Final
July 2024

Sixth Five-Year Review

Naval Air Station Whidbey Island

Oak Harbor, Washington

United States Department of the Navy
Naval Facilities Engineering Systems Command
1101 Tautog Circle
Silverdale, WA 98315-1101



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Naval Facilities Engineering Systems Command Northwest
Silverdale, WA

Final

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Naval Air Station Whidbey Island
Oak Harbor, Washington

July 2024

DCN: LBJV-5006-4050-0009

Prepared for:

United States Department of the Navy
Naval Facilities Engineering Systems Command Northwest
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Contract Number: N44255-20-D-5006; Task Order No. N4425523F4050

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Executive Summary

The Sixth five-year review (FYR) of the remedial actions at Operable Units (OUs) 1 through 5 at Naval Air Station (NAS) Whidbey Island, Oak Harbor, Washington, has been completed pursuant to Section 121(c) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 United States Code Section (§)9621(c), and Section 300.430(f)(4)(ii) of the National Oil and Hazardous Substances Pollution Contingency Plan, Title 40 Code of Federal Regulations § 300.430(f)(4)(ii).

The purpose of this FYR is to ensure that the remedial actions selected in the Record of Decisions (RODs), Explanation of Significant Differences, and the OU1 ROD Amendment and implemented for OUs 1 through 5 at NAS Whidbey Island remain protective of human health and the environment. A FYR is required because the selected remedial actions or remedies allow contaminants to remain in place at concentrations that do not allow for unlimited use and unrestricted exposure.

This FYR report was prepared as part of the CERCLA FYR process using U.S. Department of the Navy (Navy) and U.S. Environmental Protection Agency (EPA) guidance (Navy, 2004a, 2011a, 2013a, 2014c; EPA, 2001, 2012, 2016) and documents the results of the review, issues identified, and recommended actions. This FYR report is also organized in accordance with the EPA's 2016 recommended template (EPA, 2016).

In accordance with Navy and EPA guidance, this Sixth FYR contains a technical assessment to determine whether: (a) the remedies are functioning as intended by the RODs; (b) exposure assumptions, toxicity data, cleanup levels, and remedial action objectives identified in the RODs and used at the time of the remedy implementation are still valid; and (c) other information has come to light that compromises the protectiveness of the remedy at this time for OUs 1 through 5 at NAS Whidbey Island. As a result of the technical assessment, issues (and subsequent recommendations) have been identified for OU 1 Area 6, OU 2, and OU 5 Area 31. These issues affect future protectiveness of the remedies.

Remedy construction has been complete at OUs 1 through 5 since 25 September 1997. The remedies at OU 1 Area 5, OU 4, OU 5 Area 1, and OU 5 Area 52 are protective of human health and the environment. The Navy is making progress toward meeting the remedial action objectives as documented through monitoring of land use controls (LUCs) and groundwater.

At OU 1 Area 6, the amended remedy selected in the Final ROD Amendment (Navy, 2019), which addresses vinyl chloride and 1,4-dioxane in groundwater, is currently in

the process of being implemented and it needs to be implemented for the remedy to be protective into the future. However, during this implementation, LUCs currently protect human health and the environment. Residential dwellings within the footprint of impacted groundwater (vinyl chloride and 1,4 dioxane) are connected to a municipal water supply (i.e., not well water) or have been connected to a deeper water well (i.e., 6-DW-38B); therefore, the exposure of human receptors to groundwater is an incomplete pathway.

Although there are no known exposures, perfluorooctane sulfonic acid (PFOS) and perfluorooctanoic acid (PFOA) in groundwater at OU 2, OU 3, and OU 5 Area 31 may also impact the future protectiveness of the remedy. Because known off-site drinking water exposures have been addressed and on-site LUCs prevent exposure to groundwater, the Navy considers OU 2, OU 3, and OU 5 Area 31 to be protective in the short-term while ongoing PFAS investigations and evaluations are conducted through the CERCLA process to refine the PFAS conceptual site model and potential exposure risks. Findings from ongoing PFAS investigations and evaluations will be addressed in the next FYR to determine whether the current remedies at OU 2, OU 3, and OU 5 Area 31 will continue to be protective in the future.

Five-Year Review Summary Form

SITE IDENTIFICATION		
Site Name: Naval Air Station Whidbey Island, Ault Field and Seaplane Base		
EPA ID: WA5170090059 (Ault Field); WA6170090058 (Seaplane Base)		
Region: 10	**State:** WA	**City/County:** Oak Harbor/Island County
SITE STATUS		
NPL Status: OUs 1, 2, 3, and 5 Final; OU 4 Deleted		
Multiple OUs? Yes, OUs 1, 2, 3, 4, and 5	**Has the site achieved construction completion?** Yes, remedy construction is complete for OU 1 Area 5 through OU 5 and has been complete since 25 September 1997. Remedy completion was initially completed for OU 1 Area 6 in 1995. A Record of Decision Amendment for OU 1 Area 6 was finalized in 2019 and construction of the groundwater treatment systems is in-progress.	
REVIEW STATUS		
Lead agency: Other Federal Agency ***[If "Other Federal Agency," enter Agency name]:*** U.S. Department of the Navy		
Author name (Federal or State Project Manager): Laura Himes		
Author affiliation: U.S. Department of the Navy Naval Facilities Engineering Systems Command Northwest		
Review period: Initiated in April 2023 for the August 2019 – August 2024 period (data from November 2018 through August 2023)		
Date(s) of site inspection: 9/20/2023 – 9/27/2023		
Type of review: Statutory		
Review number: 6		
Triggering action date: 8/26/2019		
Due date *(five years after triggering action date)*: 8/25/2024		

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FINAL
SIXTH FIVE-YEAR REVIEW
NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WASHINGTON

July 2024

Prepared for
United States Department of the Navy
Naval Facilities Engineering Systems Command Northwest

Silverdale, WA 98315

REVIEW AND APPROVAL

Commanding Officer: _____

Captain Eric Hanks
Naval Air Station Whidbey Island

26 JUL 24
Date

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Acronyms and Abbreviations

µg/L ..... micrograms per liter

AFFF ..... aqueous film-forming foam
AOP ..... advanced oxidation process
ARARs ..... applicable or relevant and appropriate requirements

CERCLA..... Comprehensive Environmental Response, Compensation, and Liability Act
CIP ..... community involvement plan
COCs ..... contaminants of concern
cPAH ..... carcinogenic PAH
CRP ..... community relations plan
CSM ..... conceptual site model
CULs ..... cleanup levels

DCA ..... dichloroethane
DCE ..... xvichloroethane

Ecology ..... Washington State Department of Ecology
EPA ..... Environmental Protection Agency
ESD ..... Explanation of Significant Differences

FFS ..... Focused Feasibility Study
FYR ..... five-year review

GETR ..... groundwater extraction, treatment, and recharge

LOQ ..... limit of quantitation
LTM ..... long-term monitoring
LUC ..... land use control
LUCIP ..... Land Use Controls Implementation Plan

MCL ..... maximum contaminant level
mg/kg ..... milligrams per kilogram
mg/kg-day ..... milligrams per kilogram per day
MNA ..... monitored natural attenuation
MTCA ..... Model Toxics Control Act

Acronyms and Abbreviations (continued)

Navy ..... United States Department of the Navy
NAS ..... Naval Air Station
NCP ..... National Oil and Hazardous Substances Pollution Contingency Plan
ng/g ..... nanograms per gram
ng/L ..... nanograms per liter
NPL ..... National Priorities List
NTCRA ..... non-time critical removal action

O&M ..... operation and maintenance
OLF ..... Outlying Landing Field
OU ..... operable unit

PA ..... preliminary assessment
PAH ..... polycyclic aromatic hydrocarbon
PALs ..... project action levels
PCB ..... polychlorinated biphenyl
PCP ..... pentachlorophenol
PFAA ..... perfluoroalkyl acid
PFAS ..... per- and polyfluoroalkyl substances
PFBS ..... perfluorobutane sulfonic acid
PFOA ..... perfluorooctanoic acid
PFOS ..... perfluorooctane sulfonic acid
PQL ..... practical quantitation limit
PW ..... production well

RAB ..... Restoration Advisory Board
RAOs ..... remedial action objectives
RG ..... remediation goal
RI ..... remedial investigation
ROD ..... Record of Decision
RODA ..... Record of Decision Amendment
RPM ..... Remedial Project Manager
RSL ..... regional screening level

SGS ..... SGS North America Inc.
SI ..... site inspection
SMS ..... Sediment Management Standards

Acronyms and Abbreviations (continued)

TCA ..... trichloroethane
TCDD 2,3,7,8-tetrachlorodibenzo-p-dioxin
TCE ..... trichloroethene
TCRA ..... time critical removal action
TPH ..... total petroleum hydrocarbons
TRV ..... toxicity reference value

UU/UE ..... unlimited use and unrestricted exposure

VOC ..... volatile organic compound

WAC ..... Washington Administrative Code
WQC ..... water quality criteria

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1.0 Introduction

This report presents the results of the Sixth five-year review (FYR) performed for Naval Air Station (NAS) Whidbey Island National Priorities List (NPL) sites, including both the Ault Field and Seaplane Base sites, which are listed separately on the NPL. NAS Whidbey Island is located along the shoreline of the Strait of Juan de Fuca in Oak Harbor, Washington (Figure 1-1).

The purpose of an FYR is to determine whether the remedies selected in a Record of Decision (ROD) and implemented at a site remain protective of human health and the environment. The methods, findings, and conclusions of reviews are documented in FYR reports such as this one. In addition, FYR reports identify issues found during the review, if any, and document recommendations to address them.

This FYR was prepared pursuant to Section 121(c) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 United States Code Section 9621(c), and Title 40 Code of Federal Regulations Section 300.430(f)(4)(ii) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). CERCLA Section 121 states the following:

> *If the President selects a remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the site, the President shall review such remedial action no less often than each five years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented. In addition, if upon such review it is the judgment of the President that action is appropriate at such site in accordance with section [104] or [106], the President shall take or require such action. The President shall report to the Congress a list of facilities for which such review is required, the results of all such reviews, and any actions taken as a result of such reviews.*

This FYR was initiated in April 2023 and is based on analytical data generated between November 2018 and August 2023. The triggering action for this review was the signing of Fifth FYR (Battelle, 2019), which was finalized 26 August 2019. Previous FYRs were completed in 1998, 2004, 2009, and 2014. The FYR has been prepared because hazardous substances, pollutants, or contaminants remain at the sites above levels that allow for unlimited use and unrestricted exposure (UU/UE). As a result, a statutory review is required under CERCLA and the NCP. The NCP in Title 40 Code of Federal Regulations Section 300.430(f)(4)(ii) state":

> *"If a remedial action is selected that results in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, the lead agency shall review such action no less often than every five years after the initiation of the selected remedial action."*

This report covers the remedies selected in the RODs for all five operable units (OUs) at Ault Field and Seaplane Base of NAS Whidbey Island (Figures 1-2 and 1-3) (Navy, Ecology, and EPA, 1993a, 1993b, 1994, 1995, and 1996). This report was prepared as part of the CERCLA FYR process using United States Department of the Navy (Navy) and United States Environmental Protection Agency (EPA) guidance (Navy, 2004, 2011, 2013, 2014; EPA, 2001, 2012, and 2016) and documents the results of the review, issues identified, and recommended actions.

This FYR is organized in accordance with EPA's 2016 recommended template (EPA, 2016) and has been streamlined to minimize information that has been presented in the previous five FYRs. The intent is to focus on the actions, monitoring, and issues over the last five years and recommendations and protectiveness for the next five years. To facilitate this effort, references are provided in the appropriate sections of this document that will lead the reader to background and supporting information regarding that section. The following appendices are also provided with this FYR, as additional supporting information:

- Appendix A – Public Notices and Affidavits of Publication
- Appendix B – Completed Interview Questionnaires
- Appendix C – Cumulative Analytical Results from OU 1 Area 6 and OU 5 Area 31
- Appendix D – 1,000-foot Exclusion Area for OU 1 Area 5, OU 1 Area 6, and City of Oak Harbor Landfills
- Appendix E – OU 2 Areas 2/3 Field Logs, Analytical Reports, and Data Validation from August 2023
- Appendix F – Completed Site Inspection Checklists and Photographs
- Appendix G – EPA and Washington Department of Ecology (Ecology) Comments and Navy Responses on Draft FYR Report

1.1 Facility Overview

NAS Whidbey Island consists of two bases, Ault Field (Figure 1-2), and Seaplane Base (Figure 1-3). The areas that make up the five OUs at NAS Whidbey Island are listed in Table 1-1 and shown on Figures 1-4 through 1-8. Figure 1-9 depicts the chronology of

events both sitewide and at each OU. Table 1-2 summarizes the history of contamination, physical characteristics, threats to human health and the environment, land and resource use, and remedial actions performed at each of the areas that make up the five OUs, for the time prior to this FYR. A more in-depth description of each OU is available in Section 3 of the Third FYR (URS, 2009a).

Table 1-1. Operable Units and Areas at NAS Whidbey Island

Operable Unit	Area
Operable Unit 1 (Ault Field; Figure 1-4)	*Area 5, Highway 20/Hoffman Road Landfill*
	Area 6, Landfill Operations Area and Former Hazardous Waste Storage Area
Operable Unit 2 (Ault Field; Figure 1-5)	*Area 2, Western Highlands Landfill*
	Area 3, 1969 – 1970 Landfill
	Area 4, Walker Barn Storage Area
	Area 14, Pesticide Rinsate Disposal Area
	Area 29, Clover Valley Fire School
Operable Unit 3 (Ault Field; Figure 1-6)	*Area 16, Runway Ditches*
Operable Unit 4 (Seaplane Base; Figure 1-7)	*Area 39, Auto Repair and Paint Shop*
	Area 41, Building 25 and Building 26 Disposal Area
	Area 44, Seaplane Base Nose Hangar
	Areas 48 and 49, Seaplane Base Salvage Yard and Landfill
Operable Unit 5 (Ault Field; Figure 1-8)	*Area 1, Beach Landfill*
	Area 31, Former Runway Fire Training School
	Area 52, Jet Engine Test Cell

Abbreviations:
NAS = Naval Air Station

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Table 1-2. Background Information Summary for NAS Whidbey Island

Site	History of Contamination	Physical Characteristics	Primary Threat Identified in ROD	Land and Resource Use	Pre-ROD Remedial Actions[1]
Operable Unit 1 (Ault Field)					
Area 5 – Highway 20/ Hoffman Road Landfill	• *No documentation that hazardous wastes were disposed of at Area 5.* • *May have been used as a surface disposal area for a year between 1958 and 1959.* • *Evidence and observations during recent inspections confirm that the area was previously used as a disposal site.*	• *Located just north of Ault Field Road and west of State Route 20 near the southeast corner of Ault Field.* • *Small former gravel pit measuring approximately 500 feet long by 500 feet wide.* • *Flat open area covered by a mixture of soil, gravel, and vegetation.* • *Surface water flows to the southwest and southeast.* • *A small freshwater wetland that historically received surface water runoff from the excavation area via a small gully extending west from the northwest edge of the excavation area, is located approximately 600 feet west of Area 5.*	• *Both the carcinogenic and noncarcinogenic human health risks associated with potential ingestion of surface water, soil, and sediment were below EPA's acceptable risk range.* • *Ecological risk was identified for sediments and surface water in the wetlands adjacent to Area 5.* • *Arsenic and manganese were the primary risk drivers in the shallow groundwater at Area 5, although very low concentrations of VOCs also contributed to risk.* • *Although an ecological risk was identified for sediments and surface water in the wetlands adjacent to Area 5, no source area was identified, and it was determined that remedial action would cause more environmental harm than the low levels of existing chemical contaminants (Navy, 1998). As a result, no RAOs were established for OU 1, Area 5.*	• *Flat open area covered by a mixture of soil, gravel, vegetation, and construction debris*	• *None*
Area 6 – Landfill Operations Area and Former Hazardous Waste Storage Area	• *Between 1969 and early 1980s, liquid wastes (solvents, oily sludges, thinners, and other compounds) were disposed of at the Former Industrial Waste Disposal Area.* • *From 1969 to 1992, the Area 6 landfill was used for Navy household municipal waste.* • *Wastes disposed in the Area 6 landfill include asbestos, acids, caustics, solvents, oily sludges, construction debris, and animal remains. Most of the landfill area received and contains Navy household municipal waste.*	• *260-acre tract located in the southeast corner of Ault Field.* • *Located on a gently east-southeast sloping hill with the approximately 49-acre landfill situated at about 100 feet above mean sea level.* • *The landfill is composed of several closed and capped cells that are each approximately 20 feet deep.* • *Former Industrial Waste Disposal Area is approximately 15 feet by 40 feet. During operation, it was a pit (also called the former waste oil pit) approximately 10 feet deep. Prior to remedy implementation, it was filled and covered with natural vegetation.* • *Municipal landfill area was approximately 40 acres and is now covered with a synthetic cap, soil, and natural vegetation. The synthetic cap prevents infiltration of rainwater.* • *Area 6 is bordered by Ault Field Road to the north, State Route 20 to the east, and the City of Oak Harbor Landfill on the south and southwest. Privately owned forested or logged land and a commercial sand and gravel quarry operation are located immediately west of Area 6.* • *The City of Oak Harbor vehicle maintenance facility, an auto salvage yard, a transmission repair shop, the Auld Holland Inn, and a mobile home park are located in or near the southern boundary of the Oak Harbor landfill property. Private residences are located to the east, west, and south of the Area 6 landfill.*	• *The greatest potential risk to human health at Area 6 was concluded to be the future movement of organic chemicals in groundwater.* • *TCE, 1,1,1-TCA, 1,1-DCA, 1,1-DCE, cis-1,2-DCE, and vinyl chloride were identified as COCs in groundwater in the initial ROD.* • *Unacceptable ecological risks were identified based on concentrations of COCs in Area 6 soils and in sediments and surface water from the intermittent stream at Area 6. However, at the time of the ROD, no source area was located, and remedial action could cause more environmental harm than the low levels of existing chemicals are likely to cause.* • *The RODA (Navy, 2019) revised the COC list to TCE, 1,1,1-TCA, 1,1-DCE, vinyl chloride, and 1,4-dioxane in groundwater.*	• *Closed landfill* • *Recycling and mulching facility*	• *An interim action ROD was developed that resulted in installation of the air stripper GETR System to prevent the continued spread of contaminants from the Former Industrial Waste Disposal Area in the shallow aquifer beneath Area 6 and to reduce the risk of impact to existing and future groundwater users.*

Table 1-2. Background Information Summary for NAS Whidbey Island (continued)

Site	History of Contamination	Physical Characteristics	Primary Threat Identified in ROD	Land and Resource Use	Pre-ROD Remedial Actions[1]
Operable Unit 2 (Ault Field)					
Areas 2/3 – Western Highlands Landfill and 1969 – 1970 Landfill	• *From 1959 to 1969, the Area 2 landfill was the principal disposal area for solid wastes generated on NAS Whidbey Island. Reportedly, the landfill received industrial wastes as well as construction and demolition debris.* • *Area 3 was used for disposal of solid wastes between 1969 and 1970, and the materials disposed of were similar to those at the Area 2 landfill.*	• *Situated on a topographic high of approximately 118 feet above mean sea level and slopes eastward.* • *Area 2 is a 13-acre former landfill located southwest of the Current Fire Training Area.* • *Area 3 is a 1.5-acre parcel located east of Area 2 and southeast of the Current Fire Training Area.* • *The surfaces of the former landfill areas are now covered with soil and are vegetated.*	• *Antimony and arsenic were identified as COCs in soil but were found to not pose a risk exceeding the human health criteria. The low ecological risk from these COCs in soil was outweighed by the damage that would be caused by remedial action in the wetland area.* • *Antimony, arsenic, manganese, and vinyl chloride were identified as COCs in groundwater driving the remedy.*	• *Closed landfills covered with mixed evergreen species* • *Gravel security road through area*	• *None*
Area 4 – Walker Barn Storage Area	• *Area 4 includes a portion of the Walker Barn Storage Area, where transformers and supplies from an electrical shop, including telephone poles, were stored.*	• *Located approximately 400 yards west of Saratoga Street, northeast of the Current Fire Training Area, and approximately 300 yards south of the Navy hospital.* • *Fenced, relatively flat parcel of land approximately 240 feet wide and 440 feet long and partially covered with native grasses.* • *A gravel parking lot is located at the area of the former Walker barn in the southern portion of Area 4.*	• *Concentrations of PCBs, PCP, and MCPP in surface and near-surface soils were found to pose a risk to hypothetical future residents.* • *Arsenic and manganese were identified as COCs in groundwater.*	• *Open land covered with vegetation, including grasses and shrubbery*	• *None*
Area 14 – Pesticide Rinsate Disposal Area	• *A dry well was installed on the north-central edge of the area in 1973. The dry well was located near an intermittent creek that originates from a spring in the northwestern corner of the area and flows southeast through Area 14 toward Langley Boulevard.* • *The former activities at Area 14 that resulted in contamination were the disposal of pesticide rinsate solutions in the dry well.*	• *Fenced parcel, approximately 0.5 acre in area, located immediately south of Building 2555 and west of Langley Boulevard.* • *The southern and western boundaries of the area are defined by adjacent pasture lands.*	• *Bromacil, TCDD, and 2,4-dichlorophenol were identified as COCs in soil around the drywell as sources to groundwater or risk to ecological receptors.* • *Bromacil and 2,4-dichlorophenol were identified as COCs in groundwater.*	• *South of recycling center* • *Open land covered with grass and storage yard in northwest quadrant*	• *None*
Area 29 – Clover Valley Fire School	• *Waste oils, fuels, solvents, and other flammable waste liquids used in the fire training program.* • *May have included fuel oil, JP-4, avgas, Stoddard solvent (nonane, trimethylbenzene), carbon-removing compounds (methylene chloride, cresols), TCE, TCA, methyl ethyl ketone, and paint thinners.*	• *Former location of the Clover Valley Fire School.* • *A 4-acre parcel located west of the intersection of Clover Valley Road and Golf Course Road in the southwestern portion of Ault Field.* • *Bounded by the Navy golf course to the south, Clover Valley Road to the north, and Golf Course Road to the east.* • *A 1,600-square-foot concrete pad is located in the center of the area.* • *A small surface drainage ditch extends northeast from the pad to another ditch along Clover Valley Road. This surface drainage ditch eventually discharges into the wetland between Areas 2 and 3.*	• *PCP and PAHs were identified as COCs in soil.* • *Arsenic and manganese were identified as COCs in groundwater.*	• *Open land covered with vegetation, including grasses, shrubbery, and trees*	• *None*

Table 1-2. Background Information Summary for NAS Whidbey Island (continued)

Site	History of Contamination	Physical Characteristics	Primary Threat Identified in ROD	Land and Resource Use	Pre-ROD Remedial Actions[1]
Operable Unit 3 (Ault Field)					
Area 16 – Runway Ditches	• *Affected by flight-line spills.*	• *The Runway Ditches consist of approximately 9 linear miles of connected ditches and 1 mile of culverts that drain the runway area and receive discharge from many of the NAS Whidbey Island storm drain inlets. The majority of the ditches eventually connect with the Clover Valley stream, which flows east toward the Clover Valley Lagoon and Dugualla Bay.* • *Comprises the eastern portion of Ault Field, including the flight-line area and the on-site drainage areas through Clover Valley.* • *The Clover Valley Lagoon and Dugualla Bay, which are both located east of the base boundary, were also included in the investigation because they are downgradient from Area 16.* • *The Clover Valley Lagoon serves as a catchment basin for approximately 7,000 acres of land, including most of Ault Field and some surrounding areas.* • *The lagoon water surface is maintained at several feet below mean sea level by pumping water over a dike into Dugualla Bay.* • *Water from the uppermost portion of the lagoon is reportedly used to irrigate the surrounding agricultural fields and runoff from these fields drains into the lagoon.* • *One ditch, located north of Runway 7-25, discharges directly into the Strait of Juan de Fuca.*	• *Ecological risk from arsenic, lead, 2-methylnaphthalene, benzo(k)fluoranthene, dibenz(a,h)anthracene, phenanthrene, and TPH in ditch sediment.* • *Human contact with dredged ditch sediments.*	• *Stormwater conveyance*	• *A baffle system was installed along the runway ditches to keep culverts from clogging. Historically, it included an upstream OWS. Immediate spill response was current practice at the time of the ROD.*
Operable Unit 4 (Seaplane Base)					
Area 39 – Auto Repair and Paint Shop	• *From 1961 to 1965, an estimated 1,000 to 2,000 gallons of caustic radiator solvents were spilled on the ground northeast of Building 49.* • *Approximately 2,000 gallons of radiator test tank water containing traces of sealant, antifreeze, soldering compounds, and acid were reportedly poured onto the ground south of Building 49 during the same period.* • *From 1956 to 1982, wastewater likely containing paint residues from an 800-gallon paint booth was reportedly discharged up to once a week to the drainage ditch north of Building 49.*	• *Location of a former auto repair and paint shop that was housed in Building 49.*	• *Arsenic, chromium, lead, PAHs, and pesticides in the upper 2 feet of soil.* • *The estimated volume of contaminated soil was approximately 260 cubic yards.*	• *As of 1993, Building 49 was used as a lawn mower shop and self-service facility for base personnel* • *Building 49 no longer exists* • *Open land covered with grass*	• *None*
Area 41 – Building 25 and Building 26 Disposal Area	• *Buildings 25 and 26 were used as paint shops in the 1940s and 1950s and later housed the pest control shop during the 1960s.* • *Personnel reportedly discharged waste paint, thinners, solvents, and pesticides onto the seawall.*	• *Located west of Area 39.* • *Included Building 25 (which was demolished and, as of 1993, consisted of a concrete foundation), Building 26, and the rock seawall located immediately west of the buildings.*	• *Pesticides (',4'-DDE and ',4'-DDT) were detected in shallow soils around the foundation of Building 25, with an estimated volume of contaminated soil of 2 to 5 cubic yards.*	• *As of 1993, Building 26 was used for flammable materials storage*	• *None*
Area 44 – Seaplane Base Nose Hangar	• *Numerous 1- to 100-gallon avgas spills were reported that may have been washed into Oak Harbor through the Area 44 storm drain system.*	• *Former Nose Hangar, now demolished, located at the northern end of a large, paved apron area east of Marina Drive.* • *Historical steam cleaning and washing, fueling, lubricating, and parts cleaning for seaplanes.*	• *Lead and arsenic were identified in the sediments in the storm drain system (catch basin, sump, and manhole), as well as in the surface soils adjacent to the sump at the north edge of the concrete apron, with an estimated volume of contaminated soils of 20 to 30 cubic yards.*	• *As of 1993, only the foundation and concrete apron remained, and the area was used for storage of recreational boats and vehicles.*	• *None*

Table 1-2. Background Information Summary for NAS Whidbey Island (continued)

Site	History of Contamination	Physical Characteristics	Primary Threat Identified in ROD	Land and Resource Use	Pre-ROD Remedial Actions[1]
Areas 48/49 – Seaplane Base Salvage Yard and Landfill	• *In the mid-1960s, a fire involving stored flammable materials occurred there, which reportedly resulted in unknown quantities of solvents, thinners, strippers, and paints being spilled onto the ground and marsh area.* • *Seaplane Base repair and maintenance operations may have disposed of solvents, degreasers, paints, thinners, and strippers at this landfill.*	• *Located to the east of the main Seaplane Base area immediately adjacent to Crescent Harbor.* • *Area 48 was a former salvage yard for the Seaplane Base from the 1940s to the late 1960s or early 1970s.* • *Area 49 was a 3- to 4-acre landfill used between 1945 and 1955 to receive all of the solid waste from Seaplane Base operations.* • *Wetlands are located just north of, and hydraulically upgradient of, Areas 48 and 49. The City of Oak Harbor operates a 20-acre wastewater stabilization lagoon within these wetlands.* • *Groundwater is brackish and is tidally influenced.* • *There is no drainage, nor are there culverts under the road. In Areas 48 and 49, rainwater ponds during heavy rains and eventually infiltrates the ground.*	• *PAHs were detected in soil samples at Area 48.* • *None of the contaminants of interest posed an unacceptable risk at Area 49.*	• *Covered with native grasses* • *Has been used for recreational purposes since 1993*	• *None*
Operable Unit 5 (Ault Field)					
Area 1 – Beach Landfill	• *Used for disposal of demolition and construction debris from the construction of Seaplane Base between the 1940s and 1970s. Some of the waste was burned at the landfill from 1945 to 1958.* • *Because the waste was burned, products of incomplete combustion may exist in the fill material.*	• *6-acre landfill located west of the intersection of Saratoga Street and Princeton Street and running parallel to the Strait of Juan de Fuca.* • *Originally consisted of low-lying beach ridges with several salt marshes seaward of the historical bluff located west of Saratoga Street, now at an elevation similar to that of the former bluffs and has been completely filled in by Navy construction activities.* • *Two small marsh areas remain: the central marsh, located in the middle of the landfill, which serves as a retention pond for a storm drain from Saratoga Street, and the southern marsh, located at the southwestern end of the landfill.* • *The topography of Area 1 consists of a series of man-made terraces descending approximately 30 feet from Saratoga Street to the beach. The landfill is located in the terraced area.* • *Vegetation covers Area 1, with the exception of locations where wave actions have eroded the toe of the bluff.* • *The approximately 10-foot-high shoreline bluff that bounds the western edge of the landfill is situated above the high tide line. The bluff descends to a narrow beach consisting of fine to coarse sand and cobbles.* • *Groundwater occurs under unconfined conditions within the beach deposits and glacial sands and gravels beneath the fill and generally moves northwesterly to the Strait of Juan de Fuca.* • *Water table fluctuations may cause variations in the direction of flow where seasonal water table and daily tidal fluctuations affect the groundwater gradient.* • *During seasonal wet periods, groundwater may rise into the bottom of the fill materials.* • *Erosion has previously occurred along the beachfront, exposing the fill in many areas. At that time, timbers, refuse, metal, and concrete blocks were present in the exposed areas along the shoreline bluff.*	• *No current or future human health risk was found at Area 1.* • *Zinc, cyanide, bis(2-ethylhexyl)phthalate, and 1,1-DCE were identified as COCs in groundwater for protection of surface water.*	• *Open land covered with grasses and shrubbery*	• *None*

Table 1-2. Background Information Summary for NAS Whidbey Island (continued)

Site	History of Contamination	Physical Characteristics	Primary Threat Identified in ROD	Land and Resource Use	Pre-ROD Remedial Actions[1]
Area 31 – Former Runway Fire Training School	• *Used for firefighting training from 1967 to 1982.* • *Waste fuels such as avgas and JP-5, waste oil, solvents, thinners, and other flammable materials were ignited and extinguished in a shallow concrete burn pad.* • *A mixture of flammable liquids used for firefighting training was stored in an UST in the southeast corner of the area, approximately 175 feet from the burn pad.* • *Oily water from the burn pad was drained through underground piping to an OWS located in the southwest corner of the drill area, approximately 200 feet from the burn pad.* • *After water was separated from floating product in the OWS, it was discharged to a small earthen ditch that led to a depression in the southwest portion of Area 31 and subsequently drained to the runway ditches.* • *The remains of some of the materials burned on the pad were removed from the pad and piled in various areas on or near the perimeter of the drill area. The piles consisted of ash and metal debris, including landing gear components and other aircraft parts.*	• *Located approximately 400 yards northeast of the intersection of Runways 13-31 and 7-25.* • *The entire area encompasses 1 to 2 acres, sloping gently southwest.* • *The burn pad, roughly 50 by 50 feet, consists of a retaining lip around the perimeter and a floor that slopes toward a drain in the center.*	• *Beryllium, lead, manganese, mercury, Aroclor 1260, benzene, naphthalene, PCP, styrene, toluene, vinyl chloride, 1,2,37,8-TCDD, TPH, and floating petroleum product on the groundwater surface were identified as COCs in groundwater at Area 31.* • *Petroleum hydrocarbons in soil as a source to groundwater* • *Lead in ash as a potential human health risk*	• *Open land covered with grasses, shrubbery, and trees* • *Treatment system housing unit remains on site*	• *None*
Area 52 – Jet Engine Test Cell	• *Product releases include jet fuel, waste oil, and solvents.* • *Two major releases of jet fuel were documented in 1986 and 1987, and the spills reportedly occurred when the two USTs were being filled. It was estimated that approximately 1,200 gallons of jet fuel was released from each spill and an unquantified portion of the spilled product was recovered at the time of the spill event.* • *Another potential source of non-jet fuel waste was identified near the northwest corner of Building 2610, which was identified as a suspected dry well. Investigations at the site identified floating petroleum product on the groundwater surface.*	• *Located southwest of the intersection of Saratoga Street and Enterprise Road.* • *Area is paved, and the test cell building and associated support facilities are located in the center of the area.* • *Vegetation consists of grasses and shrubs, and the unpaved western portion of the area was maintained as a volleyball court.* • *Area was elevated to its current topography by the historical placement of fill materials into a low marsh area.* • *Two 10,000-gallon underground jet fuel storage tanks were located east of Saratoga Street. The aboveground ancillary equipment is enclosed within a chain link fence. An underground fuel supply line runs from the tanks to the engine test facilities. Several buried utilities, a large storm drain, and other underground pipelines exist in the vicinity.* • *Groundwater occurs under unconfined conditions within the beach deposits and glacial sands and gravels beneath the fill and generally moves northwesterly to the Strait of Juan de Fuca.* • *Water table fluctuations may cause variations in the direction of flow where seasonal water table and daily tidal fluctuations affect the groundwater gradient.* • *During seasonal wet periods, groundwater may rise into the bottom of the fill materials.*	• *Floating product on the groundwater was identified to present a potential risk to the adjacent marine environment.* • *The screening level risk assessment found no potential for significant human health risks, and no human health COC was defined at Area 52.*	• *Area 52 is an active facility where jet engines are tested*	• *An unquantified portion of jet fuel was recovered after a leak in 1986 and 1987.* • *Leak testing of the USTs and piping was conducted following the product recovery. A piping leak was subsequently located, excavated, and repaired.* • *The excavated soil was stockpiled on site, sampled, and disposed of properly.*

Source: (Battelle 2019a; Navy, Ecology, and EPA, 1995, 1996)

Notes:

1. Remedial actions performed after the RODs were signed are presented in Section 2.0 of this FYR.

Abbreviations:

AOP = advanced oxidation process
avgas = aviation gasoline
COCs = contaminants of concern
DCA = dichloroethane
DCE = dichloroethene
DDE = dichlorodiphenyldichloroethylene
DDT = dichlorodiphenyltrichloroethane
EPA = Environmental Protection Agency
FS = feasibility study
GETR = groundwater extraction treatment and recharge
JP = jet petroleum
LUC = land use control
MCPP = 2-(2-methyl-4-chlorophenoxy)propionic acid
NAS = Naval Air Station
Navy = United States Department of the Navy
NTCRA = non-time critical removal action
OU = operable unit
OWS = oil/water separator
PAHs = polycyclic aromatic hydrocarbons
PCB = polychlorinated biphenyl
PCP = pentachlorophenol
RAOs = remedial action objectives
ROD = Record of Decision
RODA = Record of Decision Amendment
TCA = trichloroethane
TCDD = 2,3,7,8-tetrachlorodibenzo-p-dioxin
TCE = trichloroethene
TCRA = time critical removal action
TPH = total petroleum hydrocarbons
UST = underground storage tank
VOCs = volatile organic compounds

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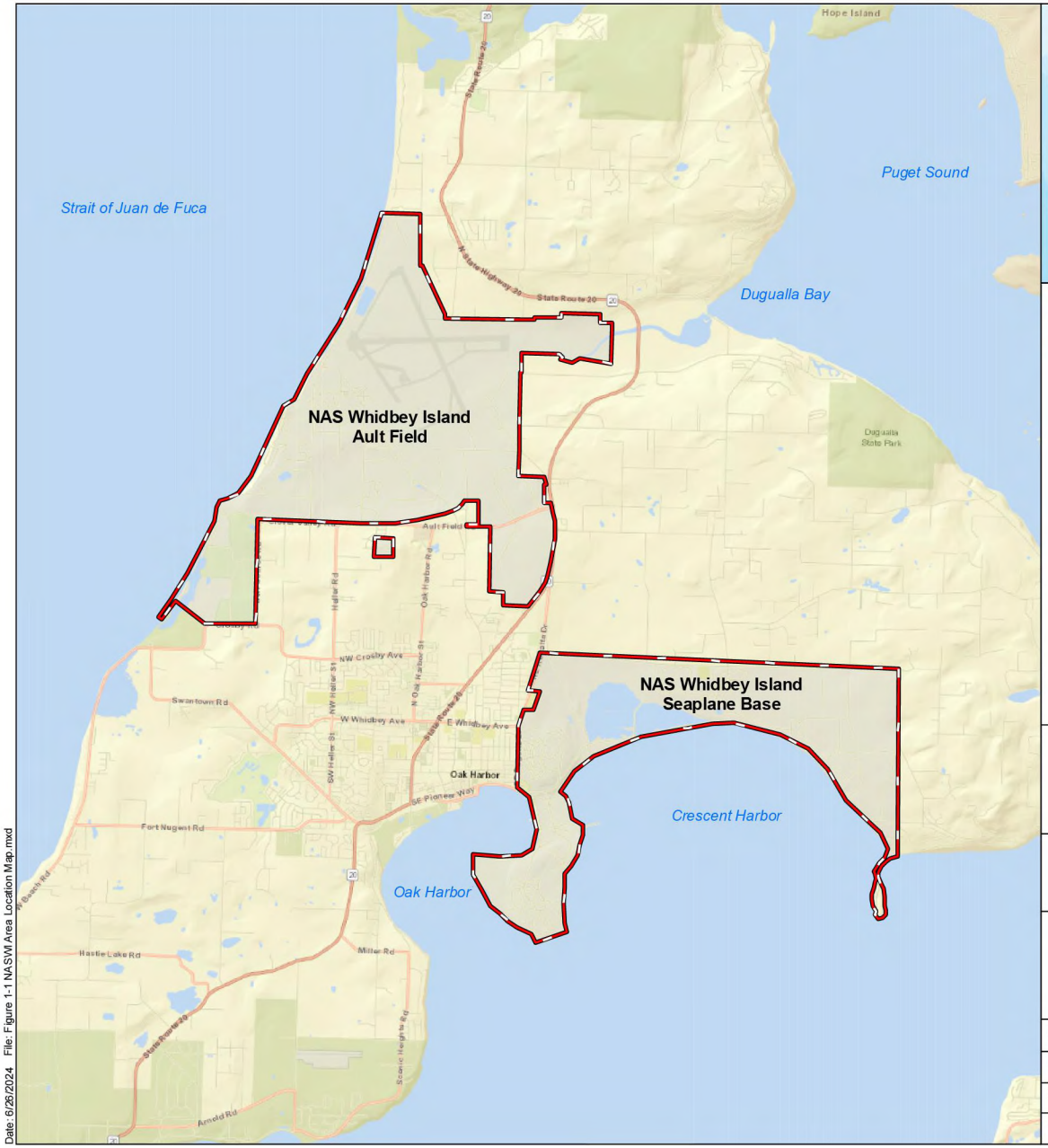



Legend

NAS Whidbey Island Boundary

Notes:
NAS = Naval Air Station
Basemap Source: Esri, 2024.

N

0 0.75 1.5 2.25 3
Miles
1 Inch = 1.5 Mile

Sixth Five-Year Review
Naval Air Station Whidbey Island
Oak Harbor, Washington

NAS Whidbey Island Facility Location

PROJECT NO.:	20D-5006.F4050
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CHECKED BY:	CB

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FIGURE
1-1

Date: 6/26/2024 File: Figure 1-1 NASWI Area Location Map.mxd

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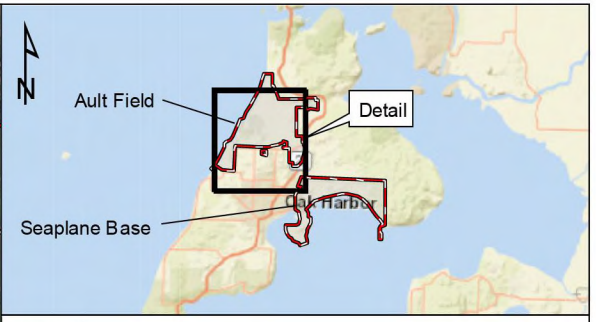

Legend

- CERCLA OU LUC Area
- CERCLA OU Site Area
- NAS Whidbey Island Boundary

Notes:

CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act
LUC = Land Use Control
NAS = Naval Air Station
OU = Operable Unit

Basemap Source: Esri, 2024.

N

0 1,500 3,000 4,500 6,000
Feet

1 Inch = 3,000 Feet

Sixth Five-Year Review
Naval Air Station Whidbey Island
Oak Harbor, Washington

Operable Units 1, 2 ,3, and 5 at Ault Field

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FIGURE 1-2

Date: 6/26/2024 File: Figure 1-2 OUs Ault Field.mxd

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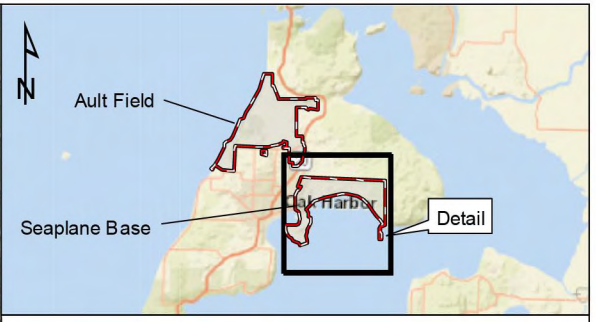

Legend

- CERCLA OU LUC Area
- CERCLA OU Site Area
- NAS Whidbey Island Boundary

Notes:
CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act
LUC = Land Use Control
NAS = Naval Air Station
OU = Operable Unit
Basemap Source: Esri, 2024.

N

0 1,750 3,500 5,250 7,000
Feet
1 Inch = 3,500 Feet

Sixth Five-Year Review
Naval Air Station Whidbey Island
Oak Harbor, Washington

Operable Unit 4 at Seaplane Base

PROJECT NO.:	20D-5006.F4050
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FIGURE 1-3

Date: 6/26/2024 File: Figure 1-3 OU 4 Seaplane Base.mxd

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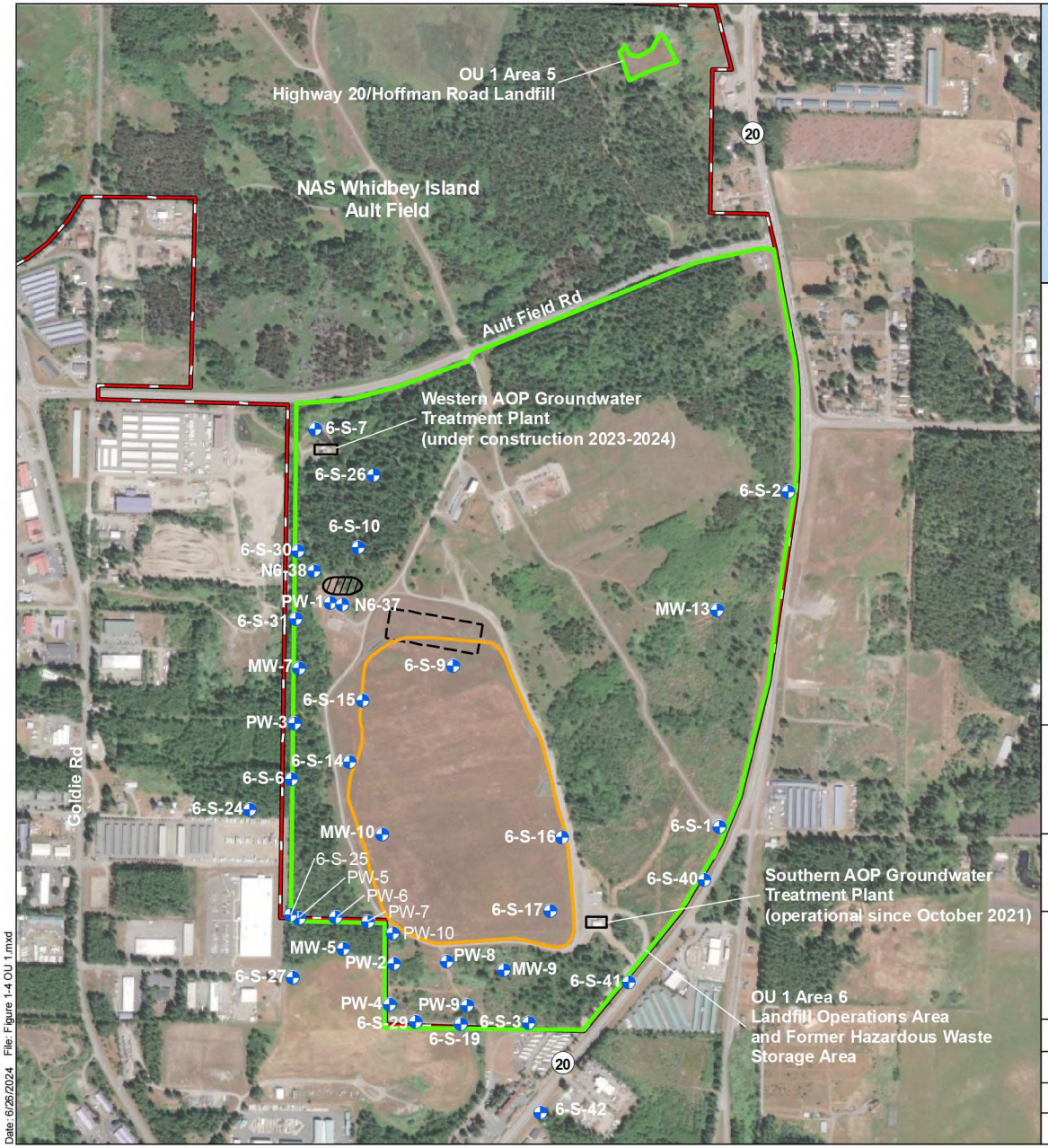

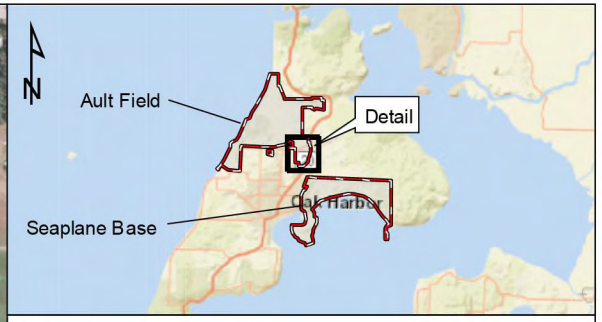

Legend

- Monitoring Well
- CERCLA OU LUC Area
- Landfill Boundary
- Stormwater Detention Basin
- Former Industrial Waste Disposal Site
- Treatment Plant
- NAS Whidbey Island Boundary

Notes:
AOP = advanced oxidation process
CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act
LUC = Land Use Control
NAS = Naval Air Station
OU = Operable Unit
Basemap Source: Esri, 2024.

N

0 500 1,000 1,500 2,000
Feet
1 Inch = 1,000 Feet

Sixth Five-Year Review
Naval Air Station Whidbey Island
Oak Harbor, Washington

Operable Unit 1
Areas 5 and 6

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FIGURE
1-4

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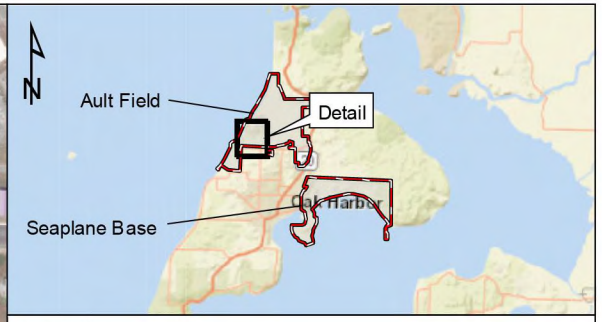

Legend

- Monitoring Well
- CERCLA OU LUC Area
- CERCLA OU Site Area
- NAS Whidbey Island Boundary

Notes:
CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act
LUC = Land Use Control
NAS = Naval Air Station
OU = Operable Unit
Basemap Source: Esri, 2024.

N

0 500 1,000 1,500 2,000
Feet
1 Inch = 1,000 Feet

Sixth Five-Year Review
Naval Air Station Whidbey Island
Oak Harbor, Washington

Operable Unit 2
Areas 2, 3, 4, 14, and 29

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FIGURE 1-5

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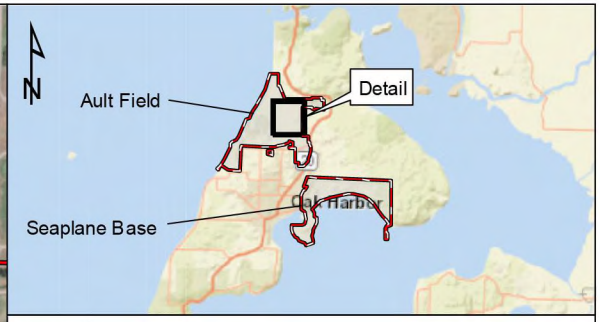

Legend

CERCLA OU LUC Area

NAS Whidbey Island Boundary

Notes:

CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act
LUC = Land Use Control
NAS = Naval Air Station
OU = Operable Unit

Basemap Source: Esri, 2024.

N

0 500 1,000 1,500 2,000
Feet

1 Inch = 1,000 Feet

Sixth Five-Year Review
Naval Air Station Whidbey Island
Oak Harbor, Washington

Operable Unit 3
Area 16 Runway Ditches

PROJECT NO.:	20D-5006.F4050
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FIGURE 1-6

Date: 6/26/2024 File: Figure 1-6 OU 3.mxd

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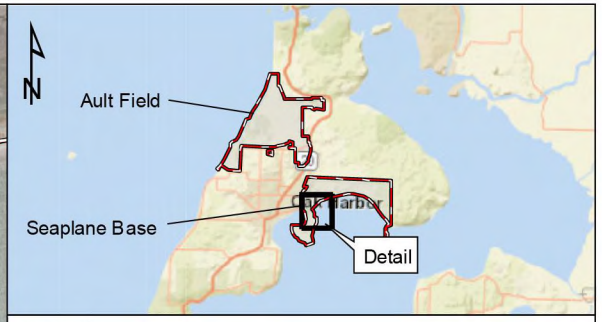

Legend

- CERCLA OU LUC Area
- CERCLA OU Site Area
- NAS Whidbey Island Boundary

Notes:

CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act
LUC = Land Use Control
NAS = Naval Air Station
OU = Operable Unit

Basemap Source: Esri, 2024.

N

0 500 1,000 1,500 2,000
Feet

1 Inch = 1,000 Feet

Sixth Five-Year Review
Naval Air Station Whidbey Island
Oak Harbor, Washington

Operable Unit 4
Areas 39, 41, 44, and 48/49

PROJECT NO.:	20D-5006.F4050
DATE:	July 2024
DRAWN BY:	JP
CHECKED BY:	CF

NAVFAC

FIGURE 1-7

Date: 6/26/2024 File: Figure 1-7 OU 4.mxd

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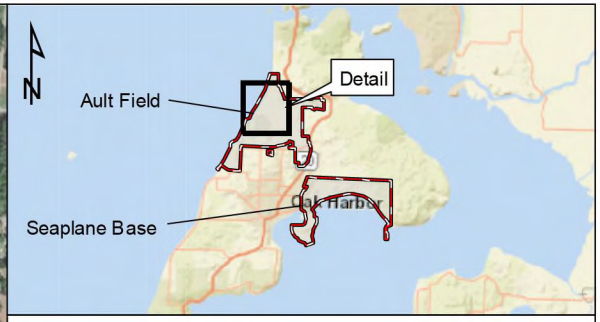

Legend

- Monitoring Well
- CERCLA OU LUC Area
- NAS Whidbey Island Boundary

Notes:

CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act
LUC = Land Use Control
NAS = Naval Air Station
OU = Operable Unit

Basemap Source: Esri, 2024.

N

0 750 1,500 2,250 3,000
Feet

1 Inch = 1,500 Feet

Sixth Five-Year Review
Naval Air Station Whidbey Island
Oak Harbor, Washington

Operable Unit 5
Areas 1, 31, and 52

PROJECT NO.:	20D-5006.F4050
DATE:	July 2024
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FIGURE 1-8

Date: 6/26/2024 File: Figure 1-8 OU 5.mxd

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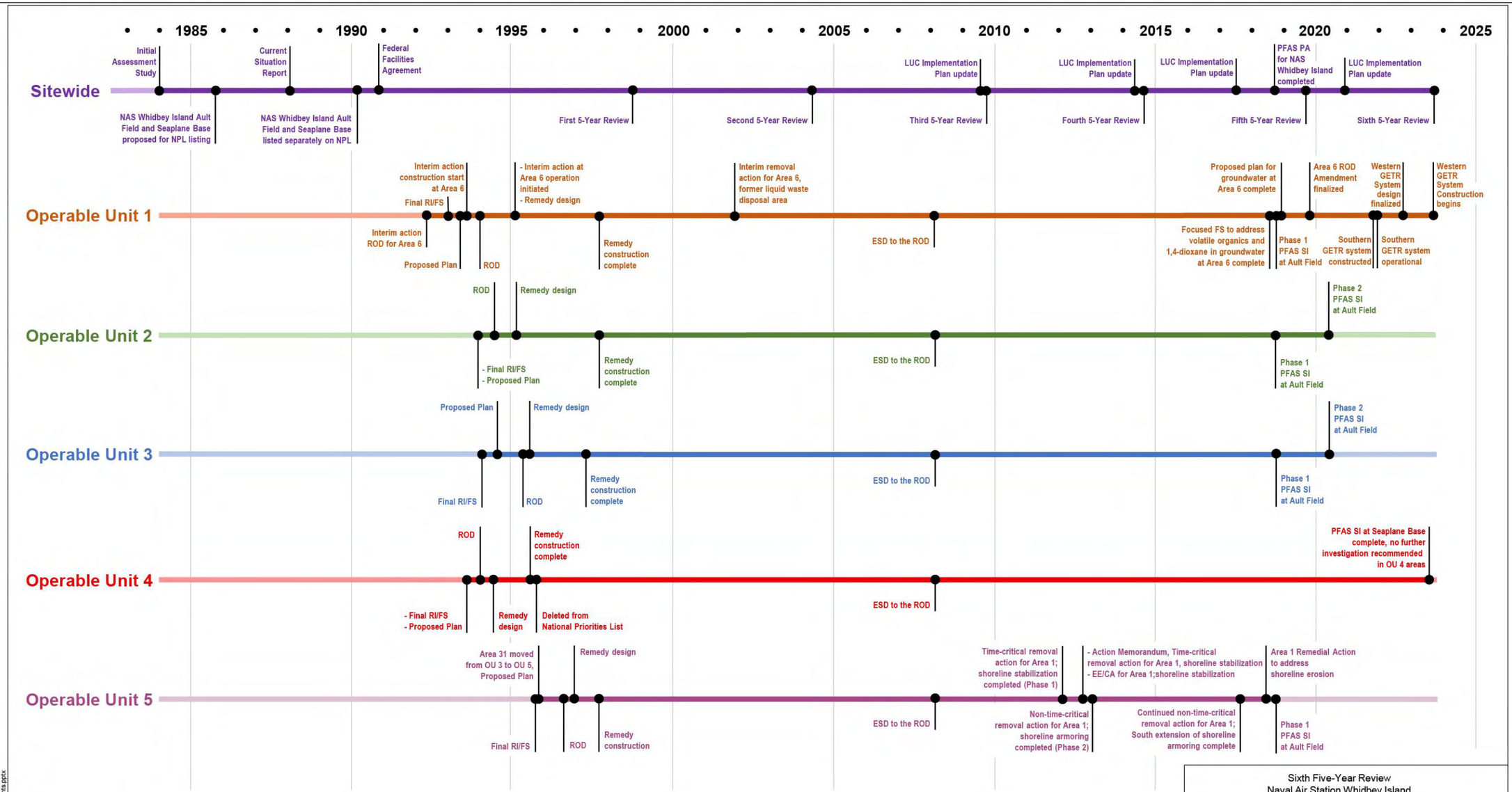

Notes:
CA = Cost Analysis
EE = Engineering Evaluation
FS = Feasibility Study
GETR = Groundwater Extraction, Treatment, and Recharge
LUC = Land Use Controls
OU = Operable Unit
PA = Preliminary Assessment
PFAS = Per- and Polyfluoroalkyl Substances
RI = Remedial Investigation
SI = Site Inspection
ROD = Record of Decision

Date: 6/26/2024 File: Figure 1-9 Chronology of Events.pptx

Sixth Five-Year Review
Naval Air Station Whidbey Island
Oak Harbor, Washington

Chronology of Events at Operable Units 1, 2, 3, 4, and 5

PROJECT NO.:	20D-5006.F4050
DATE:	July 2024
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FIGURE 1-9

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2.0 Response Action Summary

The RODs for NAS Whidbey Island required remedial actions for OUs 1 through 5. This section summarizes the basis for taking action, ROD-specified remedial action objectives (RAOs), ROD-specified remedies, remedy components and implementation, and current, ongoing, operation, maintenance, and monitoring requirements for each of the OUs.

Table 2-1 provides a remedial action summary by OU and Area. The table shows anticipated land use, contaminants of concern (COCs), relevant media, cleanup levels (CULs), RAOs, remedy components, construction status, and closeout strategy by area. Table 2-2 lists the land use control (LUC) requirements for each OU.

A more detailed narrative description of the response actions at NAS Whidbey Island is available in Section 4 of the Third FYR (URS, 2009a). An Explanation of Significant Differences (ESD) (Navy, 2007) was completed for these RODs, which clarified or modified the required LUC actions for the sites. Pursuant to the ESD (Navy, 2007), a LUC Implementation Plan (LUCIP) for NAS Whidbey Island (URS, 2009b) was prepared by the Navy. The LUCIP was updated in March 2014, July 2017, January 2020 (Battelle, 2020a), and December 2020 (Liberty JV, 2020). As the lead agency and property owner/controller, the Navy is responsible for ensuring the effectiveness of the LUCs until LUCs are no longer needed. LUCs are shown in Table 2-2 and the results of the annual LUC inspections are included in Section 4.3.

The response actions, operation, maintenance, and monitoring conducted from 2018 to 2023 are described in Sections 2.1 through 2.5.

2.1 Operable Unit 1

The response action for OU 1 Area 5 is considered complete. This section focuses on the remedy implementation; action subsequent to remedy implementation; and operations, maintenance, and monitoring for OU 1 Area 6. A summary of land use, COCs, and remedial actions for OU 1 is available in Table 2-1.

2.1.1 OU 1 Remedy Implementation

2.1.1.1 OU 1 Area 5 – Highway 20/Hoffman Road Landfill

Groundwater monitoring was conducted at OU 1 Area 5 as part of the First FYR. Based on the results from that monitoring, it was concluded that groundwater use restrictions that prohibit installation of potable water wells at OU 1 Area 5 should be implemented (Navy, 1998; TEC, 2004).

2.1.1.2 OU 1 Area 6 – Landfill Operations Area and Former Hazardous Waste Storage Area

As outlined in the 1993 ROD, the selected remedy for Area 6 consists of:

- Capping the landfill operations area trenches with a cap meeting Minimum Functional Standards;
- Assessing the interim action extraction system to ensure that it achieves aquifer CULs and specifically to determine the need for additional source area extraction wells;
- Extracting groundwater from the shallow aquifer at the western boundary of the landfill, treating it by air stripping, and returning the treated groundwater to the shallow aquifer at an on-site location;
- Monitoring groundwater in the shallow, intermediate, and deep aquifers to assess the effectiveness of the groundwater treatment system;
- Monitoring private drinking water wells in the vicinity of the landfill; and
- Implementing institutional controls (Navy, Ecology, and EPA, 1993a).

A groundwater extraction, treatment, and recharge (GETR) system with air stripper technology (the original Western GETR System) began operation in 1995 as an interim action at OU 1 Area 6. The final remedy incorporated an additional GETR System with advanced oxidation process (AOP) technology (the Southern GETR System), which is described in Section 3.2.6 (Navy, Ecology, and EPA, 1993a).

The original Western GETR System included the following major elements:

- Groundwater extraction wells (PW-1 through PW-10);
- Equalization tank;
- Sodium hypochlorite injection system (not used);
- Particulate filters;
- Packed-column air stripper;
- Discharge piping; and
- Miscellaneous pumps, controls, instrumentation, and appurtenances.

Extraction wells PW-1 through PW-7 were installed as part of the interim remedy. Extraction wells PW-8, PW-9, and PW-10 were installed as part of the final remedy. During this FYR period, while the original Western GETR system was operating,

groundwater was pumped from extraction wells PW-1 and PW-3 through PW-9. PW-2 was removed from service in 1994, and PW-10 was installed in 2002 as a future extraction well but has never been used. Extracted groundwater was pumped into an approximately 91,000-gallon-capacity, single-walled steel, aboveground equalization tank (25 feet in diameter and 25 feet high) for subsequent filtration and treatment by an air stripper system. Treated groundwater was discharged to a natural, native vegetation wetland swale for surface re-infiltration (Battelle, 2019). The system extracted and treated 65,833,465gallons of groundwater from 01 April 2022 to 31 March 2023. As of 31 March 2023, the cumulative volume of water treated since operations began is approximately 2.21 billion gallons (EA, 2023c).

OU 1 Area 6 conditions and containment system performance are monitored using a network of groundwater monitoring wells. Analytical results from samples collected during this FYR period are reviewed in Section 4.2.

Construction of the engineered landfill cap began in May 1996 and was completed in October 1996 when the final cover soil was hydroseeded (FWEC, 1997a). The cap consists of several layers as follows (from bottom to top):

- Structural fill,
- Support layer—high-strength woven geotextile,
- Gas collection layer—sand with perforated high-density polyethylene gas collection and vent pipes,
- Secondary liner—geosynthetic clay liner,
- Primary liner— polyvinyl chloride membrane,
- Drainage layer—geocomposite liner with perforated high-density polyethylene drainage pipe, and
- Soil cover layer.

Together these layers make up the engineered landfill cap that is designed to limit the infiltration of stormwater through the waste, thereby preventing contamination of the aquifer from waste leaching from the landfill (FWEC, 1997a).

The institutional controls for Area 6 are now monitored in the LUC inspection program, reviewed below in Section 4.3. The ROD included institutional controls restricting access to the area, preventing installation of on-site drinking water wells, and attaching restrictions on any future property deed (Navy, Ecology, and EPA, 1993a).

2.1.2 Actions Subsequent to OU 1 Remedy Implementation

2.1.2.1 Additional Action at OU 1 Area 5 – Highway 20/Hoffman Road Landfill

There have been no additional actions at OU 1 Area 5 subsequent to remedy implementation.

2.1.2.2 Former Industrial Waste Disposal Area Soil Removal Action at OU 1 Area 6 – Landfill Operations Area and Former Hazardous Waste Storage Area

An interim removal action was conducted during 2001 to address vadose zone contamination from the Former Industrial Waste Disposal Area and to reduce the source of contamination potentially affecting groundwater at OU 1 Area 6, thereby shortening the duration of the groundwater containment/treatment remedy component. The interim action included excavation, transport, and treatment and/or disposal of contaminated soils from the former waste oil pit. The removal action was limited by the reach of excavation equipment, and not all of the COCs identified in subsurface soil were removed (FWEC, 2002).

Approximately 1,360 cubic yards (2,040 tons) of soil was excavated, designated as nonhazardous waste, treated off site using thermal desorption, and then properly disposed. Approximately 600 cubic yards (901 tons) of soil was excavated, designated as hazardous waste, and sent to Chemical Waste Management for direct landfill disposal. Approximately 354 cubic yards (531 tons) of soil was excavated, designated as hazardous and landfill disposal (land ban) restricted, and sent to Chemical Waste Management for pre-treatment (bioremediation) and disposal in a permitted landfill (FWEC, 2002).

A significant portion of the residual contaminant mass in vadose zone soil was removed during the 2001 interim removal action. However, excavation base soil samples contained trichloroethene (TCE) at concentrations ranging from 210 to 8,200 micrograms per kilogram. The excavation base soil samples did not contain 1,1,1-trichloroethane (TCA), 1,1-dichloroethane (DCA), 1,2-dichloroethene (DCE), cis-1,2-DCE, or vinyl chloride at concentrations greater than their respective reporting limits (FWEC, 2002).

Investigations conducted in the source area between 2001 and 2014 are summarized in the Final Focused Feasibility Study (FFS) (URS, 2018) and Fifth FYR (Battelle, 2019). Soil vapor monitoring was conducted in 2001, 2003, 2011, and 2014 with decreasing trends observed. Soil sampling conducted in 2014 indicated TCE concentrations exceeding the Model Toxics Control Act (MTCA) Method B soil CULs for protection of groundwater (URS, 2018).

In 2013, a vadose zone investigation and conceptual site model (CSM) update were completed. The investigation concluded that TCE concentrations in soil remaining below the removal action depth were decreasing over time due to natural attenuation and TCE concentrations in groundwater were also decreasing, with the exception of PW-5. TCE was observed to be increasing at PW-5, likely due to pump-and-treat system operations which were also likely the reason that TCE was detected in groundwater west of the site boundary. All other COCs in the study showed decreasing trends (URS, 2013).

2.1.2.3 1,4-Dioxane in Groundwater at OU 1 Area 6 – Landfill Operations Area and Former Hazardous Waste Storage Area

In 2002, the EPA requested the Navy evaluate the groundwater at OU 1 Area 6 for the solvent stabilizer 1,4-dioxane, a common additive to 1,1,1-TCA, one of the volatile organic compound (VOC) contaminants at Area 6. 1,4-Dioxane was detected in on-site wells in 2003 and in a private off-site well in 2005 (URS, 2018). The Second, Third, and Fourth FYRs (TEC, 2004; URS, 2009b; Tetra Tech, 2014) recognized that 1,4-dioxane was not identified in the ROD as a COC in groundwater. The treatment plant was therefore not designed to treat extracted water containing 1,4-dioxane. The original Western GETR System used air-stripping treatment technology, which removes TCE and other VOCs but does not remove 1,4-dioxane from extracted groundwater because of the chemical's relatively low vapor pressure. 1,4-Dioxane would re-enter the shallow aquifer via the treated effluent. Although the location of the re-entry has changed during the years of system operation, it has generally been on site and upgradient of the extraction wells, thus causing 1,4-dioxane in groundwater to remain within the NAS Whidbey Island property boundary. However, before the original Western GETR System was installed in 1995, it is possible 1,4-dioxane from OU 1 Area 6 migrated off site. Monitoring has detected levels of 1,4-dioxane that exceed the Ecology MTCA Method B CUL of 0.44 micrograms per liter (µg/L) in wells south of the Area 6 boundary monitored by the Navy (URS, 2018).

Based on the 1,4-dioxane findings, the Navy took actions to mitigate the potential impact to the public from 1,4-dioxane and in 2009 began evaluating alternatives to address the widespread 1,4-dioxane plume. Activities conducted through 2018 are summarized in Section 2 of the Fifth FYR (Battelle, 2019).

The FFS (URS, 2018) determined that Alternative 2, Continue Pump and Treat with Ex Situ Groundwater Treatment using AOP and Additional Extraction Wells, was the preferred alternative. The proposed plan was issued in November 2018 for public comment (Battelle, 2019). The Record of Decision Amendment (RODA) (Navy, 2019) for OU 1 Area 6 was finalized in September 2019 and is further discussed in Section 3.2.1.

2.1.3 OU 1 Operations, Maintenance, and Monitoring

2.1.3.1 OU 1 Area 5 – Highway 20/Hoffman Road Landfill

Other than LUC inspections, there are no operations, maintenance, or monitoring activities associated with OU 1 Area 5.

2.1.3.2 OU 1 Area 6 – Landfill Operations Area and Former Hazardous Waste Storage Area

Maintenance and monitoring are conducted on the GETR Systems at Area 6 as discussed in Sections 3.2.5 and 3.2.6. Long-term monitoring (LTM) of groundwater is conducted at Area 6 and discussed in Section 4.2.1.

Institutional controls as stated in the ROD (Navy, Ecology, and EPA, 1993a) and defined in the LUCIP (Liberty JV, 2020) are monitored annually in the LUC inspection program. The results of these inspections during this FYR period are reviewed in Section 4.3.

2.2 Operable Unit 2

A summary of land use, COCs, and remedial actions for OU 2 is available in Table 2-1.

2.2.1 OU 2 Remedy Implementation

Approximately 5,000 cubic yards of soil were excavated from OU 2 Areas 4, 14, and 29 by October 1995. Excavated soil and investigation-derived waste were disposed of at an off-site CERCLA-acceptable facility based on the waste designation. The EPA conducted an inspection on 11 July 1996 and confirmed by letter on 24 July 1996 that all cleanup actions required by the OU 2 ROD had been completed (Groundwater Technology, 1996).

LUC requirements for OU 2 Areas 2, 3, 4, and 29 were formalized in an ESD. There are no LUC requirements for OU 2 Area 14 (Navy, 2007).

2.2.2 Actions Subsequent to OU 2 Remedy Implementation

No additional removal or remedial actions have been implemented following the initial remedy implementation at OU 2 Areas.

2.2.3 OU 2 Operations, Maintenance, and Monitoring

Post-ROD groundwater monitoring indicated the need for additional groundwater monitoring to take place during the Second FYR at Areas 2/3 (inorganics and VOCs),

Area 4 (inorganics), and Area 29 (inorganics). No additional action was required for Area 14 (URS Greiner and SAIC, 1997). Groundwater monitoring had been conducted at Areas 2/3, 4, and 29 in five-year cycles. Groundwater monitoring at Areas 4 and 29 was discontinued after the Fourth FYR, based on recommendations in the Third FYR (URS, 2009a). The Fourth FYR (Tetra Tech, 2014) includes EPA and Navy concurrence to discontinue groundwater monitoring and keep LUCs in place at Areas 4 and 29.

