT
- CONCRETE
- GRAVEL
- 620 EXCAVATION CONTOUR INTERVAL
- EXCAVATION TOP OF BANK
- EXCAVATION TOE OF SLOPE
- PRE-CONSTRUCTION SIDEWALL CONFIRMATION BORING LOCATIONS

Client
SAN JACINTO RIVER WASTE PITS

Project
SOUTHERN IMPOUNDMENT PRE-CONSTRUCTION FIELD SAMPLING PLAN HARRIS COUNTY, TEXAS

No.	Issue	Drawn	Approved	Date

Drawn **MW**	Designer **RH**
Drafting Check **BP**	Design Check **LL**
Project Coordinator **CM**	Date **May 30, 2022**
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Original Size **Arch D**	Bar is one inch on original size drawing 0 1"

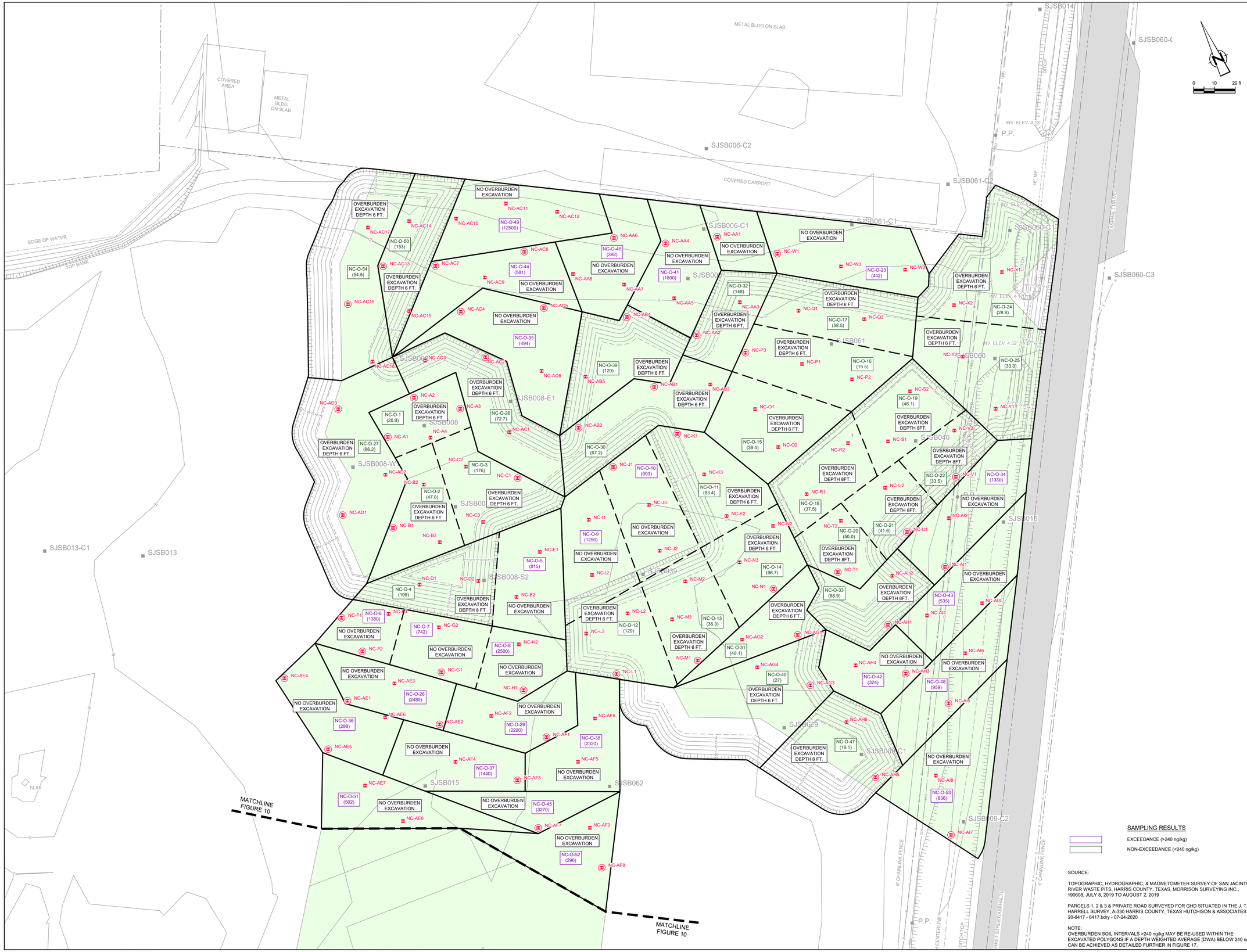
Project No. **11215131**

Title
PC-FSE NORTH CENTRAL SIDEWALL INVESTIGATION RESULTS

Sheet No.
FIGURE 6

Sheet - of -

Plot Date: 30 May 2022 - 3:03 PM
Plotted By: Taylor Nancekivell
Filename: N:\US\Baton Rouge\Projects\562\11215131\Digital_Design\ACAD 2019\Figures\11215131-02-DWG-G-510.dwg



SAMPLING RESULTS

EXCEEDANCE (>240 ng/kg)

NON-EXCEEDANCE (<240 ng/kg)

SOURCE:

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

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NOTE:
OVERBURDEN SOIL INTERVALS >240 ng/kg MAY BE RE-USED WITHIN THE EXCAVATED POLYGONS IF A DEPTH WEIGHTED AVERAGE (DWA) BELOW 240 ng/kg CAN BE ACHIEVED AS DETAILED FURTHER IN FIGURE 17.

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LEGEND

- PROPERTY BOUNDARY
- PROPERTY EASEMENT
- EXISTING CONTOUR INTERVAL
- FENCELINE
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- TOP OF BANK
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- GUARDRAIL
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- PDIRI BORING LOCATION
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- POWER POLE
- LIGHT POLE
- WELL
- AREA OF IMPACT
- ASPHALT
- CONCRETE
- GRAVEL
- EXCAVATION CONTOUR INTERVAL
- EXCAVATION TOP OF BANK
- EXCAVATION TOE OF SLOPE
- POLYGON LIMITS (WITH ADDITIONAL SIDE SLOPE AREAS)
- SAMPLING GRIDS (~500 CY) WITHIN POLYGONS
- PRE-CONSTRUCTION SIDEWALL/ OVERBURDEN CONFIRMATION BORING LOCATIONS
- PRE-CONSTRUCTION OVERBURDEN CONFIRMATION BORING LOCATIONS

Client
SAN JACINTO RIVER WASTE PITS

Project
SOUTHERN IMPOUNDMENT PRE-CONSTRUCTION FIELD SAMPLING PLAN HARRIS COUNTY, TEXAS

No.	Issue	Drawn	Approved	Date

Drawn **MW** | Designer **RH**
Drafting Check **BP** | Design Check **LL**
Project Coordinator **CM** | Date **May 30, 2022**

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Scale **1" = 20'**

Original Size **Arch D**

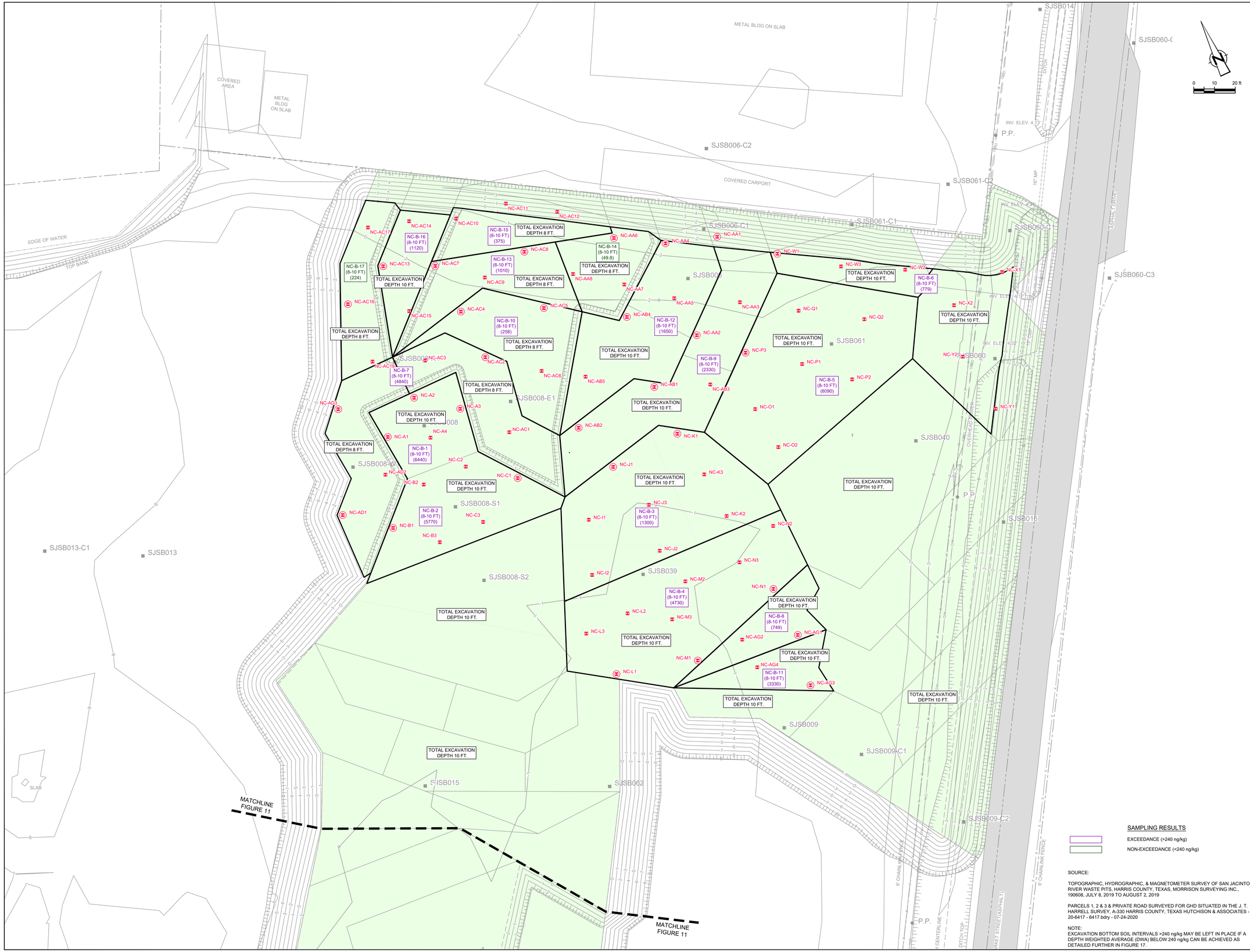
Bar is one inch on original size drawing
0 1"

Project No. **11215131**

Title
PC-FSE NORTH CENTRAL OVERBURDEN INVESTIGATION RESULTS

Sheet No.
FIGURE 7
Sheet - of -

Plot Date: 30 May 2022 - 2:57 PM
Plotted By: Taylor Nancekivell
Filename: N:\US\Baton Rouge\Projects\562\11215131\Digital_Design\ACAD 2019\Figures\11215131-02-DWG-G-509.dwg



SOURCE:

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

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NOTE:
EXCAVATION BOTTOM SOIL INTERVALS >240 ng/kg MAY BE LEFT IN PLACE IF A DEPTH WEIGHTED AVERAGE (DWA) BELOW 240 ng/kg CAN BE ACHIEVED AS DETAILED FURTHER IN FIGURE 17.

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LEGEND

- PROPERTY BOUNDARY
- PROPERTY EASEMENT
- 620 EXISTING CONTOUR INTERVAL
- X FENCELINE
- SHORELINE
- TOP OF BANK
- TOE OF SLOPE
- OHI OVERHEAD ELECTRICAL
- GUARDRAIL
- UE UNDERGROUND CCTV LINE
- SJSB002 PDIRI BORING LOCATION
- MW MONITORING WELL
- P.P. POWER POLE
- L.P. LIGHT POLE
- WELL
- AREA OF IMPACT
- ASPHALT
- CONCRETE
- GRAVEL
- 620 EXCAVATION CONTOUR INTERVAL
- EXCAVATION TOP OF BANK
- EXCAVATION TOE OF SLOPE
- SAMPLING GRIDS (MAX. 500 CY)
- PRE-CONSTRUCTION SIDEWALL/ BASE OF EXCAVATION CONFIRMATION BORING LOCATIONS
- PRE-CONSTRUCTION BASE OF EXCAVATION CONFIRMATION BORING LOCATIONS

Client
SAN JACINTO RIVER WASTE PITS

Project
SOUTHERN IMPOUNDMENT PRE-CONSTRUCTION FIELD SAMPLING PLAN HARRIS COUNTY, TEXAS

No.	Issue	Drawn	Approved	Date

Drawn MW	Designer RH
Drafting Check BP	Design Check LL
Project Coordinator CM	Date May 30, 2022
This document shall not be used for construction unless signed and sealed for construction.	Scale 1" = 20'
Original Size Arch D	Bar is one inch on original size drawing 0 1"

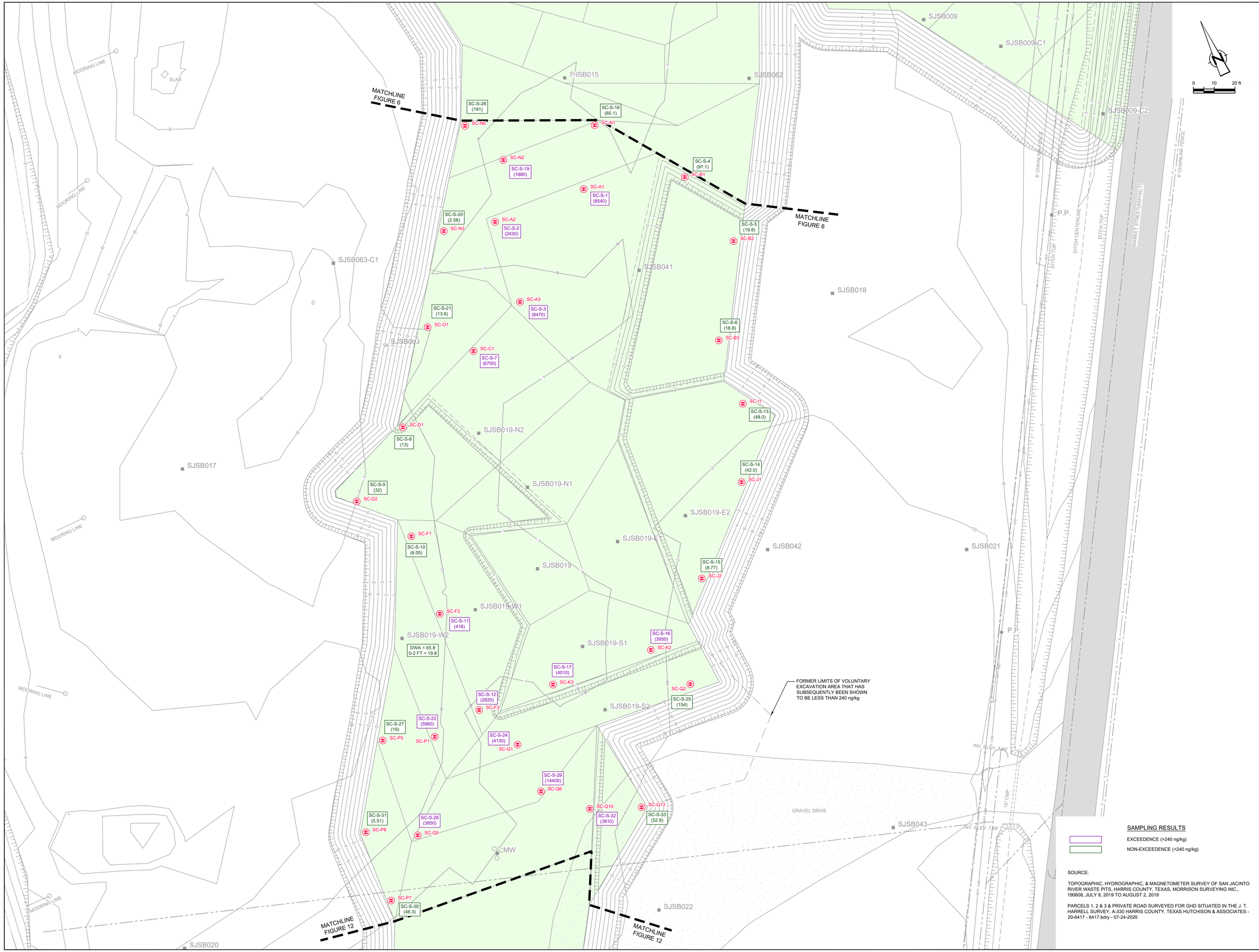
Project No. 11215131

Title
PC-FSE NORTH CENTRAL EXCAVATION BOTTOM INVESTIGATION RESULTS

Sheet No.
FIGURE 8

Sheet - of -

Plot Date: 31 May 2022 - 8:17 AM
Plotted By: Taylor Nancekivell
Filename: N:\US\Baton Rouge\Projects\562\11215131\Digital_Design\ACAD 2019\Figures\11215131-02-DWG-G-511.dwg



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LEGEND

- PROPERTY BOUNDARY
- PROPERTY EASEMENT
- 620 EXISTING CONTOUR INTERVAL
- X FENCELINE
- SHORELINE
- TOP OF BANK
- TOE OF SLOPE
- OHI OVERHEAD ELECTRICAL
- GUARDRAIL
- UE UNDERGROUND CCTV LINE
- SJSB002 PDIRI BORING LOCATION
- MW MONITORING WELL
- P.P. POWER POLE
- L.P. LIGHT POLE
- WELL
- AREA OF IMPACT
- ASPHALT
- CONCRETE
- GRAVEL
- 620 EXCAVATION CONTOUR INTERVAL
- EXCAVATION TOP OF BANK
- EXCAVATION TOE OF SLOPE
- PRE-CONSTRUCTION SIDEWALL CONFIRMATION BORING LOCATIONS

SAMPLING RESULTS

- EXCEEDENCE (>240 ng/kg)
- NON-EXCEEDENCE (<240 ng/kg)

SOURCE:

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

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

Client
SAN JACINTO RIVER WASTE PITS

Project
SOUTHERN IMPOUNDMENT PRE-CONSTRUCTION FIELD SAMPLING PLAN HARRIS COUNTY, TEXAS

No.	Issue	Drawn	Approved	Date

Drawn **MW**	Designer **RH**
Drafting Check **BP**	Design Check **LL**
Project Coordinator **CM**	Date **May 30, 2022**
This document shall not be used for construction unless signed and sealed for construction.	Scale **1" = 20'**
Original Size **Arch D**	Bar is one inch on original size drawing 0 1"