Based on the Fourth FYR (Tetra Tech, 2014) recommendations and findings during the Fifth FYR (Battelle, 2019) data evaluation, groundwater monitoring was conducted at Areas 2/3 as part of the Sixth FYR; results are reported in Section 4.2.

LUC monitoring over this FYR period is described and summarized in Section 4.3.

2.3 Operable Unit 3

A summary of land use, COCs, and remedial actions for OU 3 is available in Table 2-1.

2.3.1 OU 3 Remedy Implementation

Sediment removal and disposal was the chosen remedy for OU 3 Area 16 (Navy, Ecology, and EPA, 1995). The remediation was completed in April 1996 (Navy, 1998). Approximately 6,000 cubic yards of sediment were excavated and transported to the OU 1 Area 6 landfill (URS, 2009a).

At the time of the First FYR, the OU 3 remedies were considered complete. The First FYR concluded that OU 3 would not be subject to future FYRs because no hazardous substances, pollutants, or contaminants remained on site above levels that would not allow for UU/UE (Navy, 1998).

The more recent EPA guidance (EPA, 2001) requires FYRs for OU 3 because NAS Whidbey Island has implemented institutional controls encompassing OU 3 Area 16, and these controls do not allow for UU/UE at OU 3 Area 16. As a result, Area 16 has been included in subsequent FYRs. The Navy has been allowed to place material dredged from ditches during routine maintenance on the ditch banks. In order to do this, areas 50 feet from either side of bank centerlines have been designated as industrial areas. As a result, LUCs have been implemented at OU 3 to maintain this industrial designation.

LUCs are in place that limit adjoining ditch banks from disposing dredged sediments that do not meet MTCA Industrial Soils Criteria and/or industrial use, thus, preventing unacceptable risk to ecological receptors.

LUC monitoring over this FYR period is described and summarized in Section 4.3.

2.3.2 Actions Subsequent to OU 3 Remedy Implementation

No additional removal or remedial actions have been implemented following the initial remedy implementation at OU 3.

2.3.3 OU 3 Operations, Maintenance, and Monitoring

As recommended in the Third FYR (URS, 2009a), a sediment sample was collected at location 16-2 during the Fourth FYR period. Location 16-2 is in the catch basin on the west end of the 16a ditch complex. The catch basin serves as the confluence of two surface ditches, coming in from the east and west. Stormwater exits the catch basin to the south and flows toward Dugualla Bay. The sediment sample was collected in February 2014 and laboratory results showed total petroleum hydrocarbons (TPH) above the remediation goal (RG). No other COCs were identified at a concentration greater than the RG (Tetra Tech, 2014).

The Fourth FYR (Tetra Tech, 2014) recommended a follow-up sediment sample be collected during the Fifth FYR period. During the sampling event in October 2018, it was observed that there was very minimal sediment accumulation in the catch basin. The results indicated that TPH as diesel (at 1,930 milligrams per kilogram [mg/kg]), TPH as residual range organics (at 7,840 mg/kg), and lead (at 20.2 mg/kg) all exceeded their respective ROD CULs of 200, 200, and 18 mg/kg, respectively. The Fifth FYR data evaluation recommended the following:

- No additional sediment sampling under the CERCLA process conducted at OU 3 Area 16.
- All future operation and maintenance (O&M) activities (including adding to the installation-wide stormwater pollution prevention plan the requirement and procedures for catch basin cleanout every 5 to 10 years at location 16-2; catch basin cleanout; ditch cleanout; and sampling) should be conducted by the NAS Whidbey Island Compliance Program (Battelle, 2019).

NAS Whidbey Island reportedly conducts annual vegetation removal at the ditches. The ditch maintenance had been conducted within a week prior to the 2022 LUC inspections, which was apparent and confirmed by the site escort (Liberty JV, 2023).

2.4 Operable Unit 4

A summary of land use, COCs, and remedial actions for OU 4 is available in Table 2-1.

2.4.1 OU 4 Remedy Implementation

The remedial actions at OU 4 were conducted in accordance with the final remedial design report and remedial action work plan (URS Consultants, Inc., 1994). Approximately 288 cubic yards of shallow soil was removed from Area 39, 4 cubic yards of surface soil were removed from Area 41, 1 cubic yard of sediment and 27 cubic yards of surface soil including soil from a grease trap were removed from Area 44, and 700 cubic yards of surface soil was removed from Area 48. Excavated soils were characterized for disposal, and based on the analytical results, the excavated soils were transported to the OU 1 Area 6 landfill for disposal (Ebasco Environmental, 1995).

The Area 49 landfill operated from 1945 through 1955 and was already closed with native grasses covering the area before the OU 4 ROD. The remedy for Area 49 included notification regarding the existence of a historical construction and demolition debris landfill on the deed when and if the Navy relinquishes the property (Navy, Ecology, and EPA, 1993b).

The First FYR does not address OU 4 because it was officially deleted from the Superfund NPL in September 1995. Current EPA guidance (EPA, 2001) requires a FYR at OU 4, because NAS Whidbey Island has implemented LUCs within OU 4 (TEC, 2004). The controls are implemented at Areas 48/49 and do not allow for UU/UE (Navy, 2007; Liberty JV, 2020).

2.4.2 Actions Subsequent to OU 4 Remedy Implementation

No additional removal or remedial actions have been implemented following the initial remedy implementation at the OU 4 Areas.

2.4.3 OU 4 Operations, Maintenance, and Monitoring

There are no maintenance or monitoring requirements for OU 4. The remedy for OU 4 Areas 39, 41, 44, and 48 was excavation and the remedial action has been completed with no LUC requirements for OU 4 Areas 39, 41, and 44. Therefore, the response is complete for UU/UE and OU 4 Areas 39, 41, and 44 are not evaluated in this FYR. LUC requirements are only applicable to Areas 48/49 (Navy, 2007).

LUC monitoring over this FYR period is described and summarized in Section 4.3.

2.5 Operable Unit 5

A summary of land use, COCs, and remedial actions for OU 5 is available in Table 2-1.

2.5.1 OU 5 Remedy Implementation

2.5.1.1 Area 1

The ROD remedial action at Area 1 was solely LUCs and monitoring (i.e., groundwater and biological) (Navy, Ecology, EPA, 1996). However, a time critical removal action (TCRA) was later performed in January and February 2012 to mitigate and prevent further erosion of the shoreline bluff. The shoreline stabilization was performed in three of the most heavily eroded sections by placing riprap in place at the toe of the bluff. A total of 247 feet of shoreline was stabilized with 376 tons of armor rock. A non-time critical removal action (NTCRA) was conducted to construct a permanent coastal protection system along the OU 5 Area 1 shoreline. Construction of the permanent system began in August 2012 and was completed in January 2013 (SES-TECH, 2013).

LUCs and monitoring, including annual visual inspections of the landfill bluff, were implemented prior to the First FYR. The ESD (Navy, 2007) formalizes LUCs at NAS Whidbey Island. Land use restrictions were entered into the installation restoration area database that is part of the NAS Whidbey Island planning and management model. These include special requirements for any construction activities that may disturb the landfill, including the development of activity-specific health and safety plans, environmental protection plans, and waste management plans.

2.5.1.2 Area 31

Removal of the oil/water separator and the ash pile was completed in April 1996. Approximately 32 cubic yards of ash were removed and disposed of in the Area 6 landfill. Five oil skimming wells were installed around the former oil/water separator location to remove floating product during July 1996. Passive skimming system operation was initiated on 22 July 1996. Ten 2-inch air-injection wells were installed for the bioventing system. Injection well and equipment installation was completed by 27 October 1996. System operation started soon thereafter. Semiannual groundwater monitoring was conducted to confirm system performance (FWEC, 1997b).

The soil venting and product recovery system operations were terminated in March 2000 after the EPA agreed that the RAOs had been successfully met and the recovery system had removed fuel to the practicable endpoint. The EPA concurrence with the termination of soil venting was provided in a letter dated 19 May 2000. In this letter, the EPA requested final confirmation sampling around Area 31. Confirmation sampling results were reported to the EPA on 21 November 2000 (TEC, 2004). Sampling has been continued as a good management practice and to confirm that COCs are not migrating off site. LTM efforts are summarized in Section 2.5.3 and results are reviewed in Section 4.2.

LUCs limiting site access and prohibiting groundwater use were also implemented at Area 31. LUC monitoring over this FYR period is described and summarized in Section 4.3.

2.5.1.3 Area 52

In 1996, the Navy removed the 6-inch steel casing (5 feet in length) previously reported as a potential dry well. During the removal, it was determined that the casing was embedded in a 4-foot by 4-foot reinforced concrete block and capped at the base. The bulk of the concrete was removed, and no visible signs of contamination were present in the adjacent soil. On 13 November 1996, the materials were sampled for disposal purposes. A concrete and steel casing rinsate sample was collected and analyzed. Based on the removal and analytical results, it was concluded that the casing was not a dry well used for disposal purposes.

Two active, pneumatically operated product recovery systems were installed during November and December 1996 to recover fuel on the groundwater surface. The two systems were installed to recover product from a total of six wells at the site (FWEC, 1997b). Environmental monitoring and LUCs were initiated as discussed in Section 2.5.3.

2.5.2 Actions Subsequent to OU 5 Remedy Implementation

No additional removal or remedial actions have been implemented following the initial remedy implementation at Area 31.

At Area 1, five years of annual post-ROD visual monitoring of shoreline stability was completed in July 2002. This monitoring indicated that relatively minor shoreline erosion was occurring along the coastline of Area 1 (TEC, 2004).

During the LUC inspection in September 2009, the Navy identified erosion along the shoreline had exposed the fill and historical landfill in several areas. Timbers, refuse, metal, and concrete were identified in the exposed shoreline bluff. The Navy implemented shoreline erosion monitoring starting in 2010 and continuing into 2012 in order to understand the severity of the erosion issue. The first set of erosion monitoring events was conducted in December 2010 and February, April, and June 2011 (Tetra Tech, 2014).

Monitoring events indicated up to 5.4 feet of erosion along the bluff in certain areas. A TCRA was performed in January and February 2012 to mitigate and prevent further erosion of the Area 1 shoreline. Shoreline stabilization was performed in three of the most heavily eroded sections by placing riprap at the toe of the bluff. A total of 247 feet of shoreline was stabilized with 376 tons of temporary armor rock (Tetra Tech, 2014). In

early 2013, the Navy completed a 6-month NTCRA to construct a permanent coastal erosion protection system along 1,440 feet of shoreline, including 940 feet along Area 1 beach landfill and 500 feet of shoreline along Area 52 just north of Area 1. The deteriorating seawall at Area 52 was addressed as part of the NTCRA so that the repairs at the north end of Area 1 would be protected from storm erosion (SES-TECH, 2013).

LUC inspections from 2013 through the present continue to include shoreline monitoring to assess erosion and seawall deterioration. The 2013 LUC inspection recommended that additional shoreline protection be implemented south of the new seawall at OU 5 Area 1 (Tetra Tech, 2014). LUC monitoring over this FYR period is described and summarized in Section 4.3.

In 2015, the coastal erosion protection system along the Area 52 shoreline, installed in late 2012, was showing significant signs of failure. Armor stone in Area 52 had been displaced and was migrating downslope, resulting in tearing of the underlying marine mattresses and the release of stone fill from within the mattresses. This displacement had also resulted in the development of large voids in the armor stone layer and some exposure of underlying bluff. The majority of the foreshore beach material placed waterward of the shoreline erosion protection system in Area 52 was no longer present on site and some of this material could be found on top of and inland of the top of the slope, indicating the shoreline erosion protection had been overtopped during storm events. Voids had also developed just landward of the slope armoring and marine mattresses at the bluff crest. To address this failure, the Navy completed maintenance and repair activities on 315 feet of the coastal erosion protection system along the Area 52 shoreline just north of the Area 1 beach landfill in early 2016 (Battelle, 2019).

As of December 2016, an additional 150 to 250 feet of shoreline at the south end of the Area 1 beach landfill was eroding landward, exposing underlying landfill debris along the shoreline. To address the erosion issues, erosion protection work involving construction of a permanent coastal erosion protection system at the site, initiated in 2013 as a NTCRA, was extended 160 feet south of the existing Area 1 seawall in 2017 (Battelle, 2019). Between January and July 2017, a seawall was constructed along the shoreline south of the existing Area 1 seawall to protect the beach landfill from erosion. The seawall prevents shoreline erosion that could lead both to physical and residual chemical hazards being released from this site and provides long-term protection of the permanent coastal protection system to maintain LUC requirements, as set forth in the ROD. More details of the seawall construction are available in the completion report (Tetra Tech, 2018).

2.5.3 OU 5 Operations, Maintenance, and Monitoring

Long-term groundwater monitoring is conducted at OU 5 Area 31. No changes have been made to the monitoring program during this FYR period. The monitoring conducted exceeded the recommended frequency during this FYR period and included annual sampling for TPH as diesel, gasoline, and residual range organics; benzene; naphthalene; vinyl chloride; and total and dissolved manganese at wells MW31-9A and OWS-1 (Sealaska, 2020a, 2020c; EA, 2021b, 2023b). The LTM program for OU 5 Area 31 is summarized in Section 3.2.6 and results of this monitoring are reviewed in Section 4.2.4.

LUC monitoring over this FYR period, including shoreline erosion inspection at OU 5 Area 1, is described and summarized in Section 4.3.

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Table 2-1. Summary of Remedial Actions, OUs 1 through 5, NAS Whidbey Island

OU	Site	Reasonably Anticipated Land Use	COCs Requiring Action	Media	Cleanup Levels	RAOs	Remedy Component	Remedy Construction Complete	Site Closeout Strategy
1	*Area 5*	*Continue as Naval installation*	*None established in ROD*	*NA*	*NA*	*No RAOs were established in ROD.*	*ROD: groundwater monitoring for metals no later than 6 months after the ROD is signed (with no further action status for soils, sediment, and surface water at the site).* *ESD (Navy, 2007): LUCs*	*NA*	*Ongoing LUC maintenance.*
	Area 6	*Continue as Naval installation*	*TCE* *1,1,1-TCA* *1,1-DCE* *Vinyl chloride* *Added per 2019 RODA:* *1,4-Dioxane (New COC identified after ROD; MTCA Method B groundwater designated as the CUL)* *Removed per 2019 RODA:* *1,1-DCA* *cis-1,2-DCE*	*GW*	*5 µg/L – MCL* *200 µg/L – MCL* *7 µg/L – MCL* *0.029 µg/L – MTCA Method B* *0.44 µg/L – MTCA Method B*	*<u>1993 ROD RAOs (non-groundwater related):</u>* *Minimize infiltration of rainwater in the Area 6 landfill operations area to prevent leachate generation and migration into the groundwater.* *Prevent potential impacts to downgradient surface water bodies and aquatic organisms as a result of stormwater erosion of the surface soils at the Area 6 landfill operations area.* *Prevent exposure to contaminants within subsurface soil and debris in the landfill operations area.* *<u>2019 RODA Groundwater RAOs:</u>* *Reduce the potential TCE, 1,1,1-TCA, 1,1-DCE, vinyl chloride, and 1,4-dioxane risk to current and future groundwater users downgradient of the site.* *Actively remediate TCE, 1,1,1-TCA, 1,1-DCE, vinyl chloride, and 1,4-dioxane in the western and southern plume followed by MNA until RGs are met.*	*Operation of Western and Southern GETR Systems* *Engineered landfill cap* *LUCs*	*Yes*	*Ongoing LUC maintenance.* *2019 ROD Amendment changes are 1) add 1,4-dioxane as a COC; 2) remove COCs that have reached CULs; and 3) groundwater treatment using AOP, including a new additional treatment plant to the south, upgrading the current treatment plant to AOP from air stripper, and expanding the well network.* *2019 RODA noted that the remedy is an integrated remedy that will comprise of an active treatment component, MNA (passive treatment), and ICs. The transition from the active remedy portion to MNA/ICs (passive) will follow the steps of transition points being met, validating the efficacy of MNA, and conducting ongoing performance monitoring. Termination of passive remediation will occur when the RGs for all COCs are achieved as specified in a performance monitoring plan*

Table 2-1. Summary of Remedial Actions, OUs 1 through 5, NAS Whidbey Island (continued)

OU	Site	Reasonably Anticipated Land Use	COCs Requiring Action	Media	Cleanup Levels	RAOs	Remedy Component	Remedy Construction Complete	Site Closeout Strategy
2	*Areas 2/3*	*Continue as Naval installation*	*Antimony* *Arsenic* *Manganese* *Vinyl chloride*	*GW*	*6 µg/L (Bk)[1]* *0.05 µg/L (Bk)[1]* *80 µg/L (Bk)[1]* *0.023 µg/L (PQL)[1]*	*Reduce risks to hypothetical future residents from groundwater contaminants at Areas 2/3.*	*Two events of semiannual groundwater sampling following the ROD. The Navy has continued monitoring in this area on a five-year cycle (although this is not required per the ROD), coincident with each FYR.* *LUCs*	*Yes*	*Ongoing LUC maintenance.*
	Area 4	*Continue as Naval installation*	*MCPP* *PCBs* *PCP* *Arsenic* *Manganese*	*Soil* *GW*	*80 mg/kg* *1 mg/kg* *8.33 mg/kg* *0.05 µg/L (Bk)[1]* *80 µg/L (Bk)[1]*	*Minimize the potential for migration of contaminants from surface soils to surface water or other media.* *Reduce the health risk to hypothetical future residents and the environmental risk to small mammals by removing surface and near-surface soil.*	*Excavated 1,750 cubic yards of PCB-affected soil.* *Groundwater monitoring was previously conducted in this area.* *LUCs*	*Yes*	*Ongoing LUC maintenance.*
	Area 14	*Continue as Naval installation*	*Bromacil* *2,3,7,8-TCDD* *2,4-Dichlorophenol* *Bromacil* *2,4-Dichlorophenol*	*Soil* *GW*	*7 mg/kg* *6.67x10-6 mg/kg* *4.8 mg/kg* *70 µg/L* *48 µg/L*	*Minimize the potential for migration of contaminants from surface soils to surface water or other media.* *Reduce risks to hypothetical future residents by removing the sources of organic contamination (i.e., the dry well and surrounding soils) at Area 14.*	*Pumped out dry well and well 14-MW-1, treated extracted water, and disposed of the treated water to POTW.* *Excavated dry well, monitoring well, and approximately 420 cubic yards of surrounding contaminated soil, disposed of the excavated soils and decontaminated well casings.* *Reinstalled well 14-MW-1 to support FYRs.*	*Yes*	*No further action.*
	Area 29	*Continue as Naval installation*	*PCP* *PAHs* *Arsenic* *Manganese*	*Soil* *GW*	*8.33 mg/kg* *1 mg/kg* *0.05 µg/L (Bk)[1]* *80 µg/L (Bk)[1]*	*Minimize the potential for migration of contaminants from surface soils to surface water or other media.* *Reduce risks to hypothetical future residents from inorganic groundwater contaminants at Areas 4 and 29.* *Reduce future exposure to soil containing residual organic compounds that exceed state regulatory limits or present ecological risk.*	*Excavated and disposed of approximately 1,400 cubic yards of PCP- and PAH-affected soil locations surrounding the burn pad.* *Groundwater monitoring was previously conducted in this area.* *LUCs*	*Yes*	*Ongoing LUC maintenance.*

Table 2-1. Summary of Remedial Actions, OUs 1 through 5, NAS Whidbey Island (continued)

OU	Site	Reasonably Anticipated Land Use	COCs Requiring Action	Media	Cleanup Levels	RAOs	Remedy Component	Remedy Construction Complete	Site Closeout Strategy
3	Area 16	Continue as Naval installation	Arsenic Lead 2-Methylnaphthalene Benzo(k)fluoranthene Dibenz(a,h)anthracene Phenanthrene TPH	Sediment	16 mg/kg (Eco)[2] 18 mg/kg (Bk)[3] 0.8 mg/kg (Eco)[2] 18 mg/kg 1.1 mg/kg (Eco)[2] 13 mg/kg (Eco)[2] 200 mg/kg	Reduce current ecological risks posed by COCs in the ditch sediments. Reduce potential future human health risks should contaminated sediments be dredged during ditch maintenance and placed on the ditch banks.	Sampled and analyzed sediments in the ditch segments identified during the RI to determine the extent of contamination that needed to be removed. Compared the sample results to RCRA criteria for toxicity characteristic wastes to determine whether the dredged sediments would need to be treated and disposed of as hazardous waste or dangerous waste. Dredged the sediments from those portions of the ditch segments determined by the sampling to be contaminated above the selected CULs. For those sediments determined to be nonhazardous waste, hauled and placed the dredged sediments at the Area 6 landfill so they will be incorporated under the final cover. For any sediment determined to be hazardous waste, hauled the dredged sediments to a permitted off-area facility for appropriate treatment and disposal. Periodic sediment sampling has been discontinued in this area based on recommendations from the Fifth FYR. LUCs.	Yes	Ongoing LUC maintenance.
4	Areas 39, 41, 44, and 48, 49	Continue as Naval installation	4,4'-DDD 4,4'-DDE 4,4'-DDT Arsenic Chromium (VI) Lead PAHs	Soil	4.17 mg/kg 2.94 mg/kg 2.94 mg/kg 20 mg/kg 400 mg/kg 250 mg/kg 1 mg/kg	Minimize contamination of surface water. Minimize direct contact of humans and animals with COCs in soil/sediment. Reduce concentrations of contaminants in the surface soil and Area 44 storm drain system sediments to comply with applicable state and federal regulations. Prevent further migration of the contaminants.	For Areas 39, 41, and 48, excavated contaminated soils and on-station disposal at the NAS Whidbey Island Ault Field Area 6 landfill. The soil removal from Areas 39, 41, and 48 was intended to meet regulatory soil cleanup standards established under MTCA for the COCs (Navy, Ecology, and EPA, 1993b). For Area 44, excavated (treatment if needed), and off-area disposal at an approved landfill of 1 cubic yard of sediment and approximately 30 cubic yards of surface soil and catch basin cleaning. For Area 49, included notification regarding the existence of a historical construction and demolition debris landfill on the deed when and if the Navy disposes of the property. LUCs at Areas 48/49.	Yes	Remedy complete in Areas 39, 41, and 44 and OU 4 was officially deleted from the Superfund NPL in September 1995 (TEC, 2004). Areas have been approved for unrestricted use and unlimited exposure (Navy, 2007). Ongoing LUC maintenance at Areas 48/49.
5	Area 1	Continue as Naval installation	Zinc Cyanide Bis(2-ethylhexyl) phthalate 1,1-DCE	SW	76.6 µg/L 1 µg/L 3.56 µg/L 1.93 µg/L	Confirm protection of ecological receptors in the marine environment by determining compliance with the water quality standards for marine surface waters at the point of groundwater discharge.	Established an environmental monitoring program that included groundwater sampling and biological surveys of the beach. Conducted visual inspections of the physical condition of the landfill bluff annually for the first 5 years and documented the results. LUCs	Yes	Ongoing LUC maintenance.

Table 2-1. Summary of Remedial Actions, OUs 1 through 5, NAS Whidbey Island (continued)

OU	Site	Reasonably Anticipated Land Use	COCs Requiring Action	Media	Cleanup Levels	RAOs	Remedy Component	Remedy Construction Complete	Site Closeout Strategy
OU 5 (cont.)	*Area 31*	*Continue as Naval installation*	*Beryllium* *Lead* *Manganese* *Mercury* *Aroclor 1260* *Benzene* *Naphthalene* *Pentachlorophenol* *Styrene* *Toluene* *Vinyl chloride* *2,3,7,8-TCDD* *TPH*	*GW*	*0.0203 µg/L* *9.7 µg/L* *125 µg/L* *2 µg/L* *1 µg/L* *5 µg/L* *320 µg/L* *1 µg/L* *3.296 µg/L* *1,000 µg/L* *0.1 µg/L* *0.58 × 10^{-6} µg/L* *1,000 µg/L*	*Reduce the sources of petroleum hydrocarbons in subsurface soils that may cause groundwater contamination in excess of state CULs for petroleum hydrocarbons.* *Prevent human exposure to lead in ash.* *Prevent the migration of floating petroleum product and dissolved COCs that are present above ARARs in groundwater.* *Prevent human exposure under the future residential scenario to the COCs in groundwater that are present at concentrations above state and federal CULs.*	*Removed the oil/water separator, bioventing, and oil skimming system.* *Removed the ash piles and disposed of them in accordance with state and federal regulations.* *Groundwater monitoring* *LUCs*	*Yes*	*Monitoring analyte list has been reduced over time. Fifth FYR reviewed geochemical conditions and showed natural attenuation is occurring.* *Ongoing LUC maintenance.*
	Area 52	*Continue as Naval installation*	*Vinyl chloride* *Benzo(a)anthracene* *Benzo(a)pyrene* *Benzo(b)fluoranthene* *Chrysene* *Indeno(1,2,3-cd)pyrene* *TPH*	*SW*	*2.92 µg/L* *0.0296 µg/L* *0.0296 µg/L* *0.0296 µg/L* *0.0296 µg/L* *0.0296 µg/L* *1,000 µg/L*	*Prevent the migration of floating petroleum product from groundwater to marine surface water.* *Confirm protection of ecological receptors in the marine environment by determining compliance with the water quality standards for marine surface waters at the point of groundwater discharge.*	*Operated product recovery systems (including the use of either canisters or absorbent socks) to prevent migration of floating petroleum product from groundwater to marine surface water.* *Shoreline seep monitoring was previously conducted in this area.* *LUCs*	*Yes*	*Ongoing LUC maintenance.*

Source: Battelle (2019a)

Notes:

1. CUL was based on the higher of the two values.
2. ROD CUL is based on ecological risks.
3. ROD CUL is based on background.

Abbreviations:

µg/L = micrograms per liter
AOP = advanced oxidation process
ARAR = applicable or relevant and appropriate requirement
BK = background
COCs = contaminants of concern
CUL = cleanup level
DCA = dichloroethane
DCE = dichloroethane
DDE = dichlorodiphenyldichloroethylene
DDT = dichlorodiphenyltrichloroethane
Eco = ecological
ESD = Explanation of Significant Differences
FYR = five-year review
GETR = groundwater extraction treatment and recharge
GW = groundwater
IC = institutional control
LUCs = land use controls
MCL = maximum contaminant level
MCPP = 2-(2-methyl-4-chlorophenoxy)propionic acid
mg/kg = milligram per kilogram
MCL = maximum contaminant level
MNA = monitored natural attenuation
MTCA = Model Toxics Control Act
NA = not applicable
NAS = Naval Air Station
OU = operable unit
PAHs = polycyclic aromatic hydrocarbons
PCB = polychlorinated biphenyl
PCP = pentachlorophenol
POTW = publicly owned treatment works
PQL = practical quantitation limit
RAOs = remedial action objectives
RCRA = Resource Conservation and Recovery Act
RG = remediation goal
RI = remedial investigation
ROD = Record of Decision
RODA = Record of Decision Amendment
SW = surface water
TCA = trichloroethane
TCDD = 2,3,7,8-tetrachlorodibenzo-p-dioxin
TCE = trichloroethene
TPH = total petroleum hydrocarbons
µg/L = microgram per liter
VOCs = volatile organic compounds

Table 2-2. Land Use Controls at Operable Units 1 through 5 of NAS Whidbey Island

Title	Site-Specific LUCs
Operable Unit 1	
Area 5 – Highway 20/Hoffman Road Landfill (Figure 1-4)	• *Ensure that land use remains commercial and/or industrial, which includes a prohibition on development and use of this property for residential housing, elementary and secondary schools, childcare facilities, and playgrounds.* • *Ensure that all disturbed or excavated soils at or from the area are properly categorized and disposed of, and that workers are protected during any such disturbance or excavation.* • *Prevent installation of on-site drinking water wells.* • *Deed restrictions in future property deeds.*
Area 6 – Landfill Operations Area and Former Hazardous Waste Storage Area (Figure 1-4)	• *Ensure that land use remains commercial and/or industrial, which includes a prohibition on development and use of this property for residential housing, elementary and secondary schools, childcare facilities, and playgrounds.* • *No downgradient well drilling except for monitoring wells and/or remediation system wells authorized by the EPA and Ecology in approved plans.* • *Protect existing monitoring wells.* • *No use of groundwater from, or downgradient of, the area except monitoring and remediation as approved by the EPA and Ecology.* • *Review the Island County Public Health Hydrogeology Data system biannually for well installation activities and/or groundwater use within the 1 mile buffer of Area 6.* • *Prevention of any disturbance to the landfill cap, except as necessary for authorized cap maintenance activities.* • *Prevent installation of on-area drinking water wells by deed restrictions in future property deeds.*

Table 2-2. Land Use Controls at Operable Units 1 through 5 of NAS Whidbey Island (continued)

Title	Site-Specific LUCs
Operable Unit 2	
Area 2 – Western Highlands Landfill (Figure 1-5)	• *Ensure that land use remains commercial and/or industrial, which includes a prohibition on development and use of this property for residential housing, elementary and secondary schools, childcare facilities, and playgrounds.* • *No use of groundwater from, or downgradient of, the area except for monitoring and remediation, except as approved by the EPA and Ecology.* • *No downgradient well drilling except for monitoring wells and/or remediation system wells authorized by the EPA and Ecology in approved plans.* • *Protect existing monitoring wells.* • *Use restrictions to prevent ground disturbance via digging and/or construction activities in the area of former construction debris landfill.* • *Possible deed restrictions in future property deeds.*
Area 3 – 1969-1970 Landfill (Figure 1-5)	• *Ensure that land use remains commercial and/or industrial, which includes a prohibition on development and use of this property for residential housing, elementary and secondary schools, childcare facilities, and playgrounds.* • *No use of groundwater from, or downgradient of, the area except for monitoring and remediation, except as approved by the EPA and Ecology.* • *No downgradient well drilling except for monitoring wells and/or remediation system wells authorized by the EPA and Ecology in approved plans.* • *Protect existing monitoring wells.* • *Use restrictions to prevent ground disturbance via digging and/or construction activities in the area of former construction debris landfill.* • *Possible deed restrictions in future property deeds.*
Area 4 – Walker Barn Storage Area (Figure 1-5)	• *Ensure that land use remains commercial and/or industrial, which includes a prohibition on development and use of this property for residential housing, elementary and secondary schools, childcare facilities, and playgrounds.* • *No use of groundwater from, or downgradient of, the area except for monitoring and remediation, except as approved by the EPA and Ecology.* • *No downgradient well drilling except for monitoring wells and/or remediation system wells authorized by the EPA and Ecology in approved plans.* • *Protect existing monitoring wells.*
Area 29 – Clover Valley Fire School (Figure 1-5)	• *No use of groundwater from, or downgradient of, the area except for monitoring and remediation, except as approved by the EPA and Ecology.* • *No downgradient well drilling except for monitoring wells and/or remediation system wells authorized by the EPA and Ecology in approved plans.* • *Protect existing monitoring wells.*

Table 2-2. Land Use Controls at Operable Units 1 through 5 of NAS Whidbey Island (continued)

Title	Site-Specific LUCs
Operable Unit 3	
Area 16 – Runway Ditches (Figure 1-6)	• *Ensure that land use remains commercial and/or industrial, which includes a prohibition on development and use of this property for residential housing, elementary and secondary schools, childcare facilities, and playgrounds.* • *Limit adjoining ditch banks to disposal of dredged sediments meeting MTCA Industrial Soils criteria and/or industrial use.* • *Current land use will remain industrial.* • *Deed restrictions for industrial use.*
Operable Unit 4	
Areas 48/49 – Seaplane Base Salvage Yard and Landfill (Figure 1-7)	• *Ensure that land use remains commercial and/or industrial, which includes a prohibition on development and use of this property for residential housing, elementary and secondary schools, childcare facilities, and playgrounds.* • *Use restrictions to prevent ground disturbance via excavation or other ground-disturbing activities in the area of former construction debris landfill.*
Operable Unit 5	
Area 1 – Beach Landfill (Figure 1-8)	• *Ensure that land use remains commercial and/or industrial, which includes a prohibition on development and use of this property for residential housing, elementary and secondary schools, childcare facilities, and playgrounds.* • *No use of groundwater from, or downgradient of, the area except for monitoring and remediation, except as approved by the EPA and Ecology.* • *No downgradient well drilling except for monitoring wells and/or remediation system wells authorized by the EPA and Ecology in approved plans.* • *Protect existing monitoring wells.* • *Use restrictions to prevent ground disturbance via digging and/or construction activities in the area of former construction debris landfill.* • *Ensure that shoreline armoring is in place and functioning as intended.* • *Annual visual inspection of the shoreline armoring and perform repairs, if warranted.*
Area 31 – Former Runway Fire School (Figure 1-8)	• *Ensure that land use remains commercial and/or industrial, which includes a prohibition on development and use of this property for residential housing, elementary and secondary schools, childcare facilities, and playgrounds.* • *No use of groundwater from, or downgradient of, the area except for monitoring and remediation, as approved by the EPA and Ecology.* • *No downgradient well drilling except for monitoring wells and/or remediation system wells authorized by the EPA and Ecology in approved plans.* • *Protect existing monitoring wells.*

Table 2-2. Land Use Controls at Operable Units 1 through 5 of NAS Whidbey Island (continued)

Title	Site-Specific LUCs
Area 52 – Jet Engine Test Cell (Figure 1-8)	• *Ensure that land use remains commercial and/or industrial, which includes a prohibition on development and use of this property for residential housing, elementary and secondary schools, childcare facilities, and playgrounds.* • *No use of groundwater from, or downgradient of, the area except for monitoring and remediation, except as approved by the EPA and Ecology.* • *No downgradient well drilling except for monitoring wells and/or remediation system wells authorized by the EPA and Ecology in approved plans.* • *Protect existing monitoring wells.* • *In the event of property transfer include (future) deed covenants to restrict land use and drinking water well construction.*

Source: (Liberty JV, 2020)
Abbreviations:
Ecology = Washington State Department of Ecology
EPA = Environmental Protection Agency
ESD = Explanation of Significant Differences
LUCs = land use controls
MTCA = Model Toxics Control Act

3.0 Progress Since Last Five-Year Review

This section includes the protectiveness determinations and statements as well as the recommendations from the Fifth FYR for NAS Whidbey Island (Battelle, 2019) and the current status of those recommendations.

Per EPA FYR Guidance (EPA, 2016), Table 3-1 details the protectiveness statements and determinations from the Fifth FYR for NAS Whidbey Island (Battelle, 2019).

Table 3-1. Protectiveness Determinations/Statements from the Fifth FYR

Site #	Protectiveness Determination	Protectiveness Statement
OU 1	*Short-term Protective*	*Remedy construction is complete and progress is being made toward meeting the RAOs as documented through groundwater monitoring (i.e., Area 6) and/or LUC monitoring (i.e., Areas 5 and 6). The remedy at OU 1 Area 5 is protective of human health and the environment. The remedy at OU 1 Area 6 currently protects human health and the environment because of the LUCs in place and the fact that residents are on a municipal water supply (i.e., not well water); therefore, there are no known human receptors to the groundwater contamination. However, in order for the remedy to be protective in the long term, the amended remedy selected in the ROD Amendment (Navy, 2019), addressing vinyl chloride and 1,4-dioxane in groundwater, needs to be finalized and implemented.*
OU 2	*Short-term Protective*	*Remedy construction is complete and RAOs to prevent exposure are being met as documented through groundwater monitoring (i.e., during FYR period at Areas 2/3) and LUC monitoring (i.e., at Areas 2/3, 4, and 29).* *Chemicals of Emerging Concern: Although there are no known exposures, PFOS and PFOA in groundwater at OU 2 may impact the future protectiveness of the remedy. Because known off-site drinking water exposures have been addressed and on-site LUCs prevent exposure to groundwater, the Navy considers OU 2 to be protective in the short-term while ongoing PFAS investigations and evaluations are conducted through the CERCLA process to refine the PFAS CSM and potential exposure risks. Findings from ongoing PFAS investigations and evaluations will be addressed in the next FYR to determine if the current remedy at OU 2 will continue to be protective with respect to PFAS in the future.*
OU 3	*Protective*	*The remedy at OU 3 is protective of human health and the environment. Remedy construction is complete and RAOs to prevent exposure are being met as documented through LUC monitoring (i.e., at Area 16).*
OU 4	*Protective*	*The remedy at OU 4 is protective of human health and the environment. Remedy construction is complete and RAOs to prevent exposure are being met as documented through LUC monitoring (i.e., at Areas 48/49).*
OU 5	*Short-term Protective*	*Remedy construction is complete and RAOs to prevent exposure are being met as documented through groundwater monitoring (i.e., annual basis at Area 31) and LUC monitoring (i.e., at Areas 1, 31, and 52).* *Chemicals of Emerging Concern: Although there are no known exposures, PFOS and PFOA in groundwater at OU 5 Area 31 may impact the future protectiveness of the remedy. Because known off-site drinking water exposures have been addressed and on-site LUCs prevent exposure to groundwater, the Navy considers the OU 5 Area 31 to be protective in the short-term while ongoing PFAS investigations and evaluations are conducted through the CERCLA process to refine the PFAS CSM and potential exposure risks. Findings from ongoing PFAS investigations and evaluations will be addressed in the next FYR to determine if the current remedy at the OU 5 Area 31 will continue to be protective with respect to PFAS in the future.*

Table 3-1. Protectiveness Determinations/Statements from the Fifth FYR (continued)

Site #	Protectiveness Determination	Protectiveness Statement
Sitewide	*Short-term Protective*	*Remedy construction has been complete at OUs 1 through 5 since 25 September 1997. The remedy at OU 1 Area 5, OU 3, OU 4, OU 5 Area 1, and OU 5 Area 52 is protective of human health and the environment. Progress is being made towards meeting the RAOs as documented through monitoring of LUCs and groundwater. At OU 1 Area 6, the remedy currently protects human health and the environment because of the LUCs in place and the fact that residents are on a municipal water supply (i.e., not well water); therefore, there are no known human receptors to groundwater contamination. However, the amended remedy selected in the ROD Amendment (Navy, 2019), addressing vinyl chloride and 1,4-dioxane in groundwater, needs to be finalized and implemented in order for the remedy to be protective into the future.* *Chemicals of Emerging Concern: Although there are no known exposures, PFOS and PFOA in groundwater at OU 2 and OU 5 Area 31 may impact the future protectiveness of the remedy. Because known off-site drinking water exposures have been addressed and on-site LUCs prevent exposure to groundwater, the Navy considers OU 2 and OU 5 Area 31 to be protective in the short-term while ongoing PFAS investigations and evaluations are conducted through the CERCLA process to refine the PFAS CSM and potential exposure risks. Findings from ongoing PFAS investigations and evaluations will be addressed in the next FYR to determine if the current remedies at OU 2 and OU 5 Area 31 will continue to be protective with respect to PFAS in the future.*

Source: Battelle (2019a)
Abbreviations:
CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act
CSM = conceptual site model
FYR = five-year review
LUCs = land use controls
Navy = United States Department of the Navy
OU = operable unit
PFAS = per- and polyfluoroalkyl substances
PFOA = perfluorooctanoic acid
PFOS = perfluorooctane sulfonic acid
RAOs = remedial action objectives
ROD = record of decision

3.1 Status of Recommendations

3.1.1 Formal Recommendations from Last Five-Year Review

Three formal recommendations were presented in the Fifth FYR (Battelle, 2019) to ensure the protectiveness of the remedies at OUs 1, 2, 3, 4, and 5. Per EPA FYR Guidance (EPA, 2016), Table 3-2 summarizes these recommendations as well as their current status of implementation.

Table 3-2. Status of Recommendations from the Fifth FYR

Site #	Issue	Recommendations	Current Status	Current Implementation Status Description*	Completion Date (if applicable)
OU 1, Area 6	*Results from the February 2018 sampling event demonstrate that the vinyl chloride and 1,4-dioxane groundwater plumes extend downgradient and off site of OU 1 Area 6. The vinyl chloride plume remains within the 1,000-foot exclusion zone surrounding the boundary of the OU 1 Area 6, OU 1 Area 5, and City of Oak Harbor landfills per WAC 173-160-171 3.b.vi. and as entered in the Island County Public Health Hydrogeology Data System; however, the 1,4-dioxane plume extends beyond this 1,000-foot exclusion zone. Although this plume has migrated further downgradient than the 1,000-foot exclusion zone at concentrations exceeding the CUL (0.44 µg/L), annual LUC inspections monitor any well installation activities and groundwater use within a 1-mile buffer around Ault Field and Seaplane Base. In addition, all residents within this area of the plume are on the municipal water supply (i.e., not well water); therefore, there are no known human receptors.*	*Update the NAS Whidbey Island LUCIP such that well installation activities and groundwater use within a 1-mile buffer around Ault Field and Seaplane Base are monitored via the Island County Public Health Hydrogeology Data System and reported on a semiannual basis (i.e., every six months) to ensure that there are no potential groundwater use receptors.*	*Completed*	*The LUCIP (Battelle, 2020a; Liberty JV, 2020) has been updated such that well installation activities and/or groundwater use within the 1-mile buffer of Area 6 as reported in the Island County Public Health Hydrogeology Data System and is monitored biannually.*	*January 2020; December 2020*
OU 1, Area 6	*The original air stripper Western GETR System was not preventing downgradient and off-site migration of vinyl chloride and 1,4-dioxane in the shallow aquifer posing potential risk to future groundwater users downgradient of OU 1 Area 6. 1,4-Dioxane was not identified and not accounted for in the OU 1 ROD (Navy, Ecology, and EPA, 1993a).*	*Implement the RODA (Navy, 2019), identifying groundwater treatment using AOP as the preferred remedial alternative, including: 1) constructing a new additional AOP treatment plant to the south; 2) upgrading the current treatment plant to AOP (from air stripper); and 3) expanding the well network to delineate the southern boundary of the vinyl chloride and 1,4-dioxane plumes.*	*Ongoing*	*The RODA for impacted groundwater at OU 1 Area 6 was finalized in 2019 (Navy, 2019).* *1) Construction of the Southern GETR AOP treatment plant was completed in October 2021.* *2) The primary treatment method of the Western GETR System is in progress to be changed to ex situ advanced oxidization and is offline during this construction.* *3) The initial phase of the downgradient delineation investigation to determine the southern boundary of the vinyl chloride and 1,4-dioxane plumes is completed and five monitoring wells were installed. Two additional monitoring wells were installed in fall of 2023 during the second phase of investigation.*	*1) October 2021* *2) Ongoing, anticipated completion summer 2024* *3) Ongoing, all seven groundwater monitoring well results were non-detect for 1,4-dioxane and vinyl chloride. The Navy is currently pursuing a real estate agreement to redevelop, resurvey, and conduct a camera inspection of 6-DW-38. . Unknown whether a third phase of*

Table 3-2. Status of Recommendations from the Fifth FYR (continued)

Site #	Issue	Recommendations	Current Status	Current Implementation Status Description*	Completion Date (if applicable)
					investigation (additional monitoring well installation) is required and will be based on new 6-DW-38 information.
OU 2 and OU 5 Area 31	*Based on the technical assessment, PFOS and PFOA in groundwater at OU 2 and OU 5 Area 31 may affect the future protectiveness of the remedies implemented at these two OUs.*	*Ongoing PFAS investigations and evaluations are being conducted through the CERCLA process to refine the PFAS CSM and potential exposure risks. Findings from ongoing PFAS investigations and evaluations will be addressed in the next FYR to determine if the current remedies at OU 2 and OU 5 Area 31 will continue to be protective with respect to PFAS in the future.*	*Ongoing*	*A PFAS RI for the Current Fire Training Area, which includes OU 2 Areas 2/3, is ongoing with fieldwork conducted from June to December 2023. The draft RI report is not scheduled until fall 2024 and as such data evaluation will be summarized in the next FYR.* *The PFAS RI at OU 5 Area 31 is ongoing. Data evaluation is included in this FYR (Section 3.2.8).*	*Ongoing*

Abbreviations:
µg/L = micrograms per liter
AOP = advanced oxidation process
CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act
CSM = conceptual site model
FYR = five-year review
GETR = groundwater extraction treatment and recharge
LUC = land use control
LUCIP = Land Use Controls Implementation Plan
NAS = Naval Air Station
OU = operable unit
PFAS = per- and polyfluoroalkyl substances
PFOA = perfluorooctanoic acid
PFOS = perfluorooctane sulfonic acid
RI = remedial investigation
ROD = Record of Decision
RODA = Record of Decision Amendment
WAC = Washington Administrative Code

3.2 Additional Actions Taken to Implement Recommendations During this FYR Period

To address the recommendations in Table 3-2, the Navy has taken actions at OUs 1, 2, 3, 4, and 5 to ensure the protectiveness of the remedies. These actions are described in the following subsections.

3.2.1 OU 1 ROD Amendment

In 2019, RODA Number 1 altered the selected remedial action for impacted groundwater at OU 1 Area 6 (Navy, 2019). The original selected remedy in the OU 1 ROD, groundwater extraction, treatment with air stripping, and reinjection, was designed to remove chlorinated VOCs from groundwater. The system has been effective at removing VOCs. However, the system did not remove 1,4-dioxane from groundwater, which was identified in groundwater in 2003 after the 1993 ROD was executed and system operation was initiated in 1995. The Navy has evaluated the extent of 1,4-dioxane in groundwater, addressed exposures, and evaluated treatment options.

The 2019 RODA modifies the groundwater treatment technology component of the remedy selected for OU 1 Area 6 in the 1992 Interim ROD and 1993 OU 1 ROD but does not affect the selected remedy components for the landfill or Area 6 that have already been successfully implemented. The 2019 RODA selected as the remedy two independent AOP HiPOx GETR Systems to treat VOCs in groundwater. The Southern GETR System was constructed in the southern portion of the site to address the southern plume and has been operational since October 2021. The Western GETR System will replace the original Western air stripper GETR System to address the western plume. The Western GETR System is under construction to convert its treatment method to AOP.

During this FYR period, the Design for Upgraded Western GETR System was finalized. Upgrade designs were completed in March 2022 and had the primary goal of improving system capability to efficiently destroy chlorinated ethenes and 1,4-dioxane in water captured from the western plume area (Navy, 2022). To meet this goal, the existing concrete treatment pad will be modified to accommodate a containerized AOP treatment system using HiPOx technology. This technology uses ozone and hydrogen peroxide to destroy, via chemical oxidation, a wide range of organic compounds, including 1,4-dioxane and vinyl chloride. Chlorinated ethenes like TCE, DCE, and 1,4-dioxane are completely destroyed (mineralized) into dissolved carbon dioxide, chloride, and water without producing process residuals or waste products. Chlorinated ethanes, such as 1,1,1-TCA and 1,2-DCA, are not destroyed by the AOP HiPOx system, but their

concentrations in the combined influent are expected to be below the RGs required by the RODA (Navy, 2019).

It is anticipated the Western GETR will be operational by summer 2024. Additionally, it should be noted the original Western air stripper GETR System was permanently shut down in August 2023. The remedy selected by the 2019 RODA consists of the following elements by plume area:

Off-Site (Southern) Plume – Southern GETR System

- Added five new off-site extraction wells to address the 1,4-dioxane plume through strategic placement along the northern shoulder of State Route 20 or as approved in the remedial design.
- Connected these wells to a piping system to transport extracted water to a treatment system.
- Installed an AOP (HiPOx treatment system by APTwater LLC) treatment system, which uses ozone and hydrogen peroxide. This is referred to as the "southern system."

On-Site (Western) Plume – Western GETR System

- Use the existing extraction well network and piping infrastructure to the maximum extent possible.
- Optimize the extraction well network (maintain/add/subtract) to contain the plume. Based on the Western GETR Remedial Design, four new extraction wells will be installed and added to the existing three wells in the western plume.
- Replace the existing air-stripping tower in the northwestern portion of the site with an AOP treatment system (Navy, 2019).

The selected remedy also adds 1,4-dioxane as a COC, adds a 1,4-dioxane CUL, removes 1,1-DCA and cis-1,2-DCE from the COC list, and modifies CULs for 1,1-DCE and vinyl chloride (Navy, 2019). Changes impacting COCs and CULs are discussed in Section 5.1.

The 2019 RODA also identified per- and polyfluoroalkyl substances (PFAS) as a suite of "emerging" contaminants that have been identified in groundwater at Area 6 and are currently being evaluated separately under the CERCLA process (Navy, 2019). The Navy has completed a PFAS Preliminary Assessment/Site Inspection for Area 6. The status of PFAS investigation is included in Section 5.1.2. If the CERCLA process determines it is appropriate, the Navy will prepare a RODA to address PFAS. In addition to PFAS, there are thousands of polyfluorinated "perfluoroalkyl acids (PFAAs)

precursors," which can transform in the environment to create PFAAs. Oxidation used by the new southern and western AOP systems could cause PFAA precursors to oxidize and potentially convert to PFAAs including perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA). To evaluate the potential PFAA precursor issue, the Navy collected PFAS samples from the AOP systems during this FYR period. Results are discussed in Section 4.2.1.6. For future planning and decision-making, data will continue to be collected from the influent and effluent to determine whether the AOP systems are converting PFAA precursors to PFAAs. If necessary, the Navy will address PFAS in the effluent.

The selected amended remedy is an integrated remedy that will comprise an active treatment component (operating the AOP GETRs), monitored natural attenuation (MNA), and institutional controls (ICs). The transition from the active remedy portion to MNA/ICs (passive treatment) will occur when whichever of the active endpoint conditions presented in the RODA is met (Navy, 2019).

Prior to the transition from active to passive remediation, the Navy will validate the efficacy of MNA by doing the following to support the transition to MNA:

- Monitor plume configuration, which will include additional delineation of the southern plume, as part of the performance monitoring;
- Confirm that data trends demonstrate active treatment mass reduction; and
- Develop modeling predictions based on the data available at that time.

The Navy will validate the modeling predictions to assure that remediation goals will be achieved in a reasonable time frame using an integrated remedy approach. This validation will be subject to EPA review and concurrence as part of an updated performance monitoring plan prior to the Navy transitioning to MNA. Assuming validation of MNA, the transition to MNA may occur when the active remedy has achieved asymptotic conditions (Navy, 2019).

During this FYR period, the Navy has been conducting downgradient delineation of the southern plume in a phased approach including:

- Installation and groundwater sampling of five monitoring wells in December 2022 and January 2023, respectively (AECOM, 2022).
- Installation and groundwater sampling of two additional monitoring wells in September 2023 and October 2023, respectively (AECOM, 2023).

Vinyl chloride and 1,4-dioxane were not detected in groundwater samples from all seven monitoring wells, which are located south of West Cemetery Road and east of State Route 20 (Eurofins, 2023a, 2023b and EMAX, 2023a, 2023b). Two of the seven

monitoring wells are within 300 and 450 feet downgradient of well 6-DW-38. Based on the sampling results, the Navy is working to secure a real estate agreement to evaluate well 6-DW-38 in 2024. This agreement will include redeveloping, resurveying, inspecting with a well camera, and sampling the groundwater. The results of the downgradient delineation investigation will be formally documented and reported during the next FYR period.

3.2.2 2020 Land Use Controls Implementation Plan Update, January

An updated LUCIP (Battelle, 2020a) was developed for 22 specified areas/sites at NAS Whidbey Island. The purpose of the plan was to establish responsibilities and requirements for enforcing, implementing, inspecting, and maintaining LUCs to protect human health, the environment, and the integrity of remedies. The specific purpose of this update to the LUCIP was to:

1. Add Site EO351, Former Lake Hancock Target Range and Naval Ocean Processing Facility Coos Head, Former Tank #6 Site and their respective LUCs to the LUCIP;
2. Revise the LUCs, as needed, to ensure consistency with their applicable decision documents; and
3. Revise the LUC boundaries, as needed, to ensure consistency with their applicable guiding reference documents and Naval Installation Restoration Information Solution (NIRIS).

As stated in the LUCIP (Battelle, 2020a), the plan is reviewed annually for applicability and revised as required by NAS Whidbey Island to maintain compliance with the LUCs.

3.2.3 2020 Land Use Controls Implementation Plan Update, December

An updated LUCIP (Liberty JV, 2020) was developed for 20 specified areas/sites at NAS Whidbey Island. The purpose of the plan was to establish responsibilities and requirements for enforcing, implementing, inspecting, and maintaining LUCs to protect human health, the environment, and the integrity of remedies. The specific purpose of this update to the LUCIP was to:

1. Remove Site 42, Building 357 from the LUCIP because a No Further Action directive is pending from Ecology.
2. Create a separate LUCIP for Naval Ocean Processing Facility Coos Head, Former Tank #6 Site and attach as Appendix A to the LUCIP.

3. Update figures for each site and revise the LUC boundaries, as needed, to ensure consistency with their applicable guiding reference documents and NIRIS.

As stated in the LUCIP (Liberty JV, 2020), the plan is reviewed annually for applicability and revised as required by NAS Whidbey Island to maintain compliance with the LUCs.

3.2.4 2020 OU 1 Area 6 Well Decommissioning

Continued groundwater monitoring around the Area 6 site helps to measure the effectiveness of the GETR System. The Navy has well lease and right-of-entry agreements with various landowners for wells to continue to monitor groundwater off base. The Area 6 well lease agreement with North End Holdings, LLC facilitated the installation and continued access to two groundwater monitoring wells, 6-S-11 and 6-I-2, along the west side of Area 6. The well lease agreement was not renewed at the end of November 2020 and the Navy decommissioned the wells on the private property prior to the end of the lease (EA, 2021c).

During well decommissioning preparation, multiple attempts were made by field personnel to locate monitoring well 6-I-2, including a detailed site reconnaissance and the use of a metal detector. Monitoring well 6-I-2 was not located. Monitoring well 6-S-11 was decommissioned in accordance with Washington Administrative Code (WAC) rules and regulations, with one exception: during well decommissioning activities, it was discovered that the 6-inch security casing was cemented into an 8-inch steel casing, thus preventing over-drilling because tools could not fit between the casings. The drilling contractor obtained an approved variance from Ecology to grout the well in place. Site restoration was performed following the grouting of 6-S-11 (EA, 2021c).

3.2.5 OU 1 Area 6 Western GETR System and Landfill Cap Operation

Operation of the extraction wells, treatment plant, and recharge system is performed in accordance with the most recent version of the O&M manual (EA, 2022). The original Western air stripper GETR was permanently shut down in August 2023 for construction of the AOP system. The 2018 O&M Manual (Sealaska, 2018) was current at the start of this FYR period; the manual has been updated with minor administrative revisions three times since then (Sealaska, 2020a, EA, 2020 and EA, 2022). During this FYR period, the treatment plant operated most of the time without unscheduled interruptions and achieved the effluent-treatment discharge goals while the plant was operational (Sealaska, 2019, 2020b; EA, 2021a, 2023a). Treatment plant shutdowns during this FYR period are reviewed in this section.

The original Western GETR System includes 10 production wells, eight of which were operational when the system was active. The eight production wells that were active are

located along the west and south sides of the Area 6 landfill cap. The two wells that were not operational are PW-2 and PW-10. Use of PW-2 was terminated due to structural issues, and well PW-10 was not incorporated into the extraction system (EA, 2022).

When active, the production wells extract groundwater from within and at the downgradient end of the contaminant plumes in an attempt to halt the downgradient migration of the plumes. Contaminated groundwater is gravity-fed to the treatment plant, which consists of a holding tank and a packed-column air stripper system. Following treatment, effluent is pumped to an upgradient groundwater recharge swale. Other than during routine maintenance and repairs, and during the current shutdown for upgrades, the production wells are pumped 24 hours a day, seven days a week (EA, 2022).

The 2022 O&M manual (EA, 2022) includes a preventive maintenance schedule that includes the following activities when the system is active:

- Daily data sheet completion;
- Weekly production well vault inspections; and
- Weekly treatment plant equipment inspections.

Non-routine maintenance includes the following:

- Inspection and cleaning of the production well vault pipe;
- Cleaning of production wells and pumps;
- Changeout stripper tower packing;
- Changeout acid wash air compressor filter;
- Cleaning of treatment plant effluent pipe; and
- Cleaning of PW-8 and PW-9 effluent pipes (EA, 2022).

Western GETR System performance monitoring has been conducted and includes the following:

- Monthly sampling and analysis of VOCs in water collected from the original Western GETR System; and
- Quarterly sampling and analysis of 1,4-dioxane in water collected from the original Western GETR System.

The treatment plant water samples monitor compliance effectiveness by checking stripper tower discharge water against Ecology effluent limitations established in the ROD. The most up-to-date treatment plant sampling and analysis plan is included in the

2022 O&M Manual. Monitoring of groundwater extraction and monitoring wells at OU 1 Area 6 evaluates the plume migration, degradation, and the effectiveness of the remedy to contain and remove COCs (EA, 2022). Details of the results from this FYR period are reviewed in Section 4.2.

Inspection and maintenance of the landfill cap is conducted routinely at Area 6 (EA, 2022). Details of the activities and findings from this FYR period are reviewed in Section 3.2.5.1 through 3.2.5.5.

Production Well Operation

Routine maintenance of extraction wells during this FYR period typically included:

- Well pump and vault piping removal, inspection, and cleaning (mechanical or acid);
- Surge pumping;
- Snaking or pressure-washing vault effluent pipe;
- Adjusting flow to achieve target range;
- Flow meter cleaning; and
- Debris removal (Sealaska, 2019, 2020b; EA, 2021a, 2023a, and 2024).

Non-routine maintenance was conducted on production wells and their associated lines each year during this FYR period. Non-routine maintenance includes repairs to pumps, vault piping, electrical components, programming, or any other non-scheduled work required to maintain the wells, pumps, and influent and effluent lines, as well as any unscheduled work conducted within the well vault fenced areas. LTM contractors performed non-routine maintenance on all production wells in the system in accordance with the current O&M manual at the time of maintenance. Details of repairs and other maintenance actions performed can be found in the annual technical memoranda for the system (Sealaska, 2019, 2020b; EA, 2021a, 2023a, 2024). Other than during routine maintenance and repairs, the production well pumps were operational 24 hours a day, seven days a week until the system was permanently shut down in August 2023 for AOP upgrades. To regulate the water level in the equalization tank system, the Supervisory Control and Data Acquisition system automatically shuts off well PW-3 periodically when the equalization tank level exceeds 8 feet. PW-3 was chosen for periodic shutdown, as it is located between PW-1, which treats the source plume, and PW-5 through PW-7, which maintain plume containment. As the system ages, biofouling has been an increasing maintenance issue and has required constant attention to maintain target flow rates. The drawdown range for the Area 6 production wells was designed to be between approximately 1 and 3 feet (EA, 2023b).

Treatment Plant System

Treatment plant performance during this FYR period is reviewed in Sections 3.2.5.1 through 3.2.5.5. Discussion of the original Western GETR System groundwater sampling results is presented in Section 4.2.1.

Routine maintenance of the original Western GETR System during this FYR period typically included:

- Removal of sludge from the equalization tank;
- Lubrication of pumps, blowers, and motors;
- Bag filter cleaning;
- Acid washing of the stripper tower packing;
- Removal of debris from the containment area;
- Discharge line cleaning; and
- Control checks (Sealaska, 2019, 2020b, and EA, 2021a, 2023a, 2024).

Non-routine maintenance of the original Western GETR System during this FYR period included:

- Repair or replacement of failed components (e.g., switches, electrical contacts, motors, light fixtures);
- Evaluation of electrical hazards; and
- Addition of safety controls such as anti-slip treads and repair of plant perimeter fencing (Sealaska, 2019, 2020b, and EA, 2021a, 2023a, 2024).

Landfill Cap Maintenance

The landfill cap continued to be in good condition during this FYR period. Ongoing maintenance continued to control weed species (Scotch broom and lupine) that threaten the integrity of the cap liner. Weed control on the landfill cap, and at Area 6 in general, consists of both mechanical methods and the use of Crossbow® and Roundup® herbicides. The landfill cap and detention pond are inspected for animal damage and any holes are filled and reseeded with grass (Sealaska, 2019, 2020b, and EA, 2021a, 2023a, 2024).

3.2.5.1 2018–2019 OU 1 Area 6 Original Western GETR System and Landfill Cap Operation

During the O&M period from 01 April 2018 through 31 March 2019, production wells were maintained to continue pumping within their target range (Sealaska, 2019).

The total cumulative treatment plant influent for this period was 78,653,353 gallons. The treatment plant operated mostly without unscheduled interruptions and achieved effluent-treatment discharge goals while operational. The treatment plant was nonoperational from 01 November to 18 December 2018, due to a damaged stripper tower level sensor. Additionally, between 05 February and 15 February 2019, the treatment plant was nonoperational due to frozen sensors and gauges. (Sealaska, 2019).

During this O&M period, influent concentrations of TCE, 1,1-DCE, and vinyl chloride consistently exceeded their respective groundwater RGs. The influent concentrations of 1,1,1-TCA, 1,1-DCA, and cis-1,2-DCE remained consistently less than their respective groundwater RGs. Concentrations of VOCs in the influent were slightly decreased compared to the previous year and demonstrated a continued overall decline since the beginning of treatment plant operations in February 1995. During this O&M period, influent concentrations of 1,4-dioxane were consistent between 1.6 µg/L and 2.4 µg/L (Sealaska, 2019).

Effluent samples collected at the treatment plant show the six VOC COCs concentrations were all less than their respective RGs. The original Western GETR System was not designed to remediate 1,4-dioxane, a semivolatile organic compound, and the effluent concentration demonstrates no reduction of this COC through the system. Between April 2013 and March 2019, 1,4-dioxane concentrations were present at levels greater than the MTCA Method B CUL of 0.44 µg/L (Sealaska, 2019).

Based on the performance of the production wells and treatment plant effluent sample results, the original Western GETR System operated and performed near capacity during the April 2018 through March 2019 O&M period. Biofouling continued to be an ongoing maintenance issue throughout the production well system, piping, and treatment system components. Despite two interruptions during the performance period, the treatment plant operated as designed and achieved the effluent-treatment discharge goals for the ROD COCs (Sealaska, 2019).

The landfill cap continued to be in good condition during this O&M period. During a landfill cap inspection on 19 February 2018, an animal den was observed on the north side of the landfill cap, just above the detention pond, but it did not impact the landfill cap liner. The den was believed to be a coyote den belonging to a pregnant female that was observed in the area. Naval Facilities Engineering Command Northwest notified

NAS Whidbey Island Biologist, Mr. Michael Bianchi, who recommended the den be left alone until the coyote pups are born and the mother eventually leaves the den (Sealaska, 2019). Maintenance for the abandoned den is included in Section 3.2.5.2.

3.2.5.2 2019–2020 OU 1 Area 6 Original Western GETR System and Landfill Cap Operation

During the O&M period from 01 April 2019 through 31 March 2020, production wells were maintained to continue pumping within their target range (Sealaska, 2020a).

The total cumulative treatment plant influent for this period was 55,194,865 gallons. The treatment plant experienced multiple unscheduled interruptions. The treatment plant was nonoperational from 17 July to 18 September 2019, due the discovery of water within electrical conduits and junction boxes raising concern over electrical hazards, and the subsequent discovery of a broken bag filter pressure gauge upon attempts to restart the treatment plant on 09 September 2019. Additionally, between 03 November 2019 and 09 January 2020, the treatment plant was nonoperational due to the failure of discharge pump #2. The treatment plant was also nonoperational from 13 January 2020 to 29 January 2020 to allow Blue Mountain Electric, Inc. to perform necessary upgrades to the electrical heat trace system (Sealaska, 2020a).

During this O&M period, influent concentrations of TCE, 1,1-DCE, and vinyl chloride consistently exceeded their respective groundwater RGs, and the influent concentrations of 1,1,1-TCA remained consistently less than the groundwater RG. During this O&M period, 1,4-dioxane was present in the treatment plant influent at concentrations greater than the MTCA Method B CUL of 0.44 µg/L (Sealaska, 2020a).

Effluent samples collected at the treatment plant show the four VOC COCs concentrations were all less than their respective RGs. The effluent concentration demonstrates no reduction of 1,4-dioxane through the system. During this O&M period, effluent concentrations of 1,4-dioxane were between 1.3 µg/L and 4.1 µg/L in the treatment plant effluent, and between 1.4 µg/L and 4.0 µg/L in samples taken from the recharge swale, all above the MTCA Method B CUL of 0.44 µg/L (Sealaska, 2020a).

Based on the performance of the production wells and treatment plant effluent sample results, the original Western GETR System operated and performed near capacity during the April 2019 through March 2020 O&M period, with the exception of the shutdown periods discussed previously. Biofouling continued to be an ongoing maintenance issue throughout the production well system, piping, and treatment system components. Despite the aforementioned interruptions during the performance period, the treatment plant operated as designed and achieved the effluent-treatment RGs for

the ROD COCs, with the exception of 1,4-dioxane (which was not part of the 1993 ROD COCs).

The landfill cap remained in good condition during the O&M period. Maintenance conducted during this O&M period consisted of the following:

1. On 25 September 2019, Sealaska field staff confirmed the coyote den discovered during 2018 field activities was abandoned, then filled and reseeded the area.
2. On 03 and 07 October 2019, field staff restructured a drainage ditch to improve drainage and eliminate low spots where ponding can occur.
3. On 18 November 2019, field staff restructured rock around landfill cap outfalls along the east side of the landfill cap to improve drainage (Sealaska, 2020a).

3.2.5.3 2020–2021 OU 1 Area 6 Original Western GETR System and Landfill Cap Operation

During this O&M period from 01 April 2020 through 31 March 2021, production wells were routinely maintained to continue pumping within their target range (EA, 2021a).

The total cumulative treatment plant influent for this performance period was 67,312,382 gallons. The treatment plant operated mostly without unscheduled interruptions and achieved effluent-treatment discharge goals while operational. On 13 October and 13 November 2020, electric power for all of Whidbey Island went down due to damage from high winds. The treatment plant system was nonoperational for approximately one day for each event. Power was restored on 14 October and 14 November 2020, respectively. On 02 February 2021, electric power for a portion of Ault Field Road due to a car accident damaging overhead electrical lines. The treatment plant system was nonoperational for approximately two days as power was restored on 04 February 2020 (EA, 2021a).

During this O&M period, the influent concentrations of TCE, 1,1-DCE, vinyl chloride, and 1,4-dioxane consistently exceeded groundwater RGs of 5 µg/L, 7 µg/L, 0.029 µg/L, and 0.44 µg/L, respectively. However, concentrations of 1,1,1-TCA remained consistently less than the groundwater RG of 200 µg/L. Concentrations of TCE and 1,4-dioxane slightly increased during the 2020–2021 operational period, while concentrations of DCE and TCA slightly decreased (EA, 2021a).

During this O&M period, the effluent and swale concentrations of TCE, 1,1,1-TCA, 1,1-DCE, vinyl chloride, and 1,4-dioxane consistently did not exceed the groundwater RGs of 5 µg/L, 200 µg/L, 7 µg/L, 0.029 µg/L, and 0.44 µg/L, respectively. During this O&M period, effluent concentrations of 1,4-dioxane were consistent between 2.6 µg/L and

3.2 µg/L in the treatment plant effluent samples, and between 2.6 µg/L and 3.3 µg/L from samples collected from the recharge swale (EA, 2021a).

Based on the performance of the production wells and treatment plant effluent sample results, the original Western GETR System operated and performed near capacity during the April 2020 through March 2021 performance period. Biofouling continued to be an ongoing maintenance issue throughout the production well system, piping, and treatment system components. Despite a couple of short interruptions due to power outages during this performance period, the treatment system operated as designed and achieved the effluent-treatment discharge goals for the ROD COCs (EA, 2021a).

The landfill cap continued to be in good condition during this performance period. No additional maintenance was performed during this O&M period (EA, 2021a).

3.2.5.4 2021–2022 OU 1 Area 6 Original Western GETR System and Landfill Cap Operation

During this O&M period from 01 April 2021 through 31 March 2022, production wells were routinely maintained to continue pumping within their target range (EA, 2023a).

The total cumulative treatment plant influent for this performance period was 79,832,824 gallons. The treatment plant operated mostly without unscheduled interruptions and achieved effluent-treatment discharge goals while operational. The treatment plant was shut down from 0745 to 1100 on 01 July 2021 to allow Puget Sound Energy to service the transformer (EA, 2023a).

VOC concentrations continue to decline since the beginning of treatment plant operations in February 1995. During this O&M period, the influent concentrations of TCE, 1,1-DCE, vinyl chloride, and 1,4-dioxane consistently exceeded groundwater RGs of 5 µg/L, 7 µg/L, 0.029 µg/L, and 0.44 µg/L, respectively. However, concentrations of 1,1,1-TCA remained consistently less than the groundwater RG of 200 µg/L. Concentrations of TCE and 1,4-dioxane slightly increased during the O&M period while concentrations of DCE and TCA slightly decreased (EA, 2023a).

VOC concentrations continued to decline in the effluent and swale samples. During the O&M period, the effluent and swale concentrations of TCE, 1,1,1-TCA, 1,1-DCE, and vinyl chloride consistently did not exceed their groundwater RG of 5 µg/L, 200 µg/L, 7 µg/L, and 0.029 µg/L, respectively. The 1,4-dioxane concentrations in the effluent and swale samples exceeded the groundwater RG of 0.44 µg/L during the quarterly sampling results in April, July, October, and January. During this O&M period, effluent concentrations of 1,4-dioxane were consistent between 2.2 µg/L and 3.3 µg/L in the treatment plant effluent samples, and between 1.3 µg/L and 3.3 µg/L from samples collected from the recharge swale (EA, 2023a).