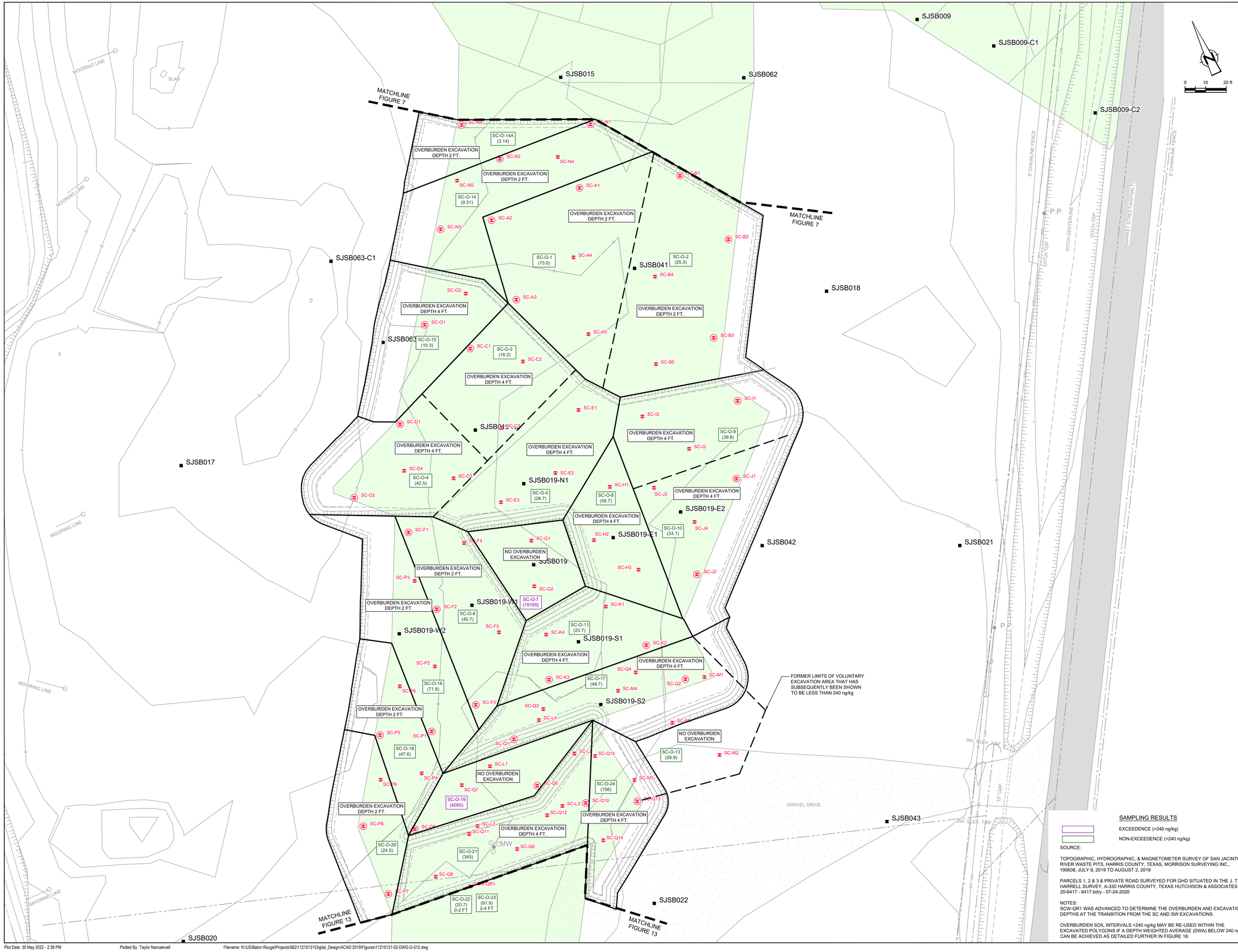
Project No. **11215131**

Title
PC-FSE SOUTH CENTRAL SIDEWALL INVESTIGATION RESULTS

Sheet No.
FIGURE 9

Sheet - of -

Plot Date: 30 May 2022 - 3:09 PM Plotted By: Taylor Nancekivell Filename: N:\US\Baton Rouge\Projects\562\11215131\Digital_Design\ACAD 2019\Figures\11215131-02-DWG-G-513.dwg



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LEGEND

- PROPERTY BOUNDARY
- PROPERTY EASEMENT
- EXISTING CONTOUR INTERVAL
- FENCELINE
- SHORELINE
- TOP OF BANK
- TOE OF SLOPE
- OVERHEAD ELECTRICAL
- GUARDRAIL
- UNDERGROUND CCTV LINE
- SJSB002 PDIRI BORING LOCATION
- MW MONITORING WELL
- P.P. POWER POLE
- L.P. LIGHT POLE
- WELL
- AREA OF IMPACT
- ASPHALT
- GRAVEL
- EXCAVATION CONTOUR INTERVAL
- EXCAVATION TOP OF BANK
- EXCAVATION TOE OF SLOPE
- POLYGON LIMITS (WITH ADDITIONAL SIDE SLOPE AREAS)
- SAMPLING GRIDS (~500 CY) WITHIN POLYGONS
- PRE-CONSTRUCTION SIDEWALL/ OVERBURDEN CONFIRMATION BORING LOCATIONS
- PRE-CONSTRUCTION OVERBURDEN CONFIRMATION BORING LOCATIONS

SAMPLING RESULTS

- EXCEEDENCE (>240 ng/kg)
- NON-EXCEEDENCE (<240 ng/kg)

SOURCE:

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

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

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

OVERBURDEN SOIL INTERVALS >240 ng/kg MAY BE RE-USED WITHIN THE EXCAVATED POLYGONS IF A DEPTH WEIGHTED AVERAGE (DWA) BELOW 240 ng/kg CAN BE ACHIEVED AS DETAILED FURTHER IN FIGURE 18.

Client
SAN JACINTO RIVER WASTE PITS

Project
SOUTHERN IMPOUNDMENT PRE-CONSTRUCTION FIELD SAMPLING PLAN HARRIS COUNTY, TEXAS

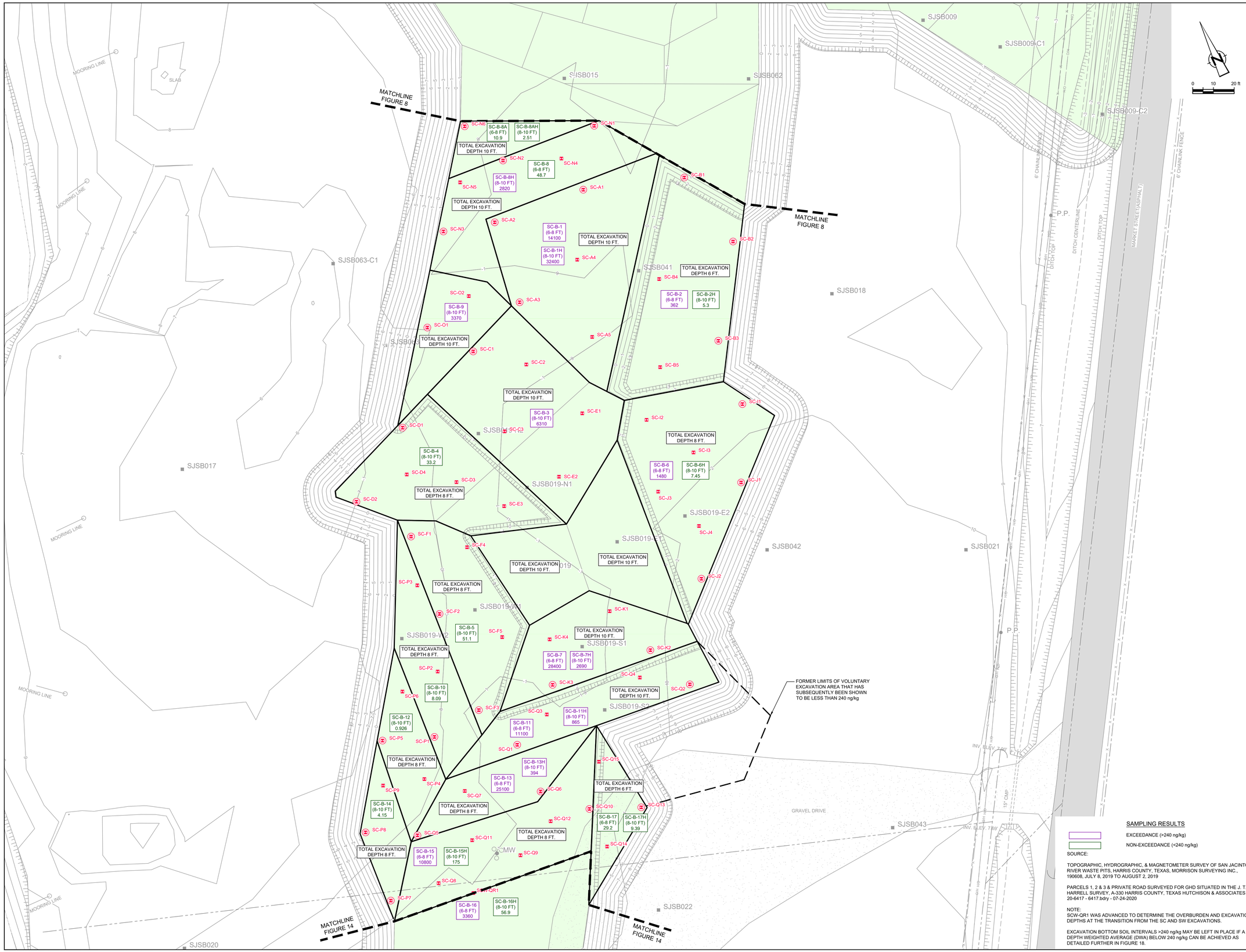
No.	Issue	Drawn	Approved	Date

Drawn **MW**	Designer **RH**
Drafting Check **BP**	Design Check **LL**
Project Coordinator **CM**	Date **May 30, 2022**
This document shall not be used for construction unless signed and sealed for construction.	Scale **1" = 20'**
Original Size **Arch D**	Bar is one inch on original size drawing 0 1"

Project No. **11215131**

Title
PC-FSE SOUTH CENTRAL OVERBURDEN INVESTIGATION RESULTS

Sheet No.
FIGURE 10
Sheet - of -



SAMPLING RESULTS

EXCEEDANCE (>240 ng/kg)

NON-EXCEEDANCE (<240 ng/kg)

SOURCE:

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

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

EXCAVATION BOTTOM SOIL INTERVALS >240 ng/kg MAY BE LEFT IN PLACE IF A DEPTH WEIGHTED AVERAGE (DWA) BELOW 240 ng/kg CAN BE ACHIEVED AS DETAILED FURTHER IN FIGURE 18.

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LEGEND

- PROPERTY BOUNDARY
- PROPERTY EASEMENT
- 620 EXISTING CONTOUR INTERVAL
- X FENCELINE
- SHORELINE
- TOP OF BANK
- TOE OF SLOPE
- OHI OVERHEAD ELECTRICAL
- GUARDRAIL
- UE UNDERGROUND CCTV LINE
- SJSB002 PDIRI BORING LOCATION
- MW MONITORING WELL
- P.P. POWER POLE
- L.P. LIGHT POLE
- WELL
- AREA OF IMPACT
- ASPHALT
- CONCRETE
- GRAVEL
- 620 EXCAVATION CONTOUR INTERVAL
- EXCAVATION TOP OF BANK
- EXCAVATION TOE OF SLOPE
- SAMPLING GRIDS (MAX. 500 CY)
- PRE-CONSTRUCTION SIDEWALL/ BASE OF EXCAVATION CONFIRMATION BORING LOCATIONS
- PRE-CONSTRUCTION BASE OF EXCAVATION CONFIRMATION BORING LOCATIONS

Client
SAN JACINTO RIVER WASTE PITS

Project
SOUTHERN IMPOUNDMENT PRE-CONSTRUCTION FIELD SAMPLING PLAN HARRIS COUNTY, TEXAS

No.	Issue	Drawn	Approved	Date

Drawn **MW**	Designer **RH**
Drafting Check **BP**	Design Check **LL**
Project Coordinator **CM**	Date **May 30, 2022**
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Original Size **Arch D**	Bar is one inch on original size drawing 0 1"

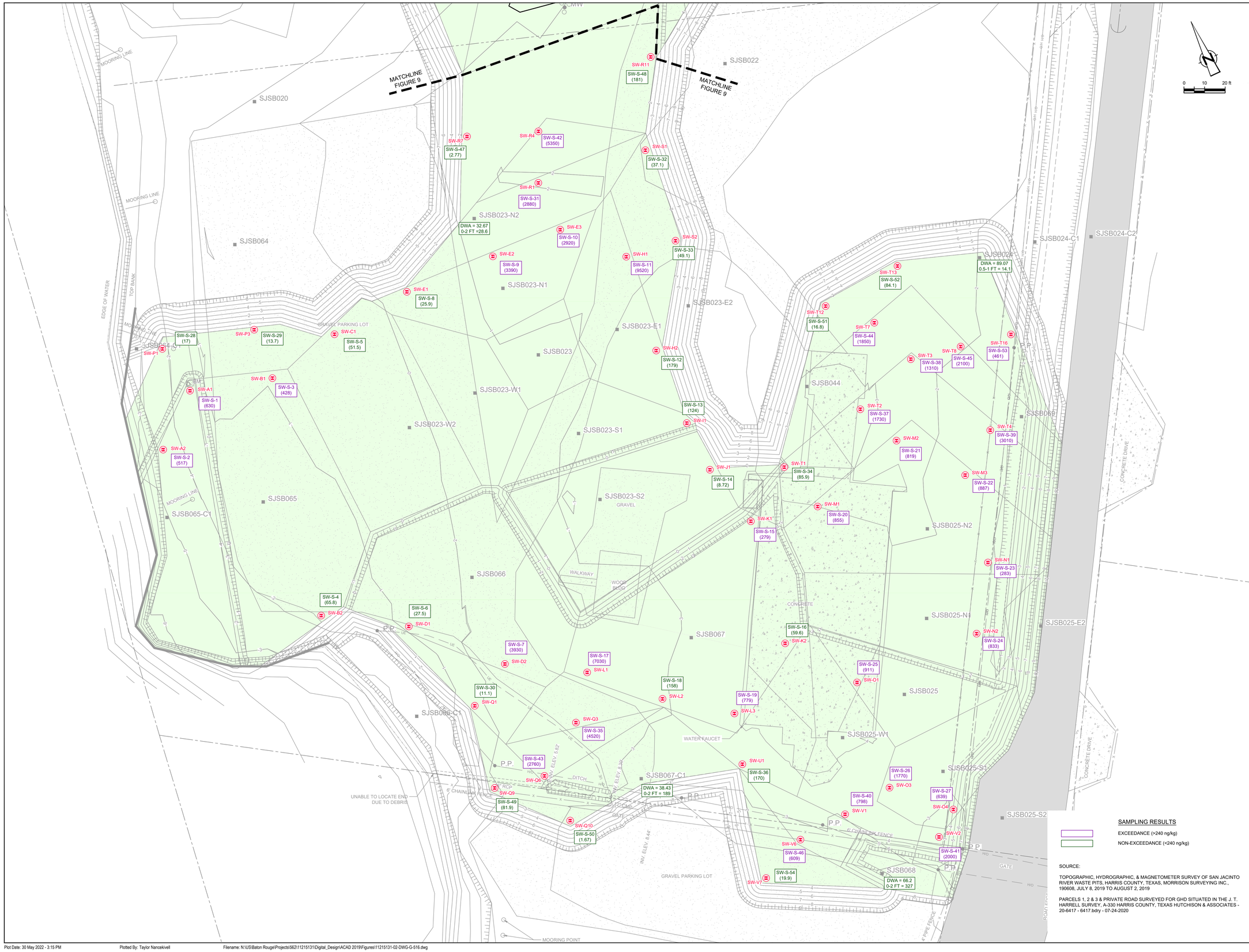
Project No. **11215131**

Title
PC-FSE SOUTH CENTRAL EXCAVATION BOTTOM INVESTIGATION RESULTS

Sheet No.
FIGURE 11

Sheet - of -

Plot Date: 31 May 2022 - 8:42 AM Plotted By: Taylor Nancekivell Filename: N:\US\Baton Rouge\Projects\562\11215131\Digital_Design\ACAD 2019\Figures\11215131-02-DWG-G-514.dwg



SAMPLING RESULTS

EXCEEDANCE (>240 ng/kg)

NON-EXCEEDANCE (<240 ng/kg)

SOURCE:

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

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

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LEGEND

- PROPERTY BOUNDARY
- PROPERTY EASEMENT
- EXISTING CONTOUR INTERVAL
- FENCELINE
- SHORELINE
- TOP OF BANK
- TOE OF SLOPE
- OVERHEAD ELECTRICAL
- GUARDRAIL
- UNDERGROUND CCTV LINE
- PDIRI BORING LOCATION
- MONITORING WELL
- POWER POLE
- LIGHT POLE
- WELL
- AREA OF IMPACT
- ASPHALT
- CONCRETE
- GRAVEL
- EXCAVATION CONTOUR INTERVAL
- EXCAVATION TOP OF BANK
- EXCAVATION TOE OF SLOPE
- PRE-CONSTRUCTION SIDEWALL CONFIRMATION BORING LOCATIONS

Client
SAN JACINTO RIVER WASTE PITS

Project
SOUTHERN IMPOUNDMENT PRE-CONSTRUCTION FIELD SAMPLING PLAN HARRIS COUNTY, TEXAS

No.	Issue	Drawn	Approved	Date

Drawn **MW**	Designer **RH**
Drafting Check **BP**	Design Check **LL**
Project Coordinator **CM**	Date **May 30, 2022**
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Original Size **Arch D**	Bar is one inch on original size drawing 0 1"