Based on the performance of the production wells and treatment plant effluent sample results, the original Western GETR System operated and performed near capacity during the April 2021 through March 2022 performance period. Biofouling continued to be an ongoing maintenance issue throughout the production well system, piping, and treatment system components. Despite a couple short interruptions due to power outages during this performance period, the treatment system operated as designed and achieved the effluent-treatment discharge goals for the ROD COCs (EA, 2023a).

The landfill cap continued to be in good condition during this performance period. No additional maintenance was performed during this O&M period (EA, 2023a).

3.2.5.5 2022–2023 OU 1 Area 6 Original Western GETR System and Landfill Cap Operation

During this O&M period from 01 April 2022 through 31 March 2023, production wells were routinely maintained to continue pumping within their target range (EA, 2024).

The total cumulative treatment plant influent for this performance period was 65,833,465 gallons. The treatment plant operated mostly without unscheduled interruptions and achieved effluent-treatment discharge goals while operational. There was a non-routine maintenance event due to a malfunctioning pressure transmitter that caused the treatment plant to be offline between August – September 2022.

VOC concentrations continue to decline since the beginning of treatment plant operations in February 1995. During this O&M period, the influent concentrations of TCE, 1,1-DCE, vinyl chloride, and 1,4-dioxane consistently exceeded groundwater RGs of 5 µg/L, 7 µg/L, 0.029 µg/L, and 0.44 µg/L, respectively. However, concentrations of 1,1,1-TCA remained consistently less than the groundwater RG of 200 µg/L. Concentrations of DCE and 1,4-dioxane slightly decreased during the 2022–2023 operational period, while concentrations of TCE, vinyl chloride and TCA fluctuated and remained generally stable (EA, 2024).

VOC concentrations continue to decline in the effluent and swale samples. During the O&M period, the effluent and swale concentrations of TCE, 1,1,1-TCA, 1,1-DCE, vinyl chloride, and 1,4-dioxane consistently did not exceed the groundwater CULs of 5 µg/L, 200 µg/L, 7 µg/L, 0.029 µg/L, respectively. The 1,4-dioxane concentrations in the effluent and swale samples exceeded the groundwater RG of 0.44 µg/L during the quarterly sampling results in May, October, November, and February (EA, 2024).

During this O&M period, effluent concentrations of 1,4-dioxane were consistent between 2.3 µg/L and 3.4 µg/L in the treatment plant effluent samples, and between 1.2 µg/L and 3.2 µg/L from samples collected from the recharge swale (EA, 2024).

Based on the performance of the production wells and treatment plant effluent sample results, the original Western GETR System operated and performed near capacity during the April 2022 through March 2023 performance period. Biofouling continued to be an ongoing maintenance issue throughout the production well system, piping, and treatment system components. The treatment system operated as designed and achieved the effluent-treatment discharge goals for the ROD COCs, despite a few system outages due to transmitter malfunctions during this performance period (EA, 2024).

The landfill cap continued to be in good condition during this performance period. No additional maintenance was performed during this O&M period (EA, 2024).

3.2.6 OU 1 Area 6 and OU 5 Area 31 Groundwater Long-Term Monitoring

OU 1 Area 6 groundwater LTM data included in this FYR period were collected between November 2018 and August 2023. The monitoring results presented in this report provide an evaluation of the movement of contaminant plumes generated from sources within Area 6 and the effectiveness of the original Western GETR System and the new Southern GETR System. Additionally, Section 4.2.1 describes the results of further investigation to delineate the extent of the 1,4-dioxane plume within the existing Western and Southern GETR Systems discharge areas. Section 4.2.1 summarizes the methods and results associated with sample collection and evaluates whether the remedies remain effective and are progressing toward the endpoint criteria specified in the relevant ROD during this FYR period.

Groundwater monitoring has been conducted at OU 5 Area 31 at various monitoring wells and for various analytes since the shutdown of the soil venting and product recovery systems in 2000. The current groundwater monitoring program includes five monitoring wells (MW31-34, MW31-9A, OWS-1, OWS-3, and WI-AF-MW-635) that are sampled for benzene, naphthalene, and vinyl chloride; TPH as diesel, gasoline, and residual range organics; and total and dissolved manganese analysis (EA, 2024). Section 4.2.4 summarizes groundwater COC exceedances of their respective RG and the status of natural attenuation during the 2022–2023 annual report.

3.2.7 Construction and Operation of the OU 1 Area 6 Southern GETR System

The Southern GETR System was designed and constructed to capture off-site migration of the groundwater contaminant plume south of Area 6. The installed Southern GETR System extracts a maximum combined 200 gallons per minute of groundwater, with the objective of treating groundwater containing 1,4-dioxane and vinyl chloride at levels exceeding RGs. Using well pumps strategically placed along the migration of the

chemical plume, the groundwater is pressurized and transported on site to a centrally located treatment plant for processing. The treatment plant uses AOP HiPOx to remove contaminants, including the targeted 1,4-dioxane and vinyl chloride. The treated water discharges to the ground surface via a rock-lined outfall into a reinforced swale before being directed to a vegetated area where the original Western GETR System water is also discharged (AGVIQ, 2022).

Construction took place from July 2020 to October 2021. Startup sampling was conducted in August and September 2021. On 09 September 2021, the system was started and samples were taken at the influent, effluent, service water pump, and frac tanks. Some of the early sample results yielded lower than anticipated 1,4-dioxane influent results than the system was designed and built for, so additional sampling was conducted to optimize the system performance. As the system performance was proven, the discharge was switched to the surface water swale; on 06 October 2021 during the first hours of discharge, a sample was taken at the swale. 1,4-Dioxane was not detected at or above the laboratory reporting limits, which confirmed system performance objectives were met (AQVIQ, 2022). Section 4.2.1 contains treatment system evaluation results.

3.2.7.1 Operation and Maintenance October 2021 through September 2022

According to the RPM, AGVIQ operated and maintained the Southern GETR System from October 2021 until October 2022 when the system operation transferred to a different contractor. Operation issues included:

- Flooding of the well vaults during the winter, which was resolved by adding a waterproof membrane during summer 2022;
- Biofouling of the bag filters, which was resolved by using stainless steel mesh inserts instead of bag filters; and
- Biofouling of the well pumps, which was being analyzed by AGVIQ and the next contractor during the system operation transfer (AGVIQ, 2024).

According to the RPM, system influent and effluent were sampled on a weekly basis for the first six months of operation (October 2021 through March 2022), and monthly thereafter to demonstrate effectiveness of the GETR. Samples were analyzed for VOCs and 1,4-dioxane by SGS North America Inc. (SGS) of Orlando, Florida, and Eurofins of Fife, Washington. As discussed in Section 3.2.1, PFAS are being analyzed to evaluate for PFAA precursors and PFAS is not a ROD Amendment COC. PFAS were analyzed by SGS for Southern GETR system samples collected during this FYR period (AGVIQ, 2024). Results are discussed in Section 4.2.1.6.

RODA RGs were met in the effluent samples. According to the Navy RPM, the PFAS results do not demonstrate a PFAA precursor issue with the Southern GETR operation (AGVIQ, 2024). The technical memoranda with this information are forthcoming and anticipated to be referenced in the final version of this report.

3.2.8 PFAS Investigations at Ault Field (including Area 6)

PFAS are compounds found in a variety of commercial and industrial sources and have been widely used since the 1970s, including in the generation of aqueous film-forming foam (AFFF), which was utilized by the Navy for fire training exercises, fire suppression systems, and suppressing aircraft fires or other fires. The first firefighting foam containing PFAS was marketed by the 3M Corporation in 1964, and the Military Specification for AFFF (MIL-F-24385) was first issued in late 1969 (CH2M, 2018). AFFF suppresses combustion by coating the fuel source of the fire and subsequently preventing oxygen from entering. AFFF may have been used, stored, disposed of, or released at areas located within Ault Field during historical operations.

3.2.8.1 PFAS Preliminary Assessment

A Preliminary Assessment (PA) was performed from October through December 2017 (CH2M, 2018) to:

1. Identify locations related to the potential use, storage, and disposal of AFFF;
2. Provide initial overview of potential contaminant migration pathways from areas where AFFF was potentially used and identify potential receptors that may be exposed; and
3. Provide recommendations for areas requiring further investigation.

The PA report identified 39 areas that were evaluated for potential PFAS releases, eight of which were CERCLA sites included in this Sixth FYR. Based on background research, interviews, and visits to Ault Field, one of those CERCLA sites was recommended for no further action (OU 2 Area 4 Walker Barn Storage Area) and seven were recommended for further evaluation:

- OU 1 Area 6 Landfill Operations Area and Former Hazardous Waste Storage Area,
- OU 2 Area 2 Western Highlands Landfill,
- OU 2 Area 3 1969-to-1970 Landfill,
- OU 2 Area 14 Pesticide Rinsate Disposal Area,

- OU 2 Area 29 Clover Valley Fire School,
- OU 3 Area 16 Runway Ditches, and
- OU 5 Area 31 Former Runway Fire School (CH2M, 2018).

3.2.8.2 Phase 1 Site Inspection – Ault Field (not including Area 6)

An expedited site inspection (SI) for groundwater sampling was conducted at Hangar 5, Area 16, and Area 31 in 2015 (MMEC Group, 2016). The work included groundwater collection and analysis for PFAS, specifically PFOA and PFOS at Hangar 5 and Areas 16 and 31. Groundwater was sampled from five monitoring wells within these three areas in September 2015.

A Phase 1 SI was completed in 2018 near the eastern and southwestern boundaries of Ault Field, with a focus on collecting groundwater samples from existing groundwater wells in potential source areas (Areas 2 and 3) and information to support the long-term solutions for two residential parcels near Ault Field, where PFAS have been detected in drinking water above 70 nanograms per liter (ng/L) PFOS and PFOA, individually or combined (CH2M, 2019).

Field activities included monitoring well installation, soil sample collection, groundwater sample collection, groundwater level survey, and archaeological survey. Soil and groundwater samples were analyzed by EPA Modified Method 537 which included PFOA, PFOS, perfluorobutane sulfonic acid (PFBS), and 11 other PFAS compounds (CH2M, 2019).

3.2.8.2.1 Soil Sampling Results at CERCLA Sites

Soil samples were collected at varying intervals during borehole advancement for monitoring well installation of MW-605 through MW-615. All soil samples were non-detect for PFBS and PFOS. PFOA was detected in one sample (SB606-0001) from 0 to 1 foot below ground surface at a concentration of 0.163 nanograms per gram (ng/g). At the time of sampling, project action levels (PALs) did not exist for PFOA in soil (CH2M, 2019).

3.2.8.2.2 Groundwater Sampling Results at CERCLA Sites

Eleven groundwater wells were installed between 06 January 2018 and 23 February 2018, ranging in depth from approximately 55 to 170 feet below ground surface. Groundwater samples were collected from 17 preselected existing groundwater monitoring wells and all newly installed wells between 13 February 2018 and 01 March 2018. None of the new groundwater wells had exceedances of the groundwater PAL for PFOS and PFOA (70 ng/L, individually or combined), or PAL for

PFBS (380,000 ng/L) at the time of sampling in 2018. Ten groundwater samples were collected from 10 existing wells at Areas 2 and 3 (MW-N2-7S, MW-201, N2-6C, MW-200, MW-N3-12, MW-114, MW-202, N2-5, MW-204, and MW-3), with concentrations up to 29,200 ng/L and 3,010 ng/L of PFOS and PFOA, respectively. All existing groundwater well sample results exceeded 70 ng/L for PFOS and PFOA, individually or combined (CH2M, 2019).

None of the groundwater samples exceeded the PAL for PFBS. Although the samples were collected from existing wells at Areas 2 and 3, the Navy concluded that the exceedances are the result of past AFFF releases at the Current Fire Training Area located near Areas 2 and 3 (CH2M, 2019).

3.2.8.2.3 Phase 1 SI Recommendations

The Phase 1 SI recommended that additional groundwater data and lithologic information be collected at all Ault Field sites to determine whether PFAS sources on Ault Field, such as the Current Fire Training Area, hangars and runways, have impacted the former drinking water wells at Residence 1 and 2. In addition, the results from the Phase 1 SI demonstrated that a remedial investigation (RI) was warranted at the Current Fire Training Area (including the wells with detections above 70 ng/L PFOS and/or PFOA at Areas 2 and 3) (CH2M, 2019).

3.2.8.3 Phase 2 Site Inspection – Ault Field

The Navy performed a Phase 2 SI at NAS Whidbey Island, Ault Field (CH2M, 2021) to evaluate the presence of PFAS in soil and groundwater at 30 of the 35 potential source areas identified in the PA for Ault Field (CH2M, 2018). The following CERCLA sites were included in the 30 potential source areas investigated in this Phase 2 SI:

- OU 2 Area 14 Pesticide Rinsate Disposal Area,
- OU 2 Area 29 Clover Valley Fire School, and
- OU 3 Area 16 Runway Ditches (CH2M, 2021).

Field activities during the Phase 2 SI consisted of installing new monitoring wells, sampling existing and newly installed monitoring wells, soil boring sampling, collecting grab groundwater samples at selected soil boring locations, and a groundwater level survey (CH2M, 2021).

3.2.8.3.1 Soil Sampling Results at CERCLA Sites

The laboratory analytical results for soil samples collected during the Phase 2 SI showed no detection of PFOA or PFBS in any sample, and detections of PFOS were all below the PAL (130 ng/g) at the time of sampling (DoD, 2019; CH2M, 2021).

3.2.8.3.2 Groundwater Sampling Results at CERCLA Sites

All groundwater results were below the PFBS PAL (600 ng/L) at the time of sampling (CH2M, 2021).

PFOS was detected below the PAL (40 ng/L) at the time of sampling at OU 2 Area 14 Pesticide Rinsate Disposal Area, up to 5.21 ng/L, and PFOS was detected in a groundwater sample from the OU 2 Area 29 Clover Valley Fire School at 0.99 ng/L. PFOS was detected above the PAL (40 ng/L) at the time of sampling in three groundwater samples from the OU 3 Area 16 Runway Ditches, up to 564 ng/L (CH2M, 2021).

PFOA was detected below the PAL (40 ng/L) at the time of sampling at the OU 2 Area 14 Pesticide Rinsate Disposal Area, up to 12.7 ng/L, and PFOA was not detected in the groundwater samples from the OU 2 Area 29 Clover Valley Fire School. PFOA was detected above the PAL (40 ng/L) at the time of sampling in three groundwater samples from the OU 3 Area 16 Runway Ditches, up to 238 ng/L (CH2M, 2021).

3.2.8.3.3 Phase 2 SI Recommendations for CERCLA Sites

Soil and groundwater samples collected at OU 2 Area 14 and OU 2 Area 29 did not exceed the PFAS PALs. Therefore, no further investigation is planned for OU 2 Area 14 and OU 2 Area 29 (CH2M, 2021).

Groundwater samples collected from the OU 3 Area 16 Runway Ditches exceeded the PAL for PFOS and PFOA. Therefore, further investigation was recommended for OU 3 Area 16 (CH2M, 2021). An Airfield RI for PFAS, which includes OU 3 Site 16, was awarded in summer 2023 and planning is underway as of this FYR.

3.2.8.4 Evaluation of PFAS, 1,4-Dioxane, and Vinyl Chloride (VC) in Groundwater and Drinking Water, Area 6

Section 4.2.1 discusses the results of routine groundwater monitoring at Area 6 for the presence of 1,4-dioxane and VOCs (Sealaska, 2018). The Navy conducted additional investigation in two phases that took place between February 2018 and April 2019 to:

- Determine the presence of PFAS and PFAS precursors in on-base groundwater at OU 1 Area 6, based on recommendation to assess whether oxidation of PFAA precursors would be an issue at the site (Navy, 2019);
- Evaluate the distribution of PFAS in off-base drinking water and groundwater (if detected on base); and
- Evaluate the distribution of known on-base contaminants 1,4-dioxane and vinyl chloride in off-base drinking water and groundwater (CH2M, 2020).

The OU 1 Area 6 Field investigation activities included three stages:

1. On-base groundwater monitoring well and Western GETR System sampling;
2. Phase 1 off-base drinking and groundwater well sampling; and
3. Phase 2 off-base drinking and groundwater well sampling.

Only the sampling conducted within the OU 1 Area 6 boundary will be discussed in this FYR. A summary of the complete investigation is presented in the technical memorandum (CH2M, 2020).

3.2.8.4.1 On-Base Groundwater Monitoring Well and Treatment System Sampling

The first of three stages of the Area 6 field investigation included sampling 13 existing, on-base groundwater monitoring wells and the original Western GETR System influent and effluent, to determine whether PFAS is present at the site. Stages 2 and 3 of this work focused on off-base drinking water and groundwater well sampling, and included analysis of vinyl chloride and 1,4-dioxane, as well as PFAS compounds (CH2M, 2020). Results from Stage 1 are reviewed in this section.

PFBS was detected in groundwater samples from 21 locations, up to 62.5 ng/L, below the PAL (400,000 ng/L) at the time of the sampling. PFOS was detected in groundwater samples from five locations up to 5.6 ng/L, below the PAL (70 ng/L) at the time of sampling. None of the groundwater monitoring well or original Western GETR System influent and effluent samples exceeded the PAL for PFOS.

PFOA was detected in samples from 17 locations, up to 96.9 ng/L, with one sample above the PAL (70 ng/L) at the time of sampling. None of the original Western GETR System influent and effluent samples exceeded the PAL for PFOA (CH2M, 2020).

3.2.8.4.2 Conclusions

PFOA exceeded 70 ng/L in one on-base groundwater monitoring well located in the former industrial waste disposal area. As a result, further investigation of the PFAS source(s) and migration pathways for OU 1 Area 6 was recommended (CH2M, 2020), including an off-base drinking water investigation and an on-base RI for PFAS. The PFAS RI is currently ongoing at OU 1 Area 6.

Based on the findings in Stages 2 and 3 of this investigation, the concentrations and spatial distribution of vinyl chloride and 1,4-dioxane in groundwater monitoring wells was consistent with the footprint of the VOC and 1,4-dioxane groundwater plumes based on data collected as part of the LTM program for OU 1 Area 6 (CH2M, 2020) (Section 4.2.1).

3.2.8.5 OU 5 Area 31 Former Runway Fire School PFAS RI

The Airfield RI, which includes OU 5 Area 31, was awarded in summer 2023 Planning is underway as of this FYR. Results and conclusions will be presented in the RI report and reviewed in the next FYR.

3.2.9 PFAS Investigations at Seaplane Base

3.2.9.1 Preliminary Assessment

The Navy conducted a PA at the NAS Whidbey Island Seaplane Base (Figure 1-1) to identify locations where PFAS may have been released into the environment and to provide an initial assessment of possible migration pathways and potential receptors of contamination. Specific objectives were to:

- Identify locations related to the potential use, storage, and disposal of AFFF;
- Provide an initial overview of potential contaminant migration pathways from areas where AFFF was potentially used and identify potential receptors that may be exposed; and
- Provide recommendations for areas requiring further investigation (CH2M, 2018).

The PA report identified six areas that were evaluated for potential PFAS releases, two of which were CERCLA sites included in this Sixth FYR (OU 4 Area 44, Seaplane Base Nose Hangar, and OU 4 Area 49 Seaplane Base Landfill). Based on background research, interviews, and visits to the Seaplane Base, both of those CERCLA sites were

recommended for no further investigation at this time. The rationale for these decisions was as follows:

- OU 4 Area 44, Seaplane Base Nose Hangar: Building was demolished prior to the formal issue of Military Specification for AFFF (MIL-F-24385) in late 1969; and
- OU 4 and Area 49 Seaplane Base Landfill: Closed prior to the formal issue of Military Specification for AFFF (MIL-F-24385) in late 1969 (CH2M, 2018).

Two of the six sites evaluated in the PA were the Fire Station (Building 16) and the Seaplane Base Sanitary Wastewater Treatment Plant, neither of which was found to have the potential for PFAS release. Two additional sites were recommended for further evaluation as discussed below.

3.2.9.2 Site Inspection Report

The Navy conducted an SI (CH2M, 2023), to evaluate the presence or absence of PFAS in soil and groundwater at levels that pose potential risks to human health and the environment at two sites, Building 18 and the Biosolids Land Application Area, which are the two potential source areas identified in the PA (CH2M, 2018) for NAS Whidbey Island Seaplane Base (Figure 1-1). However, these two sites are not CERCLA sites and are not included in this Sixth FYR.

3.2.10 Interim Removal Action for Drinking Water near Ault Field (including Area 6)

An interim removal action/NTCRA was completed for drinking water property owners affected by PFAS adjacent to Ault Field (including Area 6). The interim action was to replace the drinking water supply for residents who have drinking water wells with PFOA and PFOS concentrations, individually or combined, above the 2016 EPA lifetime drinking water health advisories of 70 ng/L for these contaminants (CAPE-ER JV LLC, 2023).

The interim removal action consisted of the following:

- Designing and constructing the necessary components to connect Ault Field Residence 1 to a new, deeper well not affected by PFAS;
- Connecting Ault Field Residence 2 to the nearest public water supply; and
- Connecting 24 homes associated with six impacted wells to the City of Oak Harbor's water distribution system.

The action also included disconnecting the homes from the impacted drinking water wells and decommissioning former drinking water wells where requested by the homeowner. Former drinking water wells that were not decommissioned can only be used for non-potable purposes. All work was completed by June 2022 (CAPE-ER JV LLC, 2023).

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4.0 Five-Year Review Process

Section 4 describes the FYR process at each of the sites for the following categories:

- Community notification, involvement, and interviews;
- Data review, and
- FYR site inspections.

Data review addresses LTM and non-LTM data collected at each OU where samples were collected this FYR period. LTM sampling locations are shown on Figures 4-1 through 4-6 for OU 1 Area 6 and Figure 4-10 for OU 5 Area 31. The sample locations and results for the investigation conducted at OU 2 Areas 2/3 are shown on Figure 4-7.

4.1 Community Notification, Involvement, and Interviews

There are specific requirements pursuant to CERCLA Section 117(a), as amended, for certain reports to be released to the public and for the public to be notified of proposed cleanup plans and remedial actions. The Navy's public or community notification and involvement activities related to NAS Whidbey Island are described in Sections 4.1.1 through 4.1.3.

4.1.1 History of Community Involvement

Community involvement activities have established communication between the citizens living near NAS Whidbey Island, other interested organizations and agencies, the Navy, EPA, and Ecology. The actions taken to satisfy the statutory community involvement requirements have also provided a forum for citizen involvement and input on remedial action activities.

Community involvement activities included the following:

- Periodic meetings of the Technical Review Committee and the Restoration Advisory Board (RAB), which replaced the Technical Review Committee in February 1994;
- Development of a community involvement plan (CIP);
- Posting publications/information on the RAB website; and
- Local newspaper and website notifications.

The RAB is a forum of stakeholder groups that meet on Whidbey Island on a regular basis to discuss environmental restoration at a specific property or site that is either currently or formerly owned by the Department of Defense, and where the Department

of Defense has the responsibility to oversee the environmental restoration process. The RAB has included stakeholder groups or representatives from the Navy, EPA, Ecology, and Island County Public Health, as well as civic, private, city government, and environmental activist groups. The RAB meetings have always allowed two-way communication of information and concerns between the affected community, regulatory agencies, and the Navy. Members of the community are always invited to these meetings via local newspaper notifications. Meeting times and locations are announced in the *Whidbey News Times* and *South Whidbey Record* approximately two weeks prior to each meeting. Meeting topics include the State Petroleum Cleanup Program, Military Munitions Response Program, and the CERCLA program. In addition to the meetings, the Navy is currently developing a procedure to have the RAB involved in the review and comment process for NAS Whidbey Island environmental restoration documents.

A community relations plan (CRP) was developed in 1986 and updated in 1991, 1995, and 2010. The purpose of the CRP was to facilitate two-way communication between the surrounding community and the Navy and to encourage community involvement and understanding of ongoing environmental restoration activities at NAS Whidbey Island. Interviews with community members were included as part of the CRP to assess the Navy's performance on its community involvement efforts. Section 4.1.2 discusses the implementation of a CIP, which will replace the CRP.

The Navy also utilizes its NAS Whidbey Island RAB website to announce upcoming RAB meetings and activities and to post NAS Whidbey Island environmental restoration documents for members of the community.

4.1.2 Community Involvement during the Five-Year Review Period

The Navy hosted RAB meetings periodically during this FYR period, in April 2019, October 2019, May 2021, November 2021, February 2023, and October 2023. The COVID-19 pandemic affected the usual spring and fall meeting timing. The May 2021, November 2021, and February 2023 meetings were conducted virtually, and the October 2023 meeting was a hybrid meeting (virtual and in-person options for attendance). During these RAB meetings, specific environmental restoration activities and issues, such as groundwater and drinking water sampling results, were discussed with the public. In the future, RAB meetings are anticipated to occur twice a year.

On 31 August 2022, the Navy conducted a RAB tour of NAS Whidbey Island sites with RAB members and regulatory stakeholders.

The Navy was updating the CRP in 2019. Based on comments from the EPA, the Navy determined that the CRP format was obsolete and a CIP would be required. The Navy

has awarded the CIP to be prepared following current EPA format. Preparation began in November 2023. The CIP will continue to facilitate two-way communication between the surrounding community and the Navy to encourage community involvement and understanding of ongoing environmental restoration activities. The CIP is anticipated complete in summer 2024. A public notice was made available by newspaper in the *Whidbey News Times* on 16 August and 23 August 2023, and in the *South Whidbey Record* on 19 August and 26 August 2023, informing the public of the Navy's intent to conduct this Sixth FYR for NAS Whidbey Island OUs 1 through 5 and inviting the public to submit any comments to the Navy. The proof of publication documents is available in Appendix A. A Notice of Completion for this Sixth FYR will be published upon finalization of the document.

4.1.3 Interviews during the Five-Year Review Period

As part of the FYR process, interviews were conducted with persons familiar with the CERCLA actions at NAS Whidbey Island. Interview candidates were identified from a variety of organizations and groups, including the Navy, Navy contractors, and RAB and community members of Whidbey Island. A set of interview questions tailored to specific categories of interview candidates (i.e., either Navy personnel/contractor or community member) and instructions were transmitted to interview candidates via email in November 2023. Not all those interview candidates invited to participate chose to do so. The complete interview questionnaires are provided as Appendix B. Highlights of the Navy personnel and community member interviews are summarized below.

Navy Personnel. Two Navy staff and three Navy contractors completed the interview form. Their completed questionnaires are provided in Appendix B. The names, organization, and role of the Navy respondents are listed in Table 4-1.

Table 4-1. Sixth FYR Navy/Navy Contractor Interview Respondents

Name	Organization	Role
Steve Skeehan	*NAVFAC Northwest*	*Navy Technical Representative*
Greg Burgess	*AECOM*	*Navy Contractor*
Jennifer Madsen	*Jacobs*	*Navy Contractor*
Camille Warren	*EA Engineering, Science, and Technology, Inc., PBC*	*Navy Contractor*
Laura Muhs	*NAS Whidbey Island*	*Installation Environmental Program Director*

All Navy and Navy contractor interviewees agreed that, for the OUs familiar to them, the Navy is effectively implementing the selected remedies. None of the Navy or Navy contractor interviewees responded that there have been any changes to site conditions, land ownership, or recent work that would impact the effectiveness of any component of the selected remedies. The Navy and Navy contractor interviewees responded that the

2019 RODA, which was necessary to address 1,4-dioxane contamination in groundwater at OU 1 Area 6, has been implemented successfully.

Interviewees identified PFAS as an emerging concern. They mentioned that the Navy is currently evaluating PFAS across the installation. However, PFAS compounds are not currently identified as COCs, and they believed that the groundwater remediation system at OU 1 Area 6 will need to be modified to treat PFAS concentrations in groundwater. Also, the Navy and Navy contractor interviewees are aware of the community's concern regarding PFAS migration from the NAS Whidbey Island and multiple comprehensive RIs as well as an interim removal action/NTCRA for off-base drinking water impacts are planned or underway to address these issues.

The Navy and Navy contractor interviewees responded that the coastal erosion protection system is sufficient to withstand the anticipated increased storm surges due to sea-level rise.

Major accomplishments noted by the Navy and Navy contractor interviewees were no LUC violations; the construction and effective functioning of the new Southern GETR System and groundwater wells; and that the construction of the redesigned Western GETR System is well underway. They also mentioned that the additional monitoring well sampling at OU 5 Area 31 has shown no spread of COCs in the area. There were no known issues with meeting the current requirements of the remedies.

Community Members. Two community members responded to the interview questionnaire. The completed questionnaires are provided in Appendix B.

Both community members stated that they were familiar with the areas because they were members of the RAB and have attended public presentations. Regarding the remedy implementation at OU 1 Area 6, one respondent felt that the Navy's response to the groundwater contamination was excellent in the southern direction but that the community should be better informed about the progress of the remediation effort on the western migration of the groundwater plume.

Regarding community concerns, one respondent noted that they received a few negative responses from residents north of NAS Whidbey Island about the PFAS response. The other respondent expressed concern that the Navy has not been forthcoming about the effect of the gallery golf course well reactivations on contaminant migration in the aquifer. They mentioned that the initial concern over the remedy implementation at the OUs has subsided. One respondent noted that when the new PFAS standards are published, more town halls may be helpful to explain what that will mean for the surrounding community.

4.2 Data Review

4.2.1 Monitoring Results from OU 1 Area 6

The following section provides an overview of the groundwater monitoring program for the OU 1 Area 6 landfill site during this FYR period. Data included in this FYR period was collected between November 2018 and August 2023. The monitoring results presented in this report provide an evaluation of the movement of contaminant plumes generated from sources within Area 6 and the effectiveness of the original Western GETR System and the new Southern GETR System. Additionally, this section describes the results of further investigation to delineate the extent of the 1,4-dioxane plume within the existing Western and Southern GETR System discharge areas. This section summarizes the methods and results associated with sample collection and evaluates whether the remedies remain effective and are progressing toward the endpoint criteria specified in the relevant ROD during this FYR period.

The groundwater monitoring and treatment plant data were reviewed and evaluated based on the results presented in the past five annual long-term groundwater monitoring reports (Sealaska, 2020b, 2020c; EA, 2021b, 2023b, 2024). Appendix C provides the cumulative analytical results for the data discussed in this section.

4.2.1.1 Overview of Groundwater Monitoring Program and Site Conditions

As introduced in Section 3.2.6, the current groundwater monitoring program includes 44 wells (eight production wells, 35 monitoring wells, and one domestic well) sampled on a semiannual basis. At OU 1 Area 6, groundwater contamination is predominantly contained within the shallow aquifer in two distinct plumes (Sealaska, 2020b, 2020c; EA, 2021b, 2023b, 2024):

1. A western plume containing chlorinated VOCs appearing to originate from the Former Industrial Waste Disposal Area and extending south along the western boundary of the sites.
2. A southern plume, consisting of vinyl chloride and 1,4-dioxane, which extends off site to State Route 20 where contaminants potentially originate from the capped landfill and have migrated south past the landfill boundary prior to the operation of the groundwater treatment system.

The primary groundwater flow direction in the shallow aquifer is to the south beneath the OU 1 Area 6 landfill, and then south-southeast once the flow is south of the landfill. Figure 4-1 illustrates the groundwater elevations at specific wells and resulting potentiometric surface and groundwater flow directions in September 2018 and February 2023 (i.e., the duration of this FYR period). As shown in Figure 4-1,

groundwater elevations fluctuate between the summer (September 2018) and winter (February 2023) sampling events; however, the overall potentiometric surface and groundwater flow direction remains consistent (i.e., towards the south and south-southeast across the site). The average horizontal hydraulic gradient in the shallow aquifer is approximately 0.0055 feet per foot, which is consistent with previous calculations (which ranged between 0.005 foot/foot to 0.0055 over the FYR period) (Sealaska, 2020b, 2020c; EA, 2021b, 2023b, 2024).

WAC 173-160-171.3.b.vi prohibits the drilling or installation of wells within 1,000 feet of a landfill. Wells should not be drilled within these areas unless a variance is obtained from Ecology. In addition to the OU 1 Area 6 landfill, there is the OU 1 Area 5 landfill to the north and City of Oak Harbor landfill directly to the south. These three landfills combined create a 1,000-foot buffer or exclusion area around the southeastern portion of Ault Field. No wells can be drilled or installed in this area without a variance from Ecology. Appendix D presents this 1,000-foot exclusion area contour at Ault Field due to the OU 1 Area 6, OU 1 Area 5, and City of Oak Harbor landfills, as present in the Island County Public Health Hydrogeology Data System.

4.2.1.2 Groundwater Remediation Goals and Contaminant Plumes

Currently, groundwater samples are collected and analyzed for TCE, 1,1,1-TCA, 1,1-DCE, vinyl chloride, and 1,4-dioxane because concentrations continue to exceed their respective ROD CULs (hereafter referred to as RGs) as presented in the RODA. The RGs for each COC are listed below:

- TCE – 5 micrograms per liter (µg/L);
- 1,1,1-TCA – 200 µg/L;
- 1,1-DCE – 7 µg/L;
- Vinyl chloride – 0.029 µg/L; and
- 1,4-Dioxane – 0.44 µg/L.

The retired COCs 1,1-DCA and cis-1,2-DCE are not included in this list because were formally removed as OU 1 Area 6 COCs in the RODA (Navy, 2019). Figures 4-2 through 4-6 illustrate the contaminant plumes for TCE, 1,1,1-TCA, 1,1-DCE, vinyl chloride, and 1,4-dioxane, respectively, in September 2018 and February 2023.

The TCE groundwater plume is contained along the western boundary of the site and between September 2018 and February 2023 and the areal extent of the plume appears to have remained constant (Figure 4-2). TCE concentrations exceeding the ROD CUL of 5 µg/L extend from the former source area (i.e., Former Industrial Waste Disposal Area) to extraction well PW-5. TCE concentrations immediately cross-gradient

(i.e., 6-S-25 and PW-6) and downgradient (i.e., 6-S-27) of PW-5 have been consistently non-detect, delineating the southern or downgradient extent of the plume and demonstrating that the plume does not extend beyond the southern boundary of the site. These data also demonstrate the TCE groundwater plume has been captured by the extraction wells, particularly PW-5, which is positioned to intercept the groundwater plume at the southern boundary. TCE concentrations within the Former Industrial Waste Disposal Area (i.e., at N6-37) have decreased from a maximum of 480 µg/L in September 1995 to 8 µg/L in February 2023 (see Appendix C, Table C-1).

1,1,1-TCA concentrations were above the RG of 200 µg/L in well 6-S-6 during five sampling events during this FYR period and concentrations were equal to the RG in well 6-S-25 in September 2020. All other wells had 1,1,1-TCA concentrations below the RG for all other sampling events during this FYR period. Both wells 6-S-6 and 6-S-25 are located along the western boundary of the site (Figure 4-3). 1,1,1-TCA concentrations at well 6-S-6 demonstrate a decrease from the post-ROD maximum of 4,900 µg/L in July 2001 to 250 µg/L in February 2023, demonstrating that the remedy is progressing toward achieving the RAO and cleanup goals (Appendix C, Table C-1). Similarly, 1,1,1-TCA concentrations at well 6-S-25 demonstrate a decrease from the post-ROD maximum of 1,500 µg/L in July 2000 to 120 µg/L in February 2023, demonstrating that the remedy is progressing toward achieving the RAO and cleanup goals (Appendix C, Table C-1).

During this FYR period, the 1,1-DCE groundwater plume extended along the western boundary of the site (Figure 4-4), similar to the TCE plume. 1,1-DCE concentrations exceeding the RODA (Navy, 2019) RG of 7 µg/L were limited to wells along the western boundary of the site and were not detected during this FYR period beyond wells 6-S-25 and PW-5, located at the southern boundary. 1,1-DCE concentrations in the center of the plume (i.e., well 6-S-6) decreased from a post-ROD maximum of 550 µg/L in July 2000 to 16 µg/L in February 2023, demonstrating that the remedy is progressing toward achieving the RAO and cleanup goals (Appendix C, Table C-1).

The vinyl chloride plume is part of the southern plume at OU 1 Area 6. The vinyl chloride groundwater plume originated from beneath the landfill and appears to extend off site to the south beyond State Route 20 (Figure 4-5). The plume remained within the 1,000-foot exclusion area surrounding the boundary of OU 1 Area 6 (Appendix D), per WAC 173-160-171.3.b.vi for landfills and as entered in the Island County Public Health Hydrogeology Data System. During this FYR period, the groundwater plume appears to have increased in aerial extent (not due to seasonal fluctuations) (Figure 4-5). During February 2023, vinyl chloride exceeded the RG (0.029 µg/L) in wells 6-S-3, 6-S-17, 6-S-19, 6-S-29, MW-9, MW-10, and 6-DW-38 at detected concentrations ranging from 0.0293 µg/L to 0.93 µg/L. The maximum vinyl chloride concentration occurred in

well MW-10, located at the landfill cap. At location 6-DW-38, only one exceedance of the vinyl chloride RG occurred during this FYR period, in February 2023 (Appendix C, Table C-3). Figure 4-5 shows that vinyl chloride concentrations greater than the RG exist south of the Area 6 boundary and State Route 20.

1,4-Dioxane was not identified in the OU 1 ROD (Navy, Ecology, and EPA, 1993a). As discussed in Section 2.1.2.3, 1,4-dioxane was initially discovered in site groundwater in 2003 (Battelle, 2019). The 1,4-dioxane groundwater plume is widespread across the site and extends off base in the south-southeast direction (Figure 4-6). The plume is contoured on Figure 4-6 at increments of 0.44 µg/L, which is the RG. The plume is undefined at the southeastern edge and may extend beyond the 1,000-foot groundwater well exclusion area surrounding the boundary of OU 1 Area 6. The plume is delineated along its eastern boundary with wells MW-12, 6-S-1, and 6-S-41 at non-detect levels. However, it is not delineated along its southern or downgradient boundary, particularly with the February 2023 concentration of 13 µg/L exceeding the MTCA Method B CUL of 0.44 µg/L at 6-DW-38, the most downgradient well used in LTM monitoring.

As discussed in Section 3.2.1, the Navy has been conducting downgradient delineation of the southern plume separate from the LTM monitoring. The downgradient delineation has included installation and sampling of seven new groundwater monitoring wells downgradient of 6-DW-38. Vinyl chloride and 1,4-dioxane were not detected in any groundwater samples from the seven new monitoring wells, which are located south of West Cemetery Road and east of State Route 20. Two of the seven monitoring wells are within 300 feet and 450 feet downgradient of well 6-DW-38, respectively. Additional investigation will confirm the exceedance in well 6-DW-38 as well as the plume extent in the surrounding area.

The northern extent of the plume is also not delineated, with 1,4-dioxane detected above the RG in well 6-S-7 and no groundwater data available for the area immediately north of Ault Field Road (demarking the northern boundary of OU 1 Area 6). Due to flooding of a historical bog area, it is not feasible to sample monitoring wells P-1 through P-4, which are located across Ault Field Road from 6-S-7 (Figure 4-1). In addition, the western boundary of the plume is not entirely delineated, with 1,4-dioxane detections in wells along the western boundary of OU 1 Area 6. However, the Western GETR System captures and treats groundwater along this boundary.

4.2.1.3 Groundwater COC Results and Trends

Sections 4.2.1.3.1 through 4.2.1.3.5 evaluate the results of the statistical trend analyses performed using non-parametric Mann-Kendall tests, as presented in the Annual 2022-2023 Groundwater Long-Term Monitoring Report (EA, 2024). TCE, 1,1,1-TCA, 1,1-DCE, vinyl chloride, and 1,4-dioxane data from the past 10 sampling events

(through February 2023) were utilized in the statistical trend analysis. None of the wells with detections above the RG in the most recent round of sampling and with increasing trends (i.e., vinyl chloride in MW-10 and 1,4-dioxane in 6-S-16, 6-S-17, MW-9, and MW-11) are located along the periphery of the groundwater plume (Figures 4-5 and 4-6).

4.2.1.3.1 TCE in Groundwater

TCE concentrations at Area 6 within the plume have had an overall reduction from a high near 2,000 µg/L (in 1995) to the current high of 57 µg/L at production well PW-1. The trends within the TCE plume area, illustrated on Figure 4-2, are decreasing or no trend. TCE concentrations remain greater than the RG at four monitoring wells, 6-S-6, 6-S-44, MW-7, and N6-37. TCE concentrations show no statistically significant trend for all wells that meet the trend analysis requirements, except for wells N6-37 and N6-38 where they show a decreasing trend. TCE concentrations are less than the RG at well N6-38, with a decreasing trend. There are no statistically increasing TCE trends based on the recent Mann-Kendall analysis (Table 4-2). This table only includes the wells in the 2022–2023 LTM sampling event; that is, 31 site monitoring wells and one private drinking water well (6-DW-48). The eight production wells, plant influent, and discharge swale were not included in the trend analysis.

Table 4-2. Area 6 Monitoring Well Trends Analysis

Well	Meets Qualifications for Mann-Kendall Trend Analysis[1]					Mann-Kendall Statistical Trends[2, 3] (Up to 10 Events through February 2023)				
	VOCs				1,4-Dioxane	VOCs				1,4-Dioxane
	TCE	1,1,1-TCA	1,1-DCE	Vinyl Chloride		TCE	1,1,1-TCA	1,1-DCE	Vinyl Chloride	
6-S-3	--	Y	Y	N[5]	Y	--	No Trend	No Trend	--	Increasing
6-S-6	Y	Y	Y	N[5]	Y	No Trend	Decreasing	Decreasing	--	No Trend
6-S-7	--	--	--	--	Y	--	--	--	--	Decreasing
6-S-9	--	--	--	--	N[5]	--	--	--	--	--
6-S-10	--	Y	Y	N[5]	Y	--	No Trend	No Trend	--	No Trend
6-S-14	--	--	--	--	Y	--	--	--	--	No Trend
6-S-15	--	--	--	--	Y	--	--	--	--	No Trend
6-S-16	--	Y	--	Y	Y	--	No Trend	--	No Trend	Increasing
6-S-17	--	Y	--	Y	Y	--	No Trend	--	No Trend	Increasing
6-S-19	--	Y	Y	Y	Y	--	No Trend	No Trend	Decreasing	No Trend
6-S-24	--	Y	Y	--	N[5]	--	No Trend	No Trend	--	--
6-S-25[4]	--	Y	Y	--	N[5]	--	No Trend	No Trend	--	--
6-S-26	--	--	--	--	Y	--	--	--	--	No Trend
6-S-27[4]	--	Y	N[5]	--	Y	--	No Trend	--	--	No Trend
6-S-29	N[5]	Y	Y	Y	Y	--	No Trend	No Trend	No Trend	No Trend
6-S-30	N[5]	Y	Y	--	Y	--	No Trend	No Trend	--	No Trend

Table 4-2. Area 6 Monitoring Well Trends Analysis (continued)

Well	Meets Qualifications for Mann-Kendall Trend Analysis[1]					Mann-Kendall Statistical Trends[2, 3] (Up to 10 Events through February 2023)				
	VOCs				1,4-Dioxane	VOCs				1,4-Dioxane
	TCE	1,1,1-TCA	1,1-DCE	Vinyl Chloride		TCE	1,1,1-TCA	1,1-DCE	Vinyl Chloride	
6-S-31	Y	Y	Y	--	Y	No Trend	No Trend	No Trend	--	No Trend
6-S-42[4]	--	Y	Y	N[5]	Y	--	No Trend	No Trend	--	No Trend
6-S-43[4]	--	Y	Y	Y	Y	--	No Trend	No Trend	Decreasing	Decreasing
6-S-44	Y	Y	Y	--	Y	No Trend	No Trend	No Trend	--	No Trend
MW-3B[4]	--	Y	Y	--	Y	--	No Trend	No Trend	--	No Trend
MW-7	Y	Y	Y	--	Y	No Trend	No Trend	No Trend	--	Decreasing
MW-9	--	Y	Y	Y	Y	--	No Trend	No Trend	No Trend	Increasing
MW-10	--	N[5]	N[5]	Y	Y	--	--	--	Increasing	No Trend
MW-11	--	--	--	--	Y	--	--	--	--	Increasing
N6-37	Y	Y	Y	--	Y	Decreasing	Decreasing	No Trend	--	No Trend
N6-38	Y	Y	Y	--	Y	Decreasing	Decreasing	Decreasing	--	No Trend
6-DW-38[4]	N[5]	--	--	N[5]	Y	--		--	--	Increasing

Source: (EA, 2024)

Notes:

1. *Requirements for trend analysis are at least four detected values of the contaminant over the previous ten sampling events and 20% or less non-detect results.*
2. *Trend at 95 percent confidence level.*
3. *Orange shading indicates exceedance of remediation goals for most recent round of sampling.*
4. *Sentinel well (downgradient of plume).*
5. *Data set is composed of greater than 20% non-detect results.*

Abbreviations:

-- = No trend analysis available. Mann-Kendall trend analysis could not be performed because requirements for trend analysis were not met.
DCE = dichloroethane
N = Requirements for trend analysis were not met.
TCA = trichloroethane
TCE = trichloroethene
VOCs = volatile organic compounds
Y = Requirements for trend analysis were met.

4.2.1.3.2 1,1,1-TCA in Groundwater

Concentrations of 1,1,1-TCA at Area 6 (Figure 4-3) during February 2023 were less than the RG at all wells except 6-S-6. Overall, since 1996, concentrations within the plume have reduced from high concentrations up to 5,500 µg/L range (Appendix C, Table B-1), to a high in February 2023 of 250 µg/L at well 6-S-6. Based on data through February 2023, 1,1,1-TCA concentrations show no statistically significant trend for wells in Area 6, except 6-S-6, N6-37, and N6-38, where concentrations show decreasing trends (Table 4-2).

4.2.1.3.3 1,1-DCE in Groundwater

The 1,1-DCE concentration exceeded the RG of 7 µg/L at monitoring wells 6-S-6, 6-S-24, 6-S-25, and 6-S-30 during this FYR period (Figure 4-4 and Appendix C). Based on data through February 2023, 1,1-DCE concentrations show no statistically significant trend for wells in Area 6, except a decreasing trend for wells 6-S-6 and N6-38 (Table 4-2).

4.2.1.3.4 Vinyl Chloride in Groundwater

Detected vinyl chloride concentrations were greater than the RG of 0.029 µg/L at 12 monitoring wells during this FYR period: 6-S-3, 6-S-13, 6-S-16, 6-S-17, 6-S-19, 6-S-23, 6-S-29, 6-S-42, 6-S-43, 6-DW-38, MW-9, and MW-10 (Appendix C). Wells 6-S-19 and 6-S-43 show decreasing trends and well MW-10 shows an increasing trend. Well MW-10 is located at the landfill cap. All other wells with an RG exceedance during this FYR period either do not show a statistically significant trend or do not meet the criteria to perform the Mann-Kendall statistical analysis (Table 4-2).

4.2.1.3.5 1,4-Dioxane in Groundwater

The concentration of 1,4-dioxane was greater than the RG of 0.44 µg/L at 28 monitoring well locations during this FYR period. Three of these wells (6-S-7, 6-S-43, and MW-7) exhibit decreasing trends, six of these wells (6-S-3, 6-S-16, 6-S-17, MW-9, MW-11, and 6-DW-38) exhibit increasing trends, and the remaining wells show no statistically significant concentration trends. Five of the wells with increasing trends (i.e., 6-S-3, 6-S-16, 6-S-17, MW-9, and MW-11) are located within the NAS Whidbey Island boundary, near the center of the plume and upgradient of the Southern GETR System extraction wells (Figure 4-6). Furthermore, the Western GETR System will also address 1,4-dioxane in groundwater when construction to convert the system to AOP treatment is complete (EA, 2024). The southern plume delineation activities discussed in Section 3.2.1 are further investigating 1,4-dioxane downgradient of 6-DW-38. No increasing trends were indicated for any wells with concentrations less than the RG (Table 4-2).

4.2.1.4 Original Western GETR System Treatment Plant Influent and Effluent Sampling

Original Western GETR System treatment plant influent water samples (composites of extraction wells) were collected directly from the influent line at a point just before the equalization tank. Effluent water samples were collected at the effluent swale, located immediately downstream of the culvert beneath the access road and near the compost facility where water pools prior to infiltrating or flowing to a wetland area to the north.

The samples from the treatment plant influent and effluent (swale) were analyzed for TCE, 1,1,1-TCA, 1,1-DCE, vinyl chloride, and 1,4-dioxane. Appendix C provides influent and effluent sampling results during this FYR period.

For all influent samples collected during April 2022 through March 2023, TCE, 1,1-DCE, and vinyl chloride were detected at concentrations greater than their respective RGs. Concentrations of the analyte 1,1,1-TCA did not exceed the RG of 200 µg/L in any of the influent samples for April 2022 through March 2023. The analytes TCE, 1,1,1-TCA, 1,1-DCE, and vinyl chloride were not detected above the respective RGs in any effluent samples collected during April 2022 through March 2023.

The original Western GETR System was not designed to remediate 1,4-dioxane, a semivolatile organic compound, when the system started operating in 1995. To comply with the RODA (Navy, 2019), the Navy is upgrading the treatment train for the Western GETR System to treat 1,4-dioxane groundwater contamination. Designs for these upgrades were completed in March 2022. During this FYR period, 1,4-dioxane concentrations were present at levels greater than the MTCA Method B CUL of 0.44 µg/L. During the 2022-2023 O&M period, effluent concentrations of 1,4-dioxane ranged from 2.3 µg/L to 3.4 µg/L in the treatment plant effluent samples, and from 1.2 µg/L to 3.2 µg/L from samples collected from the recharge swale.

4.2.1.5 Private Well Sampling

Groundwater sample collection at one private drinking water well (6-DW-48) north of NE 16th Avenue was conducted during semiannual sampling events. Well 6-DW-48 is completed in the shallow aquifer.

The samples from the private well 6-DW-48 during this FYR period were analyzed for TCE, 1,1,1-TCA, 1,1-DCE, vinyl chloride, and 1,4-dioxane. Prior to 2010, the well was only sampled for 1,4-dioxane. The private well results of the 2022–2023 sampling events are reported in Table 4-3 and the cumulative results are shown in Appendix C. The analytes TCE, 1,1,1-TCA, 1,1-DCE, vinyl chloride, and 1,4-dioxane were not detected above the respective RGs in 6-DW-48 during this FYR period.

4.2.1.6 Southern Treatment Plant Influent and Effluent Sampling – October 2021 through September 2022

The construction and operation of the Southern GETR System is discussed in Section 3.2.7.

System influent and effluent were sampled on a weekly basis for the first six months of operation (October 2021 through March 2022), and monthly thereafter to demonstrate effectiveness of the GETR. Samples were analyzed for VOCs and 1,4-dioxane by SGS

and Eurofins. As discussed in Section 3.2.1, PFAS are being analyzed to evaluate for precursors, although PFAS are not a RODA COC. PFAS were analyzed by SGS for Southern GETR System samples collected during this FYR period (AGVIQ, 2024). Appendix C provides influent and effluent sampling results from AGVIQ's system operation during this FYR period.

Concentrations of 1,1,1-TCA, 1,1-DCE, and TCE did not exceed their respective RGs in any of the influent samples from October 2021 through September 2022 (AGVIQ, 2024).

Vinyl chloride and 1,4-dioxane were detected at concentrations greater than their respective RGs in most of the influent samples. None of the January 2022 sampling results had 1,4-dioxane detected in either the influent or effluent. It was determined for the 12 January 2022 sampling that not all the production wells were operating. Based on communication from 08 February 2022 between the Navy and AGVIQ, all future sampling events would have all extraction wells running for at least 3 hours prior to sampling to allow representative samples. The 09 February 2022 influent sample had 1,4-dioxane concentrations greater than the RGs (AGVIQ, 2024).

RODA RGs were met in the effluent samples (AGVIQ, 2024).

Perfluorohexanoic acid was detected above the limit of quantitation (LOQ) in all influent and effluent samples. PFBS and perfluorohexanesulfonic acid were also detected in most influent and effluent samples above the limit of detection but below the LOQ. PFOA was also detected multiple times above the limit of detection but below the LOQ. Therefore, those concentrations are labeled as "estimated." According to the Navy RPM, the PFAS results do not demonstrate a PFAA precursor issue with the Southern GETR System operation. The technical memoranda with this information are forthcoming and anticipated to be referenced in the final version of this report.

4.2.2 Groundwater Monitoring for Arsenic and Manganese at OU 2 Areas 2/3

An arsenic and manganese background concentration in groundwater evaluation was conducted during the Fifth FYR (Battelle, 2018). During the Fifth FYR sampling event, monitoring well N3-12 contained the highest detected concentrations of both arsenic and manganese at 36 and 2,800 µg/L, respectively. This evaluation concluded that elevated arsenic concentrations in well N3-12 could be attributable to historical site activities (i.e., the landfill), while arsenic concentrations detected in all other Areas 2/3 wells and manganese concentrations detected in all Areas 2/3 wells are consistent with and attributable to naturally occurring conditions. The Fifth FYR recommended that a groundwater monitoring event for arsenic and manganese (total and dissolved) at N3-12

and two nearby deeper wells be conducted to: 1) assess whether arsenic and manganese concentrations in N3-12 remain greater than the calculated background concentrations (i.e., approved remediation goals), and 2) if arsenic and manganese concentrations remain elevated, demonstrate via sampling results that these concentrations are not migrating vertically to the intermediate aquifer zone.

4.2.2.1 Results

Per a recommendation in the Fifth FYR (Battelle, 2018), a groundwater monitoring event was conducted at Areas 2/3 in August 2023 for wells 3-MW-2, N2-6C and N3-12 (Figure 4-7). Figure 4-8 presents a map and general geologic cross-section of Areas 2/3 from the OU 2 RI (URS, 1993). Figure 4-9 illustrates the approximate depths and hydrogeologic zones of the well screens for the off-site private wells, the on-site background wells, and the Areas 2/3 site-related wells constructed from historical boring logs. Wells 3-MW-2 and N2-6C are screened in the intermediate aquifer and well N3-12 is screened in a perched aquifer (Figures 4-8 and 4-9). Appendix E provides the field logs, analytical laboratory reports, and data validation report from the August 2023 groundwater monitoring event. Based on the validation effort, all results were determined to be valid as reported by the laboratory.

During the Fifth FYR, background concentrations for total arsenic and manganese in groundwater were calculated using the EPA's ProUCL and based on a 90th percentile. There was no significant difference between the groundwater data from on-site upgradient/background monitoring wells (i.e., post-ROD data) and groundwater data from off-site private drinking water wells located in the adjacent Island County community, all representing naturally occurring background concentrations. Based on the EPA's ProUCL and a 90th percentile, the proposed background concentrations for total arsenic and manganese are 10 µg/L and 497 µg/L, respectively. A Memorandum to File must be prepared to formally propose and document the calculated background concentrations as cleanup levels for arsenic and manganese in groundwater at OU 2 (i.e., 10 µg/L and 497 µg/L, respectively).

Based on the results from the August 2023 groundwater sampling event, total and dissolved arsenic was not detected above the RG at the intermediate wells 3-MW-2 or N2-6C. However, total and dissolved arsenic were above the proposed background concentrations in well N3-12, which is screened in a perched aquifer zone. Total and dissolved manganese were detected above the proposed background concentrations at wells N2-6C and N3-12 (Table 4-3). Monitoring well N3-12 contained the highest detected concentrations of both total arsenic and total manganese at 41 and 1,900 µg/L, respectively.

Table 4-3. Areas 2/3 August 2023 Groundwater Sampling Event Results

Well ID	Sample ID	Sample Date	Top of Casing Elevation	Screened Interval Elevation		August 2023 Sampling Event				
				Top	Bottom	Total As	Dissolved As	Total Mn	Dissolved Mn	Vinyl Chloride
		Units	ft msl	ft msl	ft msl	µg/L	µg/L	µg/L	µg/L	µg/L
		Remediation Goal[1]	--	--	--	10	10	497	497	1.0
3-MW-2	3-MW-2-2023	8/24/2023	81.11	-5.12	-15.12	10 J	29 U	38	19 J	*NS*
N2-6C	N2-6C-2023	8/24/2023	85.28	19.68	9.68	29 U	29 U	**1000**	**700**	*NS*
N3-12	N3-12-2023	8/24/2023	95.29	46.38	36.38	**41 J**	**25 J**	**1900**	**1700**	0.62

Notes:
[1] *Remediation goals are from the OU 2 Record of Decision (Navy, Ecology, and EPA. 1994) for vinyl chloride, and proposed background concentrations from the Fifth Five-Year Review (Battelle, 2019) for arsenic and manganese.*
Bold *results indicate an exceedance of the RG.*
Abbreviations:
µg/L = Microgram per liter
As = Arsenic
ft msl = Feel mean seal level
ID = Identification
Mn = Manganese
NS = Not Sampled
Qualifiers:
J = The result is an estimated quantity.
U = Undetected at the Detection Limit. The number to the left of the "U" indicates the Reporting Limit; The Detection Limit for arsenic for this analysis is 7.2 µg/L, which is less than the remediation goal.

4.2.2.2 Time Series Graphs

Time series graphs of post-ROD sampling of arsenic concentrations at the three groundwater monitoring wells sampled during the 2023 sampling event (i.e., 3-MW-2, N2-6C and N3-12) show arsenic has remained within the range of past detections at 3-MW-2 and N2-6C and has generally decreased over time at N3-12 (Figure 4-10).

Time series graphs of post-ROD sampling of manganese concentrations at the three groundwater monitoring wells sampled during the 2023 sampling event (i.e., 3-MW-2, N2-6C and N3-12) show manganese has remained within the range of past detections at 3-MW-2 and has decreased overall at N3-12 (Figure 4-11). At well N2-6C, the total manganese concentration appears to have increased in the 2023 sample event compared to past post-ROD sampling events.

4.2.2.3 Conclusions and Recommendations

The 2023 groundwater monitoring event at Areas 2/3 was conducted to 1) assess whether arsenic and manganese concentrations in N3-12 remain greater than the calculated background concentrations (i.e., proposed remediation goals), and 2) if arsenic and manganese concentrations remain elevated, demonstrate via sampling

results that these concentrations are not migrating vertically to the intermediate aquifer zone.

In regard to item 1, arsenic and manganese have remained above the RG at well N3-12; however, the results have showed decreasing trends over time (Figure 4-11). Additional sampling during the next FYR is recommended to monitor if arsenic and manganese will remain above the RG at well N3-12.

In regard to item 2, the arsenic and manganese concentrations in the perched aquifer (i.e., well N3-12) have remained above the RG and both arsenic and manganese were detected at and above the RG, respectively, in the intermediate zone during the 2023 sampling event (i.e., well 3-MW-2 for arsenic and N2-6C for manganese). The 2023 arsenic concentration in groundwater is within the range of past sampling events at wells 3-MW-2 and N2-6C. Also, the manganese concentration in the sample collected in 2023 is the first detection above the calculated background concentrations in the intermediate well N2-6C and therefore it is not clear that this data point represents a trend. Additional sampling during the next FYR is recommended to monitor if vertical migration to the intermediate aquifer zone is occurring.

4.2.3 Groundwater Monitoring for Vinyl Chloride at OU 2 Areas 2/3

4.2.3.1 Background

Vinyl chloride concentrations in post-ROD groundwater samples were below the ROD cleanup level of 1 µg/L in 1995, 2002, and 2007 and non-detect (i.e., less than 0.020 µg/L) in 2013 at wells 3-MW-2, N2-3, N2-6C, N2-8, and N2-9. Therefore, during the Fourth FYR (Tetra Tech, 2014), it was recommended that groundwater monitoring for vinyl chloride be discontinued at these wells and that vinyl chloride sampling should be conducted only at well N3-12 during the next FYR period. During the Fifth FYR (Battelle, 2019), vinyl chloride concentrations in N3-12 were detected at a concentration of 1.2 µg/L, exceeding the ROD cleanup level of 1.0 µg/L. Based on these results, the Fifth FYR recommended that during the next FYR period, a groundwater monitoring event for vinyl chloride be conducted at N3-12 to assess whether vinyl chloride concentrations in N3-12 remain greater than the ROD cleanup level of 1.0 µg/L.

4.2.3.2 Results

Based on these recommendations, a groundwater sample was collected from well N3-12 and analyzed for vinyl chloride in August 2023. The groundwater sample was analyzed using U.S. EPA Method 8260D SIM achieving a LOQ of 0.10 µg/L and detection limit (DL) of 0.014 µg/L, below the RG of 1.0 µg/L. At the time of the ROD, the RG for vinyl chloride was set at the practical quantitation limit (PQL) of 1.0 µg/L because

analytical instruments/methods at that time were unable to achieve the MTCA Method B value of 0.023 µg/L (currently 0.029 µg/L, please see Section 5.6.1.2). However, the current analytical method was able to achieve a DL (0.014 µg/L) below the MTCA B level (0.029 µg/L) and a LOQ of 0.10 µg/L which is lower than the PQL at the time of the ROD (1.0 µg/L).

The results from the 2023 groundwater sampling event found that vinyl chloride concentrations in N3-12 were 0.62 µg/L (duplicate 0.64 µg/L), which is less than the RG of 1.0 µg/L (Table 4-3). Also, vinyl chloride concentrations in N3-12 appear to be demonstrating a decreasing trend based on the results from post-ROD sampling events (Figure 4-12).

4.2.3.3 Conclusions and Recommendations

The 2023 groundwater monitoring event for vinyl chloride was conducted at N3-12 to assess whether vinyl chloride concentrations in N3-12 remained greater than the ROD cleanup level of 1.0 µg/L. The results from the 2023 groundwater sampling event found that vinyl chloride concentrations in N3-12 were 0.62 µg/L (duplicate 0.64 µg/L), which is less than the RG of 1.0 µg/L. This was the first instance of vinyl chloride concentration in groundwater being below the RG since post-ROD sampling began in 1995. During the next FYR period, a groundwater monitoring event for vinyl chloride is recommended to be conducted at N3-12 to monitor whether the vinyl chloride concentration in N3-12 remains less than the RG of 1.0 µg/L.

4.2.4 OU 5 Area 31 Monitored Natural Attenuation

The Fifth FYR (Battelle, 2019) reported that TPH as diesel, TPH as gasoline, benzene, and dissolved manganese concentrations in groundwater at OU 5 Area 31 were not all demonstrating decreasing or stable trends in the source area and remained above their respective RGs in some wells. The Fifth FYR reported no new releases or new sources of contamination suspected at the site; therefore, increasing contaminant concentration trends are most likely due to a combination of factors, including stagnant groundwater flow/gradient, vadose zone contamination with fluctuating groundwater elevations, and/or lack of electron acceptors to support further biodegradation. Further, the Fifth FYR reported that although MNA was not occurring at a rate that results in decreasing concentration trends in the source zone area, MNA was preventing migration downgradient (per the contaminant concentration vs. distance plots) and LUCs were in place to prevent groundwater exposures within and downgradient of the site, all within NAS Whidbey Island property. Consistent with recommendations from the Fifth FYR, Area 31 groundwater is sampled annually for benzene, naphthalene, vinyl chloride, TPH

as diesel, gasoline, and residual range organics, and total and dissolved manganese at wells MW31-34, MW31-9A, OWS-1, OWS-3, and WI-AF-MW-635 (EA, 2024).

4.2.4.1 Annual Groundwater Monitoring at OU 5 Area 31

Since shutdown of the soil venting and product recovery systems in 2000, groundwater monitoring has been conducted at OU 5 Area 31 at various monitoring wells and for various analytes. The current groundwater monitoring program includes five monitoring wells (MW31-34, MW31-9A, OWS-1, OWS-3, and WI-AF-MW-635) (Figure 4-13). In the monitoring reports, the analytical results are compared to their respective RGs and reviewed in combination with water quality parameters to evaluate the occurrence of natural attenuation in the subsurface.

During the FYR period, groundwater in the following monitoring wells exceeded RGs (Table 4-4):

- Monitoring well MW-31-09A: TPH as diesel and gasoline, benzene, and dissolved manganese exceeded their respective RGs. This well is located in the area where the former free product distribution occurred.
- Monitoring well OWS-1: TPH as diesel, gasoline, and residual range organics, benzene, naphthalene, vinyl chloride, and dissolved manganese exceeded their respective RGs. The 2022–2023 annual sampling was the first year that TPH as residual range organics exceeded its CUL (1,000 µg/L) since beginning sampling in 2007. The concentration of diesel range organics increased to above historical concentrations during the 2022–2023 sampling event as well. This well is located in the area where the former free product distribution occurred.
- Monitoring well OWS-3: TPH as diesel, benzene, vinyl chloride, and dissolved manganese exceeded their RGs during this FYR period. However, the concentrations from the most recent sampling event in September 2022 have decreased to levels below RGs, except for manganese.
- Monitoring wells MW31-34 and WI-AF-MW-635 were newly added to the 2022–2023 annual sampling event and did not have any exceedances greater than RGs.

Table 4-4. Groundwater Exceedances of Remediation Goals at OU 5 Area 31

Analyte	RG (µg/L)	No. of RG Exceedances During FYR Period[1]				
		MW-31-09A	OWS-1	OWS-3	MW31-34	WI-AF-MW-635
TPH as diesel	*1,000*	*4*	*4*	*3*	*0*	*0*
TPH as gasoline	*1,000*	*3*	*4*	*0*	*0*	*0*
TPH as residual range organics	*1,000*	*0*	*1*	*0*	*0*	*0*
Benzene	*5*	*4*	*4*	*1*	*0*	*0*
Naphthalene	*320*	*0*	*1*	*0*	*0*	*0*
Vinyl Chloride	*0.1*	*0*	*1*	*1*	*0*	*0*
Dissolved Manganese	*142*	*4*	*4*	*4*	*0*	*0*

Note:

1. Only primary samples are included in the exceedances count.

Abbreviations:
µg/L = micrograms per liter
FYR = five-year review
RG = remediation goal
TPH = total petroleum hydrocarbons

The 2022–2023 annual groundwater monitoring report indicates that natural attenuation may be occurring in groundwater in the vicinity of the former free product distribution at wells MW-31-09A and OWS-1, based on the observed anaerobic conditions (low dissolved oxygen and negative oxidation reduction potential). The increases in concentrations of TPH as diesel and as residual range organics could be the result of groundwater fluctuations. The groundwater gradient in this area is flat with a flow direction slightly toward the southwest. Based on these observations, the 2022-2023 report recommended that annual monitoring continue for TPH as diesel, gasoline, and residual range organics, benzene, naphthalene, vinyl chloride, and manganese at wells MW31-34, MW-31-09A, OWS-1, OWS-3 and WI-AF-MW-635 (EA, 2024).

The COCs with RG exceedances have been limited to the wells in the area where the former free product distribution occurred, except for manganese in the well approximately 40 feet downgradient (OWS-3) during this FYR period. In addition, the groundwater samples collected from the farthest downgradient well (WI-AF-MW-635) did not have any COC exceedances. This indicates that the extent of COCs in groundwater in this area appears to have been stable during this FYR period (EA, 2024).

4.3 FYR Site Inspections

FYR site inspections at NAS Whidbey Island OUs 1, 2, 3, 4, and 5 were conducted concurrently with the 2023 annual LUC inspection. LUC inspections were conducted

annually during this FYR period. As discussed in Section 2.0 and detailed in Table 2-2, LUCs are implemented at the following areas:

- OU 1, Area 5, Highway 20/Hoffman Road Landfill;
- OU 1, Area 6, Landfill Operations Area and Former Hazardous Waste Storage Area;
- OU 2, Area 2, Western Highlands Landfill;
- OU 2, Area 3, 1969 to 1970 Landfill;
- OU 2, Area 4, Walker Barn Storage Area;
- OU 2, Area 29, Clover Valley Fire School;
- OU 3, Area 16, Runway Ditches;
- OU 4, Areas 48/49, Seaplane Base Salvage Yard and Landfill;
- OU 5, Area 1, Beach Landfill;
- OU 5, Area 31, Former Runway Fire School; and
- OU 5, Area 52, Jet Engine Test Cell.

These LUC inspections were conducted in accordance with the Final LUCIPs prepared during this FYR period (Battelle, 2020a; Liberty JV, 2020) and provide a means to verify that the required LUCs meet objectives with respect to protection of human health and the environment.

The NAS Whidbey Island RODs and associated remedial actions for all five OUs, with the exception of OU 1 Area 6, have either been fully completed or are in LTM or O&M status. Additionally, the Seaplane Base, which comprises OU 4, has since been deleted from the NPL. However, at the time the RODs were signed, LUCs included in the RODs were unclear and lacked both detailed objectives and specific requirements. As such, the ESD to the ROD for OUs 1, 2, 3, 4, and 5 at NAS Whidbey Island (Navy, 2007) were completed to clarify LUC objectives, requirements, and responsibilities for OUs 1 through 5. For OU 1 Area 6, a RODA (Navy, 2019) was finalized in 2019 detailing changing the groundwater remedy; implementation of the new remedy is in progress.

The LUC inspection process included a field inspection of the effectiveness of the required LUCs (both institutional controls and engineering controls) at each area/site; photographs to document site conditions and visual evidence of LUC deficiencies or failures; and a document or record review.

The field team evaluated the effectiveness of LUCs, such as land use restrictions, construction restrictions, and groundwater use restrictions. In addition, the condition of engineering controls, such as fences, landfill caps/coverage, shoreline armoring, and signage, was reviewed and reported during the field inspections, and the condition of the monitoring well network was noted. In particular, the field team checked that required LUC signage at each area/site was intact, secure, and readable from vehicular and pedestrian access points to delineate the site and identify restrictions and/or hazards. Observations of conditions that were inconsistent with the LUC restrictions and/or potentially compromising the LUC effectiveness were documented in the inspection reports (Batelle, 2020b; Liberty JV, 2021, 2022, 2023, 2024). If an observed LUC deficiency had an immediate, potentially harmful impact on human health or the environment, then the notification and corrective action process was initiated by the field team leader.