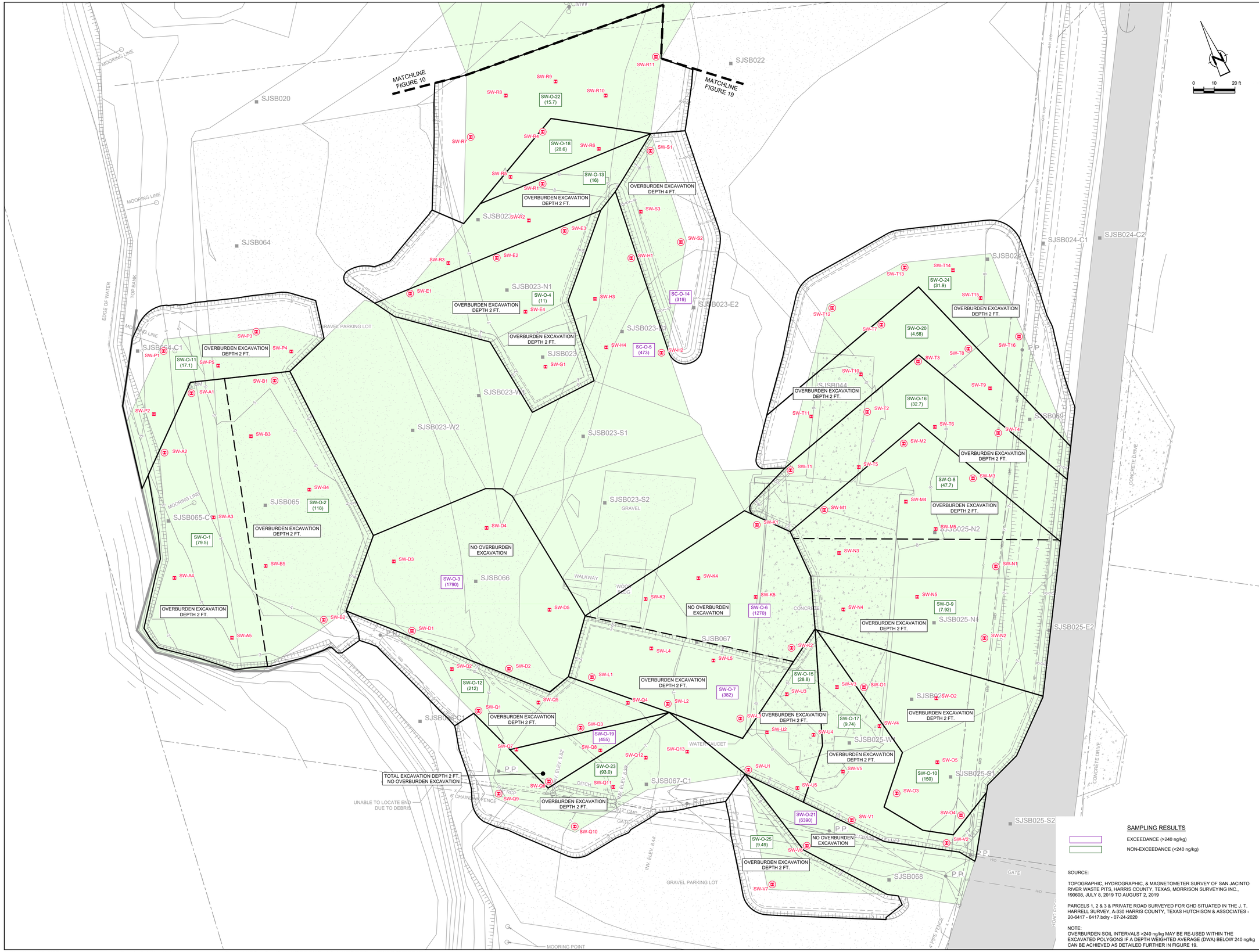
Project No. **11215131**

Title
PC-FSE SOUTHWEST SIDEWALL INVESTIGATION RESULTS

Sheet No.
FIGURE 12

Sheet - of -

Plot Date: 30 May 2022 - 3:15 PM
Plotted By: Taylor Nancekivell
Filename: N:\US\Baton Rouge\Projects\562\11215131\Digital_Design\ACAD 2019\Figures\11215131-02-DWG-G-516.dwg



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LEGEND

- PROPERTY BOUNDARY
- PROPERTY EASEMENT
- EXISTING CONTOUR INTERVAL
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- TOP OF BANK
- TOE OF SLOPE
- OVERHEAD ELECTRICAL
- GUARDRAIL
- UNDERGROUND CCTV LINE
- PDIRI BORING LOCATION
- MONITORING WELL
- POWER POLE
- LIGHT POLE
- WELL
- AREA OF IMPACT
- ASPHALT
- CONCRETE
- GRAVEL
- EXCAVATION CONTOUR INTERVAL
- EXCAVATION TOP OF BANK
- EXCAVATION TOE OF SLOPE
- POLYGON LIMITS (WITH ADDITIONAL SIDE SLOPE AREAS)
- SAMPLING GRIDS (~500 CY) WITHIN POLYGONS
- PRE-CONSTRUCTION SIDEWALL/ OVERBURDEN CONFIRMATION BORING LOCATIONS
- PRE-CONSTRUCTION OVERBURDEN CONFIRMATION BORING LOCATIONS

SAMPLING RESULTS

- EXCEEDANCE (>240 ng/kg)
- NON-EXCEEDANCE (<240 ng/kg)

SOURCE:

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

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NOTE:
OVERBURDEN SOIL INTERVALS >240 ng/kg MAY BE RE-USED WITHIN THE EXCAVATED POLYGONS IF A DEPTH WEIGHTED AVERAGE (DWA) BELOW 240 ng/kg CAN BE ACHIEVED AS DETAILED FURTHER IN FIGURE 19.

Client
SAN JACINTO RIVER WASTE PITS

Project
SOUTHERN IMPOUNDMENT PRE-CONSTRUCTION FIELD SAMPLING PLAN HARRIS COUNTY, TEXAS

No.	Issue	Drawn	Approved	Date

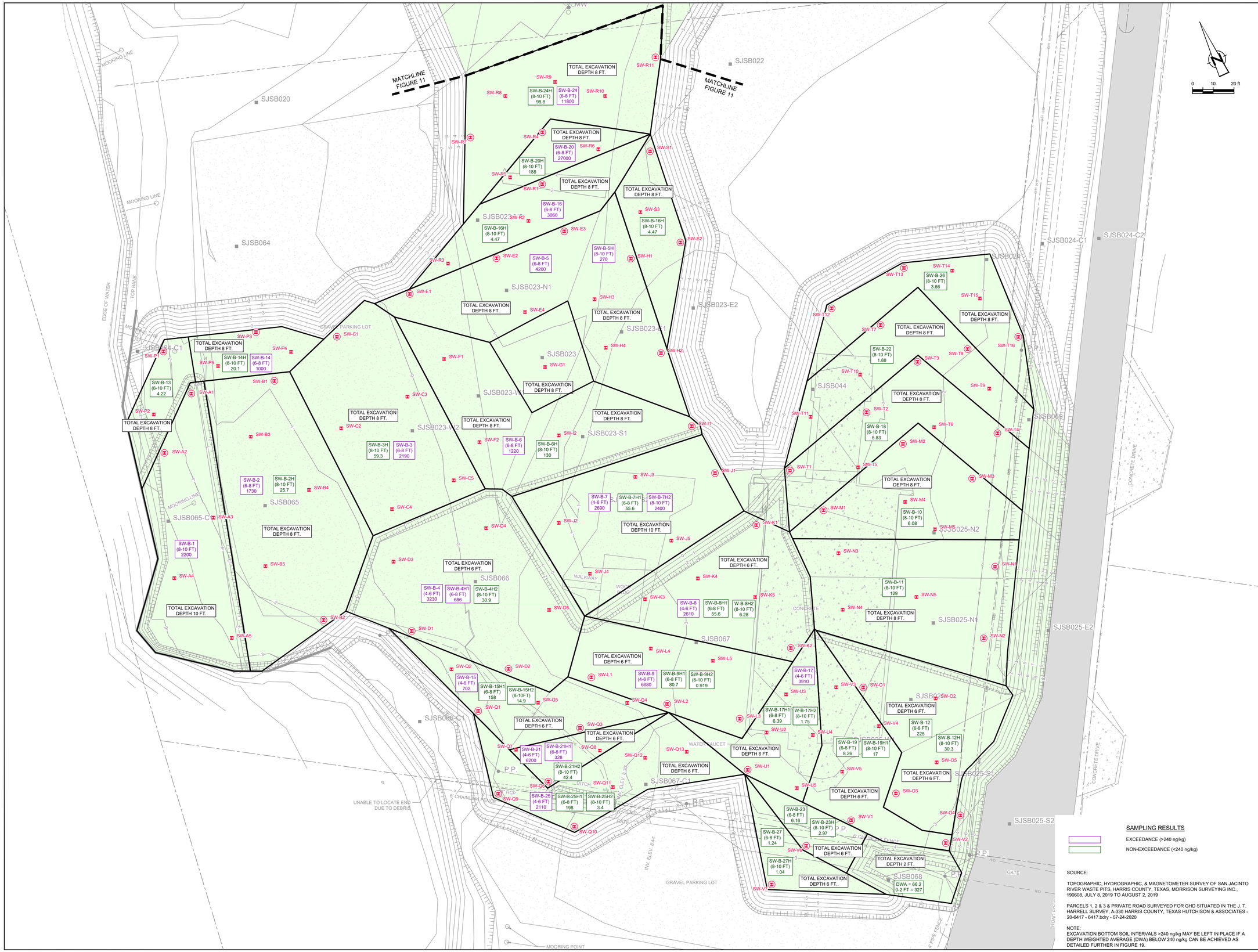
Drawn	MW	Designer	RH
Drafting Check	BP	Design Check	LL
Project Coordinator	CM	Date	May 30, 2022
This document shall not be used for construction unless signed and sealed for construction.		Scale	1" = 20'
Original Size	Arch D	Bar is one inch on original size drawing	0 1"

Project No. **11215131**

Title
PC-FSE SOUTHWEST OVERBURDEN INVESTIGATION RESULTS

Sheet No.
FIGURE 13

Sheet - of -



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LEGEND

- PROPERTY BOUNDARY
- PROPERTY EASEMENT
- 620 EXISTING CONTOUR INTERVAL
- FENCELINE
- SHORELINE
- TOP OF BANK
- TOE OF SLOPE
- OHL OVERHEAD ELECTRICAL
- GUARDRAIL
- UE UNDERGROUND CCTV LINE
- SJSB002 PDIRI BORING LOCATION
- MW MONITORING WELL
- P.P. POWER POLE
- L.P. LIGHT POLE
- WELL
- AREA OF IMPACT
- ASPHALT
- CONCRETE
- GRAVEL
- 620 EXCAVATION CONTOUR INTERVAL
- EXCAVATION TOP OF BANK
- EXCAVATION TOE OF SLOPE
- SAMPLING GRIDS (MAX. 500 CY)
- PRE-CONSTRUCTION SIDEWALL/ BASE OF EXCAVATION CONFIRMATION BORING LOCATIONS
- PRE-CONSTRUCTION BASE OF EXCAVATION CONFIRMATION BORING LOCATIONS

SAMPLING RESULTS

- EXCEEDANCE (>240 ng/kg)
- NON-EXCEEDANCE (<240 ng/kg)

SOURCE:

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

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

NOTE:
EXCAVATION BOTTOM SOIL INTERVALS >240 ng/kg MAY BE LEFT IN PLACE IF A DEPTH WEIGHTED AVERAGE (DWA) BELOW 240 ng/kg CAN BE ACHIEVED AS DETAILED FURTHER IN FIGURE 19.