After the field inspection, Ecology and the Island County Department of Environmental Health were contacted to confirm that no groundwater or drinking water wells were installed for domestic use on site or downgradient of areas/sites identified with this LUC restriction. NAS Whidbey Island Base Security was also contacted to determine whether there had been any incident reports and verify that access control had been maintained at each area/site.

As part of the LUC inspection process, site-specific checklists were used to guide the inspection team; assist in capture of data necessary to assess and report on the effectiveness of LUCs; and develop recommendations or corrective actions, if necessary. The completed site-specific LUC inspection checklists and photographs for the CERCLA Areas inspected in 2023 are presented in Appendix F.

The results of the annual LUCs inspections are summarized in Sections 4.3.1.1 through 4.3.1.11. Further information can be found in the annual LUC IRs (Battelle, 2020b; Liberty JV 2021, 2022, 2023, and 2024). Based on the LUC inspections, there were no observations or findings that required EPA notification and, most importantly, there was no change in land use at any area/site during this FYR period. Specific LUCs requirements for each area/site within OUs 1 through 5 are summarized in Table 2-2. Sections 4.3.1.1 through 4.3.1.11 describe whether the LUC requirements were met, partially met, or not met in 2019 through 2023 based on a set of questions established in the annual LUCs inspection reports. Some variation in the way LUCs were evaluated occurred over this FYR period because the Navy sought to define LUCs more clearly based on decision documents. As a result, LUC evaluations and the resulting recommendations recently have been based solely on whether a LUC for the site in question was violated by the conditions observed at the time of inspections, without evaluating non-LUC items (e.g., housekeeping issues). This has resulted in some

apparent inconsistency in inspection results, with the more recent results adhering to decision document requirements for each site.

4.3.1.1 OU 1, Area 5, Highway 20/Hoffman Road Landfill

The LUC inspections found that the LUCs for Area 5 were functioning as intended to protect human receptors from exposure to soil during the entirety of the FYR period. Because the LUCs are functioning as intended, no corrective actions are recommended as a result of the 2023 LUC inspection. Table 4-5 summarizes the LUC inspection findings during the FYR period.

Table 4-5. LUC Inspection Summary During the FYR Period at OU 1, Area 5

LUC Inspection Summary	OU 1, Area 5, Highway 20/Hoffman Road Landfill				
	2019	2020	2021	2022	2023
Land use consistent with requirements?	◉	◉	◉	◉	◉
On-site or downgradient groundwater well installation or use since last inspection?	–	◉	◉	◉	◉
Evidence of ground disturbance via digging and/or construction activities?	◉	◉	◉	◉	◉
Soil cover intact and effective?	◉	◉	–	–	–
Access control maintained?	◉	◉	◉	–	–
Signage intact and readable?	◉	◉	◉	–	–

Legend:
◉ = *Requirements met.* ◉ = *Requirements partially met.* ◉ = *Requirements not met.*
Abbreviations:
– = LUC inspection summary question is not applicable to area. *OU = operable unit*

4.3.1.2 OU 1, Area 6, Landfill Operations Area and Former Hazardous Waste Storage Area

The LUC inspections found that the LUCs for Area 6 were functioning as intended to protect human receptors from exposure to soil and groundwater during the entirety of the FYR period. Because the LUCs are functioning as intended, no corrective actions are recommended as a result of the 2023 LUC inspection. Table 4-6 summarizes the LUC inspection findings during the FYR period. One LUC regarding access control was only partially met due to damaged fencing observed during 2021; the fencing was repaired prior to the following year's inspection (Liberty JV, 2022).

Table 4-6. LUC Inspection Summary During the FYR Period at OU 1 Area 6

LUC Inspection Summary	OU 1, Area 6, Landfill Operations Area and Former Hazardous Waste Storage Area				
	2019	2020	2021	2022	2023
Land use consistent with requirements?	◉	◉	◉	◉	◉
On-site or downgradient groundwater well installation or use since last inspection?	◉	◉	◉	◉	◉
Groundwater monitoring network in good condition?	◉	◉	◉	◉	◉
Evidence of ground disturbance via digging and/or construction activities?	◉	◉	◉	◉	◉
Soil cover intact and effective?	◉	◉	◉	◉	◉
Access control maintained?	◉	◉	◉	–	–
Signage intact and readable?	◉	◉	◉	–	–

Legend:
◉ = *Requirements met.* ◉ = *Requirements partially met.* ◉ = *Requirements not met.*
Abbreviations:
– = LUC inspection summary question is not applicable to area. *OU = operable unit*

4.3.1.3 OU 2, Area 2, Western Highlands Landfill

The LUC inspections found that the LUCs for Area 2 were functioning as intended to protect human receptors from exposure to soil and groundwater during the entirety of the FYR period. Because the LUCs are functioning as intended, no corrective actions are recommended as a result of the 2023 LUC inspection. Table 4-7 summarizes the LUC inspection findings during the FYR period.

Table 4-7. LUC Inspection Summary During the FYR Period at OU 2, Area 2

LUC Inspection Summary	OU 2, Area 2, Western Highlands Landfill				
	2019	2020	2021	2022	2023
Land use consistent with requirements?	◉	◉	◉	◉	◉
On-site or downgradient groundwater well installation or use since last inspection?	◉	◉	◉	◉	◉
Groundwater monitoring network in good condition?	◉	◉	◉	◉	◉
Evidence of ground disturbance via digging and/or construction activities?	◉	◉	◉	◉	◉
Soil cover intact and effective?	◉	◉	–	–	–
Access control maintained?	◉	◉	–	–	–
Signage intact and readable?	◉	◉	◉	–	–

Legend:
◉ = *Requirements met.* ◉ = *Requirements partially met.* ◉ = *Requirements not met.*
Abbreviations:
– = LUC inspection summary question is not applicable to area. *OU = operable unit*

4.3.1.4 OU 2, Area 3, 1969 to 1970 Landfill

The LUC inspections found that the LUCs for Area 3 were functioning as intended to protect human receptors from exposure to soil and groundwater during the entirety of the FYR period. Because the LUCs are functioning as intended, no corrective actions are recommended as a result of the 2023 LUC inspection. Table 4-8 summarizes the LUC inspection findings during the FYR period. LUCs regarding ground disturbance and soil cover were only partially met in 2019 and 2020 due to erosion observed during the inspection events (Battelle, 2020b; Liberty JV 2021). The erosion observed was likely due to animal burrowing and did not worsen in the following years, so the LUC was determined to be met for 2021 through 2023 (Liberty JV, 2022, 2023, 2024).

Table 4-8. LUC Inspection Summary During the FYR Period at OU 2, Area 3

LUC Inspection Summary	OU 2, Area 3, 1969 to 1970 Landfill				
	2019	2020	2021	2022	2023
Land use consistent with requirements?	◉	◉	◉	◉	◉
On-site or downgradient groundwater well installation or use since last inspection?	◉	◉	◉	◉	◉
Groundwater monitoring network in good condition?	◉	◉	◉	◉	◉
Evidence of ground disturbance via digging and/or construction activities?	◉	◉	◉	◉	◉
Soil cover intact and effective?	◉	–	–	–	–
Access control maintained?	◉	◉	◉	–	–
Signage intact and readable?	◉	◉	◉	–	–

Legend:
◉ = *Requirements met.* ◉ = *Requirements partially met.* ◉ = *Requirements not met.*
Abbreviations:
– = LUC inspection summary question is not applicable to area. *OU = operable unit*

4.3.1.5 OU 2, Area 4, Walker Barn Storage Area

The LUC inspections found that the LUCs for Area 4 were functioning as intended to protect human receptors from exposure to groundwater during the entirety of the FYR period. Because the LUCs are functioning as intended, no corrective actions are recommended as a result of the 2023 LUC inspection. Table 4-9 summarizes the LUC inspection findings during the FYR period.

Table 4-9. LUC Inspection Summary During the FYR Period at OU 2, Area 4

LUC Inspection Summary	OU 2, Area 4, Walker Barn Storage Area:				
	2019	2020	2021	2022	2023
Land use consistent with requirements?	◉	◉	◉	◉	◉
On-site or downgradient groundwater well installation or use since last inspection?	◉	◉	◉	◉	◉
Groundwater monitoring network in good condition?	◉	◉	◉	◉	◉
Evidence of ground disturbance via digging and/or construction activities?	–	–	–	–	–
Soil cover intact and effective?	–	–	–	–	–
Access control maintained?	◉	◉	◉	–	–
Signage intact and readable?	◉	–	–	–	–

Legend:
◉ = *Requirements met.* ◉ = *Requirements partially met.* ◉ = *Requirements not met.*
Abbreviations:
– = LUC inspection summary question is not applicable to area. *OU = operable unit*

4.3.1.6 OU 2, Area 29, Clover Valley Fire School

The LUC inspections found that the LUCs for Area 29 were functioning as intended to protect human receptors from exposure to soil and groundwater during the entirety of the FYR period. Because the LUCs are functioning as intended, no corrective actions are recommended as a result of the 2023 LUC inspection. Table 4-10 summarizes the LUC inspection findings during the FYR period.

Table 4-10. LUC Inspection Summary During the FYR Period at OU 2, Area 29

LUC Inspection Summary	OU 2, Area 29, Clover Valley Fire School				
	2019	2020	2021	2022	2023
Land use consistent with requirements?	◉	◉	◉	–	–
On-site or downgradient groundwater well installation or use since last inspection?	◉	◉	◉	◉	◉
Groundwater monitoring network in good condition?	◉	◉	◉	◉	◉
Evidence of ground disturbance via digging and/or construction activities?	◉	◉	◉	–	–
Soil cover intact and effective?	–	–	–	–	–
Access control maintained?	◉	◉	◉	–	–
Signage intact and readable?	◉	◉	◉	–	–

Legend:
◉ = *Requirements met.* ◉ = *Requirements partially met.* ◉ = *Requirements not met.*
Abbreviations:
– = LUC inspection summary question is not applicable to area. *OU = operable unit*

4.3.1.7 OU 3, Area 16, Runway Ditches

The LUC inspections found that the LUCs for Area 16 were functioning as intended to protect human receptors from exposure to soil during the entirety of the FYR period. Because the LUCs are functioning as intended, no corrective actions are recommended as a result of the 2023 LUC inspection. Table 4-11 summarizes the LUC inspection findings during the FYR period.

Table 4-11. LUC Inspection Summary During the FYR Period at OU 3, Area 16

LUC Inspection Summary	OU 3, Area 16, Runway Ditches				
	2019	2020	2021	2022	2023
Land use consistent with requirements?	◉	◉	◉	◉	◉
On-site or downgradient groundwater well installation or use since last inspection?	–	–	–	–	–
Groundwater monitoring network in good condition?	–	–	–	–	–
Evidence of ground disturbance via digging and/or construction activities?	–	–	–	–	–
Soil cover intact and effective?	–	–	–	–	–
Access control maintained?	◉	◉	◉	–	–
Signage intact and readable?	–	–	–	–	–

Legend:
◉ = *Requirements met.* ◉ = *Requirements partially met.* ◉ = *Requirements not met.*

Abbreviations:
– = LUC inspection summary question is not applicable to area. *OU = operable unit*

4.3.1.8 OU 4, Areas 48/49, Seaplane Base Salvage Yard and Landfill

The LUC inspections found that the LUCs for Areas 48/49 were functioning as intended to protect human receptors from exposure to the buried landfill materials during the entirety of the FYR period. Because the LUCs are functioning as intended, no corrective actions are recommended as a result of the 2023 LUC inspection. Table 4-12 summarizes the LUC inspection findings during the FYR period.

Table 4-12. LUC Inspection Summary During the FYR Period at OU 4, Areas 48/49

LUC Inspection Summary	OU 4, Areas 48/49, Seaplane Base Landfill				
	2019	2020	2021	2022	2023
Land use consistent with requirements?	◉	◉	◉	◉	◉
On-site or downgradient groundwater well installation or use since last inspection?	–	–	–	–	–
Groundwater monitoring network in good condition?	–	–	–	–	–
Evidence of ground disturbance via digging and/or construction activities?	◉	◉	◉	◉	◉
Soil cover intact and effective?	◉	◉	–	–	–
Access control maintained?	◉	–	–	–	–
Signage intact and readable?	◉	◉	◉	◉	–

Legend:
◉ = *Requirements met.* ◉ = *Requirements partially met.* ◉ = *Requirements not met.*

Abbreviations:
– = LUC inspection summary question is not applicable to area. *OU = operable unit*

4.3.1.9 OU 5, Area 1, Beach Landfill

The LUC inspections found that the LUCs for Area 1 were functioning as intended to protect human receptors from exposure to the buried landfill materials and groundwater during the entirety of the FYR period. Field observations included inspection of each on-site monitoring well. Wells at Area 1 had degrading monuments and locks due to rust. Based on the field observations and findings, the following recommendation was made during the 2023 inspection for Area 1 to maintain LUC effectiveness:

- Perform repairs on the monitoring wells to maintain integrity and security.

Table 4-13 summarizes the LUC inspection findings during the FYR period.

Table 4-13. LUC Inspection Summary During the FYR Period at OU 5, Area 1

LUC Inspection Summary	OU 5, Area 1, Former Beach Landfill				
	2019	2020	2021	2022	2023
Land use consistent with requirements?	◉	◉	◉	◉	◉
On-site or downgradient groundwater well installation or use since last inspection?	◉	◉	◉	◉	◉
Groundwater monitoring network in good condition?	◉	◉	◉	◉	◉
Evidence of ground disturbance via digging and/or construction activities?	◉	◉	◉	◉	◉
Soil cover intact and effective?	◉	◉	–	–	–
Access control maintained?	◉	◉	◉	–	–
Signage intact and readable?	◉	◉	◉	–	–

Legend:
◉ = *Requirements met.* ◉ = *Requirements partially met.* ◉ = *Requirements not met.*

Abbreviations:
– = LUC inspection summary question is not applicable to area. *OU = operable unit*

4.3.1.10 OU 5, Area 31, Former Runway Fire School

The LUC inspections found that the LUCs for Area 31 were functioning as intended to protect human receptors from exposure to groundwater during the entirety of the FYR period. Because the LUCs are functioning as intended, no corrective actions are recommended as a result of the 2023 LUC inspection. Table 4-14 summarizes the LUC inspection findings during the FYR period. One LUC regarding monitoring well condition was only partially met in 2019 through 2021. Wells in this area were observed with missing bolts and full of surface water (Battelle, 2020b; Liberty JV 2021, 2022). Monitoring well maintenance was performed during this FYR period and the wells appeared to be in good condition in 2022 and 2023 (Liberty JV, 2023, 2024).

Table 4-14. LUC Inspection Summary During the FYR Period at OU 5, Area 31

LUC Inspection Summary	OU 5, Area 31, Former Runway Fire School				
	2019	2020	2021	2022	2023
Land use consistent with requirements?	◉	◉	◉	◉	◉
On-site or downgradient groundwater well installation or use since last inspection?	◉	◉	◉	◉	◉
Groundwater monitoring network in good condition?	◉	◉	◉	◉	◉
Evidence of ground disturbance via digging and/or construction activities?	–	–	–	–	–
Soil cover intact and effective?	–	–	–	–	–
Access control maintained?	◉	◉	◉	–	–
Signage intact and readable?	◉	◉	◉	–	–

Legend:
◉ = *Requirements met.* ◉ = *Requirements partially met.* ◉ = *Requirements not met.*

Abbreviations:
– = LUC inspection summary question is not applicable to area. *OU = operable unit*

4.3.1.11 OU 5, Area 52, Jet Engine Test Cell

The LUC inspections found that the LUCs for Area 52 were functioning as intended to protect human receptors from exposure to groundwater during the entirety of the FYR period. Because the LUCs are functioning as intended, no corrective actions are recommended as a result of the 2023 LUC inspection. Table 4-15 summarizes the LUC inspection findings during the FYR period.

Table 4-15. LUC Inspection Summary During the FYR Period at OU 5, Area 52

LUC Inspection Summary	OU 5, Area 52, Jet Engine Test Cell				
	2019	2020	2021	2022	2023
Land use consistent with requirements?	◉	◉	◉	◉	◉
On-site or downgradient groundwater well installation or use since last inspection?	◉	◉	◉	◉	◉
Groundwater monitoring network in good condition?	–	–	–	◉	◉
Evidence of ground disturbance via digging and/or construction activities?	–	–	–	–	–
Soil cover intact and effective?	–	–	–	–	–
Access control maintained?	◉	◉	◉	–	–
Signage intact and readable?	◉	◉	◉	–	–

Legend:
◉ = *Requirements met.* ◉ = *Requirements partially met.* ◉ = *Requirements not met.*

Abbreviations:
– = *LUC inspection summary question is not applicable to area.* *OU = operable unit*

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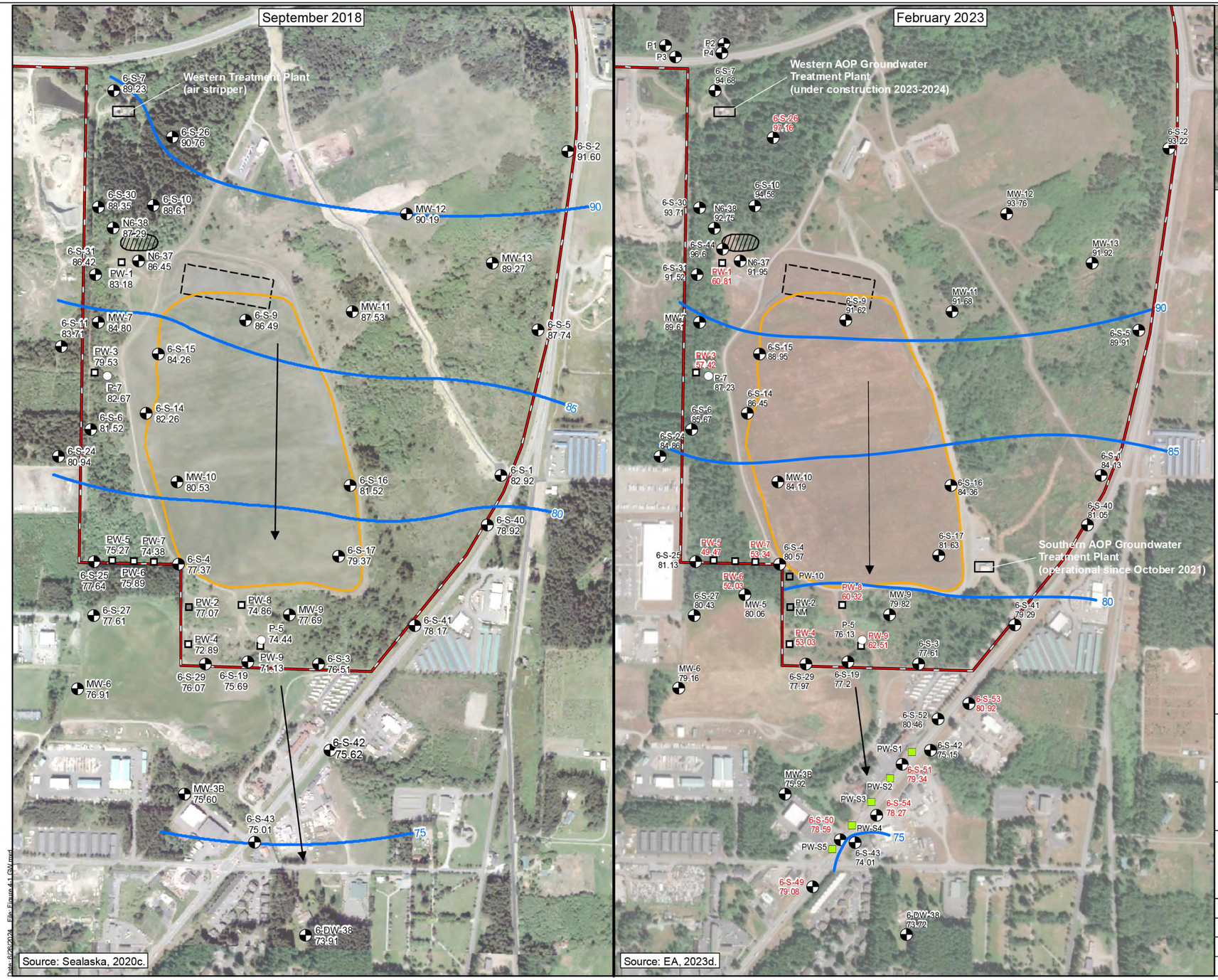

Notes:
1. Groundwater elevation in feet MSL.
2. Red labels indicate wells that were not used in contouring, February 2023.

AOP = advanced oxidation process
GETR = groundwater extraction, treatment, and recharge
MSL = mean sea level
NAS = Naval Air Station
OU = Operable Unit

Basemap Source: Esri, 2018, 2024.

0 325 650 975 1,300
Feet
1 Inch = 650 Feet

Sixth Five-Year Review
Naval Air Station Whidbey Island
Oak Harbor, Washington

OU 1, Area 6
Groundwater Levels and Potentiometric Map
September 2018 and February 2023

PROJECT NO.:	20D-5006.F4050
DATE:	July 2024
DRAWN BY:	JP
CHECKED BY:	CB

NAVFAC

FIGURE 4-1

Date: 6/26/2024 File: Figure 4-1 GW.mxd

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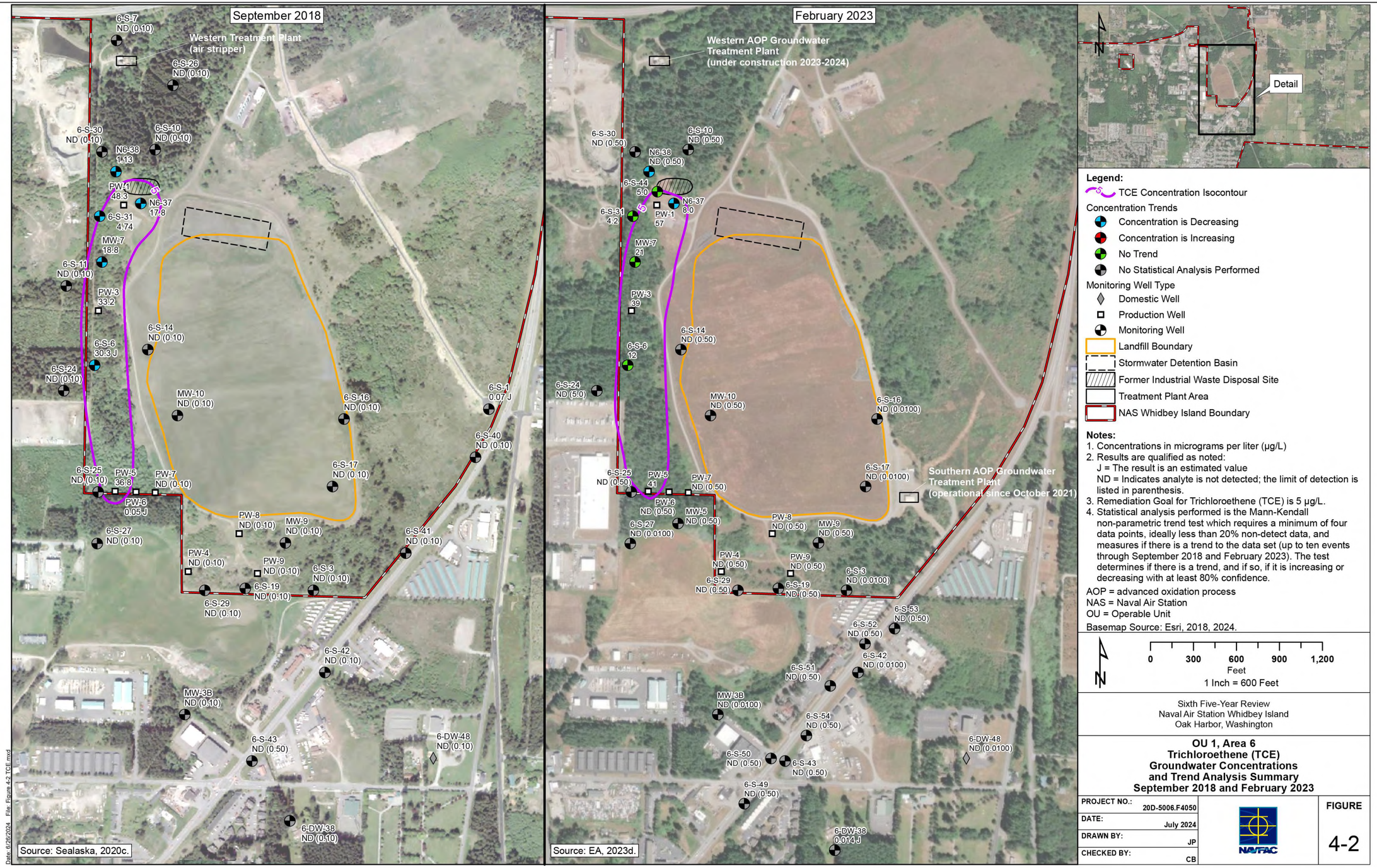
September 2018
Western Treatment Plant
(air stripper)
6-S-7 ND (0.10)
6-S-26 ND (0.10)
6-S-30 ND (0.10)
6-S-10 ND (0.10)
N6-38 1.13
PW-1 48.3
N6-37 17.8
6-S-31 4.74
MW-7 18.8
6-S-11 ND (0.10)
PW-3 33.2
6-S-14 ND (0.10)
6-S-6 30.3 J
6-S-24 ND (0.10)
MW-10 ND (0.10)
6-S-16 ND (0.10)
6-S-1 0.07 J
6-S-40 ND (0.10)
6-S-25 ND (0.10)
PW-5 36.8
PW-7 ND (0.10)
PW-6 0.05 J
6-S-17 ND (0.10)
6-S-27 ND (0.10)
PW-8 ND (0.10)
MW-9 ND (0.10)
6-S-41 ND (0.10)
PW-4 ND (0.10)
PW-9 ND (0.10)
6-S-3 ND (0.10)
6-S-19 ND (0.10)
6-S-29 ND (0.10)
6-S-42 ND (0.10)
MW-3B ND (0.10)
6-S-43 ND (0.50)
6-DW-48 ND (0.10)
6-DW-38 ND (0.10)
Source: Sealaska, 2020c.
February 2023
Western AOP Groundwater
Treatment Plant
(under construction 2023-2024)
6-S-30 ND (0.50)
6-S-10 ND (0.50)
N6-38 ND (0.50)
6-S-44 5.0
N6-37 8.0
6-S-31 4.2
PW-1 57
MW-7 21
PW-3 39
6-S-14 ND (0.50)
6-S-6 12
6-S-24 ND (5.0)
MW-10 ND (0.50)
6-S-16 ND (0.0100)
6-S-25 ND (0.50)
PW-5 41
PW-7 ND (0.50)
PW-6 ND (0.50)
MW-5 ND (0.50)
6-S-17 ND (0.0100)
Southern AOP Groundwater
Treatment Plant
(operational since October 2021)
6-S-27 ND (0.0100)
PW-8 ND (0.50)
MW-9 ND (0.50)
PW-4 ND (0.50)
PW-9 ND (0.50)
6-S-3 ND (0.0100)
6-S-29 ND (0.50)
6-S-19 ND (0.50)
6-S-53 ND (0.50)
6-S-52 ND (0.50)
6-S-42 ND (0.0100)
6-S-51 ND (0.50)
MW-3B ND (0.0100)
6-S-54 ND (0.50)
6-S-50 ND (0.50)
6-S-43 ND (0.50)
6-DW-48 ND (0.0100)
6-S-49 ND (0.50)
6-DW-38 0.014 J
Source: EA, 2023d.
Detail
N
Legend:
TCE Concentration Isocontour
Concentration Trends
Concentration is Decreasing
Concentration is Increasing
No Trend
No Statistical Analysis Performed
Monitoring Well Type
Domestic Well
Production Well
Monitoring Well
Landfill Boundary
Stormwater Detention Basin
Former Industrial Waste Disposal Site
Treatment Plant Area
NAS Whidbey Island Boundary
Notes:
1. Concentrations in micrograms per liter (µg/L)
2. Results are qualified as noted:
J = The result is an estimated value
ND = Indicates analyte is not detected; the limit of detection is listed in parenthesis.
3. Remediation Goal for Trichloroethene (TCE) is 5 µg/L.
4. Statistical analysis performed is the Mann-Kendall non-parametric trend test which requires a minimum of four data points, ideally less than 20% non-detect data, and measures if there is a trend to the data set (up to ten events through September 2018 and February 2023). The test determines if there is a trend, and if so, if it is increasing or decreasing with at least 80% confidence.
AOP = advanced oxidation process
NAS = Naval Air Station
OU = Operable Unit
Basemap Source: Esri, 2018, 2024.
0 300 600 900 1,200
Feet
1 Inch = 600 Feet
Sixth Five-Year Review
Naval Air Station Whidbey Island
Oak Harbor, Washington
OU 1, Area 6
Trichloroethene (TCE)
Groundwater Concentrations
and Trend Analysis Summary
September 2018 and February 2023
PROJECT NO.: 20D-5006.F4050
DATE: July 2024
DRAWN BY: JP
CHECKED BY: CB
NAVFAC
FIGURE
4-2
Date: 6/26/2024 File: Figure 4-2 TCE.mxd

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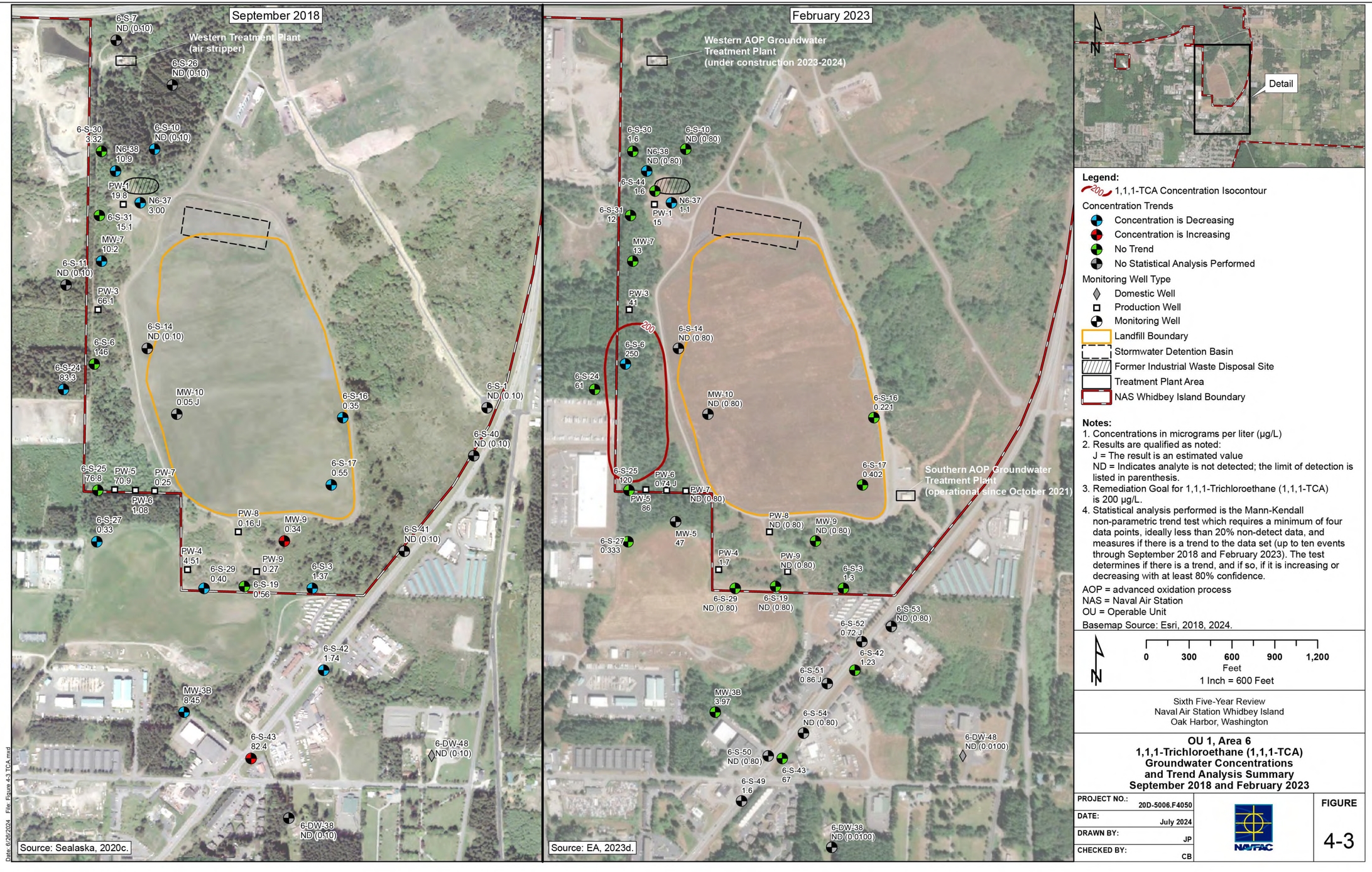

Legend:

- 200 — 1,1,1-TCA Concentration Isocontour

Concentration Trends
- Concentration is Decreasing
- Concentration is Increasing
- No Trend
- No Statistical Analysis Performed

Monitoring Well Type
- Domestic Well
- Production Well
- Monitoring Well
- Landfill Boundary
- Stormwater Detention Basin
- Former Industrial Waste Disposal Site
- Treatment Plant Area
- NAS Whidbey Island Boundary

Notes:
1. Concentrations in micrograms per liter (µg/L)
2. Results are qualified as noted:
   J = The result is an estimated value
   ND = Indicates analyte is not detected; the limit of detection is listed in parenthesis.
3. Remediation Goal for 1,1,1-Trichloroethane (1,1,1-TCA) is 200 µg/L.
4. Statistical analysis performed is the Mann-Kendall non-parametric trend test which requires a minimum of four data points, ideally less than 20% non-detect data, and measures if there is a trend to the data set (up to ten events through September 2018 and February 2023). The test determines if there is a trend, and if so, if it is increasing or decreasing with at least 80% confidence.

AOP = advanced oxidation process
NAS = Naval Air Station
OU = Operable Unit

Basemap Source: Esri, 2018, 2024.

0 300 600 900 1,200
Feet
1 Inch = 600 Feet

Sixth Five-Year Review
Naval Air Station Whidbey Island
Oak Harbor, Washington

OU 1, Area 6
1,1,1-Trichloroethane (1,1,1-TCA)
Groundwater Concentrations
and Trend Analysis Summary
September 2018 and February 2023

PROJECT NO.:	20D-5006.F4050
DATE:	July 2024
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NAVFAC

FIGURE
4-3

Date: 6/26/2024 File: Figure 4-3 TCA.mxd

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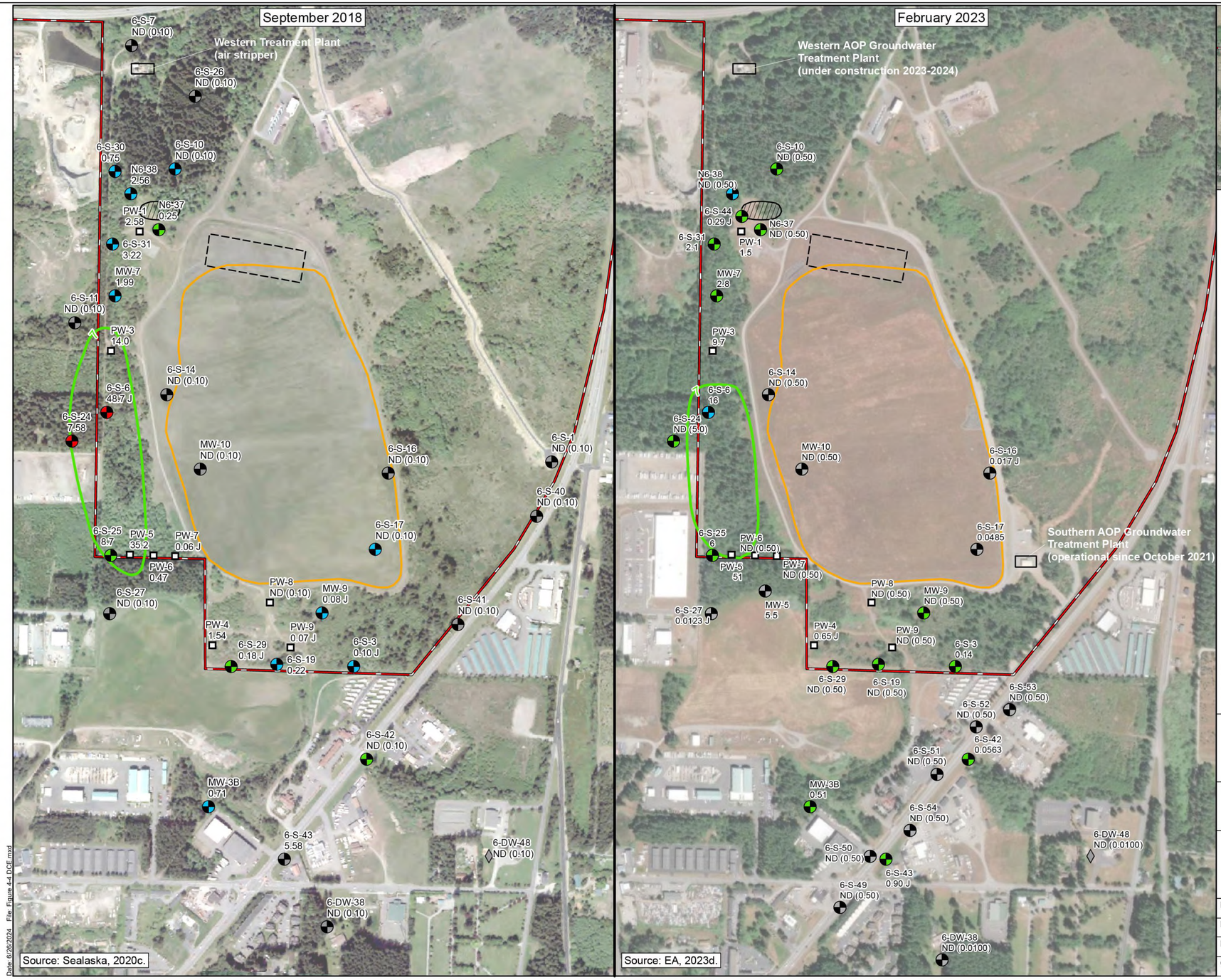

Notes:
1. Concentrations in micrograms per liter (µg/L)
2. Results are qualified as noted:
   J = The result is an estimated value
   ND = Indicates analyte is not detected; the limit of detection is listed in parenthesis.
3. Remediation Goal for 1,1-Dichloroethene (1,1-DCE) is 7 µg/L.
4. Statistical analysis performed is the Mann-Kendall non-parametric trend test which requires a minimum of four data points, ideally less than 20% non-detect data, and measures if there is a trend to the data set (up to ten events through September 2018 and February 2023). The test determines if there is a trend, and if so, if it is increasing or decreasing with at least 80% confidence.

AOP = advanced oxidation process
NAS = Naval Air Station
OU = Operable Unit
Basemap Source: Esri, 2018, 2024.

0 300 600 900 1,200
Feet
1 Inch = 600 Feet

Sixth Five-Year Review
Naval Air Station Whidbey Island
Oak Harbor, Washington

OU 1, Area 6
1,1-Dichloroethene (1,1-DCE)
Groundwater Concentrations
and Trend Analysis Summary
September 2018 and February 2023

PROJECT NO.:	20D-5006.F4050
DATE:	July 2024
DRAWN BY:	JP
CHECKED BY:	CB

NAVFAC

FIGURE 4-4

Date: 6/26/2024 File: Figure 4-4 DCE.mxd

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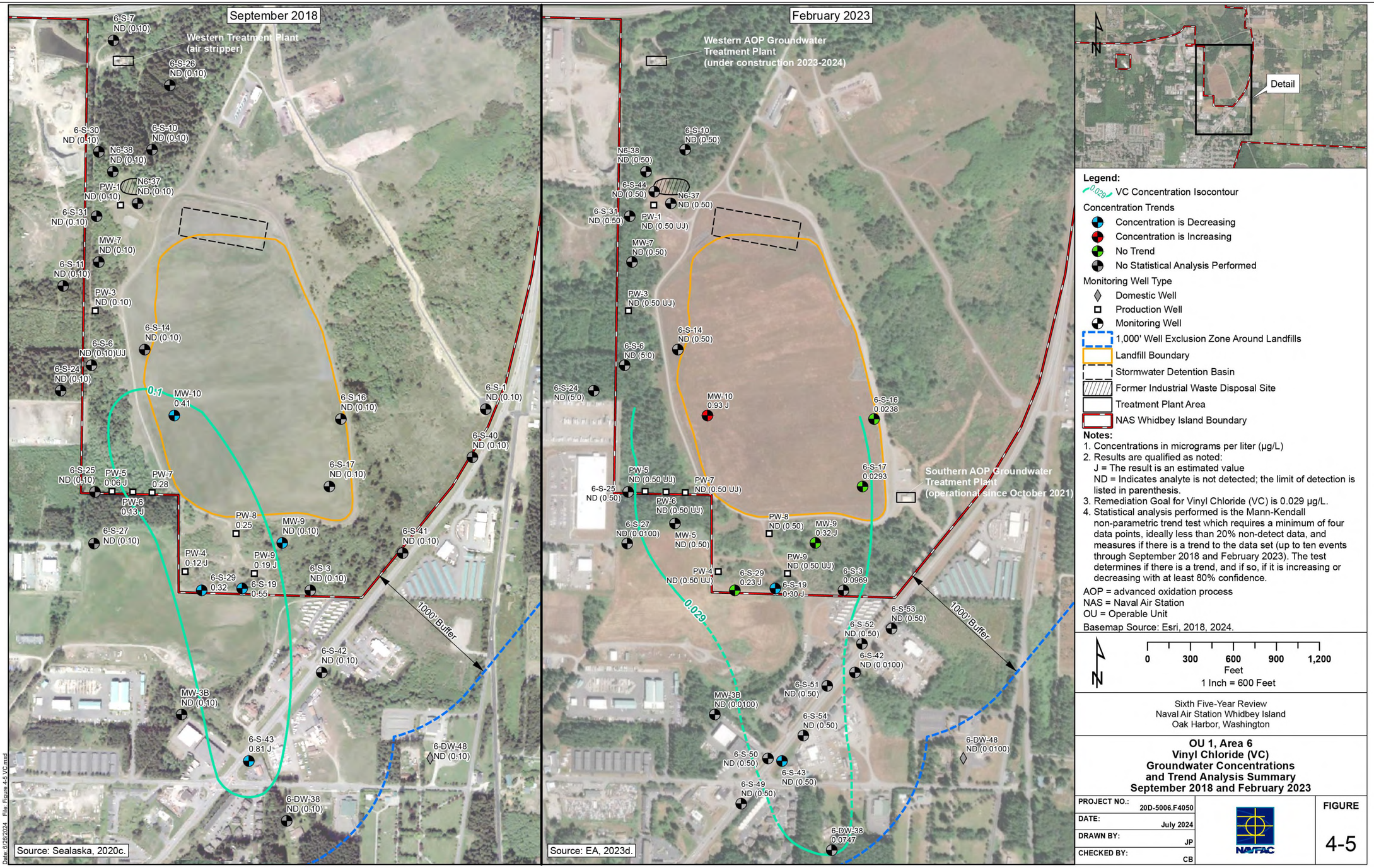
September 2018
Western Treatment Plant
(air stripper)
6-S-7 ND (0.10)
6-S-26 ND (0.10)
6-S-30 ND (0.10)
6-S-10 ND (0.10)
N6-38 ND (0.10)
N6-37 ND (0.10)
PW-1 ND (0.10)
6-S-31 ND (0.10)
MW-7 ND (0.10)
6-S-11 ND (0.10)
PW-3 ND (0.10)
6-S-14 ND (0.10)
6-S-6 ND (0.10) UJ
6-S-24 ND (0.10)
0.1
MW-10 0.41
6-S-16 ND (0.10)
6-S-1 ND (0.10)
6-S-40 ND (0.10)
6-S-25 ND (0.10)
PW-5 0.06 J
PW-7 0.28
PW-6 0.13 J
6-S-17 ND (0.10)
PW-8 0.25
MW-9 ND (0.10)
6-S-27 ND (0.10)
6-S-41 ND (0.10)
PW-4 0.12 J
PW-9 0.19 J
6-S-29 0.32
6-S-19 0.55
6-S-3 ND (0.10)
1000' Buffer
6-S-42 ND (0.10)
MW-3B ND (0.10)
6-S-43 0.81 J
6-DW-48 ND (0.10)
6-DW-38 ND (0.10)
Source: Sealaska, 2020c.
February 2023
Western AOP Groundwater
Treatment Plant
(under construction 2023-2024)
6-S-10 ND (0.50)
N6-38 ND (0.50)
6-S-44 ND (0.50)
N6-37 ND (0.50)
6-S-31 ND (0.50)
PW-1 ND (0.50 UJ)
MW-7 ND (0.50)
PW-3 ND (0.50 UJ)
6-S-14 ND (0.50)
6-S-6 ND (5.0)
6-S-24 ND (5.0)
MW-10 0.93 J
6-S-16 0.0238
PW-5 ND (0.50 UJ)
6-S-25 ND (0.50)
PW-7 ND (0.50 UJ)
PW-6 ND (0.50 UJ)
6-S-17 0.0293
Southern AOP Groundwater
Treatment Plant
(operational since October 2021)
PW-8 ND (0.50)
MW-9 0.32 J
6-S-27 ND (0.0100)
MW-5 ND (0.50)
PW-9 ND (0.50 UJ)
PW-4 ND (0.50 UJ)
6-S-29 0.23 J
6-S-19 0.30 J
6-S-3 0.0969
0.029
1000' Buffer
6-S-53 ND (0.50)
6-S-52 ND (0.50)
6-S-42 ND (0.0100)
6-S-51 ND (0.50)
MW-3B ND (0.0100)
6-S-54 ND (0.50)
6-S-50 ND (0.50)
6-S-43 ND (0.50)
6-S-49 ND (0.50)
6-DW-48 ND (0.0100)
6-DW-38 0.0747
Source: EA, 2023d.
Detail
Legend:
0.029 VC Concentration Isocontour
Concentration Trends
Concentration is Decreasing
Concentration is Increasing
No Trend
No Statistical Analysis Performed
Monitoring Well Type
Domestic Well
Production Well
Monitoring Well
1,000' Well Exclusion Zone Around Landfills
Landfill Boundary
Stormwater Detention Basin
Former Industrial Waste Disposal Site
Treatment Plant Area
NAS Whidbey Island Boundary
Notes:
1. Concentrations in micrograms per liter (µg/L)
2. Results are qualified as noted:
J = The result is an estimated value
ND = Indicates analyte is not detected; the limit of detection is listed in parenthesis.
3. Remediation Goal for Vinyl Chloride (VC) is 0.029 µg/L.
4. Statistical analysis performed is the Mann-Kendall non-parametric trend test which requires a minimum of four data points, ideally less than 20% non-detect data, and measures if there is a trend to the data set (up to ten events through September 2018 and February 2023). The test determines if there is a trend, and if so, if it is increasing or decreasing with at least 80% confidence.
AOP = advanced oxidation process
NAS = Naval Air Station
OU = Operable Unit
Basemap Source: Esri, 2018, 2024.
0 300 600 900 1,200
Feet
1 Inch = 600 Feet
Sixth Five-Year Review
Naval Air Station Whidbey Island
Oak Harbor, Washington
OU 1, Area 6
Vinyl Chloride (VC)
Groundwater Concentrations
and Trend Analysis Summary
September 2018 and February 2023
PROJECT NO.: 20D-5006.F4050
DATE: July 2024
DRAWN BY: JP
CHECKED BY: CB
NAVFAC
FIGURE
4-5
Date: 6/26/2024 File: Figure 4-5 VC.mxd

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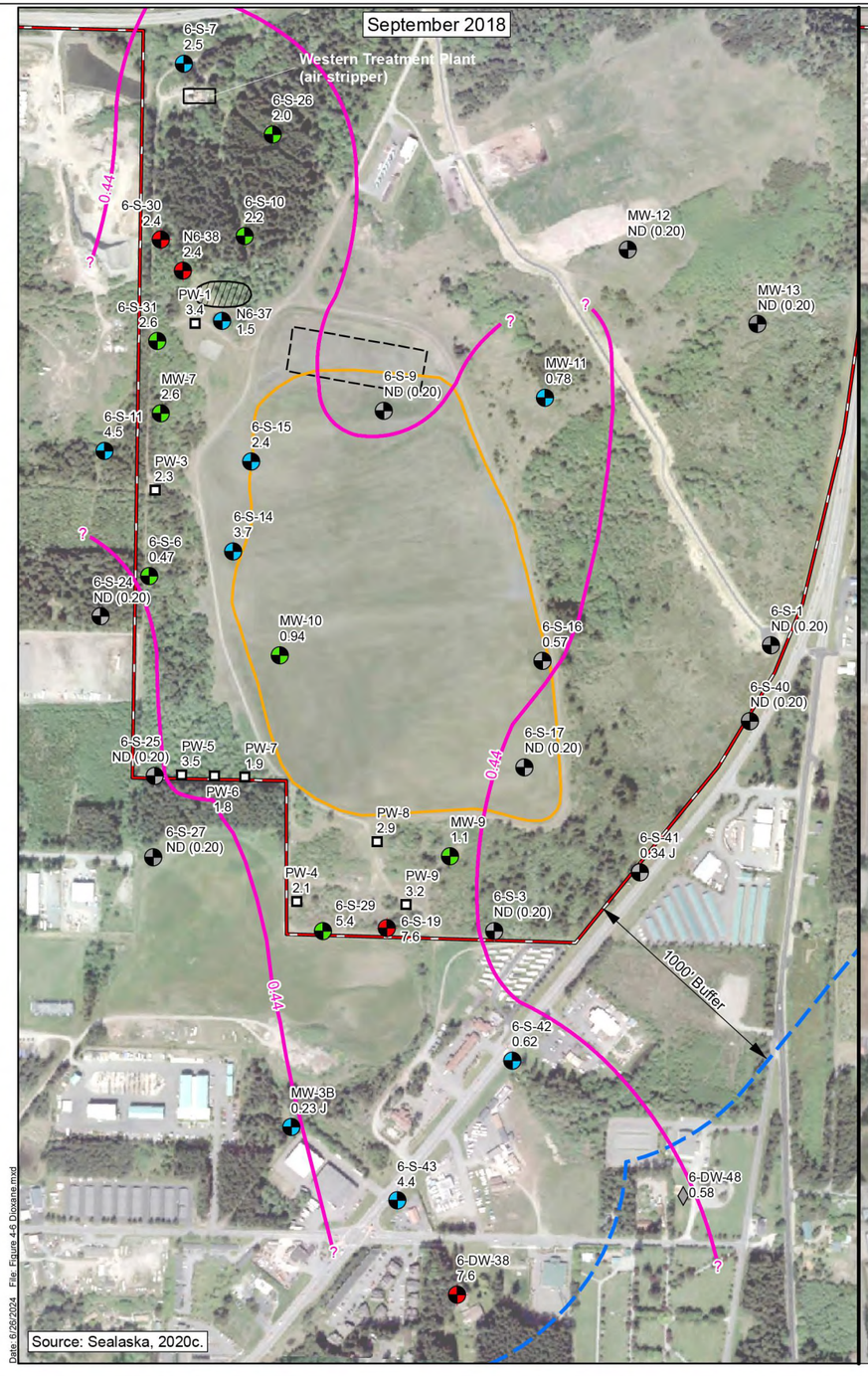
September 2018
Western Treatment Plant (air stripper)
6-S-7 2.5
6-S-26 2.0
6-S-30 2.4
6-S-10 2.2
N6-38 2.4
PW-1 3.4
N6-37 1.5
6-S-31 2.6
MW-12 ND (0.20)
MW-13 ND (0.20)
MW-11 0.78
6-S-9 ND (0.20)
MW-7 2.6
6-S-11 4.5
6-S-15 2.4
PW-3 2.3
6-S-14 3.7
6-S-6 0.47
6-S-24 ND (0.20)
MW-10 0.94
6-S-16 0.57
6-S-1 ND (0.20)
6-S-40 ND (0.20)
6-S-25 ND (0.20)
PW-5 3.5
PW-7 1.9
PW-6 1.8
6-S-27 ND (0.20)
6-S-17 ND (0.20)
PW-8 2.9
MW-9 1.1
6-S-41 0.34 J
PW-4 2.1
PW-9 3.2
6-S-29 5.4
6-S-19 7.6
6-S-3 ND (0.20)
1000' Buffer
6-S-42 0.62
MW-3B 0.23 J
6-S-43 4.4
6-DW-48 0.58
6-DW-38 7.6
0.44
Source: Sealaska, 2020c.
February 2023
Western AOP Groundwater Treatment Plant (under construction 2023-2024)
6-S-7 1.7 J
6-S-26 1.5
6-S-9 ND (0.050)
6-S-10 1.6
N6-38 1.9 J
6-S-44 1.5 J
N6-37 1.9 J
6-S-31 1.9 J
PW-1 2.8
MW-12 ND (0.047 UJ)
MW-11 2.0
6-S-9 ND (0.047)
MW-7 1.9 J
6-S-15 2.0
PW-3 2.0
6-S-14 2.7
6-S-6 ND (0.052)
6-S-24 ND (0.053)
MW-10 1.1 J
6-S-16 2.2
6-S-1 ND (0.047 UJ)
6-S-25 ND (0.052 UJ)
PW-5 3.1
PW-7 1.6
PW-6 1.5
6-S-27 ND (0.050)
MW-5 0.38 J
6-S-17 1.5
Southern AOP Groundwater Treatment Plant (operational since October 2021)
PW-8 3.3 J
MW-9 3.4 J
6-S-41 ND (0.047 UJ)
PW-4 2.1
PW-9 3.2
6-S-29 2.2
6-S-19 4.2
6-S-3 2.1
1000' Buffer
6-S-53 ND (0.048 UJ)
6-S-52 ND (0.048)
6-S-42 ND (0.049)
PW-S1
6-S-51 0.93
MW-3B 0.94 J
PW-S2
PW-S3
PW-S4
6-S-54 ND (0.047)
6-S-50 ND (0.052 UJ)
6-S-43 ND (0.052 UJ)
PW-S5
6-S-49 ND (0.052)
6-DW-48 ND (0.048 UJ)
6-DW-38 13
0.44
Source: EA, 2023d.
Detail
N
Legend:
0.44 1,4-Dioxane Concentration Isocontour
Concentration Trends
Concentration is Decreasing
Concentration is Increasing
No Trend
No Statistical Analysis Performed
Monitoring Well Type
Domestic Well
Production Well
Monitoring Well
Production Well South GETR
1,000' Well Exclusion Zone Around Landfills
Landfill Boundary
Stormwater Detention Basin
Former Industrial Waste Disposal Site
Treatment Plant Area
NAS Whidbey Island Boundary
Notes:
1. Concentrations in micrograms per liter (µg/L)
2. Results are qualified as noted:
J = The result is an estimated value
ND = Indicates analyte is not detected; the limit of detection is listed in parenthesis.
3. Remediation Goal for 1,4-Dioxane is 0.44 µg/L.
4. Statistical analysis performed is the Mann-Kendall non-parametric trend test which requires a minimum of four data points, ideally less than 20% non-detect data, and measures if there is a trend to the data set (up to ten events through September 2018 and February 2023). The test determines if there is a trend, and if so, if it is increasing or decreasing with at least 80% confidence.
AOP = advanced oxidation process
GETR = groundwater extraction, treatment, and recharge
NAS = Naval Air Station
OU = Operable Unit
Basemap Source: Esri, 2018, 2024.
N
0 300 600 900 1,200
Feet
1 Inch = 600 Feet
Sixth Five-Year Review
Naval Air Station Whidbey Island
Oak Harbor, Washington
OU 1, Area 6
1,4-Dioxane
Groundwater Concentrations
and Trend Analysis Summary
September 2018 and February 2023
PROJECT NO.: 20D-5006.F4050
DATE: July 2024
DRAWN BY: JP
CHECKED BY: CB
NAVFAC
FIGURE
4-6
Date: 6/26/2024 File: Figure 4-6 Dioxane.mxd

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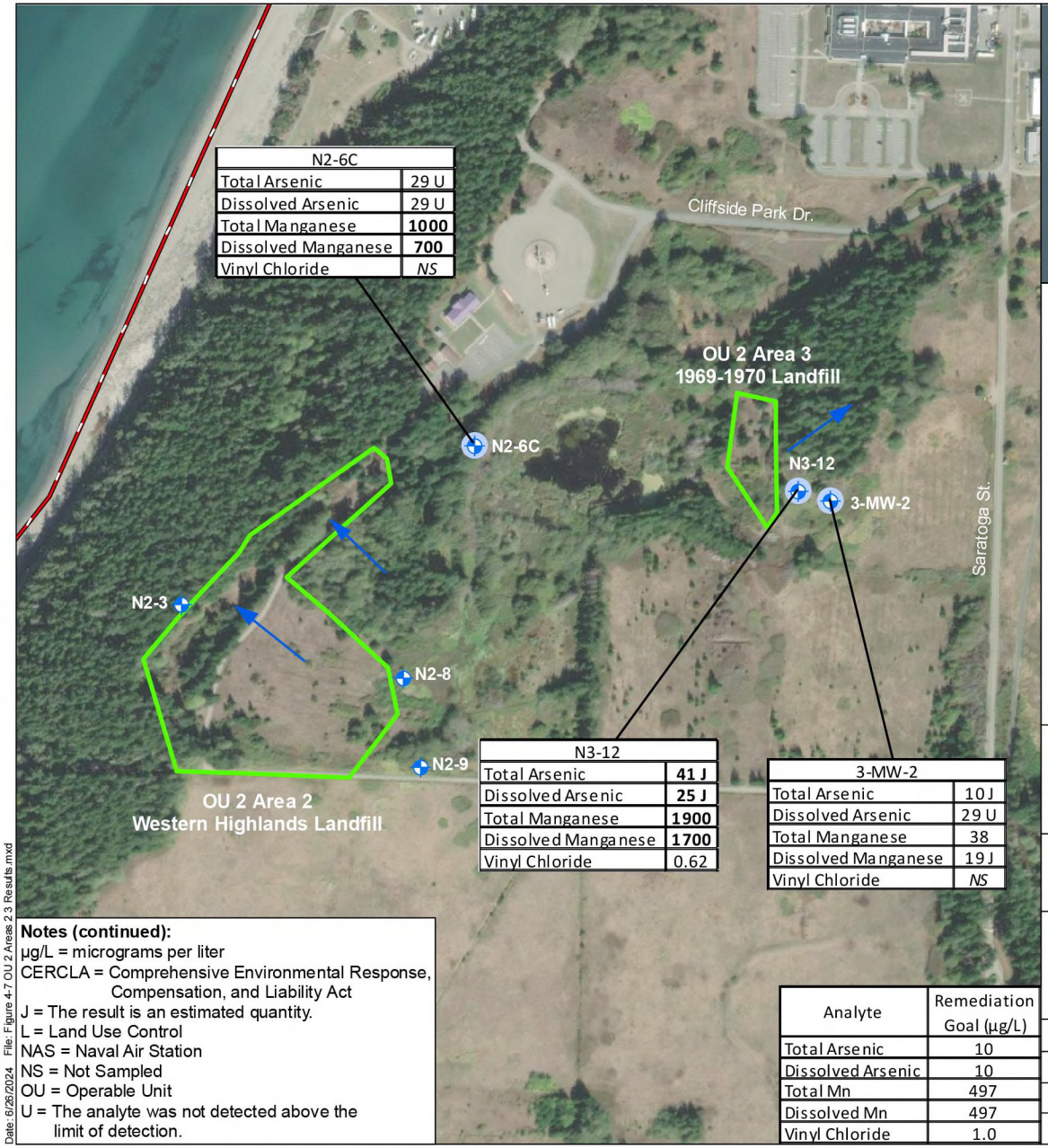

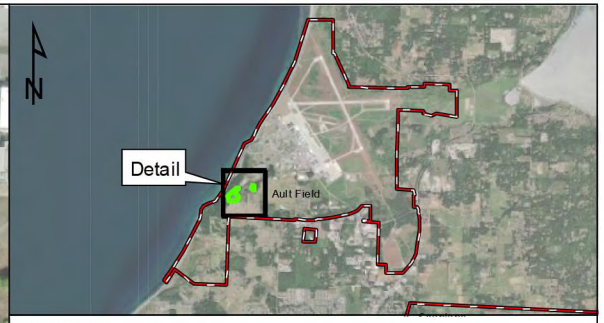

Legend

- Monitoring Well Sampled
- Monitoring Well
- Groundwater Flow Direction
- CERCLA OU LUC Area
- NAS Whidbey Island Boundary

Notes:

1. Groundwater flow direction provided from Figure 2-5 in the Final 2017 Base-Wide Management and Monitoring Approach Sampling and Analysis Plan.
2. All results in µg/L.
3. Bold results indicate a Remediation Goal exceedence.
4. Remediation Goals are from the OU 2 Record of Decision (Navy, Ecology, and EPA. 1994) for vinyl chloride, and proposed background concentrations from the Fifth Five-Year Review (Battelle, 2019a) for arsenic and manganese.

Basemap Source: Esri, 2024.

N

0 250 500 750 1,000
Feet
1 Inch = 500 Feet

Notes (continued):
µg/L = micrograms per liter
CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act
J = The result is an estimated quantity.
L = Land Use Control
NAS = Naval Air Station
NS = Not Sampled
OU = Operable Unit
U = The analyte was not detected above the limit of detection.

Analyte	Remediation Goal (µg/L)
Total Arsenic	10
Dissolved Arsenic	10
Total Mn	497
Dissolved Mn	497
Vinyl Chloride	1.0

Sixth Five-Year Review
Naval Air Station Whidbey Island
Oak Harbor, Washington

OU 2 Areas 2/3 Sample Locations and Analytical Results

PROJECT NO.:	20D-5006.F4050
DATE:	July 2024
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NAVFAC

FIGURE 4-7

Date: 6/26/2024 File: Figure 4-7 OU 2 Areas 2 3 Results.mxd

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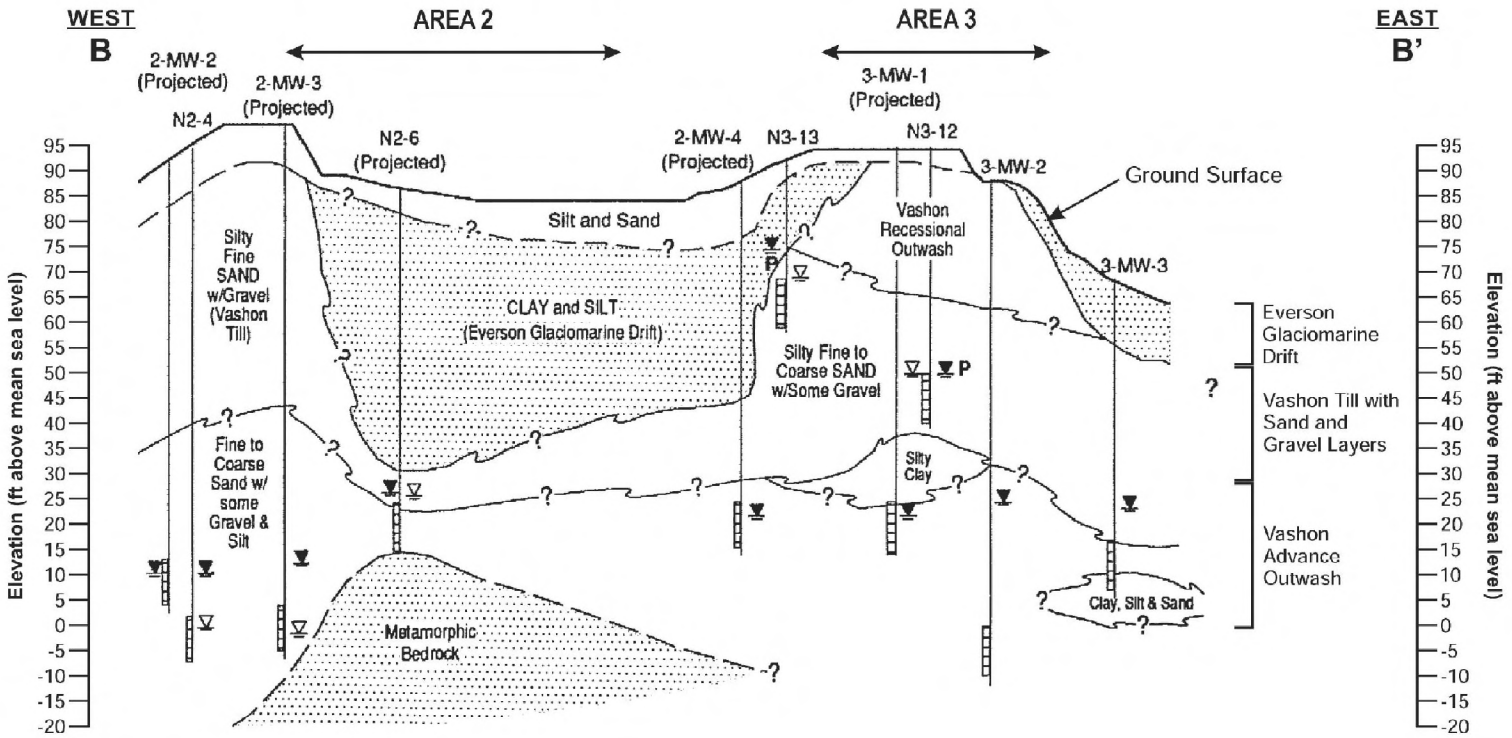
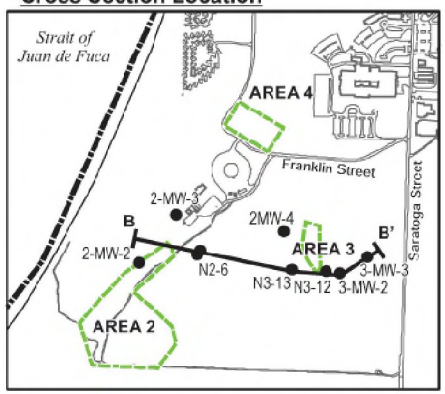


Cross Section Location



Legend

- ? Approximation
- P Perched Zone
- Static Water Level
- Water Depth Encountered During Drilling
- Low-Permeability Units

Source: URS Consultants, 1993.

Sixth Five-Year Review
Naval Air Station Whidbey Island
Oak Harbor, Washington

OU 2 Areas 2/3
Generalized Geologic Cross-Section B-B' from Remedial Investigation

PROJECT NO.:	20D-5006.F4050
DATE:	July 2024
DRAWN BY:	JP
CHECKED BY:	CB

FIGURE 4-8

Date: 6/26/2024 File: Figure 4-8 CrossSection.mxd

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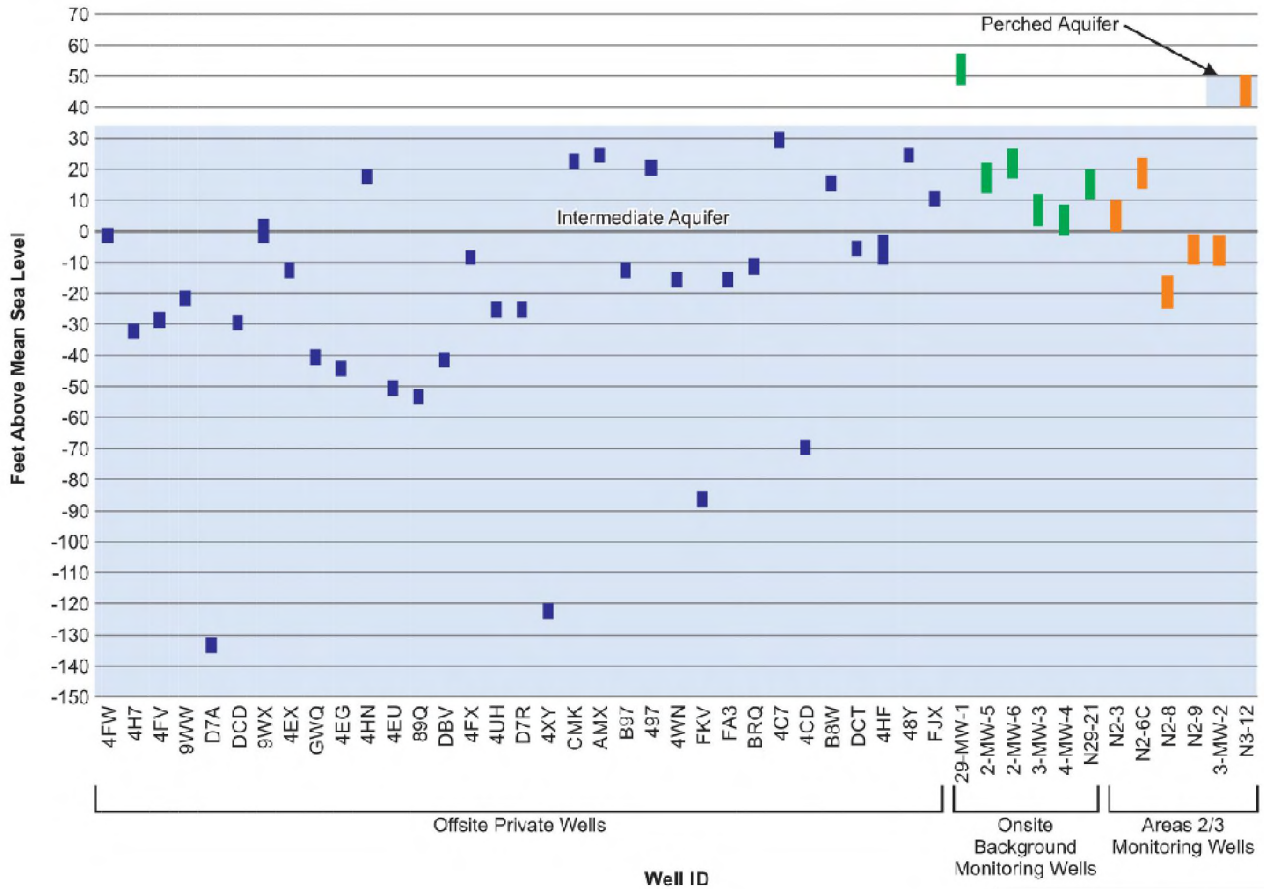

Sixth Five-Year Review
Naval Air Station Whidbey Island
Oak Harbor, Washington

Screen Elevations for Off-site Private Wells and Areas 2/3 Wells

PROJECT NO.:	20D-5006.F4050
DATE:	July 2024
DRAWN BY:	JP
CHECKED BY:	CB

FIGURE 4-9

Source: Battelle, 2019a.