Client
SAN JACINTO RIVER WASTE PITS

Project
SOUTHERN IMPOUNDMENT PRE-CONSTRUCTION FIELD SAMPLING PLAN HARRIS COUNTY, TEXAS

No.	Issue	Drawn	Approved	Date

Drawn	MW	Designer	RH
Drafting Check	BP	Design Check	LL
Project Coordinator	CM	Date	May 30, 2022
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Original Size	Arch D	Bar is one inch on original size drawing	0 1"

Project No. **11215131**

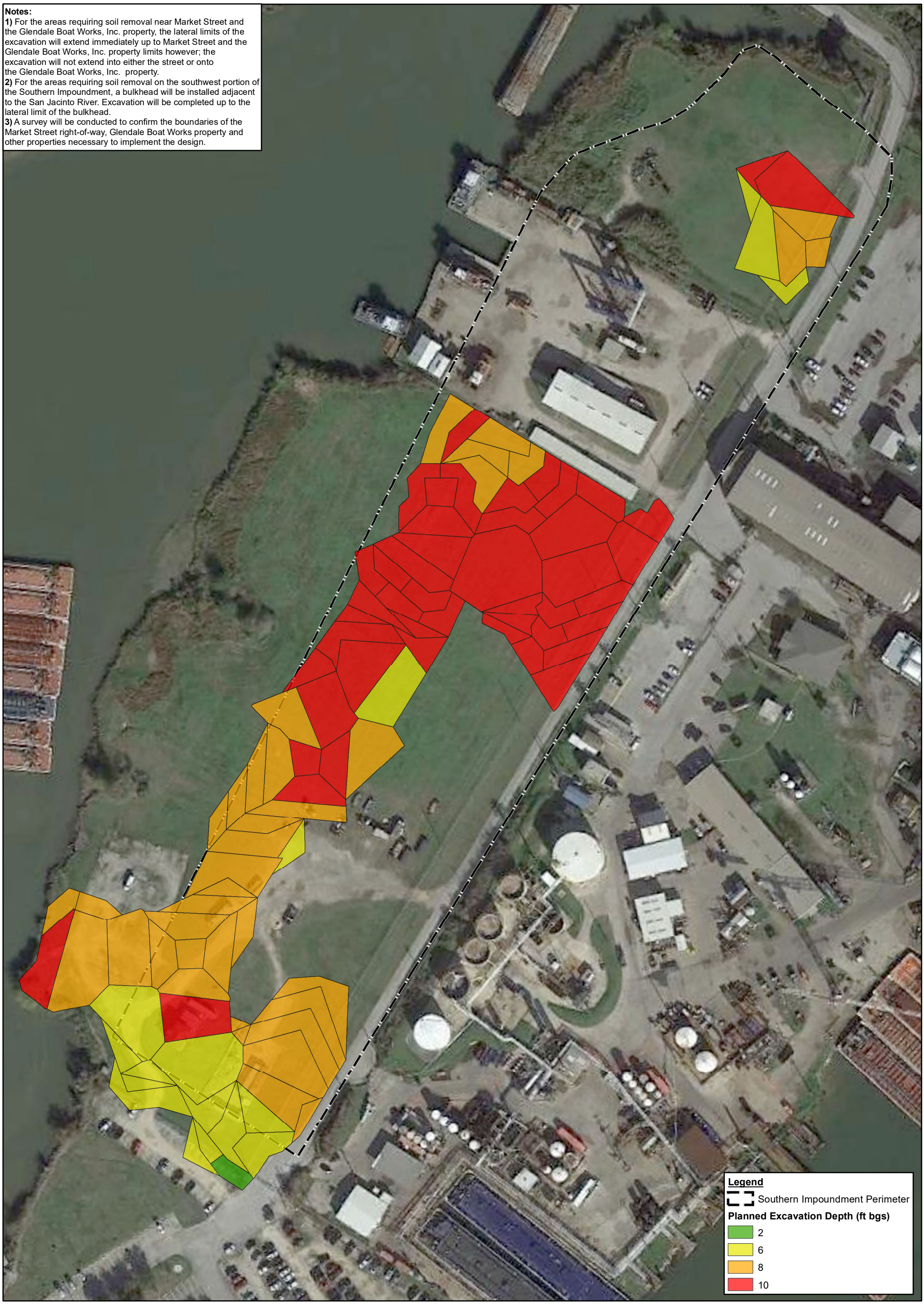
Title
PC-FSE SOUTHWEST EXCAVATION BOTTOM INVESTIGATION RESULTS

Sheet No.
FIGURE 14

Sheet - of -

Plot Date: 31 May 2022 - 8:35 AM
Plotted By: Taylor Nancekivell
Filename: N:\US\Baton Rouge\Projects\562\11215131\Digital_Design\ACAD 2019\Figures\11215131-02-DWG-G-517.dwg

Notes:
1) For the areas requiring soil removal near Market Street and the Glendale Boat Works, Inc. property, the lateral limits of the excavation will extend immediately up to Market Street and the Glendale Boat Works, Inc. property limits however; the excavation will not extend into either the street or onto the Glendale Boat Works, Inc. property.
2) For the areas requiring soil removal on the southwest portion of the Southern Impoundment, a bulkhead will be installed adjacent to the San Jacinto River. Excavation will be completed up to the lateral limit of the bulkhead.
3) A survey will be conducted to confirm the boundaries of the Market Street right-of-way, Glendale Boat Works property and other properties necessary to implement the design.



Paper Size ANSI B

0 30 60 90 120

Feet

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

N

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SAN JACINTO RIVER WASTE PITS SITE
HARRIS COUNTY, TEXAS
100% REMEDIAL DESIGN ADDENDUM
SOUTHERN IMPOUNDMENT

THIESSEN POLYGONS

Project No. **11215131**
Revision No. **-**
Date **May 27, 2022**

FIGURE 15

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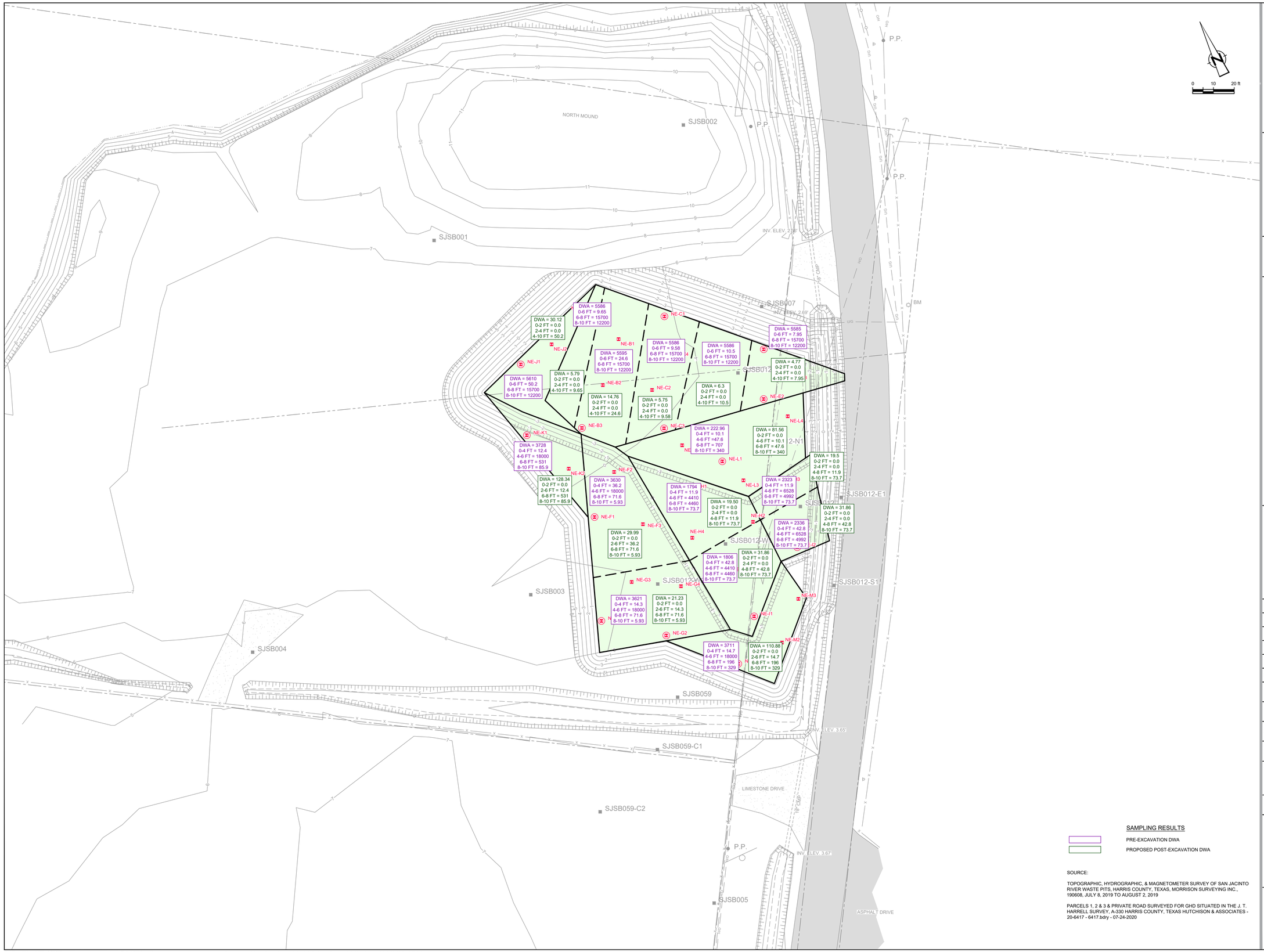
Print date: 27 May 2022 - 09:11

Data source: Google Earth



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LEGEND

- PROPERTY BOUNDARY
- PROPERTY EASEMENT
- EXISTING CONTOUR INTERVAL
- FENCELINE
- SHORELINE
- TOP OF BANK
- TOE OF SLOPE
- OVERHEAD ELECTRICAL
- GUARDRAIL
- UNDERGROUND CCTV LINE
- SJSB002 PDIRI BORING LOCATION
- MW MONITORING WELL
- P.P. POWER POLE
- L.P. LIGHT POLE
- WELL
- AREA OF IMPACT
- ASPHALT
- CONCRETE
- GRAVEL
- EXCAVATION CONTOUR INTERVAL
- EXCAVATION TOP OF BANK
- EXCAVATION TOE OF SLOPE
- POLYGON LIMITS (WITH ADDITIONAL SIDE SLOPE AREAS)
- SAMPLING GRIDS (~500 CY) WITHIN POLYGONS
- PRE-CONSTRUCTION SIDEWALL/ OVERBURDEN CONFIRMATION BORING LOCATIONS
- PRE-CONSTRUCTION OVERBURDEN CONFIRMATION BORING LOCATIONS

SAMPLING RESULTS

- PRE-EXCAVATION DWA
- PROPOSED POST-EXCAVATION DWA

SOURCE:

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

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

Client
SAN JACINTO RIVER WASTE PITS

Project
SOUTHERN IMPOUNDMENT PRE-CONSTRUCTION FIELD SAMPLING PLAN HARRIS COUNTY, TEXAS

No.	Issue	Drawn	Approved	Date

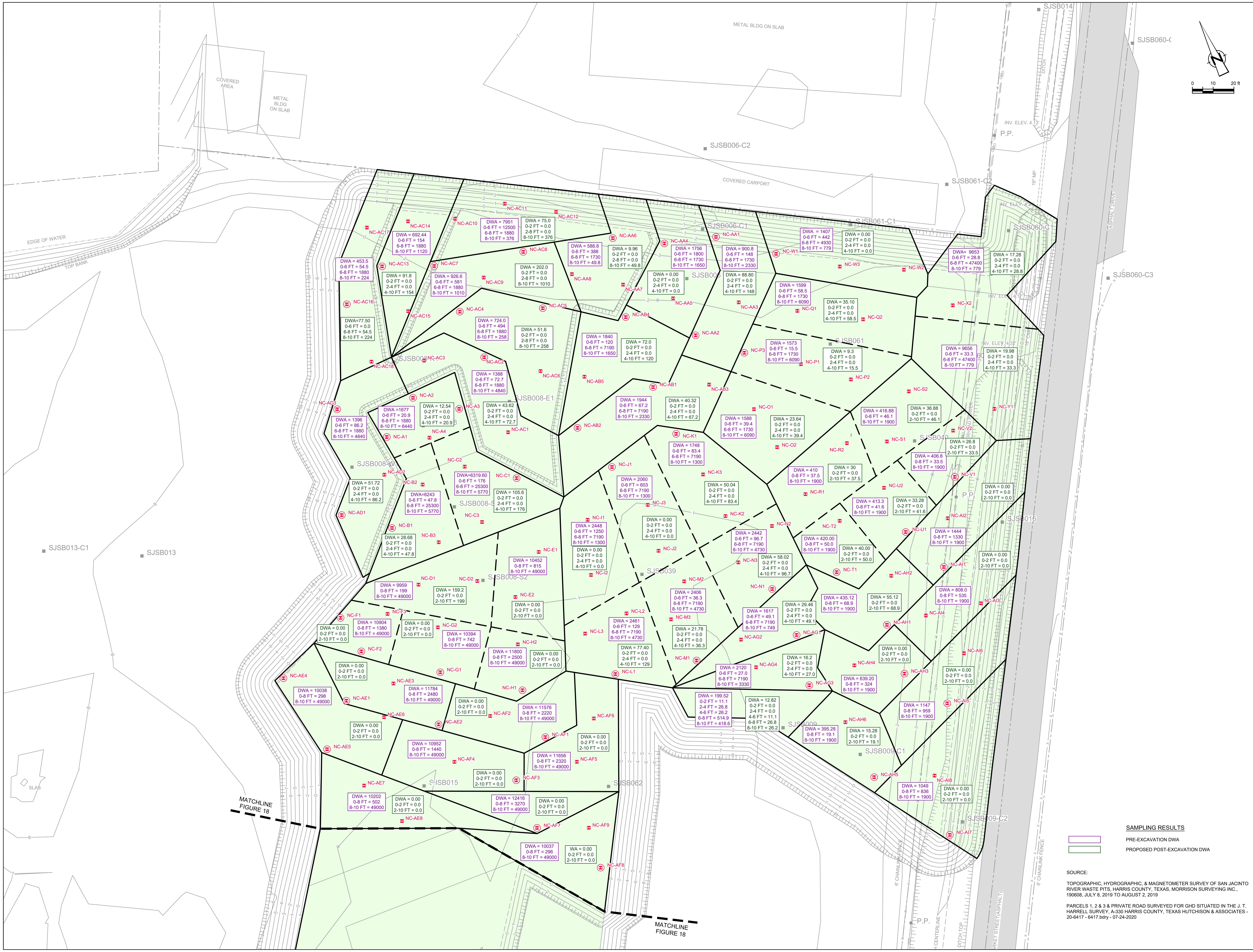
Drawn MW	Designer RH
Drafting Check BP	Design Check LL
Project Coordinator CM	Date May 27, 2022
This document shall not be used for construction unless signed and sealed for construction.	Scale 1" = 20'
Original Size Arch D	Bar is one inch on original size drawing 0 — 1"

Project No. 11215131

Title
NORTHEAST EXCAVATION DWA SUMMARY

Sheet No.
FIGURE 16

Sheet - of -



SAMPLING RESULTS

PRE-EXCAVATION DWA

PROPOSED POST-EXCAVATION DWA

SOURCE:

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

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LEGEND

- PROPERTY BOUNDARY
- PROPERTY EASEMENT
- EXISTING CONTOUR INTERVAL
- FENCELINE
- SHORELINE
- TOP OF BANK
- TOE OF SLOPE
- OVERHEAD ELECTRICAL
- GUARDRAIL
- UNDERGROUND CCTV LINE
- PDI/RI BORING LOCATION
- MONITORING WELL
- POWER POLE
- LIGHT POLE
- WELL
- AREA OF IMPACT
- ASPHALT
- CONCRETE
- GRAVEL
- EXCAVATION CONTOUR INTERVAL
- EXCAVATION TOP OF BANK
- EXCAVATION TOE OF SLOPE
- POLYGON LIMITS (WITH ADDITIONAL SIDE SLOPE AREAS)
- SAMPLING GRIDS (~500 CY) WITHIN POLYGONS
- PRE-CONSTRUCTION SIDEWALL/ OVERBURDEN CONFIRMATION BORING LOCATIONS
- PRE-CONSTRUCTION OVERBURDEN CONFIRMATION BORING LOCATIONS

Client
SAN JACINTO RIVER WASTE PITS

Project
SOUTHERN IMPOUNDMENT PRE-CONSTRUCTION FIELD SAMPLING PLAN HARRIS COUNTY, TEXAS

No.	Issue	Drawn	Approved	Date

Drawn	MW	Designer	RH
Drafting Check	BP	Design Check	LL
Project Coordinator	CM	Date	May 30, 2022
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Original Size	Arch D	Bar is one inch on original size drawing	0 1"