Date: 6/26/2024 File: Figure 4-9 Screen El.mxd

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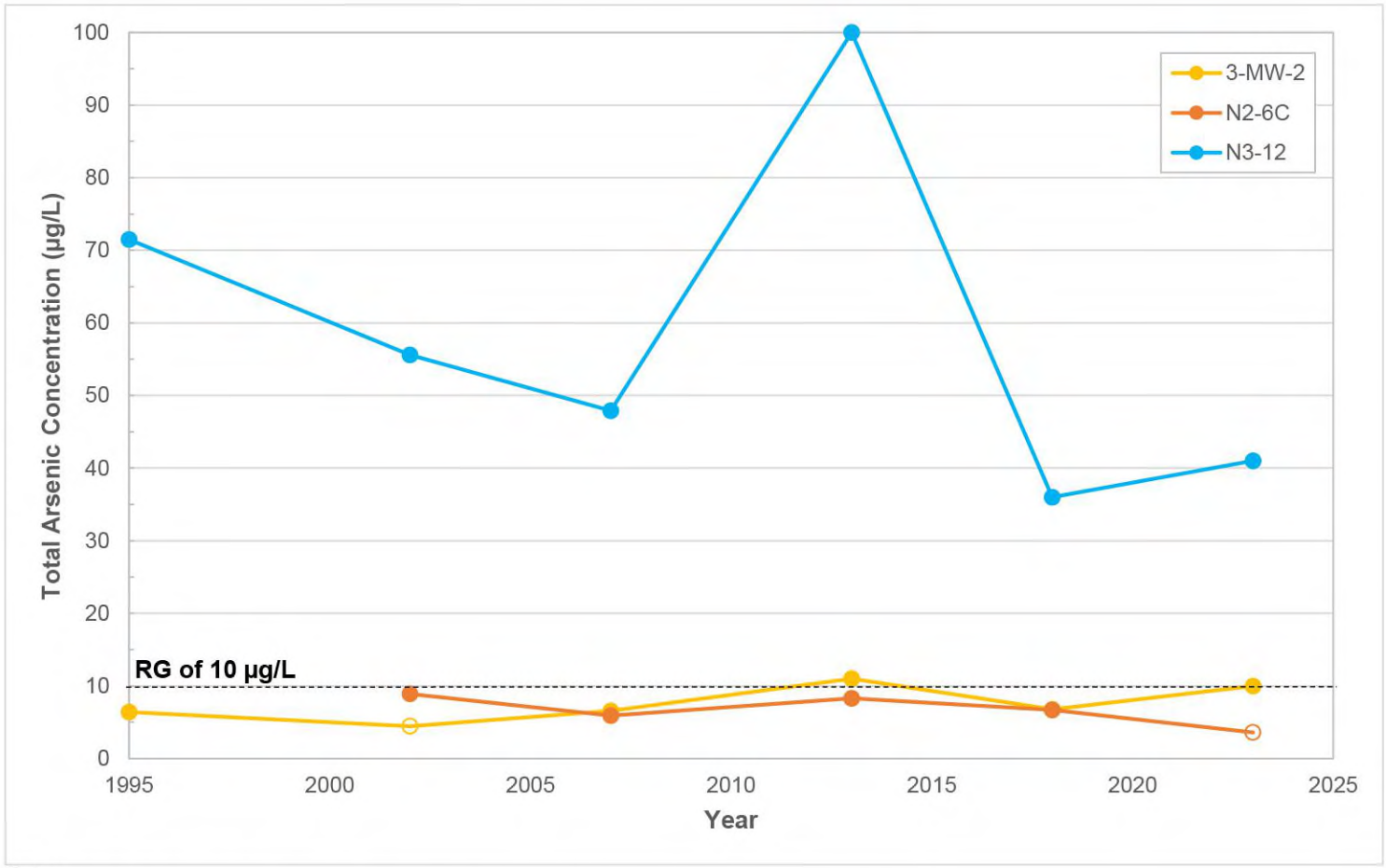
Figure 4-10. Post-ROD Sampling of Total Arsenic in Groundwater at Areas 2/3



Notes:
Only results from primary samples are shown.
Non-detected values shown at one-half the detection limit and with an open symbol.

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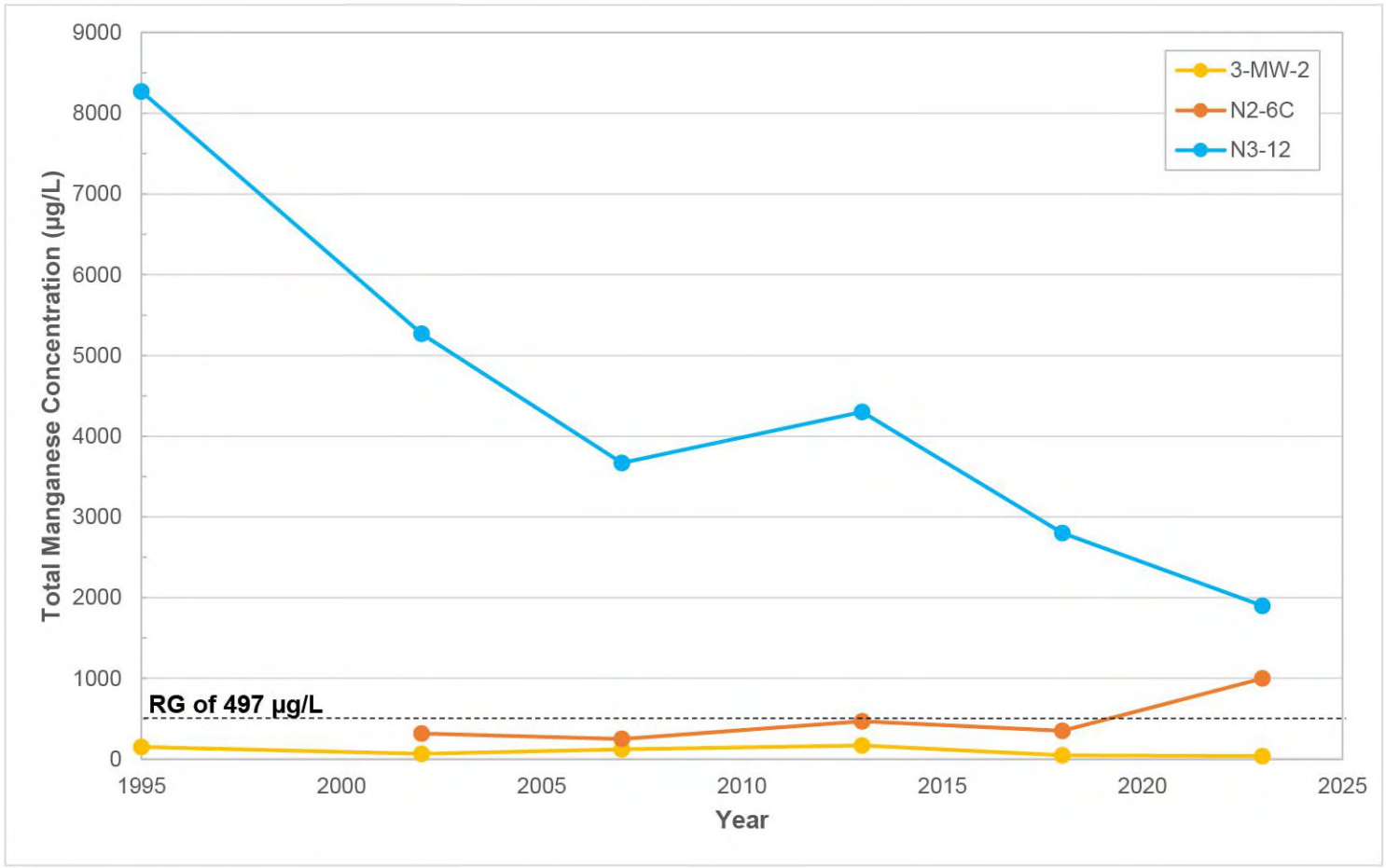
Figure 4-11. Post-ROD Sampling of Total Manganese in Groundwater at Areas 2/3



Notes:
Only results from primary samples are shown.

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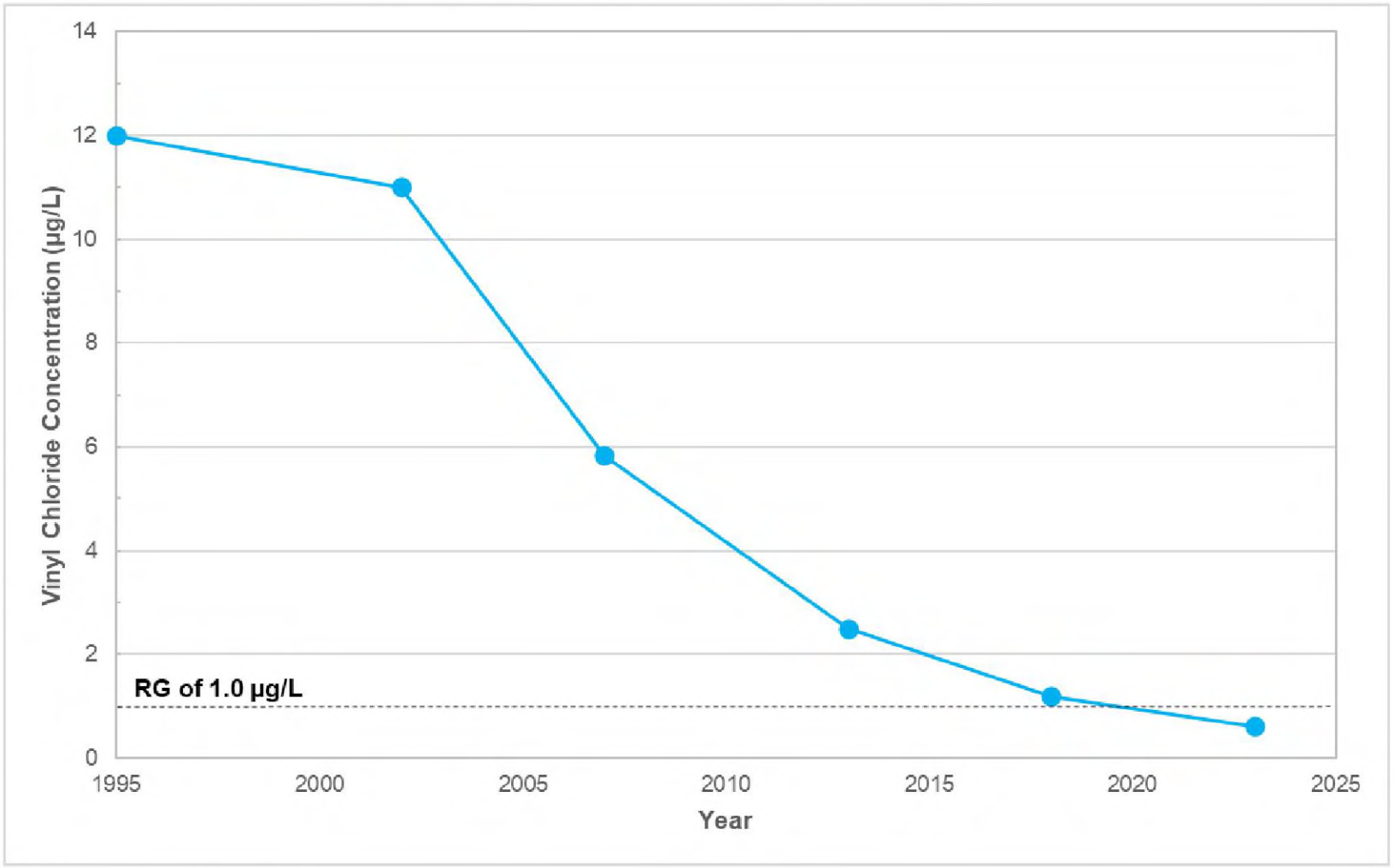
Figure 4-12. Post-ROD Sampling of Vinyl Chloride in Groundwater at Well N3-12



Notes:
Only results from primary samples are shown.

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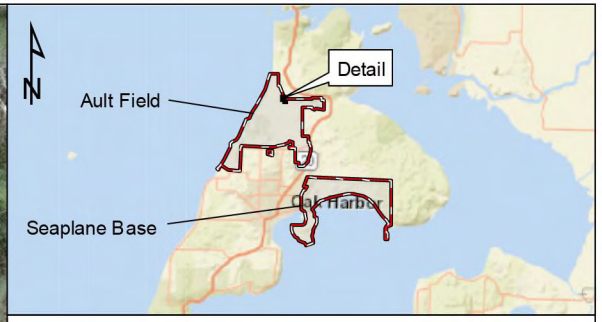

Legend

- Monitoring Well
- 17.70' Groundwater Elevation Isocontour September 2022 (feet MSL, dashed where estimated)
- Groundwater Flow Direction
- CERCLA OU LUC Area
- NAS Whidbey Island Boundary

Notes:
CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act
LUC = Land Use Control
MSL = mean sea level
NAS = Naval Air Station
OU = Operable Unit
Basemap Source: Esri, 2024.

N

0 40 80 120 160
Feet
1 Inch = 80 Feet

Sixth Five-Year Review
Naval Air Station Whidbey Island
Oak Harbor, Washington

Operable Unit 5
Area 31

PROJECT NO.:	20D-5006.F4050
DATE:	July 2024
DRAWN BY:	JP
CHECKED BY:	CF

NAVFAC

FIGURE
4-13

Date: 6/26/2024 File: Figure 4-13 OU 5 Area 31.mxd

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5.0 Technical Assessment

In accordance with the Comprehensive Five-Year Review Guidance (EPA, 2001), the technical assessment for OUs 1 through 5 at NAS Whidbey Island answer the following three questions:

- Question A: Is the remedy functioning as intended by the decision documents?
- Question B: Are the exposure assumptions, toxicity data, CULs, and RAOs used at the time of the remedy still valid?
- Question C: Has any other information come to light that could call into question the protectiveness of the remedy?

Table 5-1 summarizes the responses to Questions A, B, and C based on the technical assessment discussion provided in the following subsections for OUs 1 through 5.

Table 5-1. Technical Assessment Summary for OUs 1 through 5 at NAS Whidbey Island

OU	Area	**Question A:** *Is the remedy functioning as intended by the decision documents?*	**Question B:** *Are the exposure assumptions, toxicity data, cleanup levels, and RAOs used at the time of the remedy still valid?*	**Question C:** *Has any other information come to light that could call into question the protectiveness of the remedy?*
1	5	Yes	Yes	No
	6	Yes	Yes	Yes
2	2/3	Yes	Yes	Yes
	4	Yes	Yes	No
	14	Yes	Yes	No
	29	Yes	Yes	No
3	16	Yes	Yes	Yes
4	48/49	Yes	Yes	No
5	1	Yes	Yes	No
	31	Yes	Yes	Yes
	52	Yes	Yes	No

Abbreviations:
OU = operable unit
RAOs = remedial action objectives

5.1 Answers to Questions A, B, and C For OU 1

This section answers Questions A, B, and C for OU 1, which comprises Areas 5 and 6.

5.1.1 OU 1, Area 5, Highway 20/Hoffman Road Landfill

For OU 1 Area 5, the remedy is functioning as intended; therefore, the answer to Question A is "yes." The OU 1 ROD (Navy, Ecology, and EPA, 1993a) did not specify a

remedial action for OU 1 Area 5; however, the ESD (Navy, 2007) added LUC requirements for OU 1 Area 5. OU 1 Area 5 LUCs consist of institutional controls (i.e., land use and excavation restrictions). Based on annual LUCs inspections, these LUCs are effectively implemented at OU 1 Area 5.

No CULs were established or identified for OU 1 Area 5 in the OU 1 ROD (Navy, Ecology, and EPA, 1993a). Therefore, there were no exposure assumptions, toxicity data, CULs, or RAOs used or developed for OU 1 Area 5. Nevertheless, the answer to Question B is considered to be "yes" because the conclusions of the evaluation of OU 1 Area 5 in the OU 1 ROD are considered to still be valid.

For OU 1 Area 5, no other information reviewed during this FYR, specifically emerging chemicals and climate change issues, affects the protectiveness of the remedy at this time; therefore, the answer to Question C is "no."

5.1.2 OU 1, Area 6, Landfill Operations Area and Former Hazardous Waste Storage Area

For OU 1 Area 6, the remedy is functioning as intended by the OU 1 ROD (Navy, Ecology, and EPA, 1993a); therefore, the answer to Question A is "yes." The landfill cap was completed in October 1996 and is intact, well maintained, and functioning as intended. The original Western GETR System has effectively reduced chlorinated VOC concentrations in groundwater over time (Section 4.2.1).

In the OU 1 ROD, 1,4-dioxane was not identified or accounted for (Navy, Ecology, and EPA, 1993a). As recommended in the Fifth FYR, a RODA (Navy, 2019) was completed during this FYR period and addresses 1,4-dioxane in groundwater at OU 1 Area 6. The RODA also identifies groundwater treatment using AOP as the preferred remedial alternative, consisting of constructing a new additional AOP treatment plant to the south; upgrading the original treatment plant to AOP (from air stripper); and expanding the well network to delineate the southern boundary of the 1,4-dioxane plume. The Southern GETR System has been operational since October 2021 and has been operating as intended. The Western GETR System is currently being upgraded to AOP and is anticipated to be operational by summer 2024.

LUCs are a part of the remedy at Area 6. LUCs are inspected annually, and requirements were met during this FYR period. Per recommendations from the Fifth FYR, the Island County Public Health Hydrogeology Data System is checked semi-annually for wells installed within a 1-mile buffer of the facility as part of the LUC inspection process.

The 1,4-dioxane groundwater plume may extend downgradient and beyond the 1,000-foot exclusion zone surrounding the boundary of the OU 1 Area 6, OU 1 Area 5, and

City of Oak Harbor landfills at concentrations greater than the CUL of 0.44 µg/L. Based on the downgradient delineation discussed in Section 3.2.1, the 1,4-dioxane groundwater plume has traveled less than 0.5 miles from the base boundary. Therefore, the 1,4-dioxane plume remains within the 1-mile buffer where well installation and groundwater use is monitored through annual LUC inspections. The 1,000-foot exclusion zone around the OU 1 Area 6, OU 1 Area 5, and City of Oak Harbor landfills per WAC 173-160-171.3.b.vi is entered in the Island County Public Health Hydrogeology Data System (Appendix D). If this plume has migrated farther downgradient than the 1,000-foot exclusion zone at concentrations exceeding the CUL, annual LUC inspections monitor any well installation activities and groundwater use within a 1-mile buffer around Ault Field and the Seaplane Base. No violations of this LUC occurred during this FYR period. In addition, all residents within the plume area are on the municipal water supply (i.e., not well water) or have a deeper supply well; therefore, there are no known exposures to groundwater concentrations that pose an unacceptable risk to human health.

The RODA (Navy, 2019) also reviewed and revised the list of COCs for OU 1 Area 6 and the identified RGs. 1,1-DCA and cis-1,2-DCE were removed from and 1,4-dioxane was added to the COC list for OU 1 Area 6. In addition, the RGs for vinyl chloride and 1,1-DCE were revised to reflect changes in analytical methods and toxicity values since the point in time at which the ROD was developed. Overall, for OU 1 Area 6, as long as LUCs are maintained, the answer to Question B is considered to be "yes;" further details are provided in Section 5.6.

For OU 1 Area 6, other information reviewed during this FYR, specifically regarding emerging chemicals, could affect the protectiveness of the remedy; therefore, the answer to Question C is "yes." Specifically, PFAS was detected in groundwater at OU 1 Area 6 in 2017 and downgradient (off base) of Area 6 in 2018. Based on the 2018 Ault Field PFAS PA, an SI was recommended for Area 6 (CH2M, 2018). The SI was completed in 2021 and recommended further investigation to delineate nature and extent of PFAS (CH2M, 2021). PFAS is currently being evaluated under the CERCLA process. The PFAS RI for OU 1 Area 6 is ongoing at this time. The Navy will continue to follow the CERCLA process.

5.2 Answers to Questions A, B, and C for OU 2

This section answers Questions A, B, and C for OU 2, which comprises Areas 2, 3, 4, 14, and 29.

5.2.1 OU 2, Area 2 Western Highlands Landfill and OU 2, Area 3, 1969 to 1970 Landfill

For OU 2 Areas 2/3, the remedy is functioning as intended by the OU 2 ROD (Navy, Ecology, and EPA, 1994); therefore, the answer to Question A is "yes." A groundwater monitoring program for the first five years and LUCs were selected as the remedy for Areas 2/3.

The intent of the groundwater monitoring program was to confirm that concentrations of inorganics (i.e., metals) in groundwater were within background levels and below risk-based levels.

Based on the results from the August 2023 groundwater sampling event, total and dissolved arsenic were not detected above the RG at the intermediate wells 3-MW-2 or N2-6C. However, total and dissolved arsenic were above the proposed background concentrations in well N3-12, which is screened in a perched aquifer zone. Total and dissolved manganese were detected above the proposed background concentrations at wells N2-6C and N3-12 (Table 4-3). Monitoring well N3-12 contained the highest detected concentrations of both total arsenic and total manganese at 41 and 1,900 µg/L, respectively.

Based on the results from the August 2023 sampling event, the vinyl chloride concentration in N3-12 was 0.62 µg/L (duplicate 0.64 µg/L), below the ROD CUL of 1.0 µg/L. The vinyl chloride trend continues to decrease based on the results from 1995 through 2023.

LUCs are a part of the remedy and ongoing maintenance for OU 2 Areas 2/3. LUCs consist of institutional controls at this site. During this FYR period, LUCs were effectively implemented through Navy instruction, signage, and restrictions on land and groundwater use.

For OU 2 Areas 2/3, the exposure assumptions, toxicity data, CULs, and RAOs used for the COCs identified in the ROD (Navy, Ecology, and EPA, 1994) are still valid and protective if LUCs are maintained, therefore, the answer to Question B is "yes." Updates to these values are discussed in Section 5.6.

For OU 2 Areas 2/3, other information reviewed during this FYR, specifically regarding emerging chemicals, could affect the protectiveness of the remedy; therefore, the answer to Question C is "yes." Specifically, PFAS was detected in groundwater at OU 2 Areas 2/3. Based on the 2018 Ault Field PFAS PA, an SI was recommended for Areas 2/3 (CH2M, 2018). The PFAS SI, including the vicinity of Areas 2/3, was completed in 2018 (CH2M, 2019) and recommended further investigation. The SI demonstrated that an RI was warranted at the Current Fire Training Area (including the

wells with detections above 70 ng/L PFOS and/or PFOA at Areas 2 and 3). The RI is ongoing at this time. The Navy will continue to follow the CERCLA process.

5.2.2 OU 2, Area 4, Walker Barn Storage Area

For OU 2 Area 4, the remedy is functioning as intended by the OU 2 ROD (Navy, Ecology, and EPA, 1994); therefore, the answer to Question A is "yes." Excavation and off-site disposal of approximately 1,750 cubic yards of polychlorinated biphenyl (PCB)-contaminated soil has been completed at OU 2 Area 4. Groundwater monitoring has been conducted to determine the level of inorganics (i.e., metals) in both on-site and background wells. LUCs and continued groundwater monitoring were implemented based on the results of the initial groundwater monitoring event. As noted in the Fourth FYR (Tetra Tech, 2014), the EPA and Navy agreed to discontinue groundwater monitoring at OU 2 Area 4 based on monitoring results and remaining LUCs in place, which restrict groundwater use. LUCs at Area 4 consist of institutional controls. During this FYR period, LUCs were effectively implemented through Navy instruction and restrictions on land and groundwater use.

For OU 2 Area 4, the exposure assumptions, toxicity data, CULs, and RAOs used for the COCs identified in the ROD (Navy, Ecology, and EPA, 1994) are still valid and protective if LUCs are maintained, therefore, the answer to Question B is "yes." Updates to these values are discussed in Section 5.6.

For OU 2 Area 4, no other information reviewed during this FYR, specifically emerging chemicals and climate change issues, affects the protectiveness of the remedy at this time; therefore, the answer to Question C is "no." OU 2 Area 4 was included in the 2018 Ault Field PFAS PA, which recommended no further investigation at this time (CH2M, 2018).

5.2.3 OU 2, Area 14, Pesticide Rinsate Disposal Area

For OU 2 Area 14, the remedy is functioning as intended by the OU 2 ROD (Navy, Ecology, and EPA, 1994); therefore, the answer to Question A is "yes." The dry well and monitoring well 14-MW-1 were pumped out (approximately 1,000 gallons of water was treated and disposed of), removed, and approximately 420 cubic yards of surrounding contaminated soil was excavated and disposed of. Well 14-MW-1 was reinstalled downgradient of its original location and sampled during the wet season to confirm the effectiveness of the remediation effort. As stated in previous FYRs, the EPA confirmed, via letter, that all cleanup actions required by the ROD have been implemented and the remedy is complete (Navy, 1998). There are no LUC requirements for OU 2 Area 14.

For OU 2 Area 14, the exposure assumptions, toxicity data, CULs, and RAOs used for the COCs identified in the ROD (Navy, Ecology, and EPA, 1994) are still valid and protective, therefore, the answer to Question B is "yes". Updates to these values are discussed in Section 5.6.

For OU 2 Area 14, no other information reviewed during this FYR, specifically emerging chemicals and climate change issues, affects the protectiveness of the remedy at this time; therefore, the answer to Question C is "no." OU 2 Area 14 was included in the 2018 Ault Field PFAS PA, which recommended an SI (CH2M, 2018). The SI was completed in 2021 and concluded no further investigation at this time (CH2M, 2021).

5.2.4 OU 2, Area 29, Clover Valley Fire School

For OU 2 Area 29, the remedy is functioning as intended by the OU 2 ROD (Navy, Ecology, and EPA, 1994); therefore, the answer to Question A is "yes." Excavation and disposal of approximately 1,400 cubic yards of pentachlorophenol (PCP)- and polycyclic aromatic hydrocarbon (PAH)-contaminated soil from several locations surrounding the burn pad was completed at OU 2 Area 29. Groundwater monitoring was conducted to determine the level of inorganics (i.e., metals) in both on-site and background wells. As noted in the Fourth FYR (Tetra Tech, 2014), the EPA and Navy agreed to discontinue groundwater monitoring at OU 2 Area 29 based on monitoring results and remaining LUCs in place, which restrict groundwater use. LUCs at Area 29 consist of institutional controls. LUCs are effectively implemented through Navy instruction and restrictions on groundwater use.

For OU 2 Area 29, the exposure assumptions, toxicity data, CULs, and RAOs used for the COCs identified in the ROD (Navy, Ecology, and EPA, 1994) are still valid and protective if LUCs are maintained, therefore, the answer to Question B is "yes." Updates to these values are discussed in Section 5.6.

For OU 2 Area 29, no other information reviewed during this FYR, specifically emerging chemicals and climate change issues, affects the protectiveness of the remedy at this time; therefore, the answer to Question C is "no." OU 2 Area 29 was included in the 2018 Ault Field PFAS PA, which recommended an SI (CH2M, 2018). The SI was completed in 2021 and concluded no further investigation at this time (CH2M, 2021).

5.3 Answers to Questions A, B, and C for OU 3

This section answers Questions A, B, and C for OU 3, which comprises Area 16 runway ditches.

For OU 3 Area 16, the remedy is functioning as intended by the OU 3 ROD (Navy, Ecology, and EPA, 1995); therefore, the answer to Question A is "yes." The selected

remedy for OU 3 Area 16 included: 1) sediment sampling to determine the extent of contamination; 2) comparison of sample results to Resource Conservation and Recovery Act criteria to determine proper disposal; 3) dredging of sediment from contaminated ditch segments based on cleanup criteria; and 4) properly disposing of sediment (Navy, Ecology, and EPA, 1995). This remedial action was completed and approved by EPA in July 1996 (FWEC, 1997c).

LUCs are implemented at OU 3 Area 16 and consist of institutional controls. The LUCs are being implemented through Navy instruction and restrictions on land use. Sediment sampling was previously conducted at this site. In October 2018, the most recent sediment sampling event, there was a very minimal amount of sediment observed in the catch basin. This indicates that there is limited potential for ecological receptors to be exposed to the sediment. In addition, LUCs are in place to limit adjoining ditch banks to disposal of dredged sediments meeting MTCA Industrial Soils Criteria and/or industrial use, thus preventing unacceptable risk to ecological receptors. The Fifth FYR stated that all future O&M activities (including adding to the installation-wide stormwater pollution prevention plan the requirement and procedures for catch basin cleanout every 5 to 10 years at location 16-2; catch basin cleanout; ditch cleanout; and sampling), should be conducted by the NAS Whidbey Island Compliance Program. Because the potential for exposure is already minimal, the cleanout activities conducted under the NAS Whidbey Island Compliance Program will continue to ensure minimal sediment buildup and functionality of the runway ditch and stormwater system (Battelle, 2019).

For OU 3 Area 16, the exposure assumptions, toxicity data, CULs, and RAOs used at the time of the remedy are still valid and protective if LUCs are maintained; therefore, the answer to Question B is "yes." A discussion of the changes in toxicity data and CULs is provided in Section 5.6.

For OU 3 Area 16, other information reviewed during this FYR, specifically regarding emerging chemicals, could affect the protectiveness of the remedy; therefore, the answer to Question C is "yes." PFAS was not detected in initial groundwater samples collected in 2015. Based on historical use of the site, Area 16 was included in the 2018 Ault Field PFAS PA, and an SI was recommended for Area 16 (CH2M, 2018). The SI was completed in 2021 and recommended further investigation to delineate nature and extent of PFAS (CH2M, 2021). The RI is ongoing at the time of this FYR. The Navy will continue to follow the CERCLA process.

5.4 Answers to Questions A, B, and C for OU 4

This section answers Questions A, B, and C for OU 4, which comprises Areas 48/49.

For OU 4, the remedy is functioning as intended by the OU 4 ROD (Navy, Ecology, and EPA, 1993b); therefore, the answer to Question A is "yes." Excavation and on-station or off-site disposal of contaminated soil have been completed at Areas 39, 41, 44, and 48. The response is complete for unlimited use/unrestricted exposure at OU 4 Areas 39, 41, and 44, and these areas are not evaluated in this FYR. OU 4 was deleted from the NPL on 21 September 1995. A notification regarding the existence of a historical construction and demolition debris landfill will be placed on the deed for Area 49, when and if the Navy relinquishes the property. Transfer of any Navy property is conducted through a Finding of Suitability for Transfer process, during which the notification would be placed on the deed. In accordance with the ESD (Navy, 2007), at OU 4 LUCs are only implemented at Areas 48/49. Based on annual LUC inspections, these LUCs are effectively implemented through Navy instruction, education/outreach, signage, and delegation of responsibilities, as applicable.

For OU 4, the exposure assumptions, toxicity data, CULs, and RAOs used at the time of the remedy are still valid and protective if LUCs are maintained; therefore, the answer to Question B is "yes." A discussion of the changes in toxicity data and CULs is provided in Section 5.6.

For OU 4, no other information reviewed during this FYR, specifically emerging chemicals and climate change issues, affects the protectiveness of the remedy at this time; therefore, the answer to Question C is "no." The boundary for OU 4 Areas 48/49 is adjacent to Crescent Harbor and could potentially be vulnerable to future climate change impacts (e.g., rising sea levels and more intense storms) that could deteriorate the shoreline. However, this is not a protectiveness issue at this time, and the shoreline is monitored and documented during annual LUC inspections.

5.5 Answers to Questions A, B, and C for OU 5

This section answers Questions A, B, and C for OU 5, which comprises Areas 1, 31, and 52.

5.5.1 OU 5, Area 1, Beach Landfill

For OU 5 Area 1, the remedy is functioning as intended by the OU 5 ROD (Navy, Ecology, and EPA, 1996); therefore, the answer to Question A is "yes." LUCs and monitoring, including annual visual inspections of the landfill bluff, were implemented as prescribed in the OU 5 ROD (Navy, Ecology, and EPA, 1996). In 2017, seawall construction activities were conducted at OU 5 Area 1, extending the existing seawall to address additional shoreline erosion issues at the south end of the Area 1 beach landfill. The seawall prevents shoreline erosion that could lead to both physical and residual chemical hazards being released from the site and provides long-term protection of the

permanent coastal protection system to maintain LUC requirements, as established in the OU 5 ROD (Navy, Ecology, and EPA, 1996). Based on annual LUC inspections, the LUC requirements are effectively implemented through Navy instruction, education/outreach, signage, and delegation of responsibilities, as applicable.

For OU 5 Area 1, the exposure assumptions, toxicity data, CULs, and RAOs used at the time of the remedy are still valid and protective if LUCs are maintained; therefore, the answer to Question B is "yes." A discussion of the changes in toxicity data and CULs is provided in Section 5.6.

For OU 5 Area 1, no other information reviewed during this FYR, specifically emerging chemicals and climate change issues, affects the protectiveness of the remedy at this time; therefore, the answer to Question C is "no." The recent coastal erosion protection system maintenance, summarized in Section 3.2.1, addressed climate change impacts (i.e., sea-level rise).

5.5.2 OU 5, Area 31, Former Runway Fire School

For OU 5 Area 31, the remedy is functioning as intended by the OU 5 ROD (Navy, Ecology, and EPA, 1996); therefore, the answer to Question A is "yes." The OU 5 ROD (Navy, Ecology, and EPA, 1996) identifies several remedial actions that have since been completed, including: 1) removal of the oil/water separator, underground storage tank, and 32 cubic yards of soil in 1996 following the discovery and characterization of contaminant releases to soil and groundwater; 2) soil venting and product recovery conducted from April 1996 through March 2000, which recovered approximately 884 gallons of free product; and 3) bi-annual groundwater monitoring between January 1997 and July 1999. Since shutdown of the soil venting and product recovery systems in 2000, groundwater monitoring has been conducted at various monitoring wells and for various analytes. Currently, annual monitoring is conducted at five monitoring wells (EA, 2024).

The OU 5 ROD (Navy, Ecology, and EPA, 1996) states: "*The selected remedies for both Areas 31 and 52 rely on natural attenuation to achieve groundwater CULs over the long term.*" Based on the information presented in Section 4.2.4, natural attenuation may be occurring in the area of the former free product distribution at Area 31. Biodegradation mechanisms are active in the subsurface and could be enhanced, with a likely outcome of demonstratable MNA. Regardless, OU 5 Area 31 LUCs include restrictions on well installation activities and groundwater use within and downgradient of the site; therefore, there is no potential unacceptable impact to downgradient groundwater receptors. The annual LUC inspections demonstrate that the LUCs are effectively implemented through Navy instruction, education/outreach, signage, and delegation of responsibilities, as applicable.

For OU 5 Area 31, the exposure assumptions, toxicity data, CULs, and RAOs used for the COCs identified in the ROD (Navy, Ecology, and EPA, 1996) are still valid and protective if LUCs are maintained; therefore, the answer to Question B is "yes,". Updates to these values are discussed in Section 5.6.

For OU 5 Area 31, other information reviewed during this FYR, specifically regarding emerging chemicals , could affect the protectiveness of the remedy; therefore, the answer to Question C is "yes." PFAS was detected in groundwater at OU 5 Area 31 in 2016 (MMEC Group, 2016). Based on the 2018 Ault Field PFAS PA, an SI was recommended for Area 31 (CH2M, 2018). Because the expedited PFAS SI conducted in 2016 confirmed PFAS was present, the Navy recommended further investigation to delineate nature and extent of PFAS at Area 31. The RI is ongoing at this time. The Navy will continue to follow the CERCLA process. LUCs restricting groundwater use are maintained in Area 31; therefore, human exposure to PFAS in groundwater is prevented within the Ault Field boundary. PFAS are currently being evaluated through the CERCLA process.

5.5.3 OU 5, Area 52, Jet Engine Test Cell

For OU 5 Area 52, the remedy is functioning as intended by the OU 5 ROD (Navy, Ecology, and EPA, 1996); therefore, the answer to Question A is "yes." The remedy at OU 5 Area 52 is considered complete and based on annual LUCs inspections, LUCs are effectively implemented through Navy instruction, education/outreach, signage, and delegation of responsibilities, as applicable.

For OU 5 Area 52, the exposure assumptions, toxicity data, CULs, and RAOs used at the time of the remedy are still valid and protective if LUCs are maintained; therefore, the answer to Question B is "yes." A discussion of the changes in toxicity data and CULs is provided in Section 5.6.

For OU 5 Area 52, no other information reviewed during this FYR, specifically emerging chemicals and climate change issues, affects the protectiveness of the remedy at this time; therefore, the answer to Question C is "no." The recent coastal erosion protection system maintenance, summarized in Section 2.5.2, addressed climate change impacts (i.e., sea-level rise).

5.6 Question B Analysis: Continued Validity of ROD Assumptions

This section reviews the validity of the ROD CULs by reviewing any changes to standards identified as applicable or relevant and appropriate requirements (ARARs), changes in underlying assumptions used to calculate risk-based concentrations identified as CULs in the RODs, and newly promulgated standards for COCs since the

RODs were signed to evaluate the protectiveness of the remedy. Based on the evaluation conducted as part of this FYR, no changes to CULs were identified since the RODs that affect the protectiveness of the remedies at OUs 1 through 5 at NAS Whidbey Island. Therefore, the answer to Question B for all OUs is "yes"—the exposure assumptions, toxicity data, CULs, and RAOs used at the time of remedy selection are still valid for OUs 1 through 5.

COC concentrations in groundwater remain above the CULs at some locations in OUs 1, 2, and 5, resulting in the need for continued LUCs to prevent exposure and the need for ongoing monitoring. Although some of the risk-based CULs might be lower if calculated using current assumptions, the remedy components continue to protect against exposures, as they did at the time the RODs were signed. LUCs preventing exposure and ongoing monitoring will need to continue until COC concentrations in groundwater are below the CULs.

5.6.1 Changes in Standards and "To Be Considered" Criteria

According to Section 300.430(f)(1)(ii)(B) of the NCP, Title 40 Code of Federal Regulations Section 300.430(f)(1)(ii)(B), a remedy must attain the ARARs that are identified at the time of issuance of the ROD. For ARARs promulgated or modified after issuance of the ROD, such ARARs must be attained if that would ensure the remedy is protective of human health and the environment. If new or changed standards are more stringent, the next stage is to evaluate and compare the old and new standards and their associated risk. This comparison is done to assess whether the currently calculated risk associated with the standard identified in the ROD is still within or below the generally acceptable CERCLA risk range of 10^{-4} to 10^{-6} for carcinogenic risk and the hazard index is below 1 for noncarcinogens. In addition, the cumulative excess cancer risk associated with the site must not exceed 1×10^{-5}, consistent with MTCA. If the old standard is no longer considered protective, a new cleanup standard may be adopted after the FYR through CERCLA's processes for modifying a remedy. For this FYR, all ARARs identified in the RODs for OUs 1 through 5 were reviewed for changes that could affect the assessment of whether the remedy remains protective.

ARARs that were used in the determination of CULs have been reviewed and consist of the following:

- EPA National Primary Drinking Water Regulations MCLs;
- Washington State MTCA Cleanup Regulations (Chapter 173-340 WAC);
- Washington State Marine Surface Water Quality Standards for Protection of Aquatic Life and Human Health (Chapter 173-201A WAC); and

- Washington State Sediment Management Standards (SMS) (Chapter 173-204 WAC).

No new or additional ARARs were identified since the Fifth FYR. In addition, because MTCA Method A and B cleanup values represent risk-based concentrations calculated using the methods and procedures outlined in MTCA, they are not considered ARARs under CERCLA. Cleanup values established in the RODs are MTCA values and are therefore evaluated here as risk-based cleanup values, in terms of whether the underlying assumptions about toxicity have changed since the last FYR and if this change affects protectiveness of the remedy.

In addition to establishing risk-based CULs, MTCA also allows for use of background concentrations or the laboratory PQL as a CUL when the MTCA risk-based CUL is lower than these values. Due to improved analytical techniques, laboratories can now readily achieve lower PQLs for some COCs. When CULs are established as PQLs and the PQLs decrease with improved technology, the FYR should include an assessment of whether the latest PQLs remain higher than the risk-based levels, and, if not, whether that change effects the protectiveness of the remedy.

The result of the amendments to the regulations is sometimes the lowering of a numeric ARAR, or underlying assumptions may change for risk-based concentrations. In these instances, the revised ARAR or changes to underlying risk-based assumptions must be evaluated to determine whether the change compromises the protectiveness of the remedy. In other instances, the ARAR or risk-based value remains unchanged or has increased. In these instances, no further analysis is necessary, because the protectiveness of the remedy is not affected. Cleanup criteria identified in each of the RODs and comparison to current regulatory or risk-based values are summarized and discussed in Sections 5.6.1 through 5.6.3.

5.6.1.1 Operable Unit 1

For this FYR, OU 1 includes Areas 5 and 6. These areas were reviewed separately for potential revisions to ARARs and underlying assumptions to risk-based values that could affect the protectiveness of the remedies.

Area 5: No review was conducted for OU 1 Area 5 because no CULs were identified in the OU 1 ROD (Navy, Ecology, and EPA, 1993a).

Area 6: For OU 1 Area 6, no CULs were established for soil. Groundwater CULs were based on the protection of human health, assuming groundwater is used as drinking water. For the COCs in groundwater listed in the OU 1 ROD (Navy, Ecology, and EPA, 1993a) and the Final RODA (Navy, 2019), no revisions to the ARARs and underlying assumptions to risk-based values were found that would affect the protectiveness of the

remedy because ROD CULs remain consistent with current ARARs and risk-based concentrations.

The selected CULs for OU 1 Area 6 are based on MTCA Method B potable groundwater CULs and MCLs. Table 5-2 (in Section 5.1.2) compares current ARAR and risk-based values with CULs presented in the OU 1 ROD (Navy, Ecology, and EPA, 1993a) and the Final RODA (Navy, 2019).

TCE, 1,1-DCE, and 1,1,1-TCA CULs were set at MCLs and these MCLs remain unchanged since the development of the OU 1 ROD (Navy, Ecology, and EPA, 1993a), as is shown in EPA's National Primary Drinking Water Regulations (EPA, 2009).

There is no MCL for 1,4-dioxane; however, the current MTCA Method B value for 1,4-dioxane is 0.44 µg/L, as reported in the Cleanup Levels and Risk Calculation tables (Ecology, 2023). 1,4-Dioxane was not identified and not accounted for in the OU 1 ROD (Navy, Ecology, and EPA, 1993a). The Final RODA (Navy, 2019) identified 1,4-dioxane as a COC for OU 1 and specified the CUL for 1,4-dioxane as 0.44 µg/L based on the MTCA Method B value reported in the CLARC tables as of the Final RODA. The current CUL for 1,4-dioxane is unchanged at 0.44 µg/L, as shown in Table 5-2.

As noted in prior FYRs, the vinyl chloride MTCA Method B value has increased from 0.02 µg/L at the time of the original ROD to 0.029 µg/L based on a change in the oral cancer toxicity value. The CUL for vinyl chloride was revised in the Final RODA to 0.029 µg/L, consistent with the current MTCA Method B value. As such, the RODA CUL and current CUL for vinyl chloride are the same.

Table 5-2. Groundwater Cleanup Levels for OU 1 Area 6

COC	ROD Amendment (2019) Remediation Goal (µg/L)[1]		Current Cleanup Level (µg/L)[2]		Maximum Concentration Detected Between November 2018 and August 2023 (µg/L)			
					Result	Qualifier	Date	Location
1,4-Dioxane	*0.44*	*MTCA B*	*0.44*	*MTCA B*[3]	*13*	*none*	*9/20/22, 2/6/2023*	*6-DW-38*
Vinyl Chloride	*0.029*	*MTCA B*	*0.029*	*MTCA B*[3]	*5*	*none*	*2/16/2023*	*6-S-6*
TCE	*5*	*MCL (state and federal)*	*5*	*MCL (state and federal)*[4]	*31.2*	*none*	*2/5/2019*	*N6-37*
1,1-DCE	*7*	*MCL (state and federal)*	*7*	*MCL (state and federal)*[4]	*66*	*none*	*2/19/20*	*6-S-6*
1,1,1-TCA	*200*	*MCL (state and federal)*	*200*	*MCL (state and federal)*[4]	*400*	*none*	*2/5/2019*	*6-S-6*

Notes:
1. Final ROD Amendment (Navy, 2019).
2. Blue cell indicates the current regulatory value is the same as the remediation goal designated in the decision document.
3. MTCA Method B groundwater CUL as reported in the August 2023 Cleanup Levels and Risk Calculation Master Table.
4. MCL as obtained from National Primary Drinking Water Regulations (EPA, 2009)

Abbreviations:
µg/L= microgram(s) per liter
COC = chemical of concern
CUL = cleanup level
DCE = dichloroethane
MCL = maximum contaminant level
MTCA = Model Toxics Control Act
ROD = Record of Decision
TCA = trichloroethane
TCE = trichloroethene

5.6.1.2 Operable Unit 2

For OU 2, soil and groundwater CULs for Areas 2/3, 4, 14, and 29 were based on future residential use. For the COCs in soil and groundwater listed in the OU 2 ROD (Navy, Ecology, and EPA, 1994), no revision to ARARs or underlying assumptions of the risk-based values were found that would affect the protectiveness of the remedy.

Soil. The selected soil CULs for Areas 4, 14, and 29 are based on MTCA Methods A and B unrestricted land use and protection of groundwater. Table 5-3 compares current soil MTCA values with those documented in the OU 2 ROD (Navy, Ecology, and EPA, 1994). As identified in the Fifth FYR, ROD CULs for (2-methyl-4-chlorophenoxy)2-propionic acid, PCBs, and bromacil continue to be the same as the current regulatory levels, indicating that the underlying assumptions and toxicity values have not changed since the ROD. For 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD), the Fourth FYR identified the differences between the ROD cleanup value and the current MTCA CUL. As explained in the Fourth FYR, a change in the noncancer toxicity value for 2,3,7,8-TCDD resulted in the higher MTCA value. No additional changes to underlying assumptions for derivation of the MTCA 2,3,7,8-TCDD values has occurred since the prior FYR.

Table 5-3. Soil Cleanup Levels for OU 2 Areas 4, 14, and 29

COC[1]	ROD Remediation Goal (mg/kg)[2]		Current Cleanup Level[3] (mg/kg)	
Area 4				
MCPP	*80*	*MTCA B*	*80*	*MTCA B[4]*
PCBs[5]	*1*	*MTCA A*	*1*	*MTCA A[4]*
Pentachlorophenol	*8.33*	*MTCA B*	*2.5*	*MTCA B[4]*
Area 14				
Bromacil	*7.0*	*MTCA B, protect GW (calculated)[6, 7]*	*7.0*	*MTCA B, protect GW (calculated)[6,7]*
2,3,7,8-TCDD	*0.0000067*	*MTCA B*	*0.000013*	*MTCA B[4]*
2,4-Dichlorophenol	*4.8*	*MTCA B, protect GW*	*0.33*	*MTCA B, protect GW[4]*
Area 29				
Pentachlorophenol	*8.33*	*MTCA B*	*2.5*	*MTCA B[4]*
PAHs[8]	*1*	*MTCA A*	*0.1*	*MTCA A (benzo(a)pyrene)[4, 9]*

Notes:

1. Samples were not collected for these analytes in these areas during this FYR period.

2. ROD Table 12 (Navy, Ecology, and EPA 1994).

3. Gold cell indicates the current regulatory value is less than the remediation goal designated in the decision document.
Blue cell indicates the current regulatory value is the same as the remediation goal designated in the decision document.
Green cell indicates the current regulatory value is greater than the remediation goal designated in the decision document.

4. MTCA Method A and B soil CULs as reported in the August 2023 Cleanup Levels and Risk Calculation Master Table.

5. The chemical of concern at OU 2 Area 4 is PCBs as Aroclor 1260. The CUL is based on a total value for PCB mixture (i.e., total PCBs).

6. Soil CUL protective of groundwater for bromacil as designated in the ROD.

7. Soil CUL for bromacil verified using the MTCA Method B equations (747-1 and 747-2 [Ecology 2013]), groundwater CUL of 1,600 µg/L, Koc of 32 mL/g, and Henry's law of 5.39 x 10^{-9} (dimensionless). Groundwater CUL calculated as 1,600 µg/L based on MTCA Method B equation (720-1) and reference dose of 0.1 mg/kg-day (EPA, 2018).

8. A CUL was identified for PAHs as a chemical group in the ROD (Navy, Ecology, and EPA 1994).

9. The current Cleanup Levels and Risk Calculation table does not list CULs for PAHs as a group. Carcinogenic PAHs should be represented by benzo(a)pyrene equivalents, and the total benzo(a)pyrene equivalent value should be compared to the benzo(a)pyrene CUL (Ecology 2015).

Table 5-3. Soil Cleanup Levels for OU 2 Areas 4, 14, and 29 (continued)

Abbreviations:
µg/L = micrograms per liter
COC = chemical of concern
CUL = cleanup level
Ecology = Washington State Department of Ecology
FYR = five-year review
GW = groundwater
Koc = soil organic carbon-water partitioning coefficient
MCPP = (2-methyl-4-chlorophenoxy)2-propionic acid
mg/kg = milligrams per kilogram
mg/kg-day = milligrams per kilogram per day
mL/g = milliliters per gram
MTCA = Model Toxics Control Act
OU = operable unit
PAH = polycyclic aromatic hydrocarbons
PCBs = polychlorinated biphenyls
TCDD = tetrachlorodibenzo-p-dioxin
ROD = Record of Decision

The Fifth FYR also addressed differences observed between ROD CULs for PCP and PAHs. For these two COCs, the current MTCA values are lower than the CULs established in the ROD. As discussed in the ROD, PCP and PAHs were identified as a COC for soil due to elevated concentrations observed in a limited number of samples, and this soil has been removed from Area 4 and 29 as part of removal actions to address PCBs and PCP/PAHs in soil, respectively, as described in Section 5.2. Therefore, the change in the PCP and PAH CULs would not affect the protectiveness of the remedy as PCP and PAHs have already been addressed by prior remedial actions. Therefore, these ROD CULs remain protective of human health.

For 2,4-dichlorophenol, the MTCA Method B soil value of 4.8 mg/kg established in the ROD (as protective of groundwater) has decreased to 0.33 mg/kg as the current CUL if calculated using current assumptions. LUCs are in place that restrict groundwater use as a drinking water source; thus, the remedy remains protective of human health. If LUCs were to be removed from this area in the future, any remaining concentrations of 2,4-dichlorophenol would have to be evaluated for the purpose of assessing protectiveness.

Groundwater. The selected final CULs for Areas 2/3, 4, 14, and 29 are based on a variety of ARARs, including MCLs, background concentrations, PQLs, and MTCA Method B potable groundwater CULs. Table 5-4 compares currently effective groundwater limits with those levels established in the OU 2 ROD (Navy, Ecology, and EPA, 1994) and the post-ROD levels. As shown in Table 13 of the OU 2 ROD (Navy, Ecology, and EPA, 1994), representative background concentrations were not developed at the time of the ROD, but background for the naturally occurring COCs needed to be considered as a potential CUL. Therefore, the OU 2 ROD (Navy, Ecology, and EPA, 1994) stated that a post-ROD groundwater sampling event was to be conducted to determine background concentrations. Thus, background values for arsenic and manganese in groundwater were established after the ROD (Navy, 1997).

In OU 2 Areas 2/3, 4, and 29, the final CULs for the naturally occurring constituents (antimony, arsenic, and manganese) were to be based on the higher of either background concentrations determined from the post-ROD future groundwater sampling

effort or MTCA Method B values as indicated in Table 13 of the OU 2 ROD (Navy, Ecology, and EPA, 1994). Table 5-4 summarizes the CULs. For antimony, background concentrations could not be determined due to a low frequency of detection in the background samples; therefore, the MCL was selected as the CUL.

Table 5-4. Groundwater Cleanup Levels for OU 2 Areas 2/3, 4, 14, and 29

COC[1]	ROD Remediation Goal[2] (µg/L)		Current Cleanup Level[3] (µg/L)	
Area 2/3				
Antimony	*6.0*	*MCL[4]*	*6.0*	*MCL[4]*
Arsenic	*0.05/7.7*	*MTCA B/BK[4, 5]*	*7.7*	*BK[4]*
Manganese	*80/125*	*MTCA B/BK[4, 5]*	*750*	*MTCA B[4, 6]*
Vinyl chloride	*0.023/1*	*MTCA B/PQL[4]*	*0.029*	*MTCA B[4, 6, 7]*
Area 4				
Arsenic	*0.05/7.7*	*MTCA B/BK[4, 5]*	*7.7*	*BK[4]*
Manganese	*80/125*	*MTCA B/BK[4, 5]*	*750*	*MTCA B[4, 6]*
Area 14				
Bromacil	*70*	*EPA[8]*	*70*	*EPA[8]*
2,4-Dichlorophenol	*48*	*MTCA B*	*48*	*MTCA B[6]*
Area 29				
Arsenic	*0.05/7.7*	*MTCA B/BK[4, 5]*	*7.7*	*BK[4]*
Manganese	*80/125*	*MTCA B/BK[4, 5]*	*750*	*MTCA B[4, 6]*

Notes:

1. Samples were not collected for these analytes in these areas during this FYR period.

2. ROD Table 13 (Navy, Ecology, and EPA, 1994).

3. Blue cell indicates the current regulatory value is the same as the remediation goal designated in the decision document.
Green cell indicates the current regulatory value is greater than the remediation goal designated in the decision document.

4. CUL was based on the higher of the two values (either background or the PQL, as compared to the MTCA value or the MCL). Antimony had a low frequency of detection in background groundwater samples, so background was considered to be non-detect and no background concentrations were identified for antimony.

5. Background values for arsenic and manganese and a PQL for vinyl chloride were established after the ROD (URS Greiner, 1997).

6. MTCA Method B levels as reported in the August 2023 Cleanup Levels and Risk Calculation Master Table.

7. MTCA allows for use of the PQL when the MTCA CUL is below the PQL. At the time the ROD was signed, the PQL was 1 µg/L. However, analytical techniques have improved since then and laboratories are able to achieve a PQL of 0.020 µg/L (Liberty JV, 2023c).

8. Based on EPA's lifetime health advisory (EPA, 2018).

Abbreviations:

µg/L= microgram(s) per liter
BK= background
COC= chemical of concern
CUL = cleanup level
EPA = Environmental Protection Agency
FYR = five-year review
MCL = maximum contaminant level
MTCA= Model Toxics Control Act
PQL= practical quantitation limit
ROD = Record of Decision

For arsenic and manganese, background as determined in the post-ROD sampling event was selected as the final CUL over the MTCA Method B values because background concentrations were greater than the MTCA Method B values, as shown in Table 5-4. While the MCL for antimony and the MTCA Method B value for arsenic remain the same today as at the time the ROD was signed, the MTCA Method B level for manganese has changed. The MTCA Method B value for manganese was 80 µg/L at the time the ROD was signed and the current MTCA Method B value is 750 µg/L, which could now be used as a cleanup standard because it is greater than the

background value of 125 µg/L. Because this is an increase in the current regulatory level, the ROD CUL remains protective of human health.

In OU 2 Areas 2/3, the vinyl chloride ROD CUL was the higher of the MTCA Method B value of 0.023 µg/L and the PQL at the time the ROD was signed which was 1 µg/L. The current MTCA Method B value for vinyl chloride is 0.029 µg/L. Analytical methods are available today that can achieve a PQL of 0.020 µg/L and a method DL as low as 0.005 µg/L (Liberty JV, 2023c). Because there has been a decrease in the PQL to below the MTCA Method B value, the MTCA Method B value would now be selected as the CUL. Nevertheless, even though the PQL was used in the past to assess groundwater conditions and protectiveness, LUCs are in place that restrict groundwater use as a drinking water source; thus, the remedy remains protective of human health. If LUCs were to be removed from this area in the future, any remaining concentrations of vinyl chloride would have to be evaluated for the purpose of assessing protectiveness.

ROD CULs for bromacil and 2,4-dichlorophenol continue to be the same as the current regulatory levels indicating that the underlying assumptions and toxicity values have not changed since the ROD.

5.6.1.3 Operable Unit 3

Sediment CULs for OU 3 Area 16 were based on ecological receptors and industrial land use. No CULs were established for surface water or groundwater. Sediment ARAR values were not available for ecological receptors at the time the ROD was signed. Therefore, to establish CULs, ecological receptor modeling (based on the muskrat) was conducted for the COCs. RGs and current CULs were identified for each COC as the lower of the calculated values for protection of ecological receptors or human health assuming industrial land use, or as background if background concentration was higher than the ecological and human values. Table 5-5 compares current soil standards and risk-based values with those documented in the OU 3 ROD (Navy, Ecology, and EPA, 1995).

Table 5-5. Soil Cleanup Levels for OU 3 Area 16

COC[1]	ROD Remediation Goal[2] (mg/kg)		Current Cleanup Level[3] (mg/kg)	
Arsenic	*16*	*Based on muskrat model*	*16*	*Based on muskrat model*
Lead	*18*	*Background*	*18*	*Background*
2-Methylnaphthalene	*0.8*	*Based on muskrat model*	*0.8*	*Based on muskrat model*
Benzo(k)fluoranthene	*18*	*MTCA C*	*1,300*	*MTCA C[4, 5]*
Dibenz(a,h)anthracene	*1.1*	*Based on muskrat model*	*1.1*	*Based on muskrat model*
Phenanthrene	*13*	*Based on muskrat model*	*13*	*Based on muskrat model*
Total petroleum hydrocarbons	*200*	*MTCA A[4]*	*NA*	*NA*
Diesel	*NA*	*NA*	*2,000*	*MTCA A[4]*
Heavy oil	*NA*	*NA*	*2,000*	*MTCA A[4]*

Table 5-5. Soil Cleanup Levels for OU 3 Area 16 (continued)

COC[1]	ROD Remediation Goal[2] (mg/kg)		Current Cleanup Level[3] (mg/kg)	
Mineral oil	*NA*	*NA*	*4,000*	*MTCA A[4]*
Gasoline with benzene	*NA*	*NA*	*30*	*MTCA A[4]*
Gasoline without benzene	*NA*	*NA*	*100*	*MTCA A[4]*

Notes:

1. Samples were not collected for these analytes in this area during this FYR period.

2. OU 3 ROD Table 8-1 (Navy, Ecology, and EPA 1995).

3. Gold cell indicates the current regulatory value is less than the remediation goal designated in the decision document.
Blue cell indicates the current regulatory value is the same as the remediation goal designated in the decision document.
Green cell indicates the current regulatory value is greater than the remediation goal designated in the decision document.

4. MTCA Method A and C levels as reported in the August 2023 Cleanup Levels and Risk Calculation Master Table. The Method A CUL for TPH was included because there was no Method C CUL for TPH at the time of the ROD. In addition, there is no current CUL for TPH; the CULs now correspond to different petroleum hydrocarbon categories rather than total petroleum.

5. The current Cleanup Levels and Risk Calculation table does not list CULs for PAHs other than benzo(a)pyrene. Carcinogenic PAHs should be evaluated using their TEF as compared to benzo(a)pyrene (Ecology 2015). In this case, because benzo(k)fluoranthene is the only PAH with a CUL based on the MTCA levels, its current CUL has been calculated by applying the TEF for benzo(k)fluoranthene of 0.1 to the benzo(a)pyrene MTCA C soil value of 130 mg/kg, resulting in a current CUL of 1,300 mg/kg.

Abbreviations:

µg/L= microgram(s) per liter
COC= chemical of concern
CUL = cleanup level
FYR = five-year review
mg/kg = milligram per kilogram
MTCA= Model Toxics Control Act
NA = not applicable
OU = operable unit
PAHs = polycyclic aromatic hydrocarbons
ROD = Record of Decision
TEF = toxicity equivalency factor
TPH = total petroleum hydrocarbons

In the Fifth FYR, the 2017 SMS freshwater sediment criteria for protection of the benthic community were reviewed and compared to the ROD CULs. The SMS criteria are considered current ARARs and were not promulgated at the time of the ROD. As documented in the Fifth FYR, the SMS benthic sediment criteria are higher than the ROD CULs; thus, protectiveness is not affected by the promulgation of the SMS criteria.

In the Fifth FYR, a review of the muskrat modeling toxicity values was conducted for arsenic, dibenz[a,h]anthracene, phenanthrene, and 2-methylnaphthalene. Results had not changed since the Fourth FYR (Tetra Tech, 2014), which found that if CULs based on ecological risks for arsenic and 2-methylnaphthalene were calculated today, based on current available toxicological studies, higher CULs would result. Current CULs for dibenz[a,h]anthracene and phenanthrene if calculated today are unlikely to change from the ROD CULs. Therefore, the ROD CULs for arsenic, dibenz[a,h]anthracene, phenanthrene, and 2-methylnaphthalene remain protective of human health and the environment.

The current CUL for benzo(k)fluoranthene based on MTCA Method C would be 1,300 mg/kg, which is higher than the ROD CUL of 18 mg/kg. Therefore, this change would not affect the protectiveness of the remedy. In addition, the lead ROD cleanup value was based on background, and there has been no change to this value.

The ROD-selected CUL of 200 mg/kg for TPH in soil is based on the MTCA Method A industrial or unrestricted CUL. MTCA Method A values are currently available for each

of the specific fuel type fraction ranges of diesel, heavy oil, mineral oil, gasoline with benzene, and gasoline without benzene. Therefore, a straight comparison of present and past MTCA Method A levels cannot be made for TPH. As shown in Table 5-5, the ROD-selected CUL of 200 mg/kg is protective for all of the individual TPH compounds with the potential exception of gasoline. As pointed out in the Fourth and Fifth FYRs (Tetra Tech, 2014; Battelle, 2019), the residual TPH in sediment is more likely attributable to the diesel range rather than the gasoline range, because the source is JP-5, and benzene was not identified as a contaminant of potential concern in the risk assessment. In addition, the MTCA Method A values are intended to be protective of unrestricted land use, and LUCs are in place that prevent residential use of the site. Therefore, the ROD-selected CUL for TPH remains protective of human health.

5.6.1.4 Operable Unit 4

For OU 4, no groundwater CULs were established. The same soil CULs were used for Areas 39, 41, 44, 48, and 49 to achieve RAOs. Soil CULs were based on MTCA residential land use values. There have been no changes at OU 4 since completion of the Fifth FYR (Battelle, 2019). For the COCs in soil and sediment listed in the OU 4 ROD (Navy, Ecology, and EPA 1993b), no revision to the ARAR values were found that would affect the protectiveness of the remedy.

The selected soil CULs were based on MTCA Methods A and B unrestricted land use CULs. Table 5-6 compares current soil ARAR values with those documented in the OU 4 ROD (Navy, Ecology, and EPA 1993b). As stated in the Fifth FYR (Battelle, 2019), the current ARAR values for hexavalent chromium and carcinogenic PAHs (cPAHs) remain less than the ROD soil CULs (note that the hexavalent chromium current cleanup level has been revised from the Fifth FYR to use the value based on cancer risk rather than noncancer effects; both values are lower than the ROD soil CUL for chromium). As stated in the Fourth and Fifth FYR (Tetra Tech, 2014; Battelle, 2019), contaminated soil was excavated to ROD CULs, but it is unknown if residual concentrations of chromium and cPAH are present in soil at levels above the current MTCA values. However, OU 4 is currently industrial; the MTCA Method A industrial CUL for cPAHs based on benzo(a)pyrene is 2 mg/kg, and the MTCA Method C industrial CUL for hexavalent chromium is 260 mg/kg (cancer basis). If remaining concentrations of cPAHs and chromium in soil are above current MTCA values, LUCs are effectively implemented through Navy instruction for deed notification on the transfer of affected property. Therefore, the decrease in these MTCA values does not affect the protectiveness of the remedy.

Table 5-6. Soil Cleanup Levels for OU 4 Areas 39, 41, 48, and 49

COC[1]	ROD Remediation Goal[2] (mg/kg)		Current Cleanup Level[3, 4] (mg/kg)	
4,4'-DDD	*4.17*	*MTCA B*	*4.2*	*MTCA B*
4,4'-DDE	*2.94*	*MTCA B*	*2.9*	*MTCA B*
4,4'-DDT	*2.94*	*MTCA B*	*2.9*	*MTCA B*
Arsenic	*20*	*MTCA A*	*20*	*MTCA A*
Chromium (VI)	*400*	*MTCA B*	*0.38*	*MTCA B*
Lead	*250*	*MTCA A*	*250*	*MTCA A*
cPAHs[5]	*1*	*MTCA A*	*0.1*	*MTCA A[6]*

Notes:
1. Samples were not collected for these analytes in these areas during this FYR period.
2. OU 4 ROD Table 13 (Navy, Ecology, and EPA 1993b)
3. Gold cell indicates the current regulatory value is less than the remediation goal designated in the decision document.
Blue cell indicates the current regulatory value is the same as the remediation goal designated in the decision document.
4. MTCA Method A and B levels as reported in the February 2024 Cleanup Levels and Risk Calculation Master Table.
5. A CUL was identified for PAHs as a chemical group in the ROD (Navy, Ecology, and EPA 1993b).
6. The current Cleanup Levels and Risk Calculation table does not list CULs for PAHs as a group. Carcinogenic PAHs should be represented by benzo(a)pyrene equivalents, and the total benzo(a)pyrene equivalent value should be compared to the benzo(a)pyrene CUL (Ecology 2015).

Abbreviations:
µg/L= microgram(s) per liter
COC= chemical of concern
cPAH= carcinogenic polycyclic aromatic hydrocarbon
CUL = cleanup level
DDD= Dichlorodiphenyldichloroethane
DDE= Dichlorodiphenyldichloroethylene
DDT= Dichlorodiphenyltrichloroethane
FYR = five-year review
mg/kg = milligram per kilogram
MTCA= Model Toxics Control Act
OU = operable unit
PAHs = polycyclic aromatic hydrocarbons
ROD = Record of Decision

5.6.1.5 Operable Unit 5

OU 5 consists of Areas 1, 31, and 52. Each of these areas was reviewed separately for potential revisions to the ARARs that could affect the protectiveness of the remedies.

OU 5 Area 1. For OU 5 Area 1, the human health and ecological risk assessments concluded that under the assumed industrial and recreational land use scenarios, no human or ecological risk was present at the site, and no RAO was developed for the protection of human health and the environment for exposures to soil, freshwater sediments, or surface water. In addition, groundwater at OU 5 Area 1 is not a drinking water source, and no human health or ecological risk was identified for exposure to groundwater. However, CULs were established for groundwater to address potential adverse impacts to marine life because of groundwater discharges to the Strait of Juan de Fuca.

Table 5-7 compares current groundwater ARAR values for the protection of surface water with those presented in the OU 5 ROD (Navy, Ecology, and EPA, 1996). Since the Fifth FYR (Battelle, 2019), there have not been any changes to the marine ambient water quality criteria (WQC) per WAC 173-201A or the WQC developed for human health criteria for consumption of organisms (Table 240 of WAC 173-201A-240; revised

October 2017). As stated in WAC 173-201A, standard MTCA Method B levels for surface waters shall be at least as stringent as WQC published in the water quality standards for surface waters of the state of Washington. Given this, the WQC for bis(2-ethylhexyl)phthalate and 1,1-DCE are also shown as current CULs in Table 5-7.

Table 5-7. Groundwater Cleanup Levels for Protection of Surface Water for OU 5 Area 1

COC[1]	ROD Remediation Goal[2] (µg/L)		Current Cleanup Level[3] (µg/L)	
Zinc	*76.6*	*State Marine WQC*	*81*	*State WQC[4, 5]*
Cyanide	*1.0*	*State and Federal WQC*	*1.0*	*State and Federal WQC[4, 6]*
Bis(2-ethylhexyl)phthalate	*3.56*	*MTCA B*	*0.25/3.6*	*State WQC[4]/MTCA B[7]*
1,1-Dichloroethene	*1.93*	*MTCA B*	*4,100/23,000*	*State WQC[4]/MTCA B[7]*

Notes:

1. Samples were not collected for these analytes in these areas during this FYR period.

2. ROD Table 12 (Navy, Ecology, and EPA 1996).

3. Blue indicates the current regulatory value is the same as the remediation goal designated in the decision document.
Green indicates the current regulatory value is greater than the remediation goal designated in the decision document.

4. Water Quality Criteria for Surface Waters of the State of Washington as reported in Table 240 of WAC 173-201A-240. Unless otherwise noted, the state WQC shown is based on protection of human health from consumption of organisms only using a fish consumption rate of 175 grams per day.