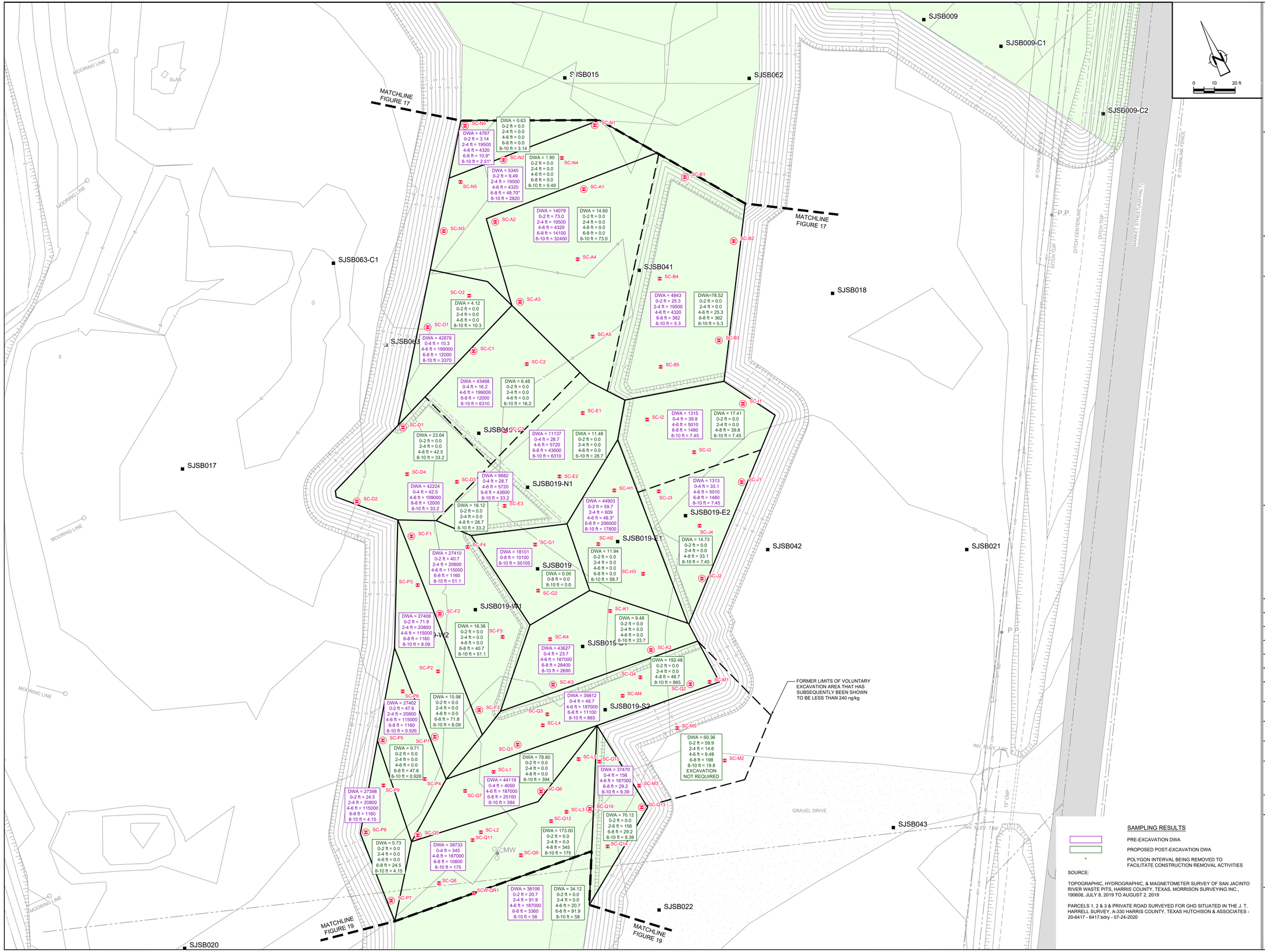
Project No. 11215131

Title
NORTH CENTRAL EXCAVATION DWA SUMMARY

Sheet No.
FIGURE 17

Sheet - of -

Plot Date: 30 May 2022 - 3:26 PM Plotted By: Taylor Nancekivell Filename: N:\US\Baton Rouge\Projects\562\11215131\Digital_Design\ACAD 2019\Figures\11215131-02-DWG-G-519.dwg



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LEGEND

- PROPERTY BOUNDARY
- PROPERTY EASEMENT
- 620 EXISTING CONTOUR INTERVAL
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- P.P. POWER POLE
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- AREA OF IMPACT
- ASPHALT
- GRAVEL
- 620 EXCAVATION CONTOUR INTERVAL
- EXCAVATION TOP OF BANK
- EXCAVATION TOE OF SLOPE
- POLYGON LIMITS (WITH ADDITIONAL SIDE SLOPE AREAS)
- SAMPLING GRIDS (~500 CY) WITHIN POLYGONS
- PRE-CONSTRUCTION SIDEWALL/ OVERBURDEN CONFIRMATION BORING LOCATIONS
- PRE-CONSTRUCTION OVERBURDEN CONFIRMATION BORING LOCATIONS

Client
SAN JACINTO RIVER WASTE PITS

Project
SOUTHERN IMPOUNDMENT PRE-CONSTRUCTION FIELD SAMPLING PLAN HARRIS COUNTY, TEXAS

No.	Issue	Drawn	Approved	Date

Drawn MW	Designer RH
Drafting Check BP	Design Check LL
Project Coordinator CM	Date May 30, 2022
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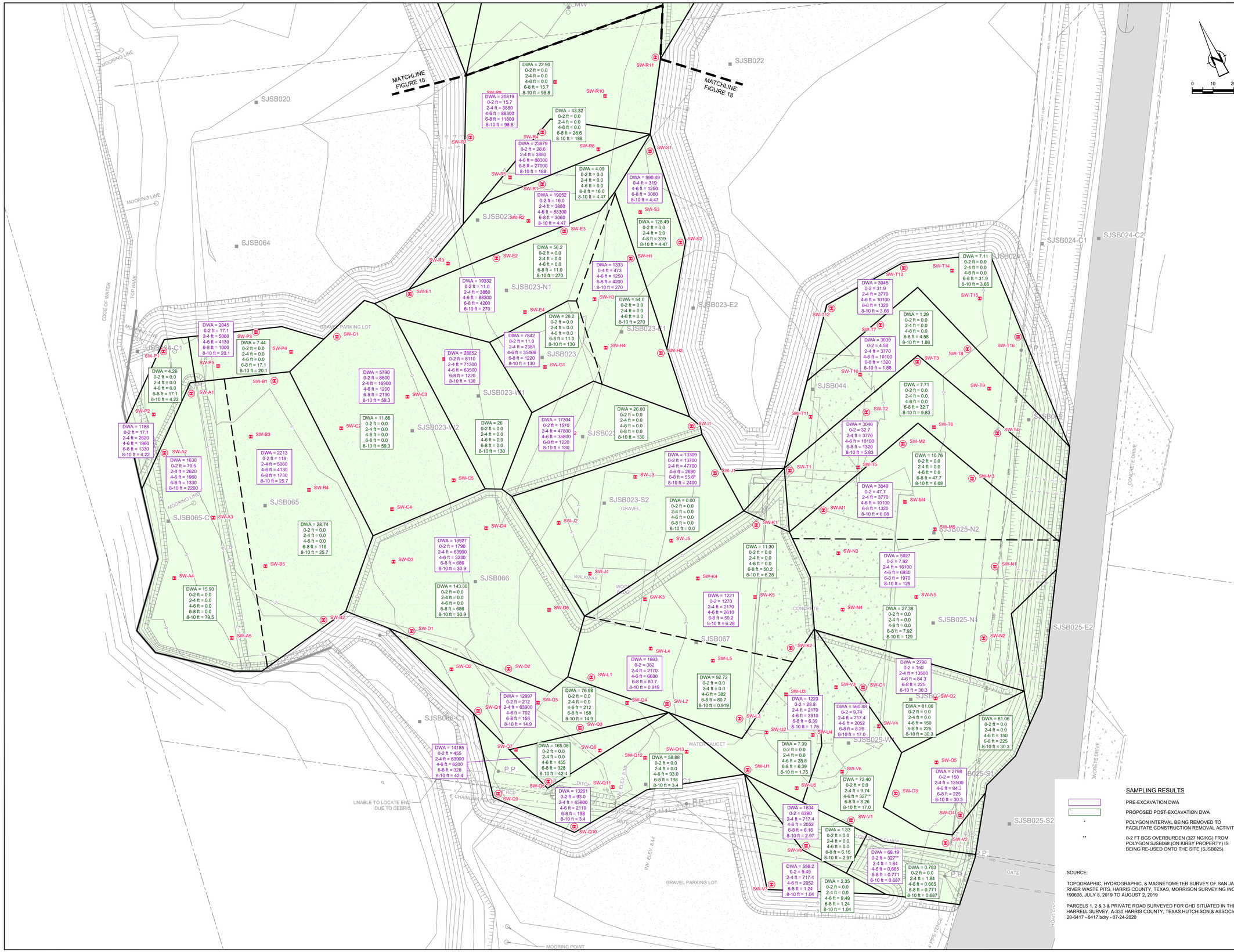
Original Size Arch D	Bar is one inch on original size drawing 0 1"

Project No. 11215131

Title
SOUTH CENTRAL EXCAVATION DWA SUMMARY

Sheet No.
FIGURE 18
Sheet - of -



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LEGEND

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- PRE-CONSTRUCTION SIDEWALL/ OVERBURDEN CONFIRMATION BORING LOCATIONS
- PRE-CONSTRUCTION OVERBURDEN CONFIRMATION BORING LOCATIONS

SAMPLING RESULTS

- PRE-EXCAVATION DWA
- PROPOSED POST-EXCAVATION DWA
- * POLYGON INTERVAL BEING REMOVED TO FACILITATE CONSTRUCTION REMOVAL ACTIVITIES
- ** 0-2 FT BGS OVERBURDEN (327 NG/KG) FROM POLYGON SJSB068 (ON KIRBY PROPERTY) IS BEING RE-USED ONTO THE SITE (SJSB025).

SOURCE:

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

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

Client
SAN JACINTO RIVER WASTE PITS

Project
SOUTHERN IMPOUNDMENT PRE-CONSTRUCTION FIELD SAMPLING PLAN HARRIS COUNTY, TEXAS

No.	Issue	Drawn	Approved	Date

Drawn **MW**	Designer **RH**
Drafting Check **BP**	Design Check **LL**
Project Coordinator **CM**	Date **May 30, 2022**
This document shall not be used for construction unless signed and sealed for construction.	Scale **1" = 20'**
Original Size **Arch D**	Bar is one inch on original size drawing 0 1"

Project No. **11215131**

Title
SOUTHWEST EXCAVATION DWA SUMMARY

Sheet No.
FIGURE 19
Sheet - of -

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The Power of Commitment