5. The WQC for zinc is based on the protection of chronic exposures for aquatic life in marine water.

6. The WQC for cyanide is based on the protection of acute exposures for aquatic life in marine water.

7. MTCA Method B surface water CULs are based on protection of human health from consumption of organisms only as reported in the August 2023 Cleanup Levels and Risk Calculation Master Table.

Abbreviations:

µg/L= microgram(s) per liter
COC= chemical of concern
CUL = cleanup level
FYR = five-year review
MTCA= Model Toxics Control Act
ROD = Record of Decision
WAC = Washington Administrative Code
WQC= water quality criteria

However, as stated in the OU 5 ROD (Navy, Ecology, and EPA, 1996), the RAO for OU 5 Area 1 was to confirm protection of ecological receptors in the marine environment by determining compliance with the water quality standards for marine surface waters at the point of groundwater discharge. There are no MTCA or WQC values for protection of aquatic life for bis(2-ethylhexyl)phthalate or 1,1-DCE. In the absence of appropriate MTCA/WQC ecological surface water or groundwater cleanup goals, the MTCA Method B values for protection of human health were selected as the CUL in the ROD. Thus, the ROD CULs represent compliance with a human health-based water quality standard for marine surface waters at the point of groundwater discharge, even though protection of human health was not the actual risk driver in establishing the RGs. In addition, there have been no changes to exposure pathways since the time of the ROD that call this decision into question. Because protection of human health is not a pathway for which the RG is intended to be protective, the WQC as identified in Table 5-7would not be ARARs for OU 5 Area 1 groundwater. The ARAR comparison therefore includes only ROD CULs and current MTCA Method B surface water CULs. The current MTCA Method B value for surface water for bis(2-ethylhexyl)phthalate is 3.6 µg/L and the current MTCA Method B value for surface water

for 1,1-DCE is 23,000 µg/L, which is higher than the ROD CUL. Thus, no revision to the groundwater ARARs was found that would affect the protectiveness of the remedy.

OU 5 Area 31. For OU 5 Area 31, no chemical-specific CULs were established for soil, sediment, or ash. Chemical-specific CULs were established for groundwater used as a drinking water source. No revision to the groundwater ARARs was found that would affect the protectiveness of the remedy.

The selected CULs for Area 31 groundwater are based on several sources, including background, potable groundwater CULs, and PQLs. Table 5-8 compares current groundwater ARARs and risk-based MTCA values with those presented in the OU 5 ROD (Navy, Ecology, and EPA 1996).

Table 5-8. Groundwater Cleanup Levels for OU 5 Area 31

COC[1]	ROD Remediation Goal[2] (µg/L)		Current Cleanup Level[3] (µg/L)		Maximum Concentration Detected Between November 2018 and August 2023 (µg/L)			
					Result	Qualifier	Date	Location
Beryllium	*0.0203*	*MTCA B*	*32/4*	*MTCA B/MCL[4]*	*Not analyzed during this period*			
Lead	*9.7*	*Background*	*15*	*MTCA A/MCL[4]*	*Not analyzed during this period*			
Manganese	*125*	*Background*	*750*	*MTCA B[4]*	*5,460*		*9/5/2019*	*MW31-9A*
Mercury	*2.0*	*MCL*	*2.0*	*MCL[4]*	*Not analyzed during this period*			
Aroclor 1260	*1*	*PQL*	*0.022*	*MTCA B[4]*	*Not analyzed during this period*			
Benzene	*5*	*MTCA B/MCL*	*0.8/5*	*MTCA B/MCL[4]*	*31*		*9/23/2020*	*OWS-1*
Naphthalene	*320*	*MTCA B*	*160*	*MTCA B[4]*	*380*		*9/29/2022*	*OWS-1*
Pentachlorophenol	*1*	*MTCA B/MCL*	*0.22/1*	*MTCA B/MCL[4]*	*Not analyzed during this period*			
Styrene	*1.46*	*MTCA B*	*1,600/ 100*	*MTCA B/MCL[4]*	*Not analyzed during this period*			
Toluene	*1,000*	*Federal MCL*	*1,000*	*Federal MCL*	*Not analyzed during this period*			
Vinyl chloride	*0.1*	*PQL*	*0.023/ 0.029*	*PQL[5]/MTCA B[4]*	*0.15*		*9/23/2020*	*OWS-1*
2,3,7,8-TCDD	*0.58 x 10^{-6}*	*MTCA B*	*3.4 x 10^{-7}*	*MTCA B[4]*	*Not analyzed during this period*			
Total petroleum hydrocarbons	*1,000*	*MTCA A*	*NA*	*MTCA A[4]*	*Not analyzed during this period*			
Diesel	*NA*	*NA*	*500*	*MTCA A[4]*	*14,000*		*9/29/2022*	*OWS-1*
Heavy oil	*NA*	*NA*	*500*	*MTCA A[4]*	*Not analyzed during this period*			
Mineral oil	*NA*	*NA*	*500*	*MTCA A[4]*	*Not analyzed during this period*			
Gasoline with benzene	*NA*	*NA*	*800*	*MTCA A[4]*	*5,200*		*9/29/2022*	*OWS-1*
Gasoline without benzene	*NA*	*NA*	*1,000*	*MTCA A[4]*	*Not analyzed during this period*			

Notes:

1. Samples were not collected for these analytes in these areas during this FYR period.

2. ROD Table 14 (Navy, Ecology, and EPA 1996).

3. Gold cell indicates the current regulatory value is less than the remediation goal designated in the decision document.
Blue cell indicates the current regulatory value is the same as the remediation goal designated in the decision document.
Green cell indicates the current regulatory value is greater than the remediation goal designated in the decision document.

4. MTCA A, MTCA B, and MCL values obtained from the August 2023 Cleanup Levels and Risk Calculation Master Table.

5. Vinyl chloride PQL is 0.023 ug/L based on recent sampling conducted in August 2023, following the Tier II Sampling and Analysis Plan (Liberty JV, 2023c).

Table 5-8. Groundwater Cleanup Levels for OU 5 Area 31 (continued)

Abbreviations:
µg/L= microgram(s) per liter
COC= chemical of concern
FYR = five-year review
MCL= maximum contaminant level
MTCA= Model Toxics Control Act
NA = not applicable
PQL= practical quantitation limit
TCDD =tetrachlorodibenzo-p-dioxin
ROD = Record of Decision

Current ARARs and risk-based values have not changed since completion of the Fifth FYR (Battelle, 2019). A summary of changes since the ROD are as follows:

- The current MTCA Method A or B levels for beryllium, lead, manganese, and styrene are higher than the ROD CULs. The MCLs for beryllium, lead, and styrene are also higher than the ROD CULs. Therefore, the lower CULs selected in the ROD remain protective.
- As noted in the Fifth FYR (Battelle, 2019), and as shown in Table 5-8, the MTCA Method B levels remain lower than ROD cleanup values for Aroclor 1260, benzene, naphthalene, PCP, vinyl chloride, and 2,3,7,8-TCDD. (Benzene also has an MCL of 5 µg/L, which is the same as the CUL in the ROD.) However, these decreases do not call into question the protectiveness of the remedy, because LUCs restrict groundwater use as a drinking water source. Therefore, these decreases in MTCA Method B values do not affect the protectiveness of the remedy.
- The ROD-selected MTCA Method A level of TPH is no longer calculated, because MTCA Method A values are currently available for each of the specific fuel type fraction ranges of diesel, heavy oil, mineral oil, gasoline with benzene, and gasoline without benzene. Although the individual fraction ranges of TPH compounds are all lower than the established CUL of TPH (with the exception of gasoline without benzene), LUCs restrict groundwater use as a drinking water source. Therefore, the ROD-selected CUL for TPH of 1,000 µg/L is considered to be protective of human health.

OU 5 Area 52. For OU 5 Area 52, no chemical-specific CULs were established for soil or sediment. RAOs for groundwater were established to reduce potential ecological risk and comply with chemical-specific ARARs.

The CULs established for groundwater at OU 5 Area 52 were based on MTCA Method A groundwater and MTCA Method B surface water CULs (see Table 5-9), which are developed for the protection of human health. The MTCA Method A groundwater and MTCA Method B surface water CULs were selected as CULs because chemical-specific ARARs for protection of marine aquatic life for the COCs identified in OU 5 Area 52 groundwater (e.g., federal/state water quality standards) were not established at the

time the ROD was signed, nor have they been established for these COCs since the ROD was signed. Table 5-9 compares CULs presented in the OU 5 ROD (Navy, Ecology, and EPA, 1996) with current MTCA Method A and B values.

Table 5-9. Groundwater Cleanup Levels for Protection of Surface Water for OU 5 Area 52

COC[1]	ROD Remediation Goal[2] (µg/L)		Current Cleanup Level [3, 4] (µg/L)	
Vinyl chloride	*2.92*	*MTCA B*	*3.7*	*MTCA B*
Benzo(a)anthracene	*0.0296*	*MTCA B*	*NA*	*NA[5]*
Benzo(a)pyrene	*0.0296*	*MTCA B*	*0.035*	*MTCA B[4, 5]*
Benzo(b)fluoranthene	*0.0296*	*MTCA B*	*NA*	*NA[5]*
Chrysene	*0.0296*	*MTCA B*	*NA*	*NA[5]*
Indeno(1,2,3-cd)pyrene	*0.0296*	*MTCA B*	*NA*	*NA[5]*
Total petroleum hydrocarbons	*1,000*	*MTCA A*	*NA*	*NA*
Diesel	*NA*	*NA*	*500*	*MTCA A[4]*
Heavy oil	*NA*	*NA*	*500*	*MTCA A[4]*
Mineral oil	*NA*	*NA*	*500*	*MTCA A[4]*
Gasoline with benzene	*NA*	*NA*	*800*	*MTCA A[4]*
Gasoline without benzene	*NA*	*NA*	*1,000*	*MTCA A[4]*

Notes:

1. Samples were not collected for these analytes in this area during this FYR period.

2. ROD Table 13 (Navy, Ecology, and EPA, 1996).

3. Gold cell indicates the current regulatory value is less than the remediation goal designated in the decision document.
Blue cell indicates the current regulatory value is the same as the remediation goal designated in the decision document.
Green cell indicates the current regulatory value is greater than the remediation goal designated in the decision document.

4. MTCA Method A groundwater CULs and Method B surface water CULs obtained from the August 2023 Cleanup Levels and Risk Calculation Master Table.

5. The current Cleanup Levels and Risk Calculation table does not list CULs for PAHs other than benzo(a)pyrene. cPAHs should be evaluated using their TEF as compared to benzo(a)pyrene (Ecology 2015). The TEFs are used to calculate benzo(a)pyrene equivalents for each cPAH, and the total benzo(a)pyrene equivalent value should be compared to the benzo(a)pyrene CUL.

Abbreviations:

µg/L= microgram(s) per liter
COC= chemical of concern
CUL = cleanup level
FYR = five-year review
MTCA= Model Toxics Control Act
NA= not applicable
PAHs = polycyclic aromatic hydrocarbons
TEF = toxicity equivalency factor
ROD = Record of Decision

As discussed in the Fifth FYR (Battelle, 2019), WQC (Table 240 of WAC 173-201A-240; revised October 2017) have been developed for human health criteria for consumption of organisms. As stated in chapter 173-201A WAC, standard MTCA Method B CULs for surface waters shall be at least as stringent as WQC published in the water quality standards for surface waters of the state of Washington.

The ROD CULs for OU 5 Area 52 groundwater were established to evaluate groundwater quality at the point of discharge, to evaluate the effectiveness of the selected remedy, and to assess the protection of ecological receptors in the marine life (Navy, Ecology, and EPA, 1996), not to protect humans for consumption of fish. In the absence of appropriate MTCA ecological surface water or groundwater cleanup goals,

the MTCA Method A and Method B ARARs for protection of human health were the chemical-specific ARARs selected as CULs in the ROD. Thus, the ROD CUL represents compliance with a human health-based water quality standard for marine surface waters at the point of groundwater discharge, even though protection of human health was not the actual risk driver in establishing a cleanup goal. In addition, there have been no changes to exposure pathways since the time of the ROD that call this decision into question. Because protection of human health is not a consideration, the WQC is not an ARAR for OU 5 Area 52 groundwater. The ARAR comparison therefore includes only ROD CULs and current MTCA Method A groundwater and MTCA Method B surface water CULs.

There have been no changes to the MTCA Method B CUL for vinyl chloride since the Fifth FYR (Battelle, 2019). The MTCA Method B CUL for vinyl chloride remains higher than the ROD CUL (3.7 µg/L vs. 2.92 µg/L). Thus, the ROD CUL of 2.92 µg/L remains protective.

The ROD-selected MTCA Method B CUL for the individual PAHs listed in Table 5-9 were all based on benzo(a)pyrene. As documented in the Fifth FYR (Battelle, 2019), toxicity values for benzo(a)pyrene changed, resulting in a slightly higher cleanup value for benzo(a)pyrene (Ecology, 2023). This change would also correspond to the CULs for the other PAHs at the same magnitude; however, CULs for the other PAHs are not specifically shown in the current CLARC table. Nevertheless, based on the update to the benzo(a)pyrene, current CULs for the PAHs would be higher than the levels in the ROD; thus, the remedy remains protective.

There have been no changes in the MTCA Method A groundwater CULs since the Fifth FYR (Battelle, 2019). Therefore, as determined during the Fifth FYR (Battelle, 2019), the ROD CUL for TPH of 1,000 µg/L remains protective.

5.6.2 Review of Human Health Risk Assessment Assumptions

Risk assessment assumptions were also reviewed as part of the requirement to assess protectiveness of the remedy. For human health, there are potentially three areas where changes could have occurred since the signing of the RODs: 1) toxicity values for some chemicals; 2) assumptions regarding human activity (i.e., exposure assumptions); and 3) new contaminants or contaminant sources. Sections 5.6.2.1 through 5.6.2.3 discuss how these changes to toxicity, exposure parameters, and contaminants potentially affect the protectiveness of the remedy.

5.6.2.1 Changes in Toxicity and Other Contaminant Characteristics

Changes to toxicity criteria have occurred since the signing of the RODs. These changes are shown on Tables 5-2 through 5-9 as differences between the ROD regulatory values and current regulatory values. Current regulatory values were obtained from Ecology's CLARC tables, which were last updated in August 2023 with toxicity values used by EPA to calculate the regional screening levels (RSLs). The toxicity values used to calculate RSLs are selected using a hierarchy of toxicological sources, with the Integrated Risk Information System as its primary source. There have not been any major changes in toxicity values identified since the Fifth FYR (Battelle, 2019).

Where differences between the old and new regulatory values have been highlighted, changes to toxicity values do not affect the protectiveness of the remedy. The protectiveness is not affected because the cleanup goal was selected as the PQL, or the current regulatory level is higher than the value established in the ROD, or LUCs are in place to prevent exposure. Thus, the protectiveness of the selected remedy is not affected.

5.6.2.2 Changes in Exposure Pathways and Exposure Parameters

Amendments have been made to the surface water regulations (WAC 173-201A-240) for development of the human health criteria for consumption of organisms. The human health criteria were calculated using a fish consumption rate of 175 grams per day to better depict the consumption rate for a tribal exposure scenario. MTCA cleanup regulations (WAC 173-340-730) are still based on the lower consumption rate of 54 grams per day. The change in consumption rate is reflected in the higher current MTCA surface WQC for human health.

There have been no new exposure pathways identified for any of the sites during this FYR, as land use continues to be the same as when the RODs were issued and LUCs are in place to restrict land use and prevent exposure to contaminants in soil and groundwater. Although PFAS have been detected in groundwater at concentrations greater than available screening values at OUs 1, 2, 3, and 5, there have been no new exposure pathways identified for exposure as long as LUCs restricting groundwater use are (and continue to be) maintained. As of 2023, the PFAS PA/SI at Ault Field and Seaplane Base (CH2M, 2018) has been completed and recommended further investigation for specific areas. These areas include portions of OUs 1, 2, 3, and 5; further investigation was not recommended for OU 4. The Navy is conducting PFAS investigation under the CERCLA process.

From December 2016 through February 2024, the Navy has sampled a total of 324 drinking water wells and identified 21 wells (associated with 41 homes and

one business) near Ault Field (including Area 6) and Outlying Landing Field (OLF) Coupeville that contain PFOS and/or PFOA above 70 parts per trillion (Navy, 2024). According to the RPM, as of March 2024, all but nine homes and one business have been connected to a public water system or a new drinking water well has been installed. One affected home related to one private well near Ault Field is receiving bottled water. Four affected homes and one affected business, related to three private wells near Area 6 (including one well serving three homes), are receiving bottled water. Three affected homes related to two private wells near OLF Coupeville continue to receive bottled water. Additionally, one home near OLF Coupeville has a point-of-use filter. The Town of Coupeville Public Water System has a water treatment plant with filtration to remove PFOS and PFOA below 70 parts per trillion.

5.6.2.3 Identified New Contaminants or Contaminant Sources

PFAS investigation and evaluation at NAS Whidbey Island is ongoing, and exposure pathways are being addressed (see Sections 3.2.8 and 3.2.9). The drinking water exposure pathway is being mitigated through LUCs, long-term protective solutions for drinking water (such as connection to a public water supply or new, deeper well), bottled water, or kitchen sink filtration systems for affected residents.

5.6.3 Review of Ecological Risk Assessment Assumptions

Ecological health risk assessment assumptions were reviewed as part of the requirement to assess protectiveness of the remedy. Only OU 3 Area 16 had soil CULs for the runway ditch sediments in the ROD that were based on ecological risk. The focus of ecological health is on toxicity and selected species rather than on exposure assumptions. Therefore, the ecological health discussion describes current toxicological information and its effect on the protectiveness of the remedy.

Washington State SMS (Chapter 173-204 WAC) are applicable to the sediment CULs. The SMS rule was last revised in 2013 and the amendments adopted include:

1. Integrate the SMS and MTCA (Chapter 173-340 WAC) cleanup requirements where appropriate;
2. Clarify requirements for protection of human health from sediment contamination;
3. Clarify requirements for protection of higher trophic level species from sediment contamination;
4. Promulgate numeric chemical and biological criteria for freshwater sediment to protect the benthic community; and

5. Clarify requirements for coordinating source control and cleanup actions at cleanup sites.

The original SMS rule did not clearly address how to assess human health and ecological risk from chemicals that bioaccumulate in the food chain. The amendments to Part V of the rule add to the SMS decision framework a mechanism for setting standards to protect human health and the environment in sediment. The mechanism is based on a two-tiered framework establishing sediment cleanup standards using risk-based, background-based, and PQL-based values to select the lower tier sediment cleanup objective and the upper tier cleanup screening level. Subsequently, the sediment CUL is determined by adjusting upwards from the sediment cleanup objective based on technical possibility and net adverse environmental impacts (Ecology, 2013).

In the Fifth FYR, the table of CULs for OU 3 Site 16 summarized the soil CULs for the runway ditch sediments from the OU 3 ROD (Navy, Ecology, and EPA, 1995) and the 2017 SMS freshwater sediment criteria for protection of the benthic community. The SMS criteria are considered current ARARs. The SMS benthic sediment criteria are higher than the ROD CULs; thus, the protectiveness is not affected (Battelle, 2019).

As described in the OU 3 ROD (Navy, Ecology, and EPA, 1995), risk-based soil CULs were calculated based on the ecological muskrat receptor for arsenic, lead, 2-methylnaphthalene, dibenz(a,h)anthracene, and phenanthrene. Although it is not possible to reproduce the muskrat modeling results used to calculate the risk-based cleanup numbers, a discussion of the likely toxicity reference values (TRVs) used in the modeling and whether or not the value has increased, decreased, or has remained the same was provided in the Fourth FYR (Tetra Tech, 2014). TRVs used for developing the risk-based cleanup goal are as follows:

- arsenic TRV of 0.380 milligrams per kilogram per day (mg/kg-day),
- lead TRV of 0.32 mg/kg-day,
- 2-methylnaphthalene TRV of 0.024 mg/kg-day, and
- dibenz(a,h)anthracene and phenanthrene TRVs of 10 mg/kg-day.

For the Sixth FYR, current sources of TRVs, including EPA (e.g., ecological soil screening level guidance and documents) and wildlife toxicity assessments from the Health Effects Division of the Army Public Health Center (formerly the U.S. Army Center for Health Promotion and Preventive Medicine) were consulted to identify significant changes in toxicity that would result in lower risk-based cleanup goals. A search of the current source information did not identify any new information regarding mammalian studies that differed from the TRV discussion put forth in the Fourth FYR (Tetra Tech, 2014). As discussed in the Fourth FYR (Tetra Tech, 2014), no new information is

available that would affect the TRVs used to calculate soil cleanup goals. Thus, TRVs for the COCs remain protective of the environment.

5.7 Question C Analysis: New Information that Could Affect Protectiveness

5.7.1 Emerging Chemicals

As discussed in Sections 3.2.8, 3.2.9, and 5.6.2.3, PFAS are manufactured chemicals that have been used since the 1950s in many household and industrial products because of their stain- and water-repellant properties. PFAS are now widespread globally because of the large amounts that have been manufactured and used and because they are persistent in the environment once released. These substances may be present in the soil and/or groundwater at Navy sites due to historical firefighting activities using AFFF.

PFAS are currently under investigation through the CERCLA process at NAS Whidbey Island. The PA/SI stages were conducted for Ault Field and Seaplane Base and details are reviewed in this report. RIs are underway at OU 1 Area 6, OU 2 Areas 2/3, OU 3 Area 16, and OU 5 Area 31. PFAS have been detected in groundwater at concentrations greater than available screening values at these areas; however, the current remedy of LUCs, restricts groundwater use and prevents exposure. All other sites reviewed in this report were recommended for no further investigation at this time in the PA or SI.

5.7.2 Climate Change

Climate change research indicates that the shoreline remedies at NAS Whidbey Island may be vulnerable to climate change impacts (e.g., sea-level rise and storm surges) not apparent during remedy selection, but are accounted for in recent coastal erosion protection system design and maintenance:

- At OU 5 Area 1, calculations in the work plan for the seawall extension document that the design accounted for sea-level rise predictions of 1.1 feet and 3.1 feet for the years 2050 and 2100, respectively, and also accounted for land subsidence during this time frame.
- At OU 5 Area 52, the coastal erosion protection system maintenance conducted in 2015 and 2016 included updated armor design assumptions that accounted for 10 inches of sea-level rise (Battelle, 2019).

Because these activities accounted for sea-level rise as part of the engineering design and maintenance, climate change impacts do not currently call into question the protectiveness of the remedies at OU 5 Areas 1 and 52.

Potentially vulnerable shoreline is also present at OU 4 Areas 48/49. During the most recent annual LUC inspections, shoreline observations showed no evidence of excessive erosion or degradation that would result in an unaccounted for exposure pathway of waste remaining in place.

6.0 Issues/Recommendations

6.1 Issues and Recommendations

This section presents the issues and recommendations identified as a result of this FYR process. Table 6-1 summarizes these issues (and subsequent recommendations) that affect current and/or future protectiveness of the remedy.

Table 6-1. Issues and Recommendations Identified in the Five-Year Review

Issues/Recommendations				
OUs: OU 1, Area 6	**Issue Category:** Remedy Performance			
	Issue: The ROD Amendment has not been fully implemented. The ROD Amendment identifies groundwater treatment using AOP as the preferred remedial alternative, consisting of constructing a new additional AOP treatment plant to the south; upgrading the original treatment system to AOP (from air stripper); and expanding the well network to delineate the southern boundary of the 1,4-dioxane plume.			
	Recommendation: Fully implement the 2019 ROD Amendment.			
Affect Current Protectiveness	**Affect Future Protectiveness**	**Party Responsible**	**Oversight Party**	**Milestone Date**
No	Yes	Navy	EPA	March 2025
OUs: OU 1, 2, 3, and 5	**Issue Category:** Chemicals of Emerging Concern			
	Issue: Based on the technical assessment, PFAS in groundwater at OU 1 Area 6, OU 2 Areas 2/3 (conducted under current fire training area), OU 3 Area 16, and OU 5 Area 31 may impact the future protectiveness of the remedies implemented in these areas. A PA/SI was completed at each of these areas and recommended an RI to determine nature and extent of PFAS in groundwater, assess risk to current and future receptors, and determine whether additional response actions are required.			
	Recommendation: Ongoing PFAS investigations and evaluations are being conducted through the CERCLA process to refine the PFAS CSM and assess potential exposure risks. Findings from ongoing PFAS investigations and evaluations will be addressed in the next FYR to determine whether the current remedies will continue to be protective with respect to PFAS in the future.			
Affect Current Protectiveness	**Affect Future Protectiveness**	**Party Responsible**	**Oversight Party**	**Milestone Date**
No	Yes	Navy	EPA	Varies by site

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7.0 Protectiveness Statement

This section presents the protectiveness determinations and statements resulting from this Sixth FYR for NAS Whidbey Island. Table 7-1 lists the individual protectiveness determinations and statements for OUs 1 through 5. Table 7-2 provides the sitewide protectiveness determination or statement for this FYR for NAS Whidbey Island.

Table 7-1. Protectiveness Statements for Operable Units 1 through 5 at NAS Whidbey Island

Protectiveness Statement(s)	
Operable Unit: 1	*Protectiveness Determination:* Short-term Protective
Protectiveness Statement: Remedy construction is complete and progress is being made toward meeting the RAOs as documented through groundwater monitoring (at Area 6) and/or LUC monitoring (at Areas 5 and 6). The remedy at OU 1 Area 5 is protective of human health and the environment. The remedy at OU 1 Area 6 currently protects human health and the environment because of the LUCs in place and the fact that residents are on a municipal water supply (i.e., not well water); therefore, there are no known human receptors to groundwater impacts. The amended remedy selected in the Final ROD Amendment (Navy, 2019), addressing vinyl chloride and 1,4-dioxane in groundwater, has been finalized and implementation is in progress. Chemicals of Emerging Concern: PFAS are present in groundwater at OU 1 Area 6 at concentrations exceeding current RSLs. Although there are no known exposures, PFAS in groundwater at OU 1 Area 6 may impact the future protectiveness of the remedy. Because known off-site drinking water exposures have been addressed and on-site LUCs prevent exposure to groundwater, the Navy considers the remedy at OU 1 to be protective in the short-term while ongoing PFAS investigations and evaluations are conducted through the CERCLA process to refine the PFAS CSM and potential exposure risks. Findings from ongoing PFAS investigations and evaluations will be addressed in the next FYR to determine whether the current remedy at OU 1 will continue to be protective with respect to PFAS in the future.	

Table 7-1. Protectiveness Statements for Operable Units 1 through 5 at NAS Whidbey Island (continued)

Protectiveness Statement(s)	
Operable Unit: 2	*Protectiveness Determination:* Short-term Protective
Protectiveness Statement: The remedy at OU 2 currently protects human health and the environment with respect to contaminants addressed in the ROD. Remedy construction is complete and RAOs to prevent exposure are being met as documented through groundwater monitoring (during FYR period at Areas 2/3) and LUC monitoring (at Areas 2/3, 4, and 29). Chemicals of Emerging Concern: PFAS are present in groundwater at OU 2 at concentrations exceeding current RSLs. Although there are no known exposures, PFOS and PFOA in groundwater at OU 2 may impact the future protectiveness of the remedy. Because known off-site drinking water exposures have been addressed and on-site LUCs prevent exposure to groundwater, the Navy considers the remedy at OU 2 to be protective in the short-term while ongoing PFAS investigations and evaluations are conducted through the CERCLA process to refine the PFAS CSM and potential exposure risks. Findings from ongoing PFAS investigations and evaluations will be addressed in the next FYR to determine whether the current remedy at OU 2 will continue to be protective with respect to PFAS in the future.	
Operable Unit: 3	*Protectiveness Determination:* Short-term Protective
Protectiveness Statement: The remedy at OU 3 currently protects human health and the environment with respect to contaminants addressed in the ROD. Remedy construction is complete and RAOs to prevent exposure are being met as documented through LUC monitoring (at Area 16). Chemicals of Emerging Concern: PFAS are present in groundwater at OU 3 at concentrations exceeding current RSLs. Although there are no known exposures, PFOS and PFOA in groundwater at OU 3 may impact the future protectiveness of the remedy. Because known off-site drinking water exposures have been addressed and on-site LUCs prevent exposure to groundwater, the Navy considers the remedy at OU 3 to be protective in the short-term while ongoing PFAS investigations and evaluations are conducted through the CERCLA process to refine the PFAS CSM and potential exposure risks. Findings from ongoing PFAS investigations and evaluations will be addressed in the next FYR to determine whether the current remedy at OU 3 will continue to be protective with respect to PFAS in the future.	
Operable Unit: 4	*Protectiveness Determination:* Protective
Protectiveness Statement: The remedy at OU 4 is protective of human health and the environment. Remedy construction is complete and RAOs to prevent exposure are being met as documented through LUC monitoring (at Areas 48/49).	

Table 7-1. Protectiveness Statements for Operable Units 1 through 5 at NAS Whidbey Island (continued)

Protectiveness Statement(s)	
Operable Unit: 5	*Protectiveness Determination:* Short-term Protective
Protectiveness Statement: The remedy at OU 5 currently protects human health and the environment with respect to contaminants addressed in the ROD. Remedy construction is complete and RAOs to prevent exposure are being met as documented through groundwater monitoring (annual basis at Area 31) and LUC monitoring (at Areas 1, 31, and 52). Chemicals of Emerging Concern: PFAS are present in groundwater at OU 5 Area 31 at concentrations exceeding current RSLs. Although there are no known exposures, PFOS and PFOA in groundwater at OU 5 Area 31 may impact the future protectiveness of the remedy. Because known off-site drinking water exposures have been addressed and on-site LUCs prevent exposure to groundwater, the Navy considers the remedy at OU 5 Area 31 to be protective in the short-term while ongoing PFAS investigations and evaluations are conducted through the CERCLA process to refine the PFAS CSM and potential exposure risks. Findings from ongoing PFAS investigations and evaluations will be addressed in the next FYR to determine whether the current remedy at the OU 5 Area 31 will continue to be protective with respect to PFAS in the future.	

Table 7-2. Sitewide Protectiveness Statement for NAS Whidbey Island

Sitewide Protectiveness Statement
Protectiveness Determination: Short-term Protective
Protectiveness Statement: Remedy construction has been complete at OUs 1 through 5 since 25 September 1997. The remedies at OU 1 Area 5, OU 4, OU 5 Area 1, and OU 5 Area 52 are protective of human health and the environment. Progress is being made toward meeting the RAOs as documented through monitoring of LUCs and groundwater. At OU 1 Area 6, the remedy currently protects human health and the environment because of the LUCs in place and the fact that residents are on a municipal water supply (i.e., not well water); therefore, there are no known human receptors to groundwater contamination. However, the remedy selected in the ROD Amendment (Navy, 2019), addressing vinyl chloride and 1,4-dioxane in groundwater, is currently in progress and needs to be completed and maintained for future protectiveness. Chemicals of Emerging Concern: PFAS are present at OUs 1, 2, 3, and 5 at concentrations exceeding current RSLs. Although there are no known exposures, PFOS and PFOA in groundwater at these OUs may impact the future protectiveness of the remedies. Because known off-site drinking water exposures have been addressed and on-site LUCs prevent exposure to groundwater, the Navy considers the remedies at OUs 1, 2, 3, and 5 to be protective in the short-term while ongoing PFAS investigations and evaluations are conducted through the CERCLA process to refine the PFAS CSM and potential exposure risks. Findings from ongoing PFAS investigations and evaluations will be addressed in the next FYR to determine whether the current remedies will continue to be protective with respect to PFAS in the future.

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8.0 Next Review

The next FYR report for OUs 1 through 5 at NAS Whidbey Island is required five years from the completion date of this review, which will be in 2029.

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9.0 References

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Appendix A:
Public Notices and Affidavits of Publication

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WHIDBEY NEWS TIMES

Affidavit of Publication

STATE OF WASHINGTON }
COUNTY OF Island } ss

Maggie Boyd being first duly sworn, upon oath deposes and says: that he/she is the legal representative of the Whidbey News Times and is a Semi-weekly newspaper. The said newspaper is a legal newspaper by order of the superior court in the county in which it is published and is now and has been for more than six months prior to the date of the first publication of the Notice hereinafter referred to, published in the English language continually as a Semi-wkly newspaper in Island County, Washington and is and always has been printed in whole or part in the Whidbey News Times : and is of general circulation in said County, and is a legal newspaper, in accordance with the Chapter 99 of the Laws of 1921, as amended by Chapter 213, Laws of 1941, and approved as a legal newspaper by order of the Superior Court of Pierce County, State of Washington, by order dated June 16, 1941, and that the annexed is a true copy of ad #2727388 as it was published in the regular and entire issue of said paper and not as a supplement form thereof for a period of 2 issue(s), such publication commencing on 8/16/2023 : and ending: on 8/23/23 and that said newspaper was regularly distributed to its subscribers during all of said period.

PAID 8/11/23

The amount of the fee for such publication is $ 900.00

Subscribed and sworn before me on this 29 day of August, 2023.

Notary Public in and for the State of Washington.

Notary Public
State of Washington
AUBREY KNAPP
COMM. # 173610
MY COMM. EXP. 07/30/2026

WSP USA/CHELSEA FOSTER 48255397

WADS

CONTINUED FROM PAGE 1

fall and winter, these objects keep washing up on North Whidbey shores on a daily basis.

Kyle Spragens oversees waterfowl hunting for the Washington Department of Fish and Wildlife.

"It used to not be a problem," he said. "Shotgun shells used for waterfowl hunting were made out of biodegradable materials. It wasn't until plastics came on the scene in the '60s and '70s that that sort of industry drifted towards a cheaper option to get their hands on."

On Aug. 2, a small group that included Christopherson and Spragens collected 109 wads in 20 minutes. On June 27, volunteers found 268. On May 30, 468. On April 11, more than 300.

All of these were found in Windjammer Park alone.

Most duck hunters Christopherson has met are environmentally conscious, but are often unaware that the wads represent an issue at all as they may not be able to see them shoot out of their shotguns into the water. Aware or not, Christopherson believes hunters are not the problem, but the industry. It would be unfair to ban plastic wads in the absence of an available alternative.

The issue was also brought to the attention of Island County Commissioner Melanie Bacon.

"So much of our environmental concerns have really difficult solutions, or we don't even see what the solution is," she said. "This is one that has a pretty basic solution."

According to Spragens, several American manufacturers have sister companies abroad, where they produce biodegradable ammo. Without demand in the U.S., manufacturers don't have a reason to create a product that is less likely to sell, Christopherson said.

A few weeks ago, CLPC met with members from the Department of Fish and Wildlife, the Department of Ecology, the Navy and other entities to discuss the issue and possible solutions.

Spragens said he is in the process of reaching out to waterfowl hunting groups, encouraging them to increase demand for biodegradable wads. He said it's unclear when the alternatives will begin to become available in American stores, but it's possible that those manufacturers would be encouraged to domestically produce biodegradable ammo with some incentives, like subsidies.

Inspiring hunters to create demand for biodegradable wads could also drive down their cost.

During the meeting, the discussion touched on the idea to use Whidbey Island to launch a pilot program to stimulate the use of biodegradable ammo. In an interview, Bacon said she is willing to help the cause, and that the county could bring the issue to the attention of the legislature and support education efforts — encouraging people to demand biodegradable ammo and volunteer at cleanup events.

"Most people on Whidbey Island have no idea how bad this is," she said. "I am grateful to the people who work to keep these things cleaned up."

Peter Steelquist, who attended the meeting, is the Washington Policy Manager at the Surfrider Foundation, an environmental nonprofit dedicated to the protection of oceans. His job consists of communicating with policymakers to pass policies that will mitigate pollution.

Though he said it's soon to push for a bill that would address the issue as they are still exploring legislative solutions, educating the community is a first step towards the right direction.

To learn more about volunteer opportunities at CLPC, visit *extension.uw.edu/island/home/beachlitter/*.



Photo by Lana Lei/Whidbey News-Times

From left, Darwin Christopherson, Washington Department of Fish and Wildlife Biologist Kurt Licence, WDFW Waterfowl Section Manager Kyle Spragens and Peter Steelquist pose with the wads they collected at Windjammer Park on Aug. 2.

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PG-13

COMING SOON:

BEST IN SHOW

OPPENHEIMER

GREASE

PARKING

CONTINUED FROM PAGE 1

Director Connie Bowers explained that the popularity of getting to the beach on these roads creates emergency access issues when there are no parking restrictions in place. She added that the department plans to come back to the board of commissioners to talk about no parking in general or no parking specific to concerns about the homeless, but for now, the conversation is about signs posted by the county on shoreline roads that didn't have the code to support them.

Commissioner Melanie Bacon said the signs are dealing with tourism. Commission Janet St. Clair, however, pointed out that in the case of Hill Road, it was a conversation of RVs parking along the road, and not just tourism.

Johnson continued to push back against the issue.

"It's gonna be hard for me to vote for this given, really, what is preferential protection and more enforcement tools for individuals who live on the water than individuals who live adjacent to a city," she said.

As part of the discussion, a public hearing was held. Marie Shimada, the reserve manager for Ebey's Landing National Historical Reserve, expressed the trust board's support for the added restrictions on Hill Road.

"I will point out that there are historic resource concerns, environmental concerns and public safety concerns regarding that section of road, and I'll point out that there is archeologic sensitivity in that area as well," Shimada said.

Another Whidbey resident asked the commissioners to consider looking into the parking situation on Hugh Taylor Lane, as well as the intersection of Maxwelton and Sills roads, and questioned the legitimacy of existing "no parking" signs at those locations.

Returning to the issue of Hoffman Road, Bacon said restricting parking here is inviting folks to find some other county road to go plant themselves in and set up a new camp, and said she wasn't sure this is the right venue to address the homeless encampment problem.

The motion for parking restrictions was approved in a 2-1 vote, with Johnson voting in opposition. St. Clair noted that the decision moved forward with a desire to bring forward a conversation about no parking in areas across the county in a more equitable fashion.

U.S. NAVY ANNOUNCES NOTICE TO CONDUCT THE SIXTH CERCLA FIVE-YEAR REVIEW OF ENVIRONMENTAL CLEANUP ACTIONS FOR NAVAL AIR STATION WHIDBEY ISLAND, OAK HARBOR, WASHINGTON.

This notice is to inform the public that the United States Department of the Navy (Navy) will conduct the sixth five-year review of previously implemented environmental cleanup actions at Naval Air Station (NAS) Whidbey Island in Oak Harbor, Washington. Pursuant to Section 121(c) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and National Oil and Hazardous Substance Pollution Contingency Plan (40 Code of Federal Regulation Part 300), a five-year review is required for NAS Whidbey Island because the selected remedial actions resulted in hazardous substances, pollutants, or contaminants remaining on a site above levels that allow for unlimited use and unrestricted exposure. The purpose of this five-year review is to ensure that the remedial actions selected in the decision documents for these CERCLA sites are functioning as planned and remain protective of human health and the environment. This will be the sixth five-year review completed for the CERCLA sites at NAS Whidbey Island. The previous five-year reviews were completed in September 1998, April 2004, September 2009, August 2014, and August 2019. A five-year review is also intended to identify possible deficiencies and recommend any necessary corrective actions.

This sixth five-year review will examine the actions, monitoring, and issues over the last 5 years and provide recommendations and protectiveness determinations for the next 5 years for the NAS Whidbey Island CERCLA sites that have undergone environmental investigation and/or remediation to address the potential impacts of contamination to human health and the environment. Specifically, this five-year review will include Operable Units (OUs) 1 (Area 5 Highway 20/Hoffman Road Landfill and Area 6 Landfill Operations Area and Former Hazardous Waste Storage Area), OU 2 (Area 2 Western Highlands Landfill, Area 3 1969 – 1970 Landfill, Area 4 Walker Barn Storage Area, Area 14 Pesticide Rinsate Disposal Area, and Area 29 Clover Valley Fire School), OU 3 (Area 16 Runway Ditches), OU 4 (Area 39 Auto Repair and Paint Shop, Area 41 Building 25 and Building 26 Disposal Area, Area 44 Seaplane Base Nose Hangar, and Areas 48 and 49 Seaplane Base Salvage Yard and Landfill), and OU 5 (Area 1 Beach Landfill, Area 31 Former Runway Fire School, and Area 52 Jet Engine Test Cell), similar to the previous five-year reviews. Information, including remedial actions and maps, regarding these sites can be found on the NAS Whidbey Island Restoration Advisory Board (RAB) webpage: https://pacific.navfac.navy.mil/NASWIRAB.

The Navy welcomes written comments from the community during the five-year review process; comments will be accepted until September 25, 2023. Comments received from community members will be acknowledged and addressed in the sixth five-year review report along with the more formal interview responses received from members of the public and other stakeholders. A Notice of Completion for the sixth five-year review at NAS Whidbey Island is anticipated to be published in late summer 2024 with the final report posted on the NAS Whidbey Island RAB webpage.

For more information or to provide comments, please contact:
Sarah G. Lincoln
Public Affairs Officer
Naval Facilities Engineering Systems Command Northwest
(360) 340-5592
navfacnwpac@us.navy.mil

Legal No. WNT2727388
Published: The Whidbey New Times August 16, 23, 2023

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So Whidbey Record

Affidavit of Publication

STATE OF WASHINGTON }
COUNTY OF Island } ss

Maggie Boyd being first duly sworn, upon oath deposes and says: that he/she is the legal representative of the So Whidbey Record and is a Semi-weekly newspaper. The said newspaper is a legal newspaper by order of the superior court in the county in which it is published and is now and has been for more than six months prior to the date of the first publication of the Notice hereinafter referred to, published in the English language continually as a Semi-wkly newspaper in Island County, Washington and is and always has been printed in whole or part in the So Whidbey Record; and is of general circulation in said County, and is a legal newspaper, in accordance with the Chapter 99 of the Laws of 1921, as amended by Chapter 213, Laws of 1941, and approved as a legal newspaper by order of the Superior Court of Pierce County, State of Washington, by order dated June 16, 1941, and that the annexed is a true copy of ad #2727390 as it was published in the regular and entire issue of said paper and not as a supplement form thereof for a period of 2 issue(s), such publication commencing on 8/19/2023: and ending: on 8/26/23 and that said newspaper was regularly distributed to its subscribers during all of said period.

PAID 8/11/23

The amount of the fee for such publication is $ 720.00

Maggie Boyd

Subscribed and sworn before me on this 29 day of August, 2023.

Aubrey Knapp

Notary Public in and for the State of Washington.

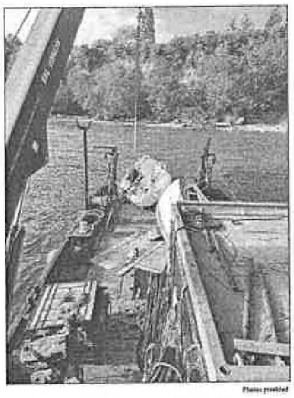
Notary Public
State of Washington
AUBREY KNAPP
COMM. # 173610
MY COMM. EXP. 07/30/2026

WSP USA/CHELSEA FOSTER 48265397

County, state seek to remove abandoned boats

By KARINA ANDREW





Photos provided

The Washington State Department of Natural Resources and the Island County Marine Resources Committee coordinate to remove derelict vessels from the Whidbey Island shoreline.

Island County and the Washington State Department of Natural Resources are working together to clean up the derelict and abandoned boats that dot Whidbey Island's coasts.

According to Kelly Zupich, coordinator of the Island County Marine Resources committee, the county and state department have removed four derelict vessels from Island County shorelines so far this year.

But it will be an expensive and time-consuming process to clear Whidbey and Camano islands of abandoned boats entirely. Troy Wood, the derelict vessel removal program manager with the state Department of Natural Resources, said there are 14 vessels remaining in Island County.

Clearing the shoreline of these dilapidated watercraft is a more involved process than simply hauling them away. Wood said the state contacts boat owners and encourages them to take care of their property on their own. If that doesn't occur, the state must notify owners that their boat will be removed, then follow the legal process to take custody of the boat, which takes 15 days. Boat owners then have 30 days to appeal the decision.

Only then can the removal itself take place. Wood said the state department contracts with tow companies for smaller boats and salvage companies for larger vessels. The process for removing a derelict boat differs depending on the size, location and situation in which it is found.

Once the boat is removed and the water cleaned of toxins, the boat materials are recycled if possible, or taken to the dump if they are non-recyclable, such as concrete.

It is a costly process, and the expenses vary widely depending upon the situation and condition of the boat. Zupich said removals in Island County this year have cost between $21,000 and $42,000 per removal. Wood said these numbers are only for small vessels; last biennium, the state department removed a boat in Pacific County that cost $3 million.

The money for the removals comes from the state watercraft excise tax; while this tax used to go directly to the state general fund, Wood said the Department of Natural Resources recently successfully petitioned the state Legislature to direct some of the revenue from this tax to the derelict vessel removal program.

With the additional state funding, the department removed 314 vessels statewide last biennium. Wood said its previous record was 123 removals in one two-year period. There are currently around 300 vessels on the state's list of concern.

Boats left to deteriorate in the waters of the Puget Sound area pose major risks to the health of marine wildlife and the environment.

"Boats tend to carry a lot of chemicals, metals and other pollutants which end up on our shorelines and in our waterways when a vessel is left to break down," Zupich said.

In the waters surrounding Whidbey Island, these chemicals affect shellfish beds and juvenile salmon that stay in nearby estuaries, she added.

Wood further explained that these chemicals make their way through the food chain. Besides harming aquatic life, contaminants find their way into salmon and shellfish that humans eat.

"Everything on a vessel — paint, sealant and stuff like that — is meant to prevent life from growing on that vessel, so when you leave these vessels out there, all that stuff is sloughed off into the environment," he said.

The boats also disrupt natural shoreline processes, create debris that is difficult to clean up and cause navigational hazards.

The best way to mitigate these deleterious effects is to prevent boats from becoming derelict in the first place, Wood said a statewide vessel turn in program exists, in which boat owners who can no longer keep up with the maintenance of their boat can turn it over to the state for disposal at no or little cost to the boat owner.

Zupich said while the Marine Resources Committee searches for abandoned boats as often as feasible, Whidbey residents can assist the committee with locating derelict vessels by reporting boats they believe to be abandoned at *mycoast.org/wa/boat/report or dnr.wa.gov/vessel-reporting.*

Algae blooms close lakes

By LUISA LOI

Algae blooms strike again, claiming Pass Lake and Lone Lake.

Pass Lake, just north of Deception Pass Bridge, has been closed to recreational use since Aug. 9 due to the high toxin levels caused by algae blooms and will remain closed until the toxic levels are below the recreational guidelines.

The Washington State Toxic Algae's website shows that the latest test results from Aug. 7 indicate levels of microcystin — or algal toxins — exceeding state guidelines.

The lake was last tested Aug. 7, and more tests will be conducted the third week of each month until the toxic levels are below the recreational guidelines, according to an alert from Washington State Parks.

Tests conducted on Lone Lake on South Whidbey on July 25 also showed excessive levels of microcystin, and it's not safe for recreation.

According to the Environmental Protection Agency, algal toxins are a substance caused by algal blooms, which may occur due to high temperatures and high nutrient levels. When cyanobacteria — a type of algae — degrades following an algae bloom, it tends to release algal toxins.

People exposed to algal toxins may experience skin rashes, eye irritation or respiratory symptoms. Though rare, some people might also experience gastroenteritis, liver or kidney failure, or even death.

Regency on Whidbey's Annual
Rock-A-Thon
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9am - 4pm
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U.S. NAVY ANNOUNCES NOTICE TO CONDUCT THE SIXTH CERCLA FIVE-YEAR REVIEW OF ENVIRONMENTAL CLEANUP ACTIONS FOR NAVAL AIR STATION WHIDBEY ISLAND, OAK HARBOR, WASHINGTON.

This notice is to inform the public that the United States Department of the Navy (Navy) will conduct the sixth five-year review of previously implemented environmental cleanup actions at Naval Air Station (NAS) Whidbey Island in Oak Harbor, Washington. Pursuant to Section 121(c) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and National Oil and Hazardous Substance Pollution Contingency Plan (40 Code of Federal Regulation Part 300), a five-year review is required for NAS Whidbey Island because the selected remedial actions resulted in hazardous substances, pollutants, or contaminants remaining on a site above levels that allow for unlimited use and unrestricted exposure. The purpose of this five-year review is to ensure that the remedial actions selected in the decision documents for these CERCLA sites are functioning as planned and remain protective of human health and the environment. This will be the sixth five-year review completed for the CERCLA sites at NAS Whidbey Island. The previous five-year reviews were completed in September 1998, April 2004, September 2009, August 2014, and August 2019. A five-year review is also intended to identify possible deficiencies and recommend any necessary corrective actions.

This sixth five-year review will examine the actions, monitoring, and issues over the last 5 years and provide recommendations and protectiveness determinations for the next 5 years for the NAS Whidbey Island CERCLA sites that have undergone environmental investigation and/or remediation to address the potential impacts of contamination to human health and the environment. Specifically, this five-year review will include Operable Units (OUs) 1 (Area 5 Highway 20/Hoffman Road Landfill and Area 6 Landfill Operations Area and Former Hazardous Waste Storage Area), OU 2 (Area 2 Western Highlands Landfill, Area 3 1969 – 1970 Landfill, Area 4 Walker Barn Storage Area, Area 14 Pesticide Rinsate Disposal Area, and Area 28 Clover Valley Fire School), OU 3 (Area 16 Runway Ditches), OU 4 (Area 39 Auto Repair and Paint Shop, Area 41 Building 25 and Building 26 Disposal Area, Area 44 Seaplane Base Nose Hangar, and Areas 46 and 49 Seaplane Base Salvage Yard and Landfill), and OU 5 (Area 1 Beach Landfill, Area 31 Former Runway Fire School, and Area 52 Jet Engine Test Cell), similar to the previous five-year reviews. Information, including remedial actions and maps, regarding these sites can be found on the NAS Whidbey Island Restoration Advisory Board (RAB) webpage: https://pacific.navfac.navy.mil/NASWIRAB.

The Navy welcomes written comments from the community during the five-year review process; comments will be accepted until September 25, 2023. Comments received from community members will be acknowledged and addressed in the sixth five-year review report along with the more formal interview responses received from members of the public and other stakeholders. A Notice of Completion for the sixth five-year review at NAS Whidbey Island is anticipated to be published in late summer 2024 with the final report posted on the NAS Whidbey Island RAB webpage.

For more information or to provide comments, please contact:
Sarah G. Lincoln
Public Affairs Officer
Naval Facilities Engineering Systems Command Northwest
(360) 340-5592
navfacnwpao@us.navy.mil

Local No. SWR2727390
Published: The South Whidbey Record August 19, 26, 2023

Appendix B:
Completed Interview Questionnaires

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2023 CERCLA Sixth Five-Year Review Interview Record
Naval Air Station Whidbey Island, Oak Harbor, Washington

TYPE 1 INTERVIEW – U.S. NAVY or Contractor	
Individual Contacted: Laura Muhs	
Title: Installation Environmental Program Director (IEPD)	
Organization: NAS Whidbey Island	
Telephone: 360-257-4025	**Email:** laura.r.muhs.civ@us.navy.mil
Contact Made By: Laura Himes	**Date:** 18 Jan 2024

Questionnaire

1. Please describe your degree of familiarity with the Naval Air Station (NAS) Whidbey Island, Records of Decision (RODs) for Operable Units (OUs) 1, 2, 3, 4 and 5. Please also describe your involvement in the remedy implementation at any of the OUs 1 through 5 during this five-year review period, November 2018 through August 2023.

Response: I'm somewhat familiar with the RODs for OUs 1 & 5. I have only been the IEPD for the installation for about 1-1/2 years, so I'm getting brought up to speed. I was not involved in remedy implementation of any of the OUs.

2. What is your overall impression of the on-going remedy implementation at OUs 1, 2, 3, 4 and 5 and its performance, especially since November 2018? Do you feel the remedies continue to be effective? Please indicate the basis for your assessment.

Response: There are no major issues with remedies, with the exception of OU1 – Area 6. PFAS concentrations may be affected by AOP treatment of 1,4-dioxane. Also, AOP effluent is being discharged to surface and draining to surface water with elevated PFAS concentrations. PFAS treatment is needed.

3. If applicable, to the best of your knowledge since November 2018, have there been any new scientific findings that relate to potential site risks and that might call into question the protectiveness and/or effectiveness of the remedies?

Response: Not sure.

2023 CERCLA Sixth Five-Year Review Interview Record
Naval Air Station Whidbey Island, Oak Harbor, Washington

TYPE 1 INTERVIEW – U.S. NAVY or Contractor
Individual Contacted: Laura Muhs
Title: Installation Environmental Program Director (IEPD)
Organization: NAS Whidbey Island
4. If applicable, to the best of your knowledge since November 2018, have there been any changes in site conditions, remedy operations, or NAS Whidbey Island operations that you feel may impact the protectiveness and/or effectiveness of the remedies? **Response:** Yes. Remedies for OU1 appear to be working for 1,4-dioxane; however, PFAS now needs to be addressed. Also, recent groundwater modeling has shown that there is a groundwater divide at the north end of Area 6 complicating the tracking of plumes. Site conditions should not change and protectiveness of remedies should be intact because ongoing operations and landuse changes occurring on the installation are properly evaluated by the base Environmental office to ensure there are no impacts to OU sites and/or existing Land Use Controls in place.
5. Are you aware of any prior or pending land use or ownership changes since the signing of the RODs that may impact the effectiveness of any component of the selected remedies for these five OUs? **Response:** No. All OUs are within Navy installation boundaries.
6. Please describe any requests you have received or are aware of regarding work at these five OUs to alter site characteristics that would result in land use or groundwater use which is inconsistent with current land use controls (LUCs). Are you aware of any groundwater use from beneath or downgradient of any of the sites at OUs 1, 2, 3, 4 or 5 (other than the private wells known to be located downgradient of OU 1 Area 6)? **Response:** Not aware of any requests to alter site characteristics of OUs.
7. To the best of your knowledge, has the on-going program of environmental monitoring following implementation of the remedies at these five OUs been sufficiently thorough and frequent to meet the goals of the RODs? Please indicate the basis for your assessment. **Response:** Yes.

2023 CERCLA Sixth Five-Year Review Interview Record
Naval Air Station Whidbey Island, Oak Harbor, Washington

TYPE 1 INTERVIEW – U.S. NAVY or Contractor
Individual Contacted: Laura Muhs
Title: Installation Environmental Program Director (IEPD)
Organization: NAS Whidbey Island
8. To the best of your knowledge, do LUCs and operation and maintenance practices being utilized at OUs 1, 2, 3, 4, and 5 meet the intent of the RODs regarding limiting the potential for contact with or movement of contaminants left in place? **Response:** Yes. Recently reviewed the annual Draft LUC Inspection Report.
9. To the best of your knowledge, has the OU 1 Area 6 selected remedy in the 2019 ROD Amendment for groundwater control been successfully implemented thus far? Is the selected remedy meeting the goals of the 2019 ROD Amendment? **Response:** I have not read the 2019 ROD Amendment, but information from the RPM provided at the November 2023 RAB indicated that we are meeting goals.
10. To the best of your knowledge, does the landfill cap and groundwater control action at OU 1 Area 6 effectively meet the goals stated in the 1993 ROD and 2019 ROD Amendment? **Response (check if yes):** ☐ Reduce concentrations of contaminants in shallow groundwater ☐ Prevent further spread of contaminants in shallow groundwater ☐ Reduce the potential risk to existing and future groundwater users ☐ Minimize infiltration of rainwater into the landfill to prevent the leachate generation and migration to groundwater ☐ Prevent stormwater erosion ☐ Prevent migration of contaminants in shallow groundwater to the lower aquifer ☐ Prevent exposure of contaminants in subsurface soil and debris in the landfill operations area
Additional Comments: I have not read the 2019 ROD Amendment, but information from the RPM provided at the November 2023 RAB indicated that we are meeting goals.

2023 CERCLA Sixth Five-Year Review Interview Record
Naval Air Station Whidbey Island, Oak Harbor, Washington

TYPE 1 INTERVIEW – U.S. NAVY or Contractor
Individual Contacted: Laura Muhs
Title: Installation Environmental Program Director (IEPD)
Organization: NAS Whidbey Island
11. Do you feel that the OU 2 Areas 2/3 groundwater monitoring that has been generally conducted every five years remains sufficient and necessary for demonstrating that the implemented remedies remain protective at the sites? **Response:** Not sure. Not discussed at November 2023 RAB.
12. Do you feel the current structural integrity of the coastal erosion protection system at OU 5 Area 1 and 52 is sufficient to withstand the anticipated increased storm surges and sea level rise due to climate change impacts? **Response:** Not sure. Not discussed at November 2023 RAB. But, visual inspection doesn't show any evidence of erosion or deterioration of site.
13. To the best of your knowledge, do you feel that the ongoing investigations at Ault Field related to PFAS are sufficiently comprehensive to evaluate risks to people, the environment, and DoD missions? **Response:** Yes. The Navy started by addressing off-base drinking water impacts first, and multiple, comprehensive RIs are planned/underway for Ault Field, SPB and OLF Coupeville.
14. To the best of your knowledge, have the recommendations made during the fifth FYR been adequately implemented/incorporated into the remedy operation, maintenance, and monitoring program? Please indicate the basis for your assessment. **Response:** Not sure.

2023 CERCLA Sixth Five-Year Review Interview Record
Naval Air Station Whidbey Island, Oak Harbor, Washington

TYPE 1 INTERVIEW – U.S. NAVY or Contractor
Individual Contacted: Laura Muhs
Title: Installation Environmental Program Director (IEPD)
Organization: NAS Whidbey Island
15. Are you aware of any community concerns regarding implementation or overall environmental protectiveness of the selected remedy at the five OU sites? If so, please give details. **Response:** Yes. Individual homeowners and activist groups have expressed concerns via email, phone and public meetings.
16. What is your overall impression of meeting the recommendations from the last FYR? **Response:**
17. What do you see as major accomplishments for sites at OUs 1, 2, 3, 4, and 5 since the last FYR? **Response:** OU 5 – Area 31: RI. OU1 – Area 6: start of construction of new west AOP; downgradient delineation of 1,4-dioxane plume (new wells installed off-base)
18. Do you have any other comments, concerns, or suggestions regarding the effectiveness of the remedies implemented to protect human health and the environment at the OUs 1, 2, 3, 4, or 5? **Response:** No

2023 CERCLA Sixth Five-Year Review Interview Record
Naval Air Station Whidbey Island, Oak Harbor, Washington

TYPE 1 INTERVIEW – U.S. NAVY or Contractor	
Individual Contacted: Jennifer Madsen	
Title: Project Manager for various PFAS SIs and RIs at NASWI	
Organization: Jacobs	
Telephone:360.888.0281	**Email: Jennifer.madsen@jacobs.com**
Contact Made By:	**Date: 1/11/24**

Questionnaire

1. Please describe your degree of familiarity with the Naval Air Station (NAS) Whidbey Island, Records of Decision (RODs) for Operable Units (OUs) 1, 2, 3, 4 and 5. Please also describe your involvement in the remedy implementation at any of the OUs 1 through 5 during this five-year review period, November 2018 through August 2023.

Response: I am currently the project manager for the PFAS investigations being done at Area 6 (OU 1), so I am somewhat familiar with the work being done there. I was the project manager for the GETR design at Area 6, but CTI-URS led the design. We just held the contract, so my involvement was very high level. I am not familiar with the work being done at Ous 2, 3, 4, and 5.

2. What is your overall impression of the on-going remedy implementation at OUs 1, 2, 3, 4 and 5 and its performance, especially since November 2018? Do you feel the remedies continue to be effective? Please indicate the basis for your assessment.

Response: I feel that the GETR plant will be effective based on its current design and treatment goals, but do think it will need to be modified to treat for PFAS in the near future.

3. If applicable, to the best of your knowledge since November 2018, have there been any new scientific findings that relate to potential site risks and that might call into question the protectiveness and/or effectiveness of the remedies?

Response: Yes, in terms of removing/treating for PFAS.

2023 CERCLA Sixth Five-Year Review Interview Record
Naval Air Station Whidbey Island, Oak Harbor, Washington

TYPE 1 INTERVIEW – U.S. NAVY or Contractor
Individual Contacted: Jennifer Madsen
Title: Project Manager for various PFAS SIs and RIs at NASWI
Organization: Jacobs
4. If applicable, to the best of your knowledge since November 2018, have there been any changes in site conditions, remedy operations, or NAS Whidbey Island operations that you feel may impact the protectiveness and/or effectiveness of the remedies? **Response: No**
5. Are you aware of any prior or pending land use or ownership changes since the signing of the RODs that may impact the effectiveness of any component of the selected remedies for these five OUs? **Response: No**
6. Please describe any requests you have received or are aware of regarding work at these five OUs to alter site characteristics that would result in land use or groundwater use which is inconsistent with current land use controls (LUCs). Are you aware of any groundwater use from beneath or downgradient of any of the sites at OUs 1, 2, 3, 4 or 5 (other than the private wells known to be located downgradient of OU 1 Area 6)? **Response: No**
7. To the best of your knowledge, has the on-going program of environmental monitoring following implementation of the remedies at these five OUs been sufficiently thorough and frequent to meet the goals of the RODs? Please indicate the basis for your assessment. **Response: I am not familiar with what's been done at OUs 2, 3, 4, or 5, so I'm not sure.**

2023 CERCLA Sixth Five-Year Review Interview Record
Naval Air Station Whidbey Island, Oak Harbor, Washington

TYPE 1 INTERVIEW – U.S. NAVY or Contractor
Individual Contacted: Jennifer Madsen
Title: Project Manager for various PFAS SIs and RIs at NASWI
Organization: Jacobs
8. To the best of your knowledge, do LUCs and operation and maintenance practices being utilized at OUs 1, 2, 3, 4, and 5 meet the intent of the RODs regarding limiting the potential for contact with or movement of contaminants left in place? **Response: OU1 – yes. I'm not sure about the other OUs**
9. To the best of your knowledge, has the OU 1 Area 6 selected remedy in the 2019 ROD Amendment for groundwater control been successfully implemented thus far? Is the selected remedy meeting the goals of the 2019 ROD Amendment? **Response: Yes**
10. To the best of your knowledge, does the landfill cap and groundwater control action at OU 1 Area 6 effectively meet the goals stated in the 1993 ROD and 2019 ROD Amendment? **Response (check if yes):** ☒ Reduce concentrations of contaminants in shallow groundwater ☒ Prevent further spread of contaminants in shallow groundwater ☒ Reduce the potential risk to existing and future groundwater users ☒ Minimize infiltration of rainwater into the landfill to prevent the leachate generation and migration to groundwater ☒ Prevent stormwater erosion ☒ Prevent migration of contaminants in shallow groundwater to the lower aquifer ☒ Prevent exposure of contaminants in subsurface soil and debris in the landfill operations area
Additional Comments:

2023 CERCLA Sixth Five-Year Review Interview Record
Naval Air Station Whidbey Island, Oak Harbor, Washington

TYPE 1 INTERVIEW – U.S. NAVY or Contractor
Individual Contacted: Jennifer Madsen
Title: Project Manager for various PFAS SIs and RIs at NASWI
Organization: Jacobs
11. Do you feel that the OU 2 Areas 2/3 groundwater monitoring that has been generally conducted every five years remains sufficient and necessary for demonstrating that the implemented remedies remain protective at the sites? **Response: Not familiar with what's being done here.**
12. Do you feel the current structural integrity of the coastal erosion protection system at OU 5 Area 1 and 52 is sufficient to withstand the anticipated increased storm surges and sea level rise due to climate change impacts? **Response: Not familiar with what's being done here.**
13. To the best of your knowledge, do you feel that the ongoing investigations at Ault Field related to PFAS are sufficiently comprehensive to evaluate risks to people, the environment, and DoD missions? **Response: Yes.**
14. To the best of your knowledge, have the recommendations made during the fifth FYR been adequately implemented/incorporated into the remedy operation, maintenance, and monitoring program? Please indicate the basis for your assessment. **Response: Not familiar with what's being done here.**

2023 CERCLA Sixth Five-Year Review Interview Record
Naval Air Station Whidbey Island, Oak Harbor, Washington

TYPE 1 INTERVIEW – U.S. NAVY or Contractor
Individual Contacted: Jennifer Madsen
Title: Project Manager for various PFAS SIs and RIs at NASWI
Organization: Jacobs
15. Are you aware of any community concerns regarding implementation or overall environmental protectiveness of the selected remedy at the five OU sites? If so, please give details. **Response: No. I am aware of the communities concern regarding PFAS migration from the Base, but I'm not aware of their concerns regarding these OUs.**
16. What is your overall impression of meeting the recommendations from the last FYR? **Response: Not familiar enough with the work to have an opinion.**
17. What do you see as major accomplishments for sites at OUs 1, 2, 3, 4, and 5 since the last FYR? **Response: Not familiar enough with the work to have an opinion.**
18. Do you have any other comments, concerns, or suggestions regarding the effectiveness of the remedies implemented to protect human health and the environment at the OUs 1, 2, 3, 4, or 5? **Response: No.**

2023 CERCLA Sixth Five-Year Review Interview Record
Naval Air Station Whidbey Island, Oak Harbor, Washington

TYPE 1 INTERVIEW – U.S. NAVY or Contractor	
Individual Contacted: Burgess, Gregory, T	
Title: Project Manager	
Organization: AECOM	
Telephone: (206) 914-0533	**Email: greg.burgess@aecom.com**
Contact Made By: Laura Himes	**Date: 1/11/24**

Questionnaire

1. Please describe your degree of familiarity with the Naval Air Station (NAS) Whidbey Island, Records of Decision (RODs) for Operable Units (OUs) 1, 2, 3, 4 and 5. Please also describe your involvement in the remedy implementation at any of the OUs 1 through 5 during this five-year review period, November 2018 through August 2023.

Response:

Very familiar with the OU 1 Area 6 ROD Amendment. Fading familiarity with the remaining RODs. PM for Area 6 groundwater extraction, treatment, and recharge systems (GETRs) designs, PM for the southern and western GETR systems construction PCAS/QA Oversight. PM for the Area 6 Downgradient Delineation Investigation

2. What is your overall impression of the on-going remedy implementation at OUs 1, 2, 3, 4 and 5 and its performance, especially since November 2018? Do you feel the remedies continue to be effective? Please indicate the basis for your assessment.

Response:

Cannot speak to OUs 2 through 5. The OU 1 Area 6 remedy is functioning as intended by the OU 1 Area 6 ROD Amendment. Once completed, the western GETR is expected function as intended by the OU 1 Area 6 ROD Amendment

3. If applicable, to the best of your knowledge since November 2018, have there been any new scientific findings that relate to potential site risks and that might call into question the protectiveness and/or effectiveness of the remedies?

Response:

Identification of PFAS at the installation will require evaluation. Navy is currently putting a large effort into this PFAS evaluation across the installation. However, PFAS compounds are not currently identified as COCs. There is no new information that calls into question the protectiveness and/or effectiveness of the Area 6 OU 1 ROD Amendment remedy.

2023 CERCLA Sixth Five-Year Review Interview Record
Naval Air Station Whidbey Island, Oak Harbor, Washington

TYPE 1 INTERVIEW – U.S. NAVY or Contractor
Individual Contacted: Burgess, Gregory, T
Title: Project Manager
Organization: AECOM
4. If applicable, to the best of your knowledge since November 2018, have there been any changes in site conditions, remedy operations, or NAS Whidbey Island operations that you feel may impact the protectiveness and/or effectiveness of the remedies? **Response:** No
5. Are you aware of any prior or pending land use or ownership changes since the signing of the RODs that may impact the effectiveness of any component of the selected remedies for these five OUs? **Response:** No
6. Please describe any requests you have received or are aware of regarding work at these five OUs to alter site characteristics that would result in land use or groundwater use which is inconsistent with current land use controls (LUCs). Are you aware of any groundwater use from beneath or downgradient of any of the sites at OUs 1, 2, 3, 4 or 5 (other than the private wells known to be located downgradient of OU 1 Area 6)? **Response:** Not aware of and changes to Area 6 characteristics or groundwater use at Area 6.
7. To the best of your knowledge, has the on-going program of environmental monitoring following implementation of the remedies at these five OUs been sufficiently thorough and frequent to meet the goals of the RODs? Please indicate the basis for your assessment. **Response:** The on-going Area 6 monitoring program is sufficiently thorough and frequent to meet the goals of the RODs. AECOM is provided final monitoring reports and relies on them to execute the scopes for which AECOM is contracted. The data provided successfully supports our requirements.

2023 CERCLA Sixth Five-Year Review Interview Record
Naval Air Station Whidbey Island, Oak Harbor, Washington

TYPE 1 INTERVIEW – U.S. NAVY or Contractor
Individual Contacted: Burgess, Gregory, T
Title: Project Manager
Organization: AECOM
8. To the best of your knowledge, do LUCs and operation and maintenance practices being utilized at OUs 1, 2, 3, 4, and 5 meet the intent of the RODs regarding limiting the potential for contact with or movement of contaminants left in place? **Response:** To the best of my knowledge, the LUCs are effective at Area 6.
9. To the best of your knowledge, has the OU 1 Area 6 selected remedy in the 2019 ROD Amendment for groundwater control been successfully implemented thus far? Is the selected remedy meeting the goals of the 2019 ROD Amendment? **Response:** Yes, the southern system appears to be successfully capturing 1,4-dioxane and vinyl chloride in groundwater, preventing the compounds from migrating further gowngradient. The AOP treatment system is successfully destroying COCs in captured groundwater to ROD levels.
10. To the best of your knowledge, does the landfill cap and groundwater control action at OU 1 Area 6 effectively meet the goals stated in the 1993 ROD and 2019 ROD Amendment? **Response (check if yes):** ☒ Reduce concentrations of contaminants in shallow groundwater ☒ Prevent further spread of contaminants in shallow groundwater ☒ Reduce the potential risk to existing and future groundwater users ☒ Minimize infiltration of rainwater into the landfill to prevent the leachate generation and migration to groundwater ☒ Prevent stormwater erosion ☒ Prevent migration of contaminants in shallow groundwater to the lower aquifer ☒ Prevent exposure of contaminants in subsurface soil and debris in the landfill operations area
Additional Comments:

2023 CERCLA Sixth Five-Year Review Interview Record
Naval Air Station Whidbey Island, Oak Harbor, Washington

TYPE 1 INTERVIEW – U.S. NAVY or Contractor
Individual Contacted: Burgess, Gregory, T
Title: Project Manager
Organization: AECOM
11. Do you feel that the OU 2 Areas 2/3 groundwater monitoring that has been generally conducted every five years remains sufficient and necessary for demonstrating that the implemented remedies remain protective at the sites? **Response:** Yes
12. Do you feel the current structural integrity of the coastal erosion protection system at OU 5 Area 1 and 52 is sufficient to withstand the anticipated increased storm surges and sea level rise due to climate change impacts? **Response:** No current knowledge of this system.
13. To the best of your knowledge, do you feel that the ongoing investigations at Ault Field related to PFAS are sufficiently comprehensive to evaluate risks to people, the environment, and DoD missions? **Response:** Yes, Navy is putting extensive effort into evaluating risk posed by the current know extent of PFAS.
14. To the best of your knowledge, have the recommendations made during the fifth FYR been adequately implemented/incorporated into the remedy operation, maintenance, and monitoring program? Please indicate the basis for your assessment. **Response:** Relative to Area 6, yes.

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TYPE 1 INTERVIEW – U.S. NAVY or Contractor
Individual Contacted: Burgess, Gregory, T
Title: Project Manager
Organization: AECOM
15. Are you aware of any community concerns regarding implementation or overall environmental protectiveness of the selected remedy at the five OU sites? If so, please give details. **Response:** No, however, not involved with community since 2019.
16. What is your overall impression of meeting the recommendations from the last FYR? **Response:** Navy has worked diligently to implement the recommendations from the last FYR.
17. What do you see as major accomplishments for sites at OUs 1, 2, 3, 4, and 5 since the last FYR? **Response:** The new, southern GETR was constructed and is functioning as intended. This remedy element is critical for overall containment of the dissolved COC plume. The replacement western GETR construction is well underway and is a critical element to upgradient mass removal.
18. Do you have any other comments, concerns, or suggestions regarding the effectiveness of the remedies implemented to protect human health and the environment at the OUs 1, 2, 3, 4, or 5? **Response:** No

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Naval Air Station Whidbey Island, Oak Harbor, Washington

TYPE 1 INTERVIEW – U.S. NAVY or Contractor	
Individual Contacted: Camille Warren	
Title: Senior Geologist / Project Manager	
Organization: EA Engineering, Science, and Technology, Inc., PBC	
Telephone: 720-626-6415	**Email: cwarren@eaest.com**
Contact Made By: Laura Himes	**Date: 1/16/24**

Questionnaire

1. Please describe your degree of familiarity with the Naval Air Station (NAS) Whidbey Island, Records of Decision (RODs) for Operable Units (OUs) 1, 2, 3, 4 and 5. Please also describe your involvement in the remedy implementation at any of the OUs 1 through 5 during this five-year review period, November 2018 through August 2023.

Response:

I acted as the treatment plant operator (OU 1 Area 6 West GETR) from 2018 to 2021. I acted as Task Order Manager (TOM) for OU 1 West GETR LTMO from 2018 to 2023 and served as a temporary TOM for the Area 6 South GETR LTMO during 2022. I conducted groundwater sampling at OU 1 Area 6 LTM and OU 5 Area 31 during 2017 to 2019, I have also acted as TOM for these LTM sites from 2018 to present.

2. What is your overall impression of the on-going remedy implementation at OUs 1, 2, 3, 4 and 5 and its performance, especially since November 2018? Do you feel the remedies continue to be effective? Please indicate the basis for your assessment.

Response:

The remedy at OU 1 continues to be effective. The West GETR compliance sampling indicates that the system reduces chlorinate concentrations in groundwater to below site-specific remediation goals designated in the OU 1 ROD Amendment. The South GETR system was built to reduce 1,4-dioxane concentrations in groundwater to below site-specific remediation goals designated in the OU 1 ROD Amendment, compliance sampling indicates that the system is effective.

The remedy at OU 5 Area 31 is effective; the contamination has not spread, and groundwater monitoring is conducted annually. In addition, land use restrictions prevent groundwater well installation and development in the area.

3. If applicable, to the best of your knowledge since November 2018, have there been any new scientific findings that relate to potential site risks and that might call into question the protectiveness and/or effectiveness of the remedies?

Response:

No, not to my knowledge.

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Naval Air Station Whidbey Island, Oak Harbor, Washington

TYPE 1 INTERVIEW – U.S. NAVY or Contractor
Individual Contacted: Camille Warren
Title: Senior Geologist / Project Manager
Organization: EA Engineering, Science, and Technology, Inc., PBC
4. If applicable, to the best of your knowledge since November 2018, have there been any changes in site conditions, remedy operations, or NAS Whidbey Island operations that you feel may impact the protectiveness and/or effectiveness of the remedies? **Response:** **No, not to my knowledge.**
5. Are you aware of any prior or pending land use or ownership changes since the signing of the RODs that may impact the effectiveness of any component of the selected remedies for these five OUs? **Response:** **No, I am not aware of any such changes.**
6. Please describe any requests you have received or are aware of regarding work at these five OUs to alter site characteristics that would result in land use or groundwater use which is inconsistent with current land use controls (LUCs). Are you aware of any groundwater use from beneath or downgradient of any of the sites at OUs 1, 2, 3, 4 or 5 (other than the private wells known to be located downgradient of OU 1 Area 6)? **Response:** **I have not received any such requests and am not aware of work that is inconsistent LUCs. No, I am not aware of groundwater use other than known private wells associated with Area 6.**
7. To the best of your knowledge, has the on-going program of environmental monitoring following implementation of the remedies at these five OUs been sufficiently thorough and frequent to meet the goals of the RODs? Please indicate the basis for your assessment. **Response:** **OU 5: Environmental sampling is sufficient to meet goals of the ROD; to limit the spread of groundwater contamination.** **OU 1 Area 6: Compliance sampling is conducted to determine if the South and West GETRs are effectively reducing COCs. Biannual sampling is conducted in the shallow aquifer at Area 6, satisfying the groundwater monitoring requirement of the amended remedy. Environmental sampling at Area 6 is sufficient.**

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Naval Air Station Whidbey Island, Oak Harbor, Washington

TYPE 1 INTERVIEW – U.S. NAVY or Contractor
Individual Contacted: Camille Warren
Title: Senior Geologist / Project Manager
Organization: EA Engineering, Science, and Technology, Inc., PBC
8. To the best of your knowledge, do LUCs and operation and maintenance practices being utilized at OUs 1, 2, 3, 4, and 5 meet the intent of the RODs regarding limiting the potential for contact with or movement of contaminants left in place? **Response:** **To my knowledge, LUCs and O&M practices meet the intent of the RODs at OU 5 Area 31 and OU 1 Area 6.**
9. To the best of your knowledge, has the OU 1 Area 6 selected remedy in the 2019 ROD Amendment for groundwater control been successfully implemented thus far? Is the selected remedy meeting the goals of the 2019 ROD Amendment? **Response:** **Yes, the amended remedy for Area 6 is being successfully implemented. The South AOP GETR was installed and is effectively treating 1-4-dioxane.**
10. To the best of your knowledge, does the landfill cap and groundwater control action at OU 1 Area 6 effectively meet the goals stated in the 1993 ROD and 2019 ROD Amendment? **Response (check if yes):** ☒ Reduce concentrations of contaminants in shallow groundwater ☒ Prevent further spread of contaminants in shallow groundwater ☒ Reduce the potential risk to existing and future groundwater users ☒ Minimize infiltration of rainwater into the landfill to prevent the leachate generation and migration to groundwater ☒ Prevent stormwater erosion ☒ Prevent migration of contaminants in shallow groundwater to the lower aquifer ☒ Prevent exposure of contaminants in subsurface soil and debris in the landfill operations area
Additional Comments:

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Naval Air Station Whidbey Island, Oak Harbor, Washington

TYPE 1 INTERVIEW – U.S. NAVY or Contractor
Individual Contacted: Camille Warren
Title: Senior Geologist / Project Manager
Organization: EA Engineering, Science, and Technology, Inc., PBC
11. Do you feel that the OU 2 Areas 2/3 groundwater monitoring that has been generally conducted every five years remains sufficient and necessary for demonstrating that the implemented remedies remain protective at the sites? **Response:** **I do not have enough knowledge to evaluate monitoring at OU 2.**
12. Do you feel the current structural integrity of the coastal erosion protection system at OU 5 Area 1 and 52 is sufficient to withstand the anticipated increased storm surges and sea level rise due to climate change impacts? **Response:** **I do not have enough knowledge to evaluate monitoring at OU 5 Areas 1 and 52.**
13. To the best of your knowledge, do you feel that the ongoing investigations at Ault Field related to PFAS are sufficiently comprehensive to evaluate risks to people, the environment, and DoD missions? **Response:** **I do not have enough experience with PFAS monitoring at NASWI to evaluate its effectiveness.**
14. To the best of your knowledge, have the recommendations made during the fifth FYR been adequately implemented/incorporated into the remedy operation, maintenance, and monitoring program? Please indicate the basis for your assessment. **Response:** **To the best of my knowledge, the remedy performance recommendation is being adequately implemented. The South AOP GETR has been installed, the West GETR is being re-designed to treat 1,4-dioxane, and the well network is being expanded. I do not have enough knowledge of LUC inspections and PFAS monitoring to evaluate the other two recommendations.**

2023 CERCLA Sixth Five-Year Review Interview Record
Naval Air Station Whidbey Island, Oak Harbor, Washington

TYPE 1 INTERVIEW – U.S. NAVY or Contractor
Individual Contacted: Camille Warren
Title: Senior Geologist / Project Manager
Organization: EA Engineering, Science, and Technology, Inc., PBC
15. Are you aware of any community concerns regarding implementation or overall environmental protectiveness of the selected remedy at the five OU sites? If so, please give details. **Response:** **I am not aware of any such concerns.**
16. What is your overall impression of meeting the recommendations from the last FYR? **Response:** **My overall impression is the recommendations are being met.**
17. What do you see as major accomplishments for sites at OUs 1, 2, 3, 4, and 5 since the last FYR? **Response:** **OU 1 Area 6: Installation of new SOUTH SOP GETR and re-design of West GETR.** **OU 5 Area 31: Additional monitoring well sampling has shown no spread of COCs in area.**
18. Do you have any other comments, concerns, or suggestions regarding the effectiveness of the remedies implemented to protect human health and the environment at the OUs 1, 2, 3, 4, or 5? **Response:** **No other comments.**

NAVFAC
Naval Facilities Engineering Systems Command

2023 CERCLA Sixth Five-Year Review Interview Record
Naval Air Station Whidbey Island, Oak Harbor, Washington

TYPE 2 INTERVIEW – COMMUNITY MEMBER	
Individual Contacted: (b)(6)	(RAB MEMBER)
Title: CITIZEN	
Organization:	
Telephone: (b)(6)	**Email** (b)(6)
Contact Made By: SELF	**Date:** 1/13/2024

Questionnaire

1. Please describe your degree of familiarity with the Naval Air Station (NAS) Whidbey Island, Records of Decision (RODs) for Operable Units (OUs) 1, 2, 3, 4 and 5. Please also describe your involvement in the remedy implementation at any of the OUs 1 through 5 during this five-year review period, November 2018 through August 2023.

Response: AS A CITIZEN, I HAVE ATTENDED PUBLIC PRESENTATIONS. WHEN ASKED TO APPLY FOR RAB INVOLVEMENT DURING COMMANDER MOORE'S TOUR OF DUTY, I ASSENTED. I HAVE PARTICIPATED AS ASKED AND PRESENTED CONCERNS OF OTHER CITIZENS AS THEY WERE PRESENTED TO ME.

2. What is your overall impression of the on-going remedy implementation at OUs 1, 2, 3, 4 and 5 and its performance, especially since November 2018? Do you feel the remedies continue to be effective? Please indicate the basis for your assessment.

Response: NAVY RESPONSE TO POLUTION PLUME LEAKEAGE FROM AREA 6 DUMPSITE IS EXCELLENT IN SOUTHEASTERN DIRECTION TOWARD THE OAK HARBOR TOWNSHIP BUT QUESTIONABLE IN A WESTWARD DIRECTION TOWARD THUNDER LANE WHERE HEALTH HAZARDS ATTRIBUTED TO DRINKING WATER FROM WELLS HAVE BEEN REPORTED.
NAVY HAS NOT BEEN FORTHCOMING ABOUT IT'S GALLERY GOLF COURSE WELL REACTIVATION'S EFFECT IN AQUIFER MIGRATION.

3. To the best of your knowledge, do you feel that the ongoing investigations at Ault Field related to PFAS are sufficiently comprehensive to evaluate risks to people, the environment, and DoD missions?

Response: YES, EXCEPT FOR THE WESTERLY DIRECTION.

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2023 CERCLA Sixth Five-Year Review Interview Record
Naval Air Station Whidbey Island, Oak Harbor, Washington

TYPE 2 INTERVIEW – COMMUNITY MEMBER

Individual Contacted: (b)(6)

Title: CITIZEN

Organization: PUBLIC

4. Are you aware of any community concerns regarding implementation or overall environmental protectiveness of the selected remedy at the five OU sites? If so, please give details.

Response: ONLY IN THE THUNDER LANE REGION WESTWARD FROM THE AREA 6 LANDFILL DUMP SITE.

5. What effects have the remedy operation, maintenance, and monitoring program at the OU 1, 2, 3, 4, and 5 sites had on the surrounding community?

Response: INITIAL ALARM THAT HAS SUBSIDED.

6. Do you feel well informed about the ongoing activities at the OU 1, 2, 3, 4, and 5 sites?

Response: NO PARTLY DUE TO (b)(6)
I HAVE ATTENDED ALL EVENTS THAT HAVE BEEN OFFERED. BUT BEING A CITIZEN WITHOUT MILITARY ID OR CLEARANCES, I HAVE NOT BEEN KNOWLEDGEABLE ENOUGH TO KNOW WHAT THE ISSUES ARE AND ASK PERTINANT QUESTIONS.

7. Do you have any other comments, concerns, or suggestions regarding the effectiveness of the remedies implemented to protect human health and the environment at the OUs 1, 2, 3, 4, or 5?

Response: I CONSIDER NAVY TO BE ESSENTIAL TO OUR NATION'S DEFENCE. I AM NOT A VETERAN, BUT NOT DUE TO INTENTIONAL AVERSION. II SERVE ON THE RAB AS A PATRIOT.

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2023 CERCLA Sixth Five-Year Review Interview Record Naval Air Station Whidbey Island, Oak Harbor, Washington	
TYPE 2 INTERVIEW – COMMUNITY MEMBER	
Individual Contacted:Gary Winlund	
Title:community chair [RAB]	
Organization:Admirals Cove Water Dist.	
Telephone:(b)(6)	**Email:** (b)(6)
Contact Made By:	**Date:1-12-2024**
Questionnaire	
• Please describe your degree of familiarity with the Naval Air Station (NAS) Whidbey Island, Records of Decision (RODs) for Operable Units (OUs) 1, 2, 3, 4 and 5. Please also describe your involvement in the remedy implementation at any of the OUs 1 through 5 during this five-year review period, November 2018 through August 2023.	
Response:RAB 5years+ and 11 year Island resident	
• What is your overall impression of the on-going remedy implementation at OUs 1, 2, 3, 4 and 5 and its performance, especially since November 2018? Do you feel the remedies continue to be effective? Please indicate the basis for your assessment.	
Response: I am mostly familiar wth the OLF and Admirials Cove South. The moniter wells and testing of our district seem to have slowed the migration south from the OLF. ACWD wells still meet the currect standards.	
• To the best of your knowledge, do you feel that the ongoing investigations at Ault Field related to PFAS are sufficiently comprehensive to evaluate risks to people, the environment, and DoD missions?	
Response: I geta few negative response from the folks north of NSWI. Folks in the Agri-businesses are still unhappy.	
• Are you aware of any community concerns regarding implementation or overall environmental protectiveness of the selected remedy at the five OU sites? If so, please give details.	

Response: There are still concerns that more should be done but few are aware of the complicated nature and scope of the clean up processes. I was with Oregon Fire Marshals Hazmat Team in Astoria Or. for over 20 years as a Hazmat responder, and understand the complexities of the processes.
• What effects have the remedy operation, maintenance, and monitoring program at the OU 1, 2, 3, 4, and 5 sites had on the surrounding community?
Response: Mostly concernthat the new standards will show a much bigger problem.
• Do you feel well informed about the ongoing activities at the OU 1, 2, 3, 4, and 5 sites?
Response: I am, but I'am on the inside so to speak. More town halls might make a difference to the public at large.
• Do you have any other comments, concerns, or suggestions regarding the effectiveness of the remedies implemented to protect human health and the environment at the OUs 1, 2, 3, 4, or 5?
Response: I want to see the new Pfas standards first. I don't think the public is aware of what 70ppt means or what ever the new stardard will mean in real terms.

Appendix C:
Cumulative Analytical Results from OU 1 Area 6 and OU 5 Area 31

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Table C-1. OU 1 Area 6 Production Well Analytical Results

Sample Location	Sample Date	Trichloroethene	1,1,1-Trichloroethane	1,1-Dichloroethane	cis-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,4-Dioxane
		Concentrations in µg/L						
	Remedial Goal	**5.0**	**200**	**--**	**--**	**7.0**	**0.029**	**0.44**
PW-1	8/25/1993	**1400**	**2800**	ND (200)	NA	ND (200)	ND (200)	NA
PW-1	2/10/1995	**850**	**1700**	12 J	NA	**41** J	ND (100)	NA
PW-1	2/10/1995 (Dup)	**830**	**1600**	ND (120)	NA	**41** J	ND (120)	NA
PW-1	9/19/1995	**480**	**1700**	ND (50)	NA	**62**	ND (50)	NA
PW-1	12/4/1995	**350**	**1000**	ND (50)	NA	**49** J	ND (50)	NA
PW-1	3/25/1996	**270**	**890**	ND (50)	NA	**30** J	ND (50)	NA
PW-1	11/1/1996	**290**	**420**	4.7 J	NA	**12** J	ND (25)	NA
PW-1	1/28/1997	**390**	**320**	ND (25)	NA	ND (25)	ND (25)	NA
PW-1	5/1/1997	**320**	**230**	ND (10)	120	**8.1** J	ND (10)	NA
PW-1	5/1/1997 (Dup)	**310**	**240**	7.6 J	130	ND (10)	ND (10)	NA
PW-1	7/21/1997	**290**	**220**	ND (10)	79	4.5 J	ND (10)	NA
PW-1	10/28/1997	**300**	**290**	7.1	130	**11**	ND (0.20)	NA
PW-1	10/28/1997 (Dup)	**300**	**280**	7.5	140	**11**	ND (0.20)	NA
PW-1	1/20/1998	**220**	**320**	11	150	**13**	ND (1.0)	NA
PW-1	1/20/1998 (Dup)	**200**	**310**	10	140	**12**	ND (1.0)	NA
PW-1	4/16/1998	**150**	**320**	10	110 J	**9.5**	ND (1.0)	NA
PW-1	7/29/1998	**250**	**380**	7.8	110	**12**	ND (1.0)	NA
PW-1	7/29/1998 (Dup)	**240**	**380**	7.5	110	**12**	ND (1.0)	NA
PW-1	10/27/1998	**240**	**400**	6.0	88	**13**	ND (1.0)	NA
PW-1	10/27/1998 (Dup)	**230**	**300**	5.4	83	**12**	ND (1.0)	NA
PW-1	1/27/1999	**52**	130	3.7	66	**7.3**	ND (1.0)	NA
PW-1	1/27/1999 (Dup)	**72**	140	3.5	81	6.6	ND (1.0)	NA
PW-1	4/19/1999	**148**	200	4.3	64	**10**	ND (1.0)	NA
PW-1	4/19/1999 (Dup)	**160**	**225**	4.3	68	**16**	ND (50)	NA
PW-1	7/27/1999	**120**	200	4.3	74	**9.5**	ND (0.20)	NA
PW-1	11/29/1999	**120**	100	4.6	140	**7.2**	ND (1.0)	NA
PW-1	11/29/1999 (Dup)	**160**	160	5.0	220	**7.8**	ND (1.0)	NA
PW-1	1/24/2000	**160**	190	4.0	76	**11**	ND (0.20)	NA
PW-1	1/24/2000 (Dup)	**190**	200 E	3.8	73	**10**	ND (0.20)	NA
PW-1	4/26/2000	**130**	130	4.1	52	**8.8**	ND (0.20)	NA
PW-1	4/26/2000 (Dup)	**130**	140	4.2	52	**9.8**	ND (0.20)	NA
PW-1	7/26/2000	**170** D	**270** D	4.4	67 D	**10**	ND (0.50)	NA
PW-1	10/24/2000	**120**	150	4.4	51	**10**	ND (0.30)	NA
PW-1	1/9/2001	**120** D	170 D	3.9	41	**9.7**	ND (0.30)	NA
PW-1	4/10/2001	**110** D	140 D	4.1 D	43 D	**8.3** D	ND (1.0)	NA
PW-1	7/10/2001	**99** D	130 D	4.3	44	**8.6**	ND (0.22)	NA
PW-1	11/9/2001	**91** D	130 D	3.7	34	**9.7**	ND (0.20)	NA
PW-1	1/16/2002	**99** D	110 D	3.6 D	39 D	**7.7** D	ND (1.0)	NA
PW-1	4/19/2002	**110** D	100 D	3.8 D	45 D	6.8 D	ND (1.0)	NA
PW-1	7/10/2002	**94** D	96 D	4.2	39	6.6	ND (0.20)	NA
PW-1	11/22/2002	**78**	83	4.0	40	6.2	ND (0.20)	NA
PW-1	1/17/2003	**95**	110	3.9	38	6.8	**0.060** J	NA
PW-1	4/24/2003	**75**	89	3.0	35	6.8	ND (0.12)	NA
PW-1	6/26/2003	**85**	91	3.5	40	5.8 J	ND (0.12)	**14**
PW-1	11/13/2003	**75**	84	2.9	36	6.4	**0.20** J	**13**
PW-1	1/23/2004	**89**	84	2.3	36	**7.9**	**0.26** J	**13**
PW-1	4/9/2004	**83**	67	3.5	44	4.4	ND (0.12)	**11**
PW-1	7/20/2004	**90**	65	3.3	46	4.4	ND (0.12)	**12**
PW-1	11/9/2004	**74**	64	2.7	35	3.9	**0.14** J	**11**
PW-1	1/26/2005	**87**	60	3.1	43	5.4	**0.14** J	**13**
PW-1	4/29/2005	**100**	67	3.7 J	48 J	3.7 J	ND (0.13)	**11**
PW-1	8/1/2005	**97** J'	68 J'	2.5 J'	52 J'	**13** J'	**0.34** J'	**12**
PW-1	10/28/2005	**84** D	64 D	2.8	48	4.7	ND (0.13)	**15**
PW-1	2/7/2006	**98** D	50 D	4.4	50 D	2.8	ND (0.13)	**12**
PW-1	5/11/2006	**86** D	49 D	3.6	55	3.2	ND (0.13)	**14**
PW-1	8/17/2006	**140** D	71 D	6.0	90 D	3.2	ND (0.13)	**17**
PW-1	11/6/2006	**210** D	86 D	7.1	140 D	3.6	ND (0.13)	**22**
PW-1	2/27/2007	**120** D	59	4.1	65 D	3.9	ND (0.13)	**11**
PW-1	5/14/2007	**120** D	58 D	3.8	64 D	3.0	ND (0.13)	**15**
PW-1	8/17/2007	**150** D	69	4.7	81 D	3.6	ND (0.13)	**14**
PW-1	2/22/2008	**130** D	59 D	4.3	73	3.9	ND (0.040)	NA
PW-1	8/29/2008	**100** D	43 D	3.0 D	52 D	2.3 D	ND (0.060)	**9.6**
PW-1	4/27/2009	**110** D	56	3.7	65	3.8	ND (0.060)	NA
PW-1	8/20/2009	**120** D	55	3.6	63	4.0	ND (0.030)	**14**
PW-1	8/6/2010	**86** D	43	3.0	42	2.9	ND (0.030)	**7.1**
PW-1	2/11/2011	**90** D	38	2.6	42	2.7	ND (0.030)	**7.4**
PW-1	8/2/2011	**69** D	37	2.8	38	2.4	ND (0.030)	**7.8**
PW-1	2/1/2012	**77**	33	2.5	33	2.2	ND (0.030)	**7.3**

Table C-1. OU 1 Area 6 Production Well Analytical Results (continued)

Sample Location	Sample Date	Trichloroethene	1,1,1-Trichloroethane	1,1-Dichloroethane	cis-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,4-Dioxane
		Concentrations in µg/L						
	Remedial Goal	**5.0**	**200**	**--**	**--**	**7.0**	**0.029**	**0.44**
PW-1	8/6/2012	**74**	33	2.8	34	2.5	ND (0.030)	**7.6**
PW-1	2/4/2013	**65**	33	2.2	26	2.5	ND (0.030)	**4.8**
PW-1	8/5/2013	**63**	35	2.2	26	2.7	ND (0.030)	**4.4**
PW-1	2/13/2014	**73**	27	2.2	31	2.1	ND (0.030)	**4.7**
PW-1	8/25/2014	**82** D	35	2.7	41	2.6	ND (0.030)	**6.2**
PW-1	2/23/2015	**89** D	28	2.5	40	1.9	ND (0.030)	**6.8**
PW-1	7/20/2015	**73**	25	1.8	27	1.7	ND (0.030)	**5.1**
PW-1	1/19/2016	**71**	21	1.4	20	1.7	ND (0.030)	**4.2**
PW-1	8/1/2016	**66**	24	NA	NA	2.1	ND (0.075)	**4.7**
PW-1	1/30/2017	**62**	24	NA	NA	1.9	ND (0.075)	**2.9**
PW-1	9/11/2017	**39**	23	NA	NA	2.0	ND (0.10)	**3.8**
PW-1	2/5/2018	**41**	17	NA	NA	1.7	ND (0.10)	**4.8**
PW-1	9/10/2018	**48.3**	19.8	NA	NA	2.58	ND (0.10)	**3.4**
PW-1	9/11/2019	**10.9**	2.84	NA	NA	0.44	ND (0.10)	**1.8** JQ
PW-1	2/19/2020	**49.5**	12.6	NA	NA	2.24	ND (0.10)	**3.4**
PW-1	9/30/2020	**67** J	20	NA	NA	1.6	ND (0.015)	**4.4**
PW-1	2/8/2021	**68**	18	NA	NA	1.6	ND (0.015)	**3.3**
PW-1	9/27/2021	**54**	20	NA	NA	1.8 J	ND (0.15)	**3.2**
PW-1	2/17/2022	**67**	15	NA	NA	ND (0.70)	ND (0.15)	**4.0**
PW-1	9/27/2022	**14**	2.2	NA	NA	ND (0.50)	ND (0.50)	**2.4**
PW-1	2/6/2023	**57**	15	NA	NA	1.5	ND (0.50) UJ	**2.8**
PW-2	8/30/1993	ND (1.0)	3.6	2.3	NA	ND (1.0)	**4.8**	NA
PW-2	6/23/1995	ND (5.0)	3.5 J	3.4 J	NA	ND (5.0)	**4.5** J	NA
PW-2	9/19/1995	ND (5.0)	ND (5.0)	2.2 J	NA	ND (5.0)	**5.9**	NA
PW-2	12/5/1995	ND (5.0)	5.4	7.6	NA	ND (5.0)	**12**	NA
PW-2	3/25/1996	ND (2.0)	7.3	7.2	NA	ND (2.0)	**7.8**	NA
PW-2	11/1/1996	ND (5.0)	4.4 J	11	NA	ND (5.0)	ND (5.0)	NA
PW-2	1/29/1997	ND (2.0)	5.1	13	NA	ND (2.0)	**0.98** J	NA
PW-2	5/1/1997	ND (2.0)	4.8	13	ND (2.0)	ND (2.0)	**1.8** J	NA
PW-2	7/21/1997	ND (2.0)	5.6	12	ND (2.0)	ND (2.0)	**3.4**	NA
PW-2	4/16/1998	ND (2.0)	3.4	18	ND (2.0)	ND (2.0)	**1.5**	NA
PW-3	8/29/1993	**1900**	**4600**	ND (500)	NA	ND (500)	ND (500)	ND (10)
PW-3	2/10/1995	**1400**	**3700**	45 J	NA	**240** J	ND (250)	**4.4**
PW-3	9/19/1995	**870**	**4500**	ND (200)	NA	**410**	ND (200)	ND (10)
PW-3	9/19/1995 (Dup)	**770**	**4500**	37 J	NA	**400**	ND (200)	ND (10)
PW-3	12/4/1995	**700**	**3400**	150 J	NA	**340**	ND (200)	ND (10)
PW-3	3/25/1996	**550**	**3200**	110	NA	**300**	ND (200)	NA
PW-3	3/25/1996 (Dup)	**500**	**2900**	110	NA	**330**	ND (100)	NA
PW-3	11/1/1996	**560**	**2300**	79 J	NA	**180**	ND (100)	ND (10)
PW-3	11/1/1996 (Dup)	**510**	**2200**	110	NA	**170**	ND (100)	ND (10)
PW-3	1/28/1997	**620**	**1300**	57 J	NA	**77** J	ND (100)	NA
PW-3	5/1/1997	**420**	**930**	73	120	**150**	ND (25)	NA
PW-3	7/21/1997	**440**	**1000**	65	120	**120**	ND (25)	NA
PW-3	10/14/1997	**440**	**590**	67	140	**83**	**0.30**	ND (10)
PW-3	10/27/1997	NA	NA	NA	NA	NA	NA	ND (10)
PW-3	1/20/1998	**280**	**1300**	79	109	**120**	ND (1.0)	NA
PW-3	4/16/1998	**200**	**780**	71	92 J	**78**	ND (1.0)	NA
PW-3	7/29/1998	**400**	**1100**	81	110	**110**	ND (5.0)	NA
PW-3	10/27/1998	**370**	**1300**	70	92	**130**	ND (1.0)	ND (10)
PW-3	1/27/1999	**160**	**760**	65	76	**92**	ND (1.0)	NA
PW-3	4/19/1999	**270**	**950**	58	69	**110**	ND (10)	NA
PW-3	7/27/1999	**200**	**760**	60	65	**89**	ND (0.20)	NA
PW-3	11/29/1999	**310**	**300**	51	130	**36**	ND (1.0)	ND (10)
PW-3	1/24/2000	**280**	**810**	48	53	**36**	ND (0.20)	ND (10)
PW-3	4/26/2000	**240**	**1000**	62	41	**120**	ND (0.2)	NA
PW-3	7/26/2000	**280** D	**1600** D	73 D	31	**210** D	**0.30** J	ND (4.0)
PW-3	10/24/2000	**200**	**910**	55 J	31 J	**120**	ND (0.30)	NA
PW-3	1/9/2001	**210** D	**1100** D	51 J	26 J	**110** D	ND (030)	NA
PW-3	4/10/2001	**200** D	**890** D	55 D	27 D	**110** D	ND (5.00)	NA
PW-3	7/10/2001	**180** D	**790** D	47 D	22 D	**91** D	ND (0.43)	NA
PW-3	11/9/2001	**180** D	**980** D	50 D	23	**120** D	**0.20** J	NA
PW-3	1/16/2002	**170** D	**770** D	45 D	19 D	**100** D	ND (5.0)	NA
PW-3	4/19/2002	**160** D	**650** D	42 D	18 D	**90** D	ND (4)	NA
PW-3	7/10/2002	**170** D	**600** D	36	18 D	**67** D	ND (0.40)	NA
PW-3	11/22/2002	**150**	**440**	34	17	**78**	ND (0.20)	NA
PW-3	1/17/2003	**170**	**550**	33	16	**81**	**0.20** J	NA
PW-3	4/24/2003	**150**	**510**	34	16	**100**	**0.80**	NA
PW-3	6/26/2003	**130**	**430**	30	12	**67** J	ND (2.4)	**6.2**

Table C-1. OU 1 Area 6 Production Well Analytical Results (continued)

Sample Location	Sample Date	Trichloroethene	1,1,1-Trichloroethane	1,1-Dichloroethane	cis-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,4-Dioxane
		Concentrations in µg/L						
	Remedial Goal	**5.0**	**200**	**--**	**--**	**7.0**	**0.029**	**0.44**
PW-3	11/13/2003	**140**	**420**	33	16	**91**	**0.80**	**6.1**
PW-3	1/23/2004	**160**	**360**	29	15	**78**	**0.89**	**7.3**
PW-3	4/9/2004	**170**	**380**	35	16	**66**	**0.13** J	**6.1**
PW-3	7/20/2004	**140**	**310**	31	15	**67**	**0.36** J	**5.9**
PW-3	11/9/2004	**120**	**240**	26	12	**60**	**1.3**	**7.6**
PW-3	1/26/2005	**130**	**260**	27	12	**73**	**0.93**	**8.0**
PW-3	4/29/2005	**120**	**230**	30	11	**62**	**0.15** J	**8.1**
PW-3	8/1/2005	**120**	**260**	31	10	**57**	ND (0.13)	**7.9**
PW-3	10/28/2005	**110** D	**240** D	23	9.0	**53** D	**0.58**	**8.8**
PW-3	2/7/2006	**100** D	170 D	30	8.7	**44**	ND (0.13)	**7.4**
PW-3	5/11/2006	**87** D	160 D	24	7.6	**51**	ND (0.13)	**7.1**
PW-3	8/17/2006	**150** D	130 D	30	13	**32**	ND (0.13)	**7.9**
PW-3	11/6/2006	**160** D	110 D	30	15	**28**	**0.13** J	**7.6**
PW-3	2/27/2007	**99** D	170 D	22	7.5	**46**	**0.18** J	**6.7**
PW-3	5/16/2007	**100** D	180 D	23	707	**46**	**0.090** J	**6.0**
PW-3	8/17/2007	**100** D	190 D	24	7.7	**45**	**0.070** J	**6.3**
PW-3	2/22/2008	**110** D	160 D	25	8.5	**44**	**0.070** J	**5.1**
PW-3	8/29/2008	**110** D	99 D	21	7.8	**24**	ND (0.060)	**5.5**
PW-3	4/27/2009	**93** D	110 D	20	6.7	**32**	**0.070** J	**5.7**
PW-3	8/20/2009	**100** D	160 D	22	6.9	**42**	**0.080** J	**7.5**
PW-3	8/6/2010	**68** D	150 D	20	5.6	**36**	**0.060** J	**5.0**
PW-3	2/11/2011	**70**	130 D	15	5.0	**28**	**0.050** J	**5.1**
PW-3	8/2/2011	**60**	100 D	14	4.4	**24**	**0.040** J	**4.9**
PW-3	2/1/2012	**64**	100 D	15	4.9	**26**	**0.040** J	**6.3**
PW-3	8/6/2012	**61**	110 D	17	5.0	**29**	**0.040** J	**6.1**
PW-3	2/4/2013	**55**	110 D	14	5.0	**28**	**0.040** J	**3.7**
PW-3	8/5/2013	**57**	97 D	13	4.8	**28**	**0.040** J	**3.8**
PW-3	2/13/2014	**57**	60 D	12	4.9	**21**	ND (0.030)	**3.2**
PW-3	8/25/2014	**57**	87 D	13	4.9	**23**	ND (0.030)	**3.7**
PW-3	2/23/2015	**56**	80 D	12	4.8	**20**	**0.040** J	**3.1**
PW-3	7/20/2015	**48**	77 D	11	3.9	**17**	ND (0.030)	**3.2**
PW-3	1/19/2016	**45**	74	8.9	3.5	**15**	ND (0.030)	**3.0**
PW-3	8/1/2016	**41**	78	NA	NA	**17**	ND (0.075)	**2.8**
PW-3	1/30/2017	**45**	62 D	NA	NA	**16**	ND (0.075)	**2.4**
PW-3	9/11/2017	**40**	80 EJ	NA	NA	**16**	ND (0.10)	**3.0**
PW-3	2/5/2018	**57**	37	NA	NA	**9.1**	ND (0.10)	**4.0**
PW-3	9/10/2018	**33.2**	66.1	NA	NA	**14.0**	ND (0.10)	**2.3**
PW-3	2/4/2019 & 2/20/2019	**39.6**	51.4	NA	NA	**11.3**	ND (0.10)	**3.5**
PW-3	9/11/2019	**69.2**	21.2	NA	NA	3.73	ND (0.10)	**2.1** JH
PW-3	2/4/2020	**45.1**	30.3	NA	NA	6.28	ND (0.10)	**3.1**
PW-3	9/30/2020	**40**	72 J	NA	NA	**13**	0.028	**2.1**
PW-3	2/8/2021	**46**	55	NA	NA	**13**	ND (0.015)	**2.4**
PW-3	9/27/2021	**34**	43	NA	NA	**11**	ND (0.15)	**1.9**
PW-3	2/17/2022	**45**	35	NA	NA	**11**	ND (0.075)	**2.0**
PW-3	9/27/2022	**63**	11	NA	NA	3.8	ND (0.50)	**2.5**
PW-3	2/6/2023	**39**	41	NA	NA	**9.7**	ND (0.50) UJ	**2.0**
PW-4	8/27/1993	ND (1.0)	ND (1.0)	ND (1.0)	NA	ND (1.0)	**2.9**	NA
PW-4	2/10/1995	ND (1.0)	2.9	ND (1.0)	NA	ND (1.0)	**3.4**	NA
PW-4	9/19/1995	ND (5.0)	ND (5.0)	ND (5.0)	NA	ND (5.0)	**3.2** J	NA
PW-4	12/4/1995	ND (5.0)	3.0 J	1.9 J	NA	ND (5.0)	ND (5.0)	NA
PW-4	3/25/1996	ND (2.0)	3.0	0.48 J	NA	ND (2.0)	**4.7**	NA
PW-4	11/1/1996	ND (5.0)	3.1 J	0.93 J	NA	ND (5.0)	**1.7** J	NA
PW-4	1/29/1997	ND (2.0)	4.2 J	0.95 J	NA	ND (2.0)	ND (2.0)	NA
PW-4	5/1/1997	ND (2.0)	3.0	1.2 J	ND (2.0)	ND (2.0)	**2.6**	NA
PW-4	7/21/1997	ND (2.0)	2.6	1.4 J	ND (2.0)	ND (2.0)	**1.6** J	NA
PW-4	10/27/1997	ND (0.20)	5.3	3.1	ND (0.20)	ND (0.20)	**1.6**	NA
PW-4	1/20/1998	ND (0.20)	5.1	4.1	ND (0.20)	ND (0.20)	**1.6**	NA
PW-4	4/16/1998	ND (0.20)	9.2	4.7	ND (0.20)	ND (0.20)	**1.7**	NA
PW-4	7/29/1998	ND (0.20)	4.1	4.5	ND (0.20)	ND (0.20)	ND (1.0)	NA
PW-4	10/27/1998	ND (2.0)	3.7	4.1	ND (0.20)	ND (0.20)	**1.1**	NA
PW-4	1/27/1999	ND (0.20)	2.0	2.9	ND (0.20)	ND (0.20)	ND (1.0)	NA
PW-4	4/26/1999	ND (0.20)	2.7	3.9	ND (0.20)	ND (0.20)	ND (1.0)	NA
PW-4	7/27/1999	ND (0.20)	4.1	4.4	ND (0.20)	ND (0.20)	**2.8**	NA
PW-4	11/29/1999	ND (0.20)	2.5	5.1	ND (0.20)	ND (0.20)	ND (1.0)	NA
PW-4	1/24/2000	ND (0.20)	3.7	4.9	ND (0.20)	ND (0.24)	**0.89** J	NA
PW-4	4/28/2000	ND (0.20)	4.4	7.9	ND (0.20)	ND (0.30)	**2.0**	NA
PW-4	7/26/2000	ND (0.50)	30	6.5	ND (0.50)	0.20 J	**1.2**	NA
PW-4	10/24/2000	ND (0.20)	70	6.8	ND (0.20)	0.30 J	**1.1**	NA

Table C-1. OU 1 Area 6 Production Well Analytical Results (continued)

Sample Location	Sample Date	Trichloroethene	1,1,1-Trichloroethane	1,1-Dichloroethane	cis-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,4-Dioxane
		Concentrations in µg/L						
	Remedial Goal	**5.0**	**200**	**--**	**--**	**7.0**	**0.029**	**0.44**
PW-4	1/9/2001	ND (20)	120 D	7.1	ND (0.20)	0.40 J	**1.3**	NA
PW-4	4/10/2001	ND (0.50)	120 D	8.3	ND (0.50)	0.40 J	**1.4**	NA
PW-4	7/10/2001	ND (0.12)	98	8.8	ND (0.12)	0.49 J	**1.4**	NA
PW-4	11/9/2001	ND (0.20)	53 D	10	ND (0.10)	0.47 J	**1.2**	NA
PW-4	1/16/2002	ND (0.80)	76 D	8.0 D	ND (0.40)	ND (0.80)	**1.0** JD	NA
PW-4	4/19/2002	ND (1.0)	100 D	9.4 D	ND (0.50)	ND (10)	**1.1** JD	NA
PW-4	7/10/2002	ND (0.20)	76 D	11	ND (0.10)	0.71	**0.96**	NA
PW-4	11/22/2002	ND (0.20)	83	13	ND (0.10)	0.80	**0.79**	NA
PW-4	1/17/2003	ND (0.055)	92	15	ND (0.067)	1.2 J	**1.1** J	NA
PW-4	4/24/2003	ND (0.081)	68	14	ND (0.067)	1.2	**0.93**	NA
PW-4	6/26/2003	ND (0.081)	67	16	ND (0.067)	ND (1.1)	**0.80**	**6.4**
PW-4	11/13/2003	0.10 J	49	16	ND (0.067)	1.8	**1.3**	**6.6**
PW-4	1/23/2004	ND (0.081)	44	15	ND (0.067)	1.3	**1.2**	**8.3**
PW-4	4/9/2004	ND (0.081)	41	17	ND (0.067)	0.96	**0.70**	**6.2**
PW-4	7/20/2004	ND (0.081)	32	16	ND (0.067)	1.2	**0.86**	**6.5**
PW-4	11/9/2004	ND (0.081)	28	14	ND (0.067)	1.0	**0.90**	**7.9**
PW-4	1/26/2005	0.10 J	26	15	ND (0.069)	1.4	**0.78**	**9.4**
PW-4	4/29/2005	ND (0.21)	28	16	ND (0.13)	1.0	**0.65**	**8.1**
PW-4	8/1/2005	ND (0.21)	23	16	ND (0.13)	0.90	**0.61**	**12**
PW-4	10/28/2005	ND (0.21)	17	9.8	ND (0.13)	2.4	**1.0**	**13**
PW-4	11/9/2006	ND (0.21)	1.2	12	ND (0.13)	0.25 J	**0.44** J	**8.7**
PW-4	2/27/2007	ND (0.21)	44	11	ND (0.13)	0.44 J	**0.53**	**8.0**
PW-4	5/16/2007	ND (0.21)	4.7	9.5	ND (0.13)	0.38 J	**0.47** J	**7.4**
PW-4	8/17/2007	ND (0.21)	7.9	10	ND (0.13)	0.53	**0.43** J	**8.5**
PW-4	8/29/2008	ND (0.070)	4.9	9.6	ND (0.040)	0.40 J	**0.33** J	**5.1**
PW-4	8/20/2009	ND (0.030)	8.6	13	ND (0.040)	0.92	**0.43** J	**5.0**
PW-4	8/6/2010	ND (0.030)	6.3	13	ND (0.040)	0.68	**0.28**	**4.3**
PW-4	2/11/2011	ND (0.030)	6.9	11	ND (0.040)	0.85	**0.22**	**5.4**
PW-4	8/2/2011	ND (0.030)	6.0	11	ND (0.040)	0.81	**0.17**	**5.2**
PW-4	2/1/2012	ND (0.030)	6.0	11	ND (0.040)	0.98	**0.20**	**3.3**
PW-4	8/5/2013	ND (0.030)	10	11	ND (0.040)	1.6	**0.28**	**4.0**
PW-4	2/13/2014	ND (0.030)	6.7	8.0	ND (0.040)	0.81	**0.24**	**3.6**
PW-4	8/25/2014	0.10 J	19	9.8	ND (0.040)	1.3	**0.20**	**3.2**
PW-4	2/23/2015	ND (0.030)	21	10	ND (0.040)	1.5	**0.22**	**2.9**
PW-4	7/20/2015	ND (0.030)	13	9.4	ND (0.040)	1.3	**0.22**	**3.3**
PW-4	1/19/2016	ND (0.030)	9.7	7.8	ND (0.040)	1.3	**0.19**	**3.0**
PW-4	8/1/2016	ND (0.10)	7.9	NA	NA	1.6	**0.20**	**2.5**
PW-4	1/30/2017	ND (0.10)	7.0	NA	NA	1.5	**0.20**	**2.2**
PW-4	9/11/2017	ND (0.20)	6.4	NA	NA	1.7	**0.16**	**2.8**
PW-4	2/5/2018	ND (0.10)	5.2	NA	NA	1.5	**0.16** J	**3.6**
PW-4	9/10/2018	ND (0.10)	4.51	NA	NA	1.54	**0.12** J	**2.1**
PW-4	2/4/2019 & 2/20/2019	ND (0.10)	3.49	NA	NA	1.13	**0.090** J	**3.31**
PW-4	9/11/2019	ND (0.10)	0.15 J	NA	NA	0.060 J	**0.10** J	**1.7** J Q
PW-4	2/4/2020	ND (0.10)	0.80	NA	NA	0.39	**0.10** J	**3.4**
PW-4	9/11/2020	ND (0.15) UJ	4.1 J	NA	NA	1.3 J	**0.21** J	**1.9**
PW-4	2/8/2021	ND (0.15) M	0.34	NA	NA	0.065 J M	**0.33**	**2.4**
PW-4	9/27/2021	ND (0.15)	3.4	NA	NA	1.2	**0.094**	**1.8**
PW-4	2/17/2022	ND (0.15)	2.6	NA	NA	1.1	**0.17**	**2.4**
PW-4	9/27/2022	ND (0.50)	ND (0.80)	NA	NA	ND (0.50)	**0.27** J	**3.2**
PW-4	2/6/2023	ND (0.50)	1.7	NA	NA	0.65 J	ND (0.50) UJ	**2.1**
PW-5	8/29/1993	ND (1.0)	130	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
PW-5	2/10/1995	ND (25)	**340**	ND (25)	NA	ND (25)	ND (25)	NA
PW-5	9/19/1995	ND (100)	**2100**	57 J	NA	ND (100)	ND (100)	NA
PW-5	12/4/1995	ND (100)	**2400**	240	NA	**72** J	ND (100)	NA
PW-5	12/4/1995 (Dup)	ND (100)	**2400**	230	NA	**74** J	ND (100)	NA
PW-5	3/25/1996	ND (100)	**2700**	330	NA	**42** J	ND (100)	NA
PW-5	11/1/1996	ND (250)	**2800**	280	NA	**55** J	ND (250)	NA
PW-5	1/28/1997	ND (250)	**3300**	290	NA	ND (250)	ND (250)	NA
PW-5	5/1/1997	ND (100)	**2800**	330	ND (100)	**130**	ND (100)	NA
PW-5	7/21/1997	ND (100)	**3000**	280	ND (100)	**120**	ND (100)	NA
PW-5	10/14/1997	**10**	**3100**	230	14	**130**	**0.47**	NA
PW-5	10/27/1997	NA	NA	NA	NA	NA	NA	NA
PW-5	1/20/1998	**29**	**4300**	370	21	**210**	ND (1.0)	NA
PW-5	4/16/1998	**29**	**2600**	390	19	**130**	ND (1.0)	NA
PW-5	7/29/1998	**37**	**3300**	320	24	**190**	ND (1.0)	NA
PW-5	10/27/1998	**76**	**3500**	410	27	**260**	ND (1.0)	NA
PW-5	1/27/1999	**35**	**1900**	290	29	**180**	ND (1.0)	NA
PW-5	4/19/1999	**67**	**1700**	310	36	**190**	ND (10)	NA

Table C-1. OU 1 Area 6 Production Well Analytical Results (continued)

Sample Location	Sample Date	Trichloroethene	1,1,1-Trichloroethane	1,1-Dichloroethane	cis-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,4-Dioxane
		Concentrations in µg/L						
	Remedial Goal	**5.0**	**200**	**--**	**--**	**7.0**	**0.029**	**0.44**
PW-5	7/27/1999	**92**	**1800**	310	50	**230**	ND (0.20)	NA
PW-5	7/27/1999 (Dup)	**94**	**1800**	310	56	**230**	**1.3**	NA
PW-5	11/29/1999	**160**	**2500**	300	190	**370**	ND (1.0)	NA
PW-5	1/24/2000	**120**	**2400**	320	59	**350**	ND (0.20)	NA
PW-5	4/26/2000	**130**	**1300**	310	52	**280**	ND (0.20)	NA
PW-5	7/26/2000	**160** D	**1700** D	440 D	68 D	**450** D	**0.73**	NA
PW-5	10/24/2000	**120**	**1200**	310	53 J	**260**	**0.78** J	NA
PW-5	1/9/2001	**140** D	**1300** D	300 D	51 J	**260** D	**0.61** J	NA
PW-5	4/10/2001	**140** D	**1100** D	290 D	54 D	**230** D	ND (5.0)	NA
PW-5	7/10/2001	**130** D	**1000** D	270 D	49 D	**240** D	**0.54** J	NA
PW-5	11/9/2001	**150** D	**1100** D	240 D	49	**240** D	**0.57**	NA
PW-5	1/16/2002	**150** D	**970** D	250 D	43 D	**240** D	ND (10)	NA
PW-5	4/19/2002	ND (4.0)	**1100** D	240 D	47 D	**250** D	ND (4)	NA
PW-5	7/10/2002	**150** D	**1100** D	190 D	45 D	**190** D	ND (1.0)	NA
PW-5	11/22/2002	**170**	**940**	220	38	**230**	**0.43** J	NA
PW-5	4/24/2003	**200** J	**1100** J	190 J	40 J	**290** J	**2.1** J	NA
PW-5	6/26/2003	**180**	**990**	180	31	**210** J	**0.50**	NA
PW-5	11/13/2003	**130**	**850**	130	26	**180**	**3.1**	NA
PW-5	1/23/2004	**160**	**960**	130	25 J	**300**	**3.5** J	NA
PW-5	4/9/2004	**160**	**960**	140	22	**170**	**0.34** J	NA
PW-5	7/20/2004	**130**	**790**	98	19	**160**	**0.76**	NA
PW-5	11/9/2004	**130**	**730**	110	17	**150**	**2.2**	NA
PW-5	1/26/2005	**150**	**1000**	120	21	**200**	**2.5**	NA
PW-5	4/29/2005	**140**	**880**	130	19	**170**	**0.83**	NA
PW-5	8/1/2005	**130**	**820**	120	17	**150**	**0.30** J	NA
PW-5	11/1/2005	**150** D	**1100** D	110 D	18	**190** D	**1.6**	NA
PW-5	2/7/2006	**140** D	**670** D	150 D	16	**150** D	**0.34** J	**5.3**
PW-5	5/11/2006	**110** D	**530** D	82 D	13	**110** D	**0.27** J	**5.4**
PW-5	8/17/2006	**220** D	**1300** D	150 D	23	**250** D	**0.49** J	**9.1**
PW-5	11/6/2006	**230** D	**1100** D	160 D	25 D	**280** D	ND (0.61)	**11**
PW-5	2/27/2007	**130** D	**580** D	110 D	13	**150** D	**0.50**	**5.3**
PW-5	5/16/2007	**120** D	**560** D	92 D	12	**140** D	**0.27** J	**4.7**
PW-5	8/17/2007	**130** D	**540** D	99 D	12	**140** D	**0.25** J	**4.8**
PW-5	4/27/2009	**110** D	**350** D	90 D	9.9	**150** D	**0.24** J	NA
PW-5	8/20/2009	**100** D	**290** D	78 D	8.1	**130** D	**0.24** J	**4.4**
PW-5	8/6/2010	**89** D	200 D	70	6.9	**96** D	**0.17**	**2.6**
PW-5	2/11/2011	**72** D	150 D	52	5.6	**84** D	**0.13**	**3.3**
PW-5	8/2/2011	**76**	150 D	56	4.9	**76** D	**0.11**	**3.3**
PW-5	2/1/2012	**70** D	130 D	56	4.8	**83** D	**0.11**	**5.0**
PW-5	8/6/2012	**69** D	150 D	60	5.3	**91** D	**0.12**	**5.0**
PW-5	2/4/2013	**68**	140 D	48	4.3	**72** D	**0.11**	**3.4**
PW-5	8/5/2013	**72**	120 D	48	4.2	**74** D	**0.11**	**3.9**
PW-5	2/13/2014	**70**	120 D	44	4.0	**79** D	**0.10**	**4.2**
PW-5	8/25/2014	**66**	130 D	41	3.8	**78**	**0.070** J	**4.2**
PW-5	2/23/2015	**66**	130 D	46	3.8	**77**	**0.10**	**3.7**
PW-5	7/20/2015	**58**	110 D	40	3.2	**61**	**0.090** J	**4.1**
PW-5	1/19/2016	**51**	81 D	33	2.8	**51**	**0.090** J	**4.3**
PW-5	8/1/2016	**46**	66 D	NA	NA	**51**	ND (0.075)	**4.5**
PW-5	1/30/2017	**47**	66 D	NA	NA	**45**	**0.080** J	**3.4**
PW-5	9/11/2017	**52**	89 D	NA	NA	**55**	**0.080** J	**4.4**
PW-5	2/5/2018	**40**	75	NA	NA	**40**	**0.070** J	**5.7**
PW-5	9/10/2018	**36.8**	70.9	NA	NA	**35.2**	**0.060** J	**3.5**
PW-5	2/4/2019 & 2/20/2019	**41.2**	74.7	NA	NA	**39.6**	ND (0.10)	**4.97**
PW-5	9/11/2019	**56.9**	95.6	NA	NA	**79.7**	**0.17** J	**3.2** J Q
PW-5	2/19/2020	**34.5**	95.9	NA	NA	**48.7**	ND (0.10)	**4.6**
PW-5	9/30/2020	0.11 J	1.3	NA	NA	0.32	**0.15**	**2.0**
PW-5	2/18/2021	2.5	15	NA	NA	**19**	**0.19**	**2.5**
PW-5	9/27/2021	**50**	80	NA	NA	**47**	ND (0.15)	**2.9**
PW-5	2/17/2022	**41**	100	NA	NA	**71**	ND (0.15)	**3.5**
PW-5	9/27/2022	**71**	59	NA	NA	**74**	**0.30** J	**5.0**
PW-5	2/6/2023	**41**	86	NA	NA	**51**	ND (0.50) UJ	**3.1**
PW-6	8/30/1993	ND (1.0)	1.1	ND (1.0)	NA	ND (1.0)	ND (1.0)	ND (10)
PW-6	2/10/1995	ND (1.0)	0.78 J	ND (1.0)	NA	ND (1.0)	ND (1.0)	ND (10)
PW-6	9/19/1995	ND (2.0)	ND (2.0)	ND (2.0)	NA	ND (2.0)	ND (2.0)	ND (10)
PW-6	12/4/1995	ND (5.0)	1.9 J	ND (5.0)	NA	ND (5.0)	ND (5.0)	ND (10)
PW-6	3/25/1996	ND (1.0)	1.3	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
PW-6	11/1/1996	ND (2.0)	1.4 J	ND (2.0)	NA	ND (2.0)	ND (2.0)	ND (10)
PW-6	1/28/1997	ND (2.0)	1.5 J	ND (2.0)	NA	ND (2.0)	ND (2.0)	NA

Table C-1. OU 1 Area 6 Production Well Analytical Results (continued)

Sample Location	Sample Date	Trichloroethene	1,1,1-Trichloroethane	1,1-Dichloroethane	cis-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,4-Dioxane
		Concentrations in µg/L						
	Remedial Goal	**5.0**	**200**	**--**	**--**	**7.0**	**0.029**	**0.44**
PW-6	5/1/1997	ND (1.0)	0.52 J	ND (1.0)	ND (1.0)	ND (1.0)	**0.30** J	NA
PW-6	7/21/1997	ND (1.0)	1.3	ND (1.0)	ND (1.0)	ND (1.0)	**0.43** J	NA
PW-6	10/27/1997	ND (0.20)	2.0	ND (0.20)	ND (0.20)	ND (0.20)	**0.50**	**16**
PW-6	1/20/1998	0.70	7.3	0.32	ND (0.20)	0.37	ND (1.0)	NA
PW-6	4/16/1998	ND (0.20)	ND (0.20)	20	ND (0.20)	ND (0.20)	ND (0.20)	NA
PW-6	7/29/1998	ND (0.20)	2.4	0.38	ND (0.20)	ND (0.20)	ND (1.0)	NA
PW-6	10/27/1998	ND (0.20)	2.0	0.38	ND (0.20)	ND (0.20)	ND (1.0)	ND (10)
PW-6	1/27/1999	ND (0.20)	ND (0.50)	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
PW-6	4/19/1999	ND (0.20)	2.2	0.65	ND (0.20)	ND (0.20)	ND (1.0)	NA
PW-6	7/27/1999	ND (0.20)	2.2	0.75	ND (0.20)	ND (0.20)	**1.6**	NA
PW-6	11/29/1999	ND (0.20)	1.6	0.56	ND (0.20)	ND (0.20)	**1.1**	ND (10)
PW-6	1/24/2000	ND (0.20)	1.7	0.79 J	ND (0.20)	ND (0.24)	**0.62** J	NA
PW-6	4/26/2000	ND (0.20)	1.4	1.2	ND (0.20)	ND (0.30)	**0.80**	NA
PW-6	7/26/2000	ND (0.50)	2.6	1.6	ND (0.50)	ND (0.50)	**0.85**	ND (4.0)
PW-6	10/24/2000	ND (0.20)	2.1	1.8	ND (0.20)	ND (0.10)	**0.74**	NA
PW-6	1/9/2001	ND (0.20)	2.2	1.8	ND (0.20)	ND (0.20)	**0.70**	NA
PW-6	4/10/2001	ND (0.50)	ND (2.3)	2.6	ND (0.50)	ND (0.50)	**0.90**	NA
PW-6	7/10/2001	ND (0.12)	2.1	2.9	ND (0.12)	ND (0.12)	**0.93**	NA
PW-6	11/9/2001	ND (0.20)	2.4	3.5	ND (0.10)	ND (0.20)	**0.79**	NA
PW-6	1/16/2002	ND (0.20)	2.0	2.8	ND (0.10)	ND (0.20)	**0.72**	NA
PW-6	4/19/2002	ND (0.20)	1.8	2.4	ND (0.10)	ND (0.20)	**0.55**	NA
PW-6	7/10/2002	ND (0.20)	2.0	2.3	ND (0.10)	ND (0.20)	**0.65**	NA
PW-6	11/22/2002	ND (0.20)	2.1	2.3	ND (0.10)	ND (0.20)	**0.48** J	NA
PW-6	1/17/2003	ND (0.055)	2.9	2.3	ND (0.067)	0.20 J	**0.64** J	NA
PW-6	4/24/2003	ND (0.081)	2.4	1.8	ND (0.067)	0.17 J	**0.58**	NA
PW-6	6/26/2003	ND (0.50)	ND (3.6)	2.7	ND (0.067)	ND (0.50)	**0.51**	NA
PW-6	11/13/2003	ND (0.81)	3.0	2.4	ND (0.067)	0.27 J	**0.86**	NA
PW-6	1/23/2004	ND (0.081)	3.0	2.4	0.080 J	0.22 J	**0.76**	NA
PW-6	4/9/2004	ND (0.081)	2.5	3.0	0.12 J	0.24 J	**0.53**	NA
PW-6	7/20/2004	ND (0.081)	2.3	2.7	0.10 J	0.18 J	**0.54**	NA
PW-6	11/9/2004	ND (0.081)	2.0	2.3	0.070 J	ND (0.16)	**0.45** J	NA
PW-6	1/26/2005	ND (0.081)	1.7	2.2	0.080 J	ND (0.16)	**0.47** J	NA
PW-6	4/29/2005	ND (0.21)	2.1	2.4	ND (0.13)	ND (0.24)	**0.43** J	NA
PW-6	8/1/2005	ND (0.21)	1.9	2.5	0.14 J	ND (0.24)	**0.41** J	NA
PW-6	10/28/2005	ND (0.21)	1.9	2.0	0.19 J	ND (0.24)	**0.38** J	NA
PW-6	2/6/2006	ND (0.21)	1.4	2.4	0.22 J	ND (0.24)	**0.36** J	**6.5**
PW-6	5/11/2006	ND (0.21)	2.2	2.1	0.20 J	0.26 J	**0.40** J	**6.4**
PW-6	8/17/2006	ND (0.21)	1.4	2.3	ND (0.13)	ND (0.24)	**0.38** J	**9.8**
PW-6	11/6/2006	ND (0.21)	0.98	2.0	ND (0.13)	ND (0.24)	**0.35** J	**11**
PW-6	2/27/2007	ND (0.21)	1.4	1.9	0.24 J	ND (0.24)	**0.39** J	**6.7**
PW-6	5/16/2007	ND (0.21)	1.7	2.0	0.24 J	0.12 J	**0.38** J	**6.5**
PW-6	8/17/2007	ND (0.21)	1.7	2.2	0.25 J	0.12 J	**0.37** J	**6.8**
PW-6	2/25/2008	NA	NA	NA	NA	NA	NA	**4.0**
PW-6	8/29/2008	ND (0.070)	1.3	1.2	0.11 J	ND (0.060)	**0.22** J	**4.0**
PW-6	4/27/2009	NA	NA	NA	NA	NA	NA	**4.9**
PW-6	8/20/2009	ND (0.50)	14	1.9	0.31 J	0.37 J	**0.43** J	**5.7**
PW-6	8/6/2010	0.11 J	2.4	8.6	0.21 J	0.35 J	**0.45**	**3.2**
PW-6	2/11/2011	0.090 J	3.9	1.4	0.43 J	0.27 J	**0.25**	**3.7**
PW-6	8/2/2011	0.070 J	3.4	1.4	0.39 J	0.29 J	**0.21**	**2.8**
PW-6	2/1/2012	ND (0.030)	3.4	1.3	0.38 J	0.31 J	**0.22**	**4.2**
PW-6	8/6/2012	ND (0.030)	4.3	1.5	0.39 J	0.46 J	**0.24**	**3.9**
PW-6	2/4/2013	ND (0.030)	4.8	1.4	0.49 J	0.66	**0.22**	**2.9**
PW-6	8/5/2013	0.060 J	4.6	1.5	0.51	0.97	**0.23**	**3.1** J
PW-6	2/13/2014	ND (0.030)	1.4	1.2	0.35 J	0.47 J	**0.19**	**3.0**
PW-6	8/25/2014	0.25 J	2.4	1.6	0.56	0.95	**0.20**	**2.9**
PW-6	2/23/2015	ND (0.030)	1.8	1.4	0.44 J	0.63	**0.21**	**3.0**
PW-6	7/20/2015	0.060 J	1.5	1.2	0.35 J	0.61	**0.19**	**3.2**
PW-6	1/19/2016	ND (0.030)	1.2	1.0	0.34 J	0.46 J	**0.18**	**3.0**
PW-6	8/1/2016	0.15 J	1.2	NA	NA	0.52	**0.17**	**2.3**
PW-6	1/30/2017	ND (0.10)	1.2	NA	NA	0.52	**0.16**	**1.9**
PW-6	9/11/2017	ND (0.20)	1.3	NA	NA	0.54	**0.14**	**2.1**
PW-6	2/5/2018	ND (0.10)	1.2	NA	NA	0.48	**0.14** J	**2.8**
PW-6	9/10/2018	0.050 J	1.08	NA	NA	0.47	**0.13** J	**1.8**
PW-6	2/4/2019 & 2/20/2019	ND (0.10)	0.26	NA	NA	ND (0.10)	**0.28**	**1.86**
PW-6	9/11/2019	ND (0.10)	0.35	NA	NA	ND (0.10)	**0.11** J	**1.3** Q
PW-6	2/19/2020	ND (0.10)	0.09 J	NA	NA	ND (0.10)	**0.12** J	**4.0**
PW-6	9/30/2020	ND (0.15)	1.1	NA	NA	0.13 JM	**0.11**	**1.7**
PW-6	2/8/2021	ND (0.15) M	0.15 JM	NA	NA	0.13 JM	**0.31**	**3.6**

Table C-1. OU 1 Area 6 Production Well Analytical Results (continued)

Sample Location	Sample Date	Trichloroethene	1,1,1-Trichloroethane	1,1-Dichloroethane	cis-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,4-Dioxane
		Concentrations in µg/L						
	Remedial Goal	**5.0**	**200**	**--**	**--**	**7.0**	**0.029**	**0.44**
PW-6	9/21/2021	NA	NA	NA	NA	NA	NA	ND (0.046)
PW-6	9/27/2021	ND (0.15)	9.4	NA	NA	0.38	**0.11**	**1.7**
PW-6	9/27/2022	ND (0.50)	0.45 J	NA	NA	ND (0.50)	ND (0.50)	**1.0**
PW-6	2/6/2023	ND (0.50)	0.74 J	NA	NA	ND (0.50)	ND (0.50) UJ	**1.5**
PW-7	8/27/1993	ND (1.0)	3.0	ND (10)	NA	ND (1.0)	**4.0**	ND (10)
PW-7	2/10/1995	ND (1.0)	3.7	0.52 J	NA	ND (1.0)	**3.5**	ND (10)
PW-7	9/19/1995	ND (5.0)	ND (5.0)	1.9 J	NA	ND (5.0)	**4.2** J	ND (10)
PW-7	12/4/1995	ND (5.0)	3.8 J	5.4	NA	ND (5.0)	ND (5.0)	ND (10)
PW-7	3/25/1996	ND (2.0)	3.8	8.0	NA	ND (2.0)	**8.8**	NA
PW-7	11/1/1996	ND (5.0)	2.3 J	10	NA	ND (5.0)	**1.7** J	ND (10)
PW-7	5/1/1997	ND (5.0)	1.1 J	15	ND (5.0)	ND (5.0)	**2.0** J	NA
PW-7	7/21/1997	ND (5.0)	1.2 J	12	ND (5.0)	ND (5.0)	**1.9** J	NA
PW-7	10/27/1997	ND (0.20)	2.8	18	0.97	ND (0.20)	**1.5**	ND (10)
PW-7	1/20/1998	1.6	8.8	20	1.9	ND (0.20)	**1.0**	NA
PW-7	4/16/1998	0.21	2.5	23	1.7	ND (0.20)	**1.5**	NA
PW-7	4/16/1998 (Dup)	ND (0.20)	ND (0.50)	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
PW-7	7/29/1998	ND (0.20)	1.7	20	1.0	ND (0.20)	ND (1.0)	NA
PW-7	10/27/1998	ND (0.20)	1.8	19	1.2	ND (0.20)	ND (1.0)	ND (10)
PW-7	1/27/1999	ND (0.20)	1.4	14	ND (0.20)	ND (0.20)	ND (1.0)	NA
PW-7	4/19/1999	ND (0.20)	1.4	16	1.2	ND (0.20)	**1.6**	NA
PW-7	7/27/1999	ND (0.20)	1.0	13	1.0	ND (0.20)	ND (0.20)	NA
PW-7	11/29/1999	ND (0.20)	1.2	14	3.6	ND (0.20)	ND (1.0)	ND (10)
PW-7	1/24/2000	ND (0.20)	1.2	13	1.0	ND (0.24)	**0.48** J	NA
PW-7	4/26/2000	ND (0.20)	0.6	14	1.0	ND (0.30)	**1.4**	NA
PW-7	7/26/2000	ND (0.50)	1.5	15	1.1	ND (0.50)	**0.77**	ND (4.0)
PW-7	10/24/2000	ND (0.20)	1.2	16	1.1	ND (0.10)	**0.70**	NA
PW-7	1/9/2001	ND (0.20)	1.3	16	1.1	ND (0.20)	**0.70**	NA
PW-7	4/10/2001	ND (0.50)	ND (1.1)	17	1.3	ND (0.50)	**0.72**	NA
PW-7	11/9/2001	ND (0.20)	1.2	18	1.2	ND (0.20)	**0.53**	NA
PW-7	1/16/2002	ND (0.20)	1.1	15	1.1	ND (0.20)	**0.57**	NA
PW-7	4/19/2002	ND (0.20)	1.0	15	0.96	ND (0.20)	**0.58**	NA
PW-7	7/10/2002	ND (0.20)	1.0	13	0.97	ND (0.20)	**0.61**	NA
PW-7	11/22/2002	ND (0.20)	0.86	12	0.79	ND (0.20)	**0.49** J	NA
PW-7	1/17/2003	ND (0.055)	1.0	12	0.87	0.23 J	**0.76**	NA
PW-7	4/24/2003	ND (0.081)	0.93	11	0.77	0.16 J	**0.78**	NA
PW-7	6/26/2003	ND (0.081)	ND (0.76)	11	0.71	ND (0.16)	**0.51**	NA
PW-7	11/13/2003	ND (0.081)	0.83	11	0.75	ND (0.16)	**0.83**	NA
PW-7	1/23/2004	ND (0.081)	0.87	10	0.76	0.19 J	**0.82**	NA
PW-7	4/9/2004	ND (0.081)	0.61	11	0.74	0.19 J	**0.47** J	NA
PW-7	7/20/2004	ND (0.081)	0.70	11	0.63	ND (0.16)	**0.61**	NA
PW-7	11/9/2004	ND (0.081)	0.69	7.6	0.52	ND (0.16)	**0.90**	NA
PW-7	1/26/2005	ND (0.081)	0.78	8.4	0.67	0.16 J	**0.78**	NA
PW-7	4/29/2005	ND (0.21)	0.86	9.3	0.61	ND (0.24)	**0.55**	NA
PW-7	8/1/2005	ND (0.21)	0.57	8.9	0.55	ND (0.24)	**0.51**	NA
PW-7	10/28/2005	ND (0.21)	0.57	6.6	0.58	ND (0.24)	**0.54**	NA
PW-7	2/7/2006	ND (0.21)	0.58	9.8	0.53	ND (0.24)	**0.56**	**4.4**
PW-7	5/11/2006	ND (0.21)	0.67	8.2	0.53	ND (0.24)	**0.59**	**5.4**
PW-7	8/17/2006	ND (0.21)	0.69	8.3	0.56	ND (0.24)	**0.69**	**5.4**
PW-7	11/6/2006	ND (0.21)	0.63	7.4	0.65	ND (0.24)	**0.63**	**5.3**
PW-7	2/27/2007	ND (0.21)	0.74	7.8	0.56	ND (0.24)	**0.63**	**3.9**
PW-7	5/14/2007	ND (0.21)	0.79	8.0	0.47 J	ND (0.24)	**0.71**	**4.1**
PW-7	8/17/2007	ND (0.21)	0.76	8.0	0.47 J	0.070 J	**0.67**	**3.9**
PW-7	8/29/2008	ND (0.070)	0.65	6.1	0.52	ND (0.060)	**0.66**	**3.1**
PW-7	8/20/2009	ND (0.030)	0.73	7.5	0.49 J	ND (0.50)	**0.83**	**3.9**
PW-7	8/6/2010	ND (0.030)	0.52	7.1	0.51	0.080 J	**0.54**	**2.6**
PW-7	2/11/2011	ND (0.030)	0.47 J	5.9	0.48 J	0.080 J	**0.54**	**4.0**
PW-7	8/2/2011	ND (0.030)	0.43 J	5.9	0.43 J	0.050 J	**0.42**	**2.4**
PW-7	2/1/2012	ND (0.030)	0.38 J	5.9	0.46 J	0.070 J	**0.46**	**3.3**
PW-7	8/6/2012	ND (0.030)	0.45 J	6.7	0.53	0.080 J	**0.50**	**3.1**
PW-7	2/4/2013	ND (0.030)	0.43 J	5.7	0.48 J	0.070 J	**0.45**	**2.5**
PW-7	8/5/2013	ND (0.030)	0.44 J	6.2	0.56	0.090 J	**0.51**	**2.6**
PW-7	2/13/2014	ND (0.030)	0.32 J	4.9	0.38 J	0.070 J	**0.39**	**2.0**
PW-7	8/25/2014	0.11 J	0.49 J	5.7	0.45 J	0.100 J	**0.41**	**2.7**
PW-7	2/23/2015	0.030 J	0.43 J	5.6	0.46 J	0.070 J	**0.45**	**2.0**
PW-7	7/20/2015	ND (0.030)	0.31 J	4.9	0.42 J	0.050 J	**0.42**	**2.3**
PW-7	1/19/2016	0.030 J	0.30 J	4.3	0.40 J	0.060 J	**0.38**	**2.0**
PW-7	8/1/2016	ND (0.10)	0.23 J	NA	NA	ND (0.080)	**0.33**	**1.7**
PW-7	1/30/2017	ND (0.10)	0.24 J	NA	NA	ND (0.080)	**0.37**	**1.7**

Table C-1. OU 1 Area 6 Production Well Analytical Results (continued)

Sample Location	Sample Date	Trichloroethene	1,1,1-Trichloroethane	1,1-Dichloroethane	cis-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,4-Dioxane
		Concentrations in µg/L						
	Remedial Goal	**5.0**	**200**	**--**	**--**	**7.0**	**0.029**	**0.44**
PW-7	9/11/2017	ND (0.20)	0.29 J	NA	NA	ND (0.20)	**0.35**	**2.0**
PW-7	2/5/2018	ND (0.10)	0.23	NA	NA	ND (0.10)	**0.31**	**2.5**
PW-7	9/10/2018	ND (0.10)	0.25	NA	NA	0.060 J	**0.28**	**1.9**
PW-7	2/4/2019 & 2/20/2019	ND (0.10)	0.26	NA	NA	ND (0.10)	**0.28**	**1.86**
PW-7	9/11/2019	ND (0.10)	ND (0.10)	NA	NA	ND (0.10)	ND (0.10)	**1.6** Q
PW-7	2/4/2020	ND (0.10)	0.14 J	NA	NA	ND (0.10)	ND (0.10)	**1.9**
PW-7	9/30/2020	ND (0.15)	0.33	NA	NA	ND (0.070)	**0.27**	**1.6**
PW-7	2/8/2021	0.067 J	0.34	NA	NA	0.065 J	**0.33**	**1.6** M
PW-7	9/27/2021	ND (0.15)	0.32	NA	NA	ND (0.070)	**0.30**	**1.2**
PW-7	2/17/2022	ND (0.15)	0.24	NA	NA	ND (0.070)	**0.28**	**1.6**
PW-7	9/27/2022	ND (0.50)	ND (0.80)	NA	NA	ND (0.50)	ND (0.50)	**2.3**
PW-7	2/6/2023	ND (0.50)	ND (0.80)	NA	NA	ND (0.50)	ND (0.50) UJ	**1.6**
PW-8	9/18/1996	ND (2.0)	8.1	ND (2.0)	NA	ND (2.0)	**2.3**	NA
PW-8	11/1/1996	ND (5.0)	3.9 J	ND (5.0)	NA	ND (5.0)	ND (5.0)	ND (10)
PW-8	1/29/1997	ND (1.0)	2.4	ND (1.0)	NA	ND (1.0)	**0.88** J	NA
PW-8	5/3/1997	ND (2.0)	5.2	ND (2.0)	ND (2.0)	ND (2.0)	**2.7**	NA
PW-8	7/21/1997	ND (2.0)	5.0	ND (2.0)	ND (2.0)	ND (2.0)	**2.7**	NA
PW-8	10/27/1997	0.26	6.9	0.60	ND (0.20)	ND (0.20)	**2.0**	ND (10)
PW-8	1/20/1998	ND (0.20)	7.3	0.93	ND (0.20)	0.21	**1.9**	NA
PW-8	4/16/1998	ND (0.20)	ND (0.50)	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
PW-8	7/29/1998	ND (0.20)	9.6	2.0	ND (0.20)	ND (0.20)	**1.8**	NA
PW-8	10/27/1998	ND (0.20)	4.9	2.8	ND (0.20)	ND (0.20)	ND (1.0)	ND (10)
PW-8	1/27/1999	ND (0.20)	ND (0.20)	2.5	ND (0.20)	ND (0.20)	ND (1.0)	NA
PW-8	4/19/1999	ND (0.20)	2.5	3.3	ND (0.20)	ND (0.20)	**1.9**	NA
PW-8	7/27/1999	ND (0.20)	1.9	3.3	ND (0.20)	ND (0.20)	**2.7**	NA
PW-8	11/29/1999	ND (0.20)	2.9	1.2	ND (0.20)	ND (0.20)	ND (1.0)	ND (10)
PW-8	1/24/2000	ND (0.20)	3.3	0.71 J	ND (0.20)	ND (0.24)	**0.56** J	NA
PW-8	4/26/2000	ND (0.20)	1.2	5.7	ND (0.20)	ND (0.30)	**1.9**	NA
PW-8	7/26/2000	ND (0.50)	2.2	6.7	ND (0.50)	0.20 J	**1.6**	ND (4.0)
PW-8	10/24/2000	ND (0.20)	1.7	6.8	ND (0.20)	0.30 J	**1.3**	NA
PW-8	1/9/2001	ND (0.20)	1.4	5.5	ND (0.20)	ND (0.20)	**1.2**	NA
PW-8	4/10/2001	ND (0.50)	ND (1.4)	7.7	ND (0.50)	ND (0.50)	**1.5**	NA
PW-8	7/10/2001	ND (0.12)	1.3	7.1	ND (0.12)	0.19 J	**1.1**	NA
PW-8	11/9/2001	ND (0.20)	1.6	7.9	ND (0.10)	ND (0.20)	**1.4**	NA
PW-8	1/16/2002	ND (0.20)	1.1	6.6	ND (0.10)	ND (0.20)	**1.2**	NA
PW-8	4/19/2002	ND (0.20)	1.0	6.4	ND (0.10)	ND (0.20)	**1.0**	NA
PW-8	7/10/2002	ND (0.20)	1.0	6.6	ND (0.10)	ND (0.20)	**1.1**	NA
PW-8	11/22/2002	ND (0.20)	0.94	6.0	ND (0.10)	ND (0.20)	**0.87**	NA
PW-8	1/17/2003	ND (0.055)	1.2	6.6	ND (0.067)	0.31 J	**1.3** J	NA
PW-8	4/24/2003	ND (0.081)	0.89	5.3	ND (0.067)	0.19 J	**1.1**	NA
PW-8	6/26/2003	ND (0.081)	ND (0.94)	6.3	ND (0.067)	ND (0.50)	**0.97**	NA
PW-8	11/13/2003	ND (0.081)	0.90	4.9	ND (0.067)	0.21 J	**1.4**	NA
PW-8	1/23/2004	ND (0.081)	0.99	5.2	ND (0.067)	0.19 J	**1.2**	NA
PW-8	4/9/2004	ND (0.081)	0.79	5.7	ND (0.067)	0.17 J	**0.88**	NA
PW-8	7/20/2004	ND (0.081)	0.69	4.9	ND (0.067)	ND (0.16)	**0.98**	NA
PW-8	11/9/2004	ND (0.081)	0.70	4.5	ND (0.067)	ND (0.16)	**0.81**	NA
PW-8	1/26/2005	ND (0.081)	0.77	4.9	ND (0.069)	0.18 J	**0.73**	NA
PW-8	4/29/2005	ND (0.21)	0.83	5.1	ND (0.13)	ND (0.24)	**0.70**	NA
PW-8	8/1/2005	ND (0.21)	0.54	4.7	ND (0.13)	ND (0.24)	**0.73**	NA
PW-8	10/28/2005	ND (0.21)	0.65	3.9	ND (0.13)	ND (0.24)	**0.62**	NA
PW-8	2/7/2006	ND (0.21)	0.47 J	5.3	ND (0.13)	ND (0.24)	**0.80**	**5.9**
PW-8	5/11/2006	ND (0.21)	0.56	4.5	ND (0.13)	ND (0.24)	**0.69**	**5.3**
PW-8	8/17/2006	ND (0.21)	0.46 J	5.4	ND (0.13)	ND (0.24)	**0.78**	**4.2**
PW-8	11/6/2006	ND (0.21)	0.59	4.9	ND (0.13)	ND (0.24)	**0.79**	**4.7**
PW-8	2/27/2007	ND (0.21)	0.56	4.4	ND (0.13)	ND (0.24)	**0.64**	**4.1**
PW-8	5/14/2007	ND (0.21)	0.51	4.2	ND (0.13)	0.080 J	**0.71**	**3.5**
PW-8	8/17/2007	ND (0.21)	0.20 J	5.1	0.060 J	0.070 J	**0.84**	**2.2**
PW-8	8/29/2008	ND (0.070)	0.46 J	4.1	NA	ND (0.060)	**0.57**	**2.2**
PW-8	8/20/2009	ND (0.030)	ND (0.50)	4.4	0.050 J	ND (0.50)	**0.70**	**4.1**
PW-8	8/9/2010	0.080 J	0.39 J	6.2	0.11 J	0.19 J	**0.53**	**5.1**
PW-8	2/15/2011	ND (0.030)	0.18 J	4.7	0.10 J	0.070 J	**0.52**	**5.8**
PW-8	8/2/2011	ND (0.030)	0.29 J	3.7	0.050 J	0.070 J	**0.37**	**4.4**
PW-8	2/1/2012	ND (0.030)	0.30 J	3.6	0.060 J	0.070 J	**0.44**	**6.3**
PW-8	8/6/2012	ND (0.030)	0.30 J	4.5	0.060 J	0.080 J	**0.49**	**6.0**
PW-8	2/4/2013	ND (0.030)	0.28 J	4.2	0.060 J	0.090 J	**0.47**	**4.1**
PW-8	8/5/2013	ND (0.030)	0.29 J	4.2	0.060 J	0.090 J	**0.47**	**4.4**
PW-8	2/13/2014	ND (0.030)	0.23 J	3.5	0.080 J	0.070 J	**0.38**	**3.6**
PW-8	8/25/2014	0.070 J	0.32 J	3.8	0.070 J	0.090 J	**0.37**	**4.8**

Table C-1. OU 1 Area 6 Production Well Analytical Results (continued)

Sample Location	Sample Date	Trichloroethene	1,1,1-Trichloroethane	1,1-Dichloroethane	cis-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,4-Dioxane
		Concentrations in µg/L						
	Remedial Goal	**5.0**	**200**	**--**	**--**	**7.0**	**0.029**	**0.44**
PW-8	2/23/2015	ND (0.030)	0.27 J	3.9	0.070 J	0.070 J	**0.41**	**3.7**
PW-8	7/20/2015	ND (0.030)	0.21 J	3.5	0.060 J	ND (0.050)	**0.38**	**4.2**
PW-8	1/19/2016	ND (0.030)	0.20 J	3.1	0.060 J	0.050 J	**0.34** J	**3.8**
PW-8	8/1/2016	ND (0.10)	0.16 J	NA	NA	ND (0.080)	**0.31**	**3.8**
PW-8	1/30/2017	ND (0.10)	0.19 J	NA	NA	ND (0.080)	**0.34**	**3.4**
PW-8	9/11/2017	ND (0.20)	0.19 J	NA	NA	ND (0.20)	**0.35**	**3.7**
PW-8	2/5/2018	ND (0.10)	0.15 J	NA	NA	ND (0.10)	**0.27**	**5.1**
PW-8	9/10/2018	ND (0.10)	0.16 J	NA	NA	ND (0.10)	**0.25**	**2.9**
PW-8	2/4/2019 & 2/20/2019	ND (0.10)	0.15 J	NA	NA	ND (0.10)	**0.26**	**3.71**
PW-8	9/11/2019	ND (0.10)	0.070 J	NA	NA	ND (0.10)	**0.20** J	**2.6** Q
PW-8	2/19/2020	ND (0.10)	0.09 J	NA	NA	ND (0.10)	**0.12** J	**4.0**
PW-8	9/11/2020	ND (0.15) UJ	0.29 J	NA	NA	0.050 J	**0.34** J	**2.8**
PW-8	2/8/2021	ND (0.15)	0.19 J	NA	NA	0.051 J	**0.26**	**3.4**
PW-8	9/27/2021	ND (0.15)	0.23	NA	NA	ND (0.070)	**0.28**	**2.8**
PW-8	2/17/2022	ND (0.15)	0.20	NA	NA	ND (0.070)	**0.26**	**3.5**
PW-8	9/27/2022	ND (0.50)	ND (0.80)	NA	NA	ND (0.50)	ND (0.50)	**4.0**
PW-8	2/14/2023	ND (0.50)	ND (0.80)	NA	NA	ND (0.50)	ND (0.50)	**3.3** J
PW-9	9/19/1996	ND (2.0)	3.7	ND (2.0)	NA	ND (2.0)	ND (2.0)	NA
PW-9	11/1/1996	ND (2.5)	3.7	ND (2.5)	NA	ND (2.5)	ND (2.5)	ND (10)
PW-9	1/29/1997	ND (2.5)	2.6	ND (2.5)	NA	ND (2.5)	ND (2.5)	NA
PW-9	5/1/1997	ND (2.5)	4.3	ND (2.5)	ND (2.5)	ND (2.5)	**1.0** J	NA
PW-9	7/21/1997	ND (20)	4.3	ND (2.5)	ND (2.5)	ND (2.5)	**1.2** J	NA
PW-9	7/21/1997 (Dup)	ND (2.5)	3.9	ND (2.5)	ND (2.5)	ND (2.5)	**1.4** J	NA
PW-9	10/27/1997	ND (0.20)	6.3	ND (0.20)	ND (0.20)	ND (0.20)	**0.81**	ND (10)
PW-9	1/20/1998	ND (0.20)	6.6	ND (0.20)	ND (0.20)	0.20	ND (10)	NA
PW-9	7/29/1998	ND (0.20)	5.6	ND (0.20)	ND (0.20)	ND (0.20)	ND (10)	NA
PW-9	10/27/1998	ND (0.20)	4.5	ND (0.20)	ND (0.20)	ND (0.20)	ND (10)	ND (10)
PW-9	1/27/1999	ND (0.20)	4.0	ND (0.20)	ND (0.20)	ND (0.20)	ND (10)	NA
PW-9	4/19/1999	ND (0.20)	4.5	ND (0.20)	ND (0.20)	ND (0.20)	**1.5**	NA
PW-9	7/27/1999	ND (0.20)	3.5	ND (0.20)	ND (0.20)	ND (0.20)	**2.1**	NA
PW-9	11/29/1999	ND (0.20)	3.3	1.2	ND (0.20)	ND (0.20)	**2.1**	ND (10)
PW-9	1/24/2000	ND (0.20)	4.0	0.69 J	ND (0.20)	ND (0.24)	**0.82** J	NA
PW-9	4/26/2000	ND (0.20)	4.3	1.2	ND (0.20)	ND (0.30)	**2.4**	NA
PW-9	7/26/2000	ND (0.50)	4.3	1.5	ND (0.50)	0.20 J	**1.3**	NA
PW-9	7/26/2000 (Dup)	ND (0.50)	4.3	1.3	ND (0.50)	0.20 J	**1.2**	ND (4.0)
PW-9	10/24/2000	ND (0.20)	3.6	1.7	ND (0.20)	0.20 J	**1.5**	NA
PW-9	1/9/2001	ND (0.20)	4.1	1.7	ND (0.20)	0.20 J	**1.2**	NA
PW-9	4/10/2001	ND (0.50)	ND (3.1)	2.2	ND (0.50)	ND (0.50)	**1.3**	NA
PW-9	7/10/2001	ND (0.12)	2.6	2.4	ND (0.12)	0.22 J	**1.3**	NA
PW-9	11/9/2001	ND (0.20)	3.4	2.4	ND (0.10)	ND (0.20)	**1.0**	NA
PW-9	1/16/2002	ND (0.20)	2.8	2.3	ND (0.10)	0.24 J	**1.1**	NA
PW-9	4/19/2002	ND (0.20)	2.9	2.7	ND (0.10)	0.21 J	**1.1**	NA
PW-9	7/10/2002	ND (0.20)	2.4	2.7	ND (0.10)	0.21 J	**1.0**	NA
PW-9	11/22/2002	ND (0.20)	2.0	2.9	ND (0.10)	ND (0.20)	**0.83**	NA
PW-9	1/17/2003	ND (0.055)	2.5	3.3	ND (0.067)	0.34 J	**1.2** J	NA
PW-9	4/24/2003	ND (0.081)	2.4	3.1	ND (0.067)	0.29 J	**1.2**	NA
PW-9	6/26/2003	ND (0.081)	ND (2.1)	3.4	ND (0.067)	ND (0.50)	**0.94**	NA
PW-9	11/13/2003	ND (0.081)	2.0	3.6	ND (0.067)	0.27 J	**1.2**	NA
PW-9	4/9/2004	ND (0.081)	1.7	4.4	ND (0.067)	0.20 J	**0.85**	NA
PW-9	7/20/2004	ND (0.081)	1.3	4.1	ND (0.067)	0.20 J	**0.89**	NA
PW-9	11/9/2004	ND (0.081)	1.1	4.0	ND (0.067)	0.23 J	**0.79**	NA
PW-9	1/26/2005	ND (0.081)	1.2	4.3	ND (0.069)	0.23 J	**0.94**	NA
PW-9	4/29/2005	ND (0.21)	1.0	5.4	ND (0.13)	ND (0.24)	**0.91**	NA
PW-9	8/1/2005	ND (0.21)	1.0	5.6	ND (0.13)	ND (0.24)	**0.78**	NA
PW-9	11/1/2005	ND (0.21)	0.93	3.7	ND (0.13)	0.24 J	**0.84**	NA
PW-9	2/7/2006	ND (0.21)	0.68	6.8	ND (0.13)	ND (0.24)	**0.79**	**6.1**
PW-9	5/11/2006	ND (0.21)	0.84	5.5	ND (0.13)	ND (0.24)	**0.68**	**6.0**
PW-9	8/17/2006	ND (0.21)	0.72	7.3	ND (0.13)	ND (0.24)	**0.87**	**6.8**
PW-9	11/6/2006	ND (0.21)	0.63	6.5	ND (0.13)	ND (0.24)	**0.74**	**6.3**
PW-9	2/27/2007	ND (0.21)	0.79	5.8	ND (0.13)	ND (0.24)	**0.65**	**4.6**
PW-9	5/14/2007	ND (0.21)	0.76	6.1	ND (0.13)	0.11 J	**0.73**	**5.0**
PW-9	8/17/2007	ND (0.21)	0.77	6.5	ND (0.13)	0.12 J	**0.68**	**4.5**
PW-9	8/20/2009	ND (0.030)	0.63	6.8	ND (0.040)	ND (0.50)	**0.75**	**5.2**
PW-9	8/6/2010	ND (0.030)	0.54	6.9	ND (0.040)	0.16 J	**0.57**	**2.4**
PW-9	2/11/2011	ND (0.030)	0.44 J	5.4	ND (0.040)	0.15 J	**0.48**	**3.2**
PW-9	8/2/2011	ND (0.030)	0.37 J	4.8	ND (0.040)	0.12 J	**0.38**	**3.6**
PW-9	2/1/2012	ND (0.030)	0.37 J	5.0	ND (0.040)	0.13 J	**0.45**	**4.7**
PW-9	8/16/2012	0.060 J	0.24 J	8.5	0.15 J	0.21 J	**0.42**	**2.9**

Table C-1. OU 1 Area 6 Production Well Analytical Results (continued)

Sample Location	Sample Date	Trichloroethene	1,1,1-Trichloroethane	1,1-Dichloroethane	cis-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,4-Dioxane
		Concentrations in µg/L						
	Remedial Goal	**5.0**	**200**	**--**	**--**	**7.0**	**0.029**	**0.44**
PW-9	2/4/2013	ND (0.030)	0.16 J	9.0	0.12 J	0.16 J	**0.57**	**2.3**
PW-9	8/5/2013	0.070 J	0.13 J	9.3	0.12 J	0.15 J	**0.61**	**2.5**
PW-9	2/13/2014	ND (0.030)	0.19 J	5.4	0.11 J	0.16 J	**0.42**	**2.1**
PW-9	8/25/2014	0.030 J	0.34 J	5.5	0.12 J	0.17 J	**0.43**	**3.0**
PW-9	2/23/2015	ND (0.030)	0.34 J	5.2	0.14 J	0.13 J	**0.47**	**3.2**
PW-9	7/20/2015	ND (0.030)	0.32 J	4.7	0.13 J	0.11 J	**0.44**	**4.0**
PW-9	1/19/2016	ND (0.030)	0.29 J	4.0	0.15 J	0.12 J	**0.38**	**3.8**
PW-9	8/1/2016	ND (0.10)	0.29 J	NA	NA	0.12 J	**0.36**	**3.7**
PW-9	1/30/2017	ND (0.10)	0.32 J	NA	NA	0.12 J	**0.41**	**3.0**
PW-9	9/11/2017	ND (0.20)	0.37 J	NA	NA	0.15 J	**0.37**	**3.7**
PW-9	2/5/2018	ND (0.10)	0.31	NA	NA	0.13 J	**0.34**	**4.9**
PW-9	9/10/2018	ND (0.10)	0.27	NA	NA	0.070 J	**0.19** J	**3.2**
PW-9	2/4/2019 & 2/20/2019	ND (0.10)	0.20 J	NA	NA	0.070 J	**0.22**	**4.27**
PW-9	9/11/2019	ND (0.10)	0.15 J	NA	NA	0.14 J	**0.19** J	**2.6** JQ
PW-9	2/19/2020	0.050 J	0.13 J	NA	NA	0.060 J	**0.13** J	**4.3**
PW-9	9/30/2020	ND (0.15)	0.21	NA	NA	0.15 J	**0.18**	**3.0**
PW-9	2/8/2021	ND (0.15)	0.15 J	NA	NA	0.13 J	**0.31**	**3.6**
PW-9	9/27/2021	ND (0.15)	0.19 J	NA	NA	0.090 J	**0.26**	**2.8**
PW-9	2/17/2022	ND (0.15)	0.14 J	NA	NA	0.088 J	**0.27**	**3.3**
PW-9	9/27/2022	ND (0.50)	ND (0.80)	NA	NA	ND (0.50)	**0.40** J	**3.0**
PW-9	2/6/2023	ND (0.50)	ND (0.80)	NA	NA	ND (0.50)	ND (0.50) UJ	**3.2**

Notes:
µg/L – Micrograms per liter.
Bold indicates exceedance of the remedial goal.
Dup – Field duplicate.
-- – Remedial goal is not available for the indicated parameter.
NA – Not analyzed for the indicated parameter.
ND ( ) – Parameter is not detected; detection limit in parenthesis.
J – Estimated value; detected, but less than quantitation limit or qualified as estimated due to a QC outlier.
UJ – Analyte is not detected at an estimated method detection limit.
B – Analyte found in the associated method blank at a level that is significant relative to the sample result.
D – Diluted.
H – The recommended holding time was exceeded.
J^1 – Sample exceeded holding time, estimated concentration.
E – The result is an estimated value that exceeded the calibration range of the instrument.
Q – One or more quality control criteria associated with the result were not met.
M – A manual integration was performed on the chromatographic peak.

Table C-2. OU 1 Area 6 Monitoring Well Analytical Results

Sample Location	Sample Date	Trichloroethene	1,1,1-Trichloroethane	1,1-Dichloroethane	cis-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,4-Dioxane
		Concentrations in µg/L						
	Remedial Goal	**5.0**	**200**	**--**	**--**	**7.0**	**0.029**	**0.44**
6-S-1	11/10/2005	NA	NA	NA	NA	NA	NA	**1.6**
6-S-1	4/10/2006	NA	NA	NA	NA	NA	NA	**4.7**
6-S-1	5/22/2006	NA	NA	NA	NA	NA	NA	**4.2**
6-S-1	8/18/2006	NA	NA	NA	NA	NA	NA	**1.6**
6-S-1	11/14/2006	NA	NA	NA	NA	NA	NA	**0.60** J
6-S-1	2/26/2007	NA	NA	NA	NA	NA	NA	**3.0**
6-S-1	5/9/2007	NA	NA	NA	NA	NA	NA	**1.9**
6-S-1	8/15/2007	NA	NA	NA	NA	NA	NA	ND (0.26)
6-S-1	2/22/2008	NA	NA	NA	NA	NA	NA	0.31 J
6-S-1	8/26/2008	NA	NA	NA	NA	NA	NA	0.33 J
6-S-1	4/29/2009	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
6-S-1	8/14/2009	ND (0.20)	ND (1.0)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.20)	ND (0.16)
6-S-1	8/4/2010	ND (0.027)	ND (0.030)	ND (0.021)	ND (0.042)	ND (0.045)	ND (0.032)	ND (1.0)
6-S-1	2/7/2011	ND (0.027)	ND (0.030)	ND (0.021)	ND (0.042)	ND (0.045)	ND (0.032)	ND (0.16)
6-S-1	8/3/2011	ND (0.027)	ND (0.030)	ND (0.021)	ND (0.042)	ND (0.045)	ND (0.032)	ND (0.16)
6-S-1	2/2/2012	ND (0.027)	ND (0.030)	ND (0.021)	ND (0.042)	ND (0.045)	ND (0.032)	ND (0.16)
6-S-1	8/6/2012	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-S-1	2/5/2013	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-S-1	8/5/2013	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-S-1	2/3/2014	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-S-1	8/25/2014	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-S-1	2/23/2015	0.040 J	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-S-1	7/20/2015	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-S-1	1/19/2016	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-S-1	8/1/2016	ND (0.10)	ND (0.075)	NA	NA	ND (0.080)	ND (0.075)	ND (0.16)
6-S-1	2/1/2017	ND (0.10)	ND (0.075)	NA	NA	ND (0.080)	ND (0.075)	ND (0.16)
6-S-1	9/11/2017	0.10 J	0.080 J	NA	NA	ND (0.20) UJ	ND (0.10) UJ	ND (0.20)
6-S-1	2/5/2018	ND (0.10)	ND (0.10)	NA	NA	ND (0.10)	ND (0.10)	ND (0.10)
6-S-1	9/10/2018	0.070 J	ND (0.10)	NA	NA	ND (0.10)	ND (0.10)	ND (0.20)
6-S-1	2/20/2019	ND (0.10)	ND (0.10)	NA	NA	ND (0.10)	ND (0.10)	ND (0.050)
6-S-1	8/28/2019	NA	NA	NA	NA	NA	NA	ND (0.048) UJ
6-S-1	8/28/2019 (Dup)	NA	NA	NA	NA	NA	NA	ND (0.048) UJ
6-S-1	2/13/2020	NA	NA	NA	NA	NA	NA	ND (0.049)
6-S-1	9/14/2020	NA	NA	NA	NA	NA	NA	ND (0.054) UJ
6-S-1	2/11/2021	NA	NA	NA	NA	NA	NA	ND (0.047)
6-S-1	9/21/2021	NA	NA	NA	NA	NA	NA	ND (0.046)
6-S-1	2/10/2022	NA	NA	NA	NA	NA	NA	ND (0.050) UJ
6-S-1	9/21/2022	NA	NA	NA	NA	NA	NA	ND (0.051)
6-S-1	2/9/2023	NA	NA	NA	NA	NA	NA	ND (0.047) UJ
6-S-2	8/27/1993	ND (1.0)	ND (1.0)	NA	NA	ND (1.0)	ND (1.0)	NA
6-S-2	2/11/1995	ND (1.0)	ND (1.0)	NA	NA	ND (1.0)	ND (1.0)	NA
6-S-2	9/24/1995	ND (1.0)	0.50 J	NA	NA	ND (1.0)	ND (1.0)	NA
6-S-2	12/6/1995	0.28 J	1.3	NA	NA	ND (1.0)	ND (1.0)	NA
6-S-2	3/26/1996	ND (1.0)	2.3	NA	NA	ND (1.0)	ND (1.0)	NA
6-S-2	10/29/1996	ND (1.0)	ND (1.0)	NA	NA	ND (1.0)	ND (1.0)	NA
6-S-2	1/28/1997	ND (1.0)	0.69 J	NA	NA	ND (1.0)	ND (1.0)	NA
6-S-2	4/29/1997	0.33 J	0.79 J	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NA
6-S-2	7/22/1997	ND (1.0)	0.32 J	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NA
6-S-2	10/14/1997	0.24	0.57	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	NA
6-S-2	1/19/1998	ND (0.20)	ND (0.50)	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
6-S-2	4/13/1998	0.56	ND (0.50)	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
6-S-2	7/27/1998	ND (0.20)	1.2	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
6-S-2	10/19/1998	ND (0.20)	0.97	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
6-S-2	1/25/1999	ND (0.20)	1.5	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
6-S-2	4/21/1999	ND (0.20)	ND (0.50)	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
6-S-2	7/26/1999	ND (0.20)	0.55	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	NA
6-S-2	11/19/1999	ND (0.20)	ND (0.50)	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
6-S-2	1/25/2000	ND (0.20)	ND (0.30)	ND (0.20)	ND (0.20)	ND (0.24)	ND (0.20)	NA
6-S-2	10/26/2000	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.10)	ND (0.30)	NA
6-S-2	1/9/2001	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.30)	NA
6-S-2	11/6/2001	ND (0.20)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.20)	ND (0.20)	NA
6-S-2	1/14/2002	ND (0.20)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.20)	ND (0.20)	NA
6-S-2	11/19/2002	ND (0.20)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.20)	ND (0.20)	NA
6-S-2	1/13/2003	ND (0.055)	ND (0.053)	ND (0.067)	ND (0.067)	ND (0.064)	ND (0.045)	NA
6-S-2	1/19/2003	ND (0.081)	ND (0.11)	ND (0.067)	ND (0.067)	ND (0.16)	ND (0.12)	ND (0.20)
6-S-2	11/11/2003	ND (0.081)	ND (0.11)	ND (0.067)	ND (0.067)	ND (0.16)	ND (0.12)	ND (0.15)
6-S-2	4/5/2004	ND (0.081)	ND (0.11)	ND (0.067)	ND (0.067)	ND (0.16)	ND (0.12)	ND (0.20)
6-S-2	1/18/2005	ND (0.081)	ND (0.11)	ND (0.069)	ND (0.069)	ND (0.16)	ND (0.12)	ND (0.47)
6-S-2	4/25/2005	ND (0.21)	ND (0.21)	ND (0.13)	ND (0.13)	ND (0.24)	ND (0.13)	ND (0.47)
6-S-2	10/24/2005	ND (0.21)	ND (0.21)	ND (0.13)	ND (0.13)	ND (0.24)	ND (0.13)	ND (0.47)

Table C-2. OU 1 Area 6 Monitoring Well Analytical Results (continued)

Sample Location	Sample Date	Trichloroethene	1,1,1-Trichloroethane	1,1-Dichloroethane	cis-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,4-Dioxane
		Concentrations in µg/L						
	Remedial Goal	**5.0**	**200**	**--**	**--**	**7.0**	**0.029**	**0.44**
6-S-2	5/9/2006	ND (0.21)	ND (0.21)	ND (0.13)	ND (0.13)	ND (0.24)	ND (0.13)	ND (0.47)
6-S-2	11/14/2006	ND (0.21)	ND (0.21)	ND (0.13)	ND (0.13)	ND (0.24)	ND (0.13)	NA
6-S-2	5/9/2007	ND (0.21)	ND (0.21)	ND (0.13)	ND (0.13)	ND (0.24)	ND (0.13)	ND (0.27)
6-S-2	8/26/2008	ND (0.070)	ND (0.050)	ND (0.040)	ND (0.040)	ND (0.060)	ND (0.060)	ND (0.24)
6-S-2	8/19/2009	ND (0.030)	ND (0.030)	ND (0.040)	ND (0.040)	ND (0.050)	ND (0.030)	ND (1.0)
6-S-2	8/4/2010	ND (0.030)	ND (0.030)	ND (0.040)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-S-2	2/7/2011	ND (0.030)	0.040 J	ND (0.040)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-S-2	8/3/2011	0.070 J	ND (0.030)	ND (0.040)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-S-2	2/1/2012	0.050 J	0.080 J	ND (0.040)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-S-2	8/6/2012	0.090 J	ND (0.030)	ND (0.040)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-S-2	2/4/2013	ND (0.030)	ND (0.030)	ND (0.040)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-S-2	8/5/2013	0.030 J	ND (0.030)	ND (0.040)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-S-2	2/3/2014	ND (0.030)	0.060 J	ND (0.040)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-S-2	8/25/2014	ND (0.030)	0.10 J	ND (0.040)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-S-2	2/23/2015	0.13 J	0.06 J	ND (0.040)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-S-2	7/20/2015	0.070 J	0.15 J	ND (0.040)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-S-2	1/19/2016	0.070 J	0.050 J	ND (0.040)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-S-2	8/1/2016	ND (0.10)	0.11 J	NA	NA	ND (0.080)	ND (0.075)	ND (0.16)
6-S-2	1/31/2017	ND (0.10)	0.10 J	NA	NA	ND (0.080)	ND (0.075)	ND (0.16)
6-S-2	9/11/2017	ND (0.20)	ND (0.20)	NA	NA	ND (0.20)	ND (0.10)	ND (0.20)
6-S-2	2/5/2018	ND (0.10)	ND (0.10)	NA	NA	ND (0.10)	ND (0.10)	ND (0.10)
6-S-2	9/10/2018	ND (0.10)	ND (0.10)	NA	NA	ND (0.10)	ND (0.10)	ND (0.20)
6-S-2	2/6/2019	ND (0.10)	ND (0.10)	NA	NA	ND (0.10)	ND (0.10)	ND (0.050)
6-S-3	2/13/1995	ND (2.5)	2.0 J	ND (2.5)	NA	ND (2.5)	ND (2.5)	NA
6-S-3	9/21/1995	ND (5.0)	ND (5.0)	ND (5.0)	NA	ND (5.0)	ND (5.0)	NA
6-S-3	12/7/1995	ND (5.0)	ND (5.0)	ND (5.0)	NA	ND (5.0)	**4.5** J	NA
6-S-3	3/26/1996	ND (5.0)	3.7 J	ND (5.0)	NA	ND (5.0)	ND (5.0)	NA
6-S-3	10/31/1996	2.4	7.2	ND (2.0)	NA	ND (2.0)	ND (2.0)	NA
6-S-3	1/28/1997	ND (2.0)	2.0	ND (2.0)	NA	ND (2.0)	ND (2.0)	NA
6-S-3	4/29/1997	ND (2.5)	1.5 J	ND (2.5)	ND (2.5)	ND (2.5)	ND (2.5)	NA
6-S-3	7/22/1997	ND (2.5)	1.7 J	ND (2.5)	ND (2.5)	ND (2.5)	ND (2.5)	NA
6-S-3	10/14/1997	0.27	2.6	ND (0.20)	ND (0.20)	ND (0.20)	**0.79**	NA
6-S-3	4/13/1998	ND (0.20)	3.2	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
6-S-3	10/19/1998	ND (0.20)	3.9	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
6-S-3	4/21/1999	ND (0.20)	5.6	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
6-S-3	11/19/1999	ND (0.20)	7.0	ND (0.20)	ND (0.20)	0.26	ND (1.0)	NA
6-S-3	10/26/2000	ND (0.20)	13 J	ND (0.20)	ND (0.20)	ND (0.10)	ND (0.30)	NA
6-S-3	11/6/2001	ND (0.20)	11	0.34 J	ND (0.10)	ND (0.20)	**0.4** J	NA
6-S-3	11/18/2002	ND (0.20)	8.4	0.75	ND (0.10)	0.2 J	**0.43** J	NA
6-S-3	11/11/2003	ND (0.081)	7.3	1.0	ND (0.067)	0.31 J	**0.60**	**9.3**
6-S-3	11/3/2004	ND (0.081)	6.1	1.6	ND (0.067)	0.24 J	**0.45** J	**15**
6-S-3	1/17/2005	ND (0.081)	5.9	1.9	ND (0.069)	0.32 J	**0.39** J	**17**
6-S-3	10/26/2005	ND (0.21)	5.8	2.6	ND (0.13)	ND (0.24)	**0.33** J	**19**
6-S-3	2/8/2006	ND (0.21)	4.3	2.9	ND (0.13)	ND (0.24)	**0.36** J	**18**
6-S-3	5/8/2006	ND (0.21)	4.5	2.5	ND (0.13)	0.28 J	**0.4** J	**22**
6-S-3	8/15/2006	ND (0.21)	4.8	3.0	ND (0.13)	ND (0.24)	**0.43** J	**20**
6-S-3	11/13/2006	ND (0.21)	4.2	2.9	ND (0.13)	ND (0.24)	**0.45** J	**19**
6-S-3	2/21/2007	ND (0.21)	3.5	2.7	ND (0.13)	0.37 J	**0.47** J	**17**
6-S-3	5/8/2007	ND (0.21)	4.3	2.9	ND (0.13)	0.21 J	**0.46** J	**14**
6-S-3	8/13/2007	ND (0.060)	4.0	3.0	ND (0.050)	0.22 J	**0.44** J	**14**
6-S-3	8/28/2008	ND (0.50)	3.3	3.1	ND (0.50)	0.21 J	**0.39** J	**5.3**
6-S-3	8/18/2009	ND (0.030)	4.0	3.3	ND (0.040)	0.34 J	**0.38** J	**4.8**
6-S-3	8/2/2010	ND (0.030)	2.7	3.0	ND (0.040)	0.25 J	**0.29** J	**4.8**
6-S-3	2/10/2011	ND (0.030)	2.9	2.8	ND (0.040)	0.26 J	**0.29**	**5.9**
6-S-3	8/9/2011	ND (0.030)	2.8	2.6	ND (0.040)	0.26 J	**0.26**	**4.8**
6-S-3	2/13/2012	ND (0.030)	2.6	2.5	ND (0.040)	0.26 J	**0.19**	**3.6**
6-S-3	8/14/2012	ND (0.030)	2.6	2.6	ND (0.040)	0.28 J	**0.18**	**3.5**
6-S-3	2/12/2013	ND (0.030)	2.8	2.7	ND (0.040)	0.30 J	**0.16**	**2.8**
6-S-3	8/14/2013	ND (0.030)	2.5	2.5	ND (0.040)	0.29 J	**0.16**	**1.6**
6-S-3	2/11/2014	ND (0.030)	1.9	2.1	ND (0.040)	0.24 J	**0.13**	**1.5**
6-S-3	9/2/2014	ND (0.030)	2.1	2.1	ND (0.040)	0.26 J	**0.10**	**1.4**
6-S-3	3/2/2015	ND (0.030)	1.9	2.0	ND (0.040)	0.22 J	**0.08** J	**0.67** J
6-S-3	7/23/2015	ND (0.030)	1.8	1.9	ND (0.040)	0.19 J	**0.040** J	0.40
6-S-3	1/27/2016	ND (0.030)	1.7	1.6	ND (0.040)	0.19 J	ND (0.030)	0.21 J
6-S-3	8/8/2016	ND (0.10)	1.6	NA	NA	0.18 J	ND (0.075)	ND (0.16)
6-S-3	2/15/2017	ND (0.10)	1.8	NA	NA	0.14 J	ND (0.075)	ND (0.16)
6-S-3	9/20/2017	ND (0.20)	1.9	NA	NA	0.14 J	ND (0.10) UJ	ND (0.20)
6-S-3	2/14/2018	ND (0.10)	1.9	NA	NA	0.23	ND (0.10)	ND (0.10)
6-S-3	9/17/2018	ND (0.10)	1.4	NA	NA	0.10 J	ND (0.10)	ND (0.20)
6-S-3	2/20/2019	ND (0.10)	1.2	NA	NA	0.14 J	ND (0.10)	ND (0.050)

Table C-2. OU 1 Area 6 Monitoring Well Analytical Results (continued)

Sample Location	Sample Date	Trichloroethene	1,1,1-Trichloroethane	1,1-Dichloroethane	cis-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,4-Dioxane
		Concentrations in µg/L						
	Remedial Goal	**5.0**	**200**	**--**	**--**	**7.0**	**0.029**	**0.44**
6-S-3	8/26/2019 & 9/4/2019	ND (0.15)	1.5	NA	NA	ND (0.15) M	ND (0.017)	0.09 J
6-S-3	2/5/2020	ND (0.15) M	1.3	NA	NA	0.18 J	ND (0.017) M	**1.3**
6-S-3	9/9/2020	ND (0.15) UJ	1.5 J	NA	NA	0.24 J	ND (0.015) UJ	**1.2**
6-S-3	9/9/2020 (Dup)	ND (0.15) UJ	1.5 J	NA	NA	0.22 J	ND (0.015) UJ	**1.2**
6-S-3	2/9/2021	ND (0.15)	1.3	NA	NA	0.17 J	0.017 J	**1.3**
6-S-3	9/22/2021	ND (0.15)	1.5	NA	NA	0.22	**0.058**	**1.5**
6-S-3	2/10/2022	ND (0.15)	1.3	NA	NA	0.16 J	ND (0.015)	**1.3** J
6-S-3	9/19/2022	ND (0.15)	1.3	NA	NA	0.16 J	ND (0.015)	**1.5**
6-S-3	2/6/2023	ND (0.0100)	1.3	NA	NA	0.14	**0.0969**	**2.1**
6-S-6	9/9/1993	**470**	**5300**	ND (250)	NA	**460**	ND (250)	NA
6-S-6	2/14/1995	**330**	**1200**	ND (200)	NA	**90** J	ND (200)	NA
6-S-6	9/22/1995	**230**	**1700**	ND (100)	NA	**80** J	ND (100)	NA
6-S-6	12/7/1995	**220**	**2000**	ND (100)	NA	**150**	ND (100)	NA
6-S-6	3/27/1996	**880**	**3000**	ND (100)	NA	**340**	ND (100)	NA
6-S-6	10/30/1996	**690**	**1000**	ND (50)	NA	**110**	ND (50)	NA
6-S-6	1/30/1997	**800**	**730**	ND (25)	NA	**95**	ND (25)	NA
6-S-6	1/30/1997 (Dup)	**680**	**690**	ND (20)	NA	**94**	ND (20)	NA
6-S-6	2/3/1997	**770**	**640**	ND (50)	NA	**97**	ND (50)	NA
6-S-6	2/3/1997 (Dup)	**800**	**740**	ND (25)	NA	**91**	ND (25)	NA
6-S-6	5/2/1997	**540**	**290**	ND (25)	80	**40**	ND (25)	NA
6-S-6	7/23/1997	**500**	120	ND (25)	87	**31**	ND (25)	NA
6-S-6	10/15/1997	**400**	130	1.3	77	**24**	ND (0.20)	NA
6-S-6	10/15/1997 (Dup)	**370**	89	1.3	73	**24**	ND (0.20)	NA
6-S-6	1/20/1998	**350**	**210**	0.96	75	**31**	ND (1.0)	NA
6-S-6	4/14/1998	**370**	100	1.1	76	**22**	ND (1.0)	NA
6-S-6	7/28/1998	**290**	160	2.7	50	**23**	ND (1.0)	NA
6-S-6	7/28/1998 (Dup)	**260**	150	3.2	47	**23**	ND (1.0)	NA
6-S-6	10/23/1998	**340**	57	1.2	47	**15**	ND (1.0)	NA
6-S-6	10/23/1998 (Dup)	**340**	55	1.2	45	**15**	ND (1.0)	NA
6-S-6	1/26/1999	**210**	100	ND (0.20)	37	**16**	ND (1.0)	NA
6-S-6	1/26/1999 (Dup)	**210**	95	1.1	37	**16**	ND (1.0)	NA
6-S-6	4/22/1999	**210**	54	6.1	37	**14**	ND (5.0)	NA
6-S-6	4/22/1999 (Dup)	**190**	46	5.0	32	**12**	ND (1.0)	NA
6-S-6	7/28/1999	**230**	46	0.83	37	**13**	ND (0.20)	NA
6-S-6	11/24/1999	**170**	**1200**	3.7	44	**18**	ND (1.0)	NA
6-S-6	1/27/2000	**300**	**2700**	3.0	33	**90**	ND (0.20)	NA
6-S-6	1/27/2000 (Dup)	**300**	**1800**	2.8	33	**86**	ND (0.20)	NA
6-S-6	4/25/2000	**260**	**2800**	5.0	32	**200**	ND (0.20)	NA
6-S-6	4/25/2000 (Dup)	**290**	**2900**	5.0	33	**220**	ND (0.20)	NA
6-S-6	7/24/2000	**500** D	**4100** D	6.7	36	**550** D	**0.20** J	NA
6-S-6	10/26/2000	**400**	**3700**	14 J	39 J	**350**	ND (0.30)	NA
6-S-6	1/11/2001	**390** D	**4400** D	14 J	36 J	**380** D	ND (0.30)	NA
6-S-6	4/12/2001	**350** D	**3800** D	10 J	30 D	**340** D	ND (13)	NA
6-S-6	7/12/2001	**300** JD	**4900** D	7.2 JD	29 JD	**340** JD	**1.1** UJ	NA
6-S-6	11/13/2001	**360** D	**4100** D	6.1	34	**370** D	ND (0.20)	NA
6-S-6	1/15/2002	**290** D	**3700** D	5.2 JD	24 D	**310** D	ND (4.0)	NA
6-S-6	4/16/2002	**310** D	**2800** D	ND (10)	24 JD	**280** D	ND (20)	NA
6-S-6	7/11/2002	**250** D	**2800** D	3.6 JD	24 D	**270** D	ND (2.0)	NA
6-S-6	11/22/2002	**260**	**2200**	3.7	19	**300**	ND (0.20)	NA
6-S-6	1/14/2003	**300** JD	**3300** JD	5.0 J	21 J	**470** JD	**0.26** J	NA
6-S-6	4/24/2003	**260** JD	**4300** J	4.6 J	21 J	**470** J	**0.28** J	NA
6-S-6	6/26/2003	**240**	**3900**	4.0	18	**410** J	**0.15** J	0.39 J
6-S-6	11/21/2003	**250**	**3700**	4.3 J	17 J	**510**	**0.22** J	ND (0.15)
6-S-6	1/23/2004	**230**	**3400**	3.9 J	16 J	**420**	**0.20** J	ND (0.20)
6-S-6	4/7/2004	**220**	**3400**	3.3	14	**420**	ND (0.12)	ND (0.20)
6-S-6	7/20/2004	**180** J	**2500** J	2.8 J	12 J	**360** J	**0.13** J	ND (0.47)
6-S-6	11/8/2004	**170**	**1900**	2.4 J	9.5 J	**340**	**0.14** J	ND (0.47)
6-S-6	1/25/2005	**160**	**1800**	2.3 J	11 J	**370**	**0.14** J	ND (0.47)
6-S-6	4/27/2005	**170**	**2200**	3.4 J	11 J	**360**	**0.13** UJ	ND (0.47)
6-S-6	7/27/2005	**140**	**710**	2.6	7.9	**240**	ND (0.13)	ND (0.47)
6-S-6	11/10/2005	**170** D	**490** D	5.2	8.9	**210** D	ND (0.13)	ND (0.47)
6-S-6	2/21/2006	**160** D	**830** D	4.3	7.8	**180** D	ND (0.13)	ND (0.47)
6-S-6	5/11/2006	**130** D	**910** D	4.6	6.9	**180** D	ND (0.13)	ND (0.47)
6-S-6	8/17/2006	**160** D	**1200** D	3.6	7.1	**260** D	ND (0.13)	ND (0.27)
6-S-6	11/16/2006	**170** D	**1300** D	2.3	7.1	**350** D	ND (0.13)	ND (0.27)
6-S-6	2/23/2007	**130** D	**710** D	2.4	5.7	**260** D	ND (0.13)	ND (0.27)
6-S-6	5/11/2007	**130** D	**510** D	3	5.7	**220** D	ND (0.13)	**0.51** J
6-S-6	8/16/2007	**120** D	**510** D	1.9	5.4	**220** D	ND (0.040)	**0.59** J
6-S-6	8/29/2008	**110** D	**640** D	1.3	4.6	**210** D	ND (0.060)	**4.4**
6-S-6	8/20/2009	**80** D	**890** D	1.3	4.1	**300** D	**0.040** J	**9.1**

Table C-2. OU 1 Area 6 Monitoring Well Analytical Results (continued)

Sample Location	Sample Date	Trichloroethene	1,1,1-Trichloroethane	1,1-Dichloroethane	cis-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,4-Dioxane
		Concentrations in µg/L						
	Remedial Goal	**5.0**	**200**	**--**	**--**	**7.0**	**0.029**	**0.44**
6-S-6	8/9/2010	**79** D	**430** D	1.2	4.6	**160** D	**0.040** J	**0.87** J
6-S-6	2/16/2011	**68** D	**760** D	1.1	3.9	**150** D	ND (0.030)	**2.6**
6-S-6	8/11/2011	**57**	**220** D	0.98	3.1	**85** D	**0.040** J	0.40 J
6-S-6	2/15/2012	**66** D	**830** D	1.3 JD	3.4 D	**150** D	ND (0.080)	**1.1**
6-S-6	8/16/2012	**61**	**270** D	0.96	3.4	**72**	**0.060** J	**0.85** J
6-S-6	2/14/2013	**61**	**220** D	0.92	3.2	**59**	**0.070** J	**1.0**
6-S-6	8/15/2013	**54**	120 D	0.82	2.7	**41**	**0.10**	**0.72** J
6-S-6	2/3/2014	**46**	**210** D	0.99	2.2	**39**	**0.11**	**0.47** J
6-S-6	9/8/2014	**37**	**250** D	1.3	2.0	**47**	**0.12**	ND (0.16)
6-S-6	3/10/2015	**44**	**240** D	1.2	2.2	**31**	**0.10**	0.23 J
6-S-6	8/3/2015	**37**	**220** D	1.1	2.2	**42**	**0.060** J	**0.46**
6-S-6	2/3/2016	**38**	**290**	ND (1.0)	1.9 J	**38**	ND (1.0)	**0.92**
6-S-6	8/16/2016	**34** D	**450** D	NA	NA	**88** D	ND (0.15)	**0.60**
6-S-6	2/23/2017	**34**	**500** D	NA	NA	**70**	ND (0.075)	**0.50**
6-S-6	9/27/2017	**35**	**490** D	NA	NA	**88** D	ND (0.10)	**1.5** J
6-S-6	2/20/2018	**28**	**245**	NA	NA	**64**	ND (0.10) UJ	**1.3**
6-S-6	9/26/2018	**30.3** J	146	NA	NA	**48.7** J	ND (0.10) UJ	**0.47**
6-S-6	2/28/2019	**16.3**	**400**	NA	NA	**55.2**	ND (0.10)	ND (0.050)
6-S-6	9/10/2019	**15.5**	**292**	NA	NA	**61.8**	ND (10)	**0.60**
6-S-6	2/19/2020	**13.1**	**255**	NA	NA	**66**	ND (0.10)	**0.69**
6-S-6	9/17/2020	**26** J	99 J	NA	NA	**45** J	ND (0.015) UJ	0.35
6-S-6	2/22/2021	**22** J	99	NA	NA	**45** J	ND (0.015)	ND (0.049)
6-S-6	9/27/2021	**28**	38	NA	NA	**19**	ND (0.15)	**0.52**
6-S-6	9/27/2021 (Dup)	**27**	41	NA	NA	**19**	ND (0.15)	**0.53**
6-S-6	2/16/2022	**25**	26	NA	NA	**11**	0.026	0.42
6-S-6	9/22/2022	**18**	52	NA	NA	**10**	ND (2.5)	0.37
6-S-6	2/16/2023	**12**	**250**	NA	NA	**16**	ND (5.0)	ND (0.052)
6-S-7	10/29/1996	ND (1.0)	ND (1.0)	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-S-7	2/3/1997	1.4	2.0	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-S-7	4/30/1997	ND (1.0)	0.27 J	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-S-7	7/28/1997	0.95 J	1.2	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NA
6-S-7	10/17/1997	1.2	2.8	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
6-S-7	10/19/1998	ND (0.20)	ND (0.50)	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
6-S-7	11/22/1999	ND (0.20)	ND (0.30)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	NA
6-S-7	10/31/2000	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.10)	ND (0.30)	NA
6-S-7	11/5/2001	ND (0.20)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.20)	ND (0.20)	NA
6-S-7	11/11/2003	ND (0.081)	ND (0.11)	ND (0.066)	ND (0.067)	ND (0.16)	ND (0.12)	**8.4**
6-S-7	11/1/2004	ND (0.081)	ND (0.11)	ND (0.066)	ND (0.067)	ND (0.16)	ND (0.12)	**7.1**
6-S-7	10/6/2005	ND (0.21)	ND (0.21)	ND (0.16)	ND (0.13)	ND (0.24)	ND (0.13)	**8.1**
6-S-7	11/14/2006	ND (0.21)	ND (0.21)	ND (0.16)	ND (0.13)	ND (0.24)	ND (0.13)	**6.1**
6-S-7	8/26/2008	NA	ND (0.050)	ND (0.040)	ND (0.040)	ND (0.060)	ND (0.060)	**4.4**
6-S-7	8/17/2009	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	**4.6**
6-S-7	8/3/2010	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	**4.3**
6-S-7	2/14/2011	0.060 J	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	**5.5**
6-S-7	8/8/2011	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	**4.6**
6-S-7	2/7/2012	ND (0.030)	0.060 J	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	**3.3**
6-S-7	8/9/2012	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	**4.0**
6-S-7	2/7/2013	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	**3.4**
6-S-7	8/15/2013	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	**3.7**
6-S-7	2/6/2014	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	**3.1**
6-S-7	8/27/2014	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	**3.7**
6-S-7	2/25/2015	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	**3.1**
6-S-7	7/27/2015	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	**3.4**
6-S-7	1/21/2016	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	**3.0**
6-S-7	8/3/2016	ND (0.10)	ND (0.075)	NA	NA	ND (0.080)	ND (0.075)	**2.6**
6-S-7	2/16/2017	ND (0.10)	ND (0.075)	NA	NA	ND (0.080)	ND (0.075)	**2.1**
6-S-7	9/20/2017	ND (0.20)	ND (0.20)	NA	NA	ND (0.20)	ND (0.10) UJ	**2.1**
6-S-7	2/14/2018	ND (0.10)	ND (0.10)	NA	NA	ND (0.10)	ND (0.10)	**2.9**
6-S-7	9/11/2018	ND (0.10)	ND (0.10)	NA	NA	ND (0.10)	ND (0.10)	**2.5**
6-S-7	2/4/2019 & 2/25/2019	ND (0.10)	ND (0.10)	NA	NA	ND (0.10)	ND (0.10)	**2.64**
6-S-7	9/5/2019	NA	NA	NA	NA	NA	NA	**1.7**
6-S-7	2/4/2020	NA	NA	NA	NA	NA	NA	**2.6**
6-S-7	9/23/2020	NA	NA	NA	NA	NA	NA	**2.5**
6-S-7	2/17/2021	NA	NA	NA	NA	NA	NA	**2.3**
6-S-7	9/27/2021	NA	NA	NA	NA	NA	NA	**1.8**
6-S-7	2/9/2022	NA	NA	NA	NA	NA	NA	**2.3**
6-S-7	9/27/2022	NA	NA	NA	NA	NA	NA	**2.0**
6-S-7	2/14/2023	NA	NA	NA	NA	NA	NA	**1.7** J

Table C-2. OU 1 Area 6 Monitoring Well Analytical Results (continued)

Sample Location	Sample Date	Trichloroethene	1,1,1-Trichloroethane	1,1-Dichloroethane	cis-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,4-Dioxane
		Concentrations in µg/L						
	Remedial Goal	**5.0**	**200**	**--**	**--**	**7.0**	**0.029**	**0.44**
6-S-9	8/9/2012	NA	NA	NA	NA	NA	NA	ND (0.16)
6-S-9	2/12/2013	NA	NA	NA	NA	NA	NA	ND (0.16)
6-S-9	8/7/2013	NA	NA	NA	NA	NA	NA	ND (0.16)
6-S-9	2/10/2014	NA	NA	NA	NA	NA	NA	ND (0.16)
6-S-9	9/5/2014	NA	NA	NA	NA	NA	NA	ND (0.16)
6-S-9	3/5/2015	NA	NA	NA	NA	NA	NA	ND (0.16)
6-S-9	7/29/2015	NA	NA	NA	NA	NA	NA	ND (0.16)
6-S-9	2/1/2016	NA	NA	NA	NA	NA	NA	**0.57**
6-S-9	8/10/2016	NA	NA	NA	NA	NA	NA	ND (0.16)
6-S-9	2/20/2017	NA	NA	NA	NA	NA	NA	ND (0.16)
6-S-9	9/21/2017	NA	NA	NA	NA	NA	NA	ND (0.20)
6-S-9	2/15/2018	NA	NA	NA	NA	NA	NA	ND (0.10)
6-S-9	9/13/2018	NA	NA	NA	NA	NA	NA	ND (0.20)
6-S-9	2/19/2019	NA	NA	NA	NA	NA	NA	ND (0.050)
6-S-9	8/28/2019	NA	NA	NA	NA	NA	NA	ND (0.047)
6-S-9	8/28/2019 (Dup)	NA	NA	NA	NA	NA	NA	ND (0.047)
6-S-9	2/12/2020	NA	NA	NA	NA	NA	NA	ND (0.047)
6-S-9	9/15/2020	NA	NA	NA	NA	NA	NA	ND (0.047)
6-S-9	2/10/2021	NA	NA	NA	NA	NA	NA	ND (0.049)
6-S-9	9/30/2021	NA	NA	NA	NA	NA	NA	ND (0.051)
6-S-9	2/9/2022	NA	NA	NA	NA	NA	NA	0.15 J
6-S-9	9/27/2022	NA	NA	NA	NA	NA	NA	ND (0.051)
6-S-9	2/13/2023	NA	NA	NA	NA	NA	NA	ND (0.047)
6-S-10	9/11/1993	ND (5.0)	21	ND (5.0)	NA	ND (5.0)	ND (5.0)	NA
6-S-10	2/15/1995	ND (1.0)	3.7	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-S-10	9/22/1995	ND (1.0)	5.2	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-S-10	12/9/1995	1.5	11	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-S-10	3/28/1996	4.4	20	0.21 J	NA	0.90 J	ND (1.0)	NA
6-S-10	11/2/1996	1.0	2.7	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-S-10	2/3/1997	0.81 J	1.2	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-S-10	5/1/1997	ND (1.0)	1.6	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NA
6-S-10	7/28/1997	ND (1.0)	0.28 J	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NA
6-S-10	10/28/1997	ND (0.20)	ND (0.50)	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
6-S-10	4/13/1998	ND (0.20)	ND (0.50)	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
6-S-10	10/19/1998	ND (0.20)	ND (0.50)	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
6-S-10	4/19/1999	ND (0.20)	ND (0.50)	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
6-S-10	11/18/1999	ND (0.20)	ND (0.50)	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
6-S-10	4/24/2000	ND (0.20)	ND (0.30)	ND (0.10)	ND (0.20)	ND (0.30)	ND (0.20)	NA
6-S-10	10/25/2000	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.10)	ND (0.30)	NA
6-S-10	4/10/2001	ND (0.50)	ND (0.66)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	NA
6-S-10	11/5/2001	ND (0.20)	0.68	ND (0.10)	ND (0.10)	ND (0.20)	ND (0.20)	NA
6-S-10	4/15/2002	ND (0.20)	0.46 J	ND (0.10)	ND (0.10)	ND (0.20)	ND (0.20)	NA
6-S-10	11/19/2002	ND (0.20)	0.6	ND (0.10)	ND (0.10)	ND (0.20)	ND (0.20)	**7.7**
6-S-10	4/21/2003	ND (0.081)	1.0	ND (0.066)	ND (0.067)	0.34 J	ND (0.12)	**6.5**
6-S-10	11/18/2003	ND (0.081)	2.2	0.070 J	ND (0.067)	0.77	ND (0.12)	**5.7**
6-S-10	4/5/2004	ND (0.081)	ND (0.11)	ND (0.066)	ND (0.067)	ND (0.16)	ND (0.12)	**6.7**
6-S-10	11/4/2004	ND (0.081)	1.3	ND (0.066)	ND (0.067)	0.44 J	ND (0.12)	**7.3**
6-S-10	4/27/2005	ND (0.21)	1.4	ND (0.16)	ND (0.13)	0.42 J	ND (0.13)	**6.2**
6-S-10	11/1/2005	ND (0.21)	7.1	0.33 J	ND (0.13)	2.9	ND (0.13)	**6.2**
6-S-10	5/10/2006	ND (0.21)	6.6	0.53	ND (0.13)	2.0	ND (0.13)	**4.8**
6-S-10	11/13/2006	ND (0.21)	0.92	ND (0.16)	ND (0.13)	0.33 J	ND (0.13)	**4.8**
6-S-10	5/9/2007	ND (0.21)	0.19 J	0.040 J	ND (0.13)	0.08 J	ND (0.13)	**7.2**
6-S-10	8/2/2010	ND (0.030)	0.29 J	0.070 J	ND (0.040)	0.16 J	ND (0.030)	**4.5**
6-S-10	2/14/2011	ND (0.030)	0.3 J	0.050 J	ND (0.040)	0.18 J	ND (0.030)	**4.4**
6-S-10	8/8/2011	ND (0.030)	1.1	0.23 J	ND (0.040)	0.62	ND (0.030)	**3.9**
6-S-10	2/8/2012	ND (0.030)	0.38 J	0.090 J	ND (0.040)	0.16 J	ND (0.030)	**4.7**
6-S-10	8/13/2012	ND (0.030)	0.27 J	0.070 J	ND (0.040)	0.12 J	ND (0.030)	**4.5**
6-S-10	2/11/2013	ND (0.030)	0.75	0.16 J	ND (0.040)	0.65	ND (0.030)	**2.9**
6-S-10	8/14/2013	ND (0.030)	0.47 J	0.13 J	ND (0.040)	0.44 J	ND (0.030)	**2.8**
6-S-10	2/6/2014	ND (0.030)	1.4	0.39 J	ND (0.040)	1.3	ND (0.030)	**2.4**
6-S-10	9/3/2014	ND (0.030)	0.35 J	0.10 J	ND (0.040)	0.25 J	ND (0.030)	**2.5**
6-S-10	3/4/2015	ND (0.030)	0.18 J	0.060 J	ND (0.040)	0.12 J	ND (0.030)	**2.5**
6-S-10	7/27/2015	ND (0.030)	0.15 J	0.060 J	ND (0.040)	0.09 J	ND (0.030)	**2.6**
6-S-10	1/27/2016	ND (0.030)	0.17 J	0.070 J	ND (0.040)	0.10 J	ND (0.030)	**2.2**
6-S-10	8/10/2016	ND (0.10)	0.18 J	NA	NA	0.13 J	ND (0.075) UJ	**2.2**
6-S-10	2/14/2017	ND (0.10)	0.32 J	NA	NA	0.16 J	ND (0.075)	**1.9**
6-S-10	9/13/2017	ND (0.20) UJ	0.16 J	NA	NA	0.10 J	ND (0.10) UJ	**2.6**
6-S-10	2/8/2018	ND (0.10)	ND (0.10)	NA	NA	0.080 J	ND (0.10)	**2.8**
6-S-10	9/19/2018	ND (0.10)	ND (0.10)	NA	NA	ND (0.10)	ND (0.10)	**2.2**
6-S-10	2/19/2019	ND (0.10)	0.15 J	NA	NA	0.14 J	ND (0.10)	**2.25**

Table C-2. OU 1 Area 6 Monitoring Well Analytical Results (continued)

Sample Location	Sample Date	Trichloroethene	1,1,1-Trichloroethane	1,1-Dichloroethane	cis-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,4-Dioxane
		Concentrations in µg/L						
	Remedial Goal	**5.0**	**200**	**--**	**--**	**7.0**	**0.029**	**0.44**
6-S-10	8/28/2019	ND (0.10)	0.090 J	NA	NA	ND (0.10)	ND (0.10)	**0.81 J**
6-S-10	2/13/2020	ND (0.10)	ND (0.10)	NA	NA	ND (0.10)	ND (0.10)	**1.9**
6-S-10	9/10/2020	ND (0.15) UJ	ND (0.070) UJ	NA	NA	0.12 J	ND (0.015) UJ	**1.4**
6-S-10	2/17/2021	0.34 J	0.086 J	NA	NA	0.11 J	ND (0.015)	**2.0**
6-S-10	9/22/2021	ND (0.15)	0.094 J	NA	NA	0.062 J	ND (0.015)	**1.5**
6-S-10	2/9/2022	ND (0.15)	0.063 J	NA	NA	ND (0.070)	ND (0.015)	**2.0**
6-S-10	9/19/2022	ND (0.50)	ND (0.80)	NA	NA	ND (0.50)	ND (0.50)	**1.8**
6-S-10	2/13/2023	ND (0.50)	ND (0.80)	NA	NA	ND (0.50)	ND (0.50)	**1.6**
6-S-11	9/13/1993	ND (1.0)	NA	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-S-11	2/15/1995	ND (1.0)	NA	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-S-11	9/26/1995	ND (1.0)	1.3	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-S-11	12/9/1995	1.4	8.5	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-S-11	3/27/1996	ND (1.0)	1.8	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-S-11	11/2/1996	ND (1.0)	NA	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-S-11	2/3/1997	1.0	1.3	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-S-11	4/30/1997	ND (1.0)	7.9	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-S-11	7/24/1997	0.98 J	0.27 J	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-S-11	10/16/1997	1.8	2.3	ND (0.20)	NA	ND (0.20)	ND (0.20)	NA
6-S-11	1/19/1998	ND (0.20)	NA	ND (0.20)	NA	ND (0.20)	ND (1.0)	NA
6-S-11	4/14/1998	ND (0.20)	NA	ND (0.20)	NA	ND (0.20)	ND (1.0)	NA
6-S-11	7/27/1998	ND (0.20)	NA	ND (0.20)	NA	ND (0.20)	ND (1.0)	NA
6-S-11	10/23/1998	ND (0.20)	NA	ND (0.20)	NA	ND (0.20)	ND (1.0)	NA
6-S-11	1/25/1999	ND (0.20)	NA	ND (0.20)	NA	ND (0.20)	ND (1.0)	NA
6-S-11	4/20/1999	ND (0.20)	0.51	ND (0.20)	NA	ND (0.20)	ND (1.0)	NA
6-S-11	7/26/1999	ND (0.20)	0.43	ND (0.20)	NA	ND (0.20)	ND (0.20)	NA
6-S-11	11/19/1999	ND (0.20)	NA	ND (0.20)	NA	ND (0.20)	ND (1.0)	NA
6-S-11	1/24/2000	ND (0.20)	NA	ND (0.20)	NA	ND (0.20)	ND (0.20)	NA
6-S-11	10/31/2000	ND (0.20)	NA	ND (0.20)	NA	ND (0.10)	ND (0.30)	NA
6-S-11	1/9/2001	ND (0.20)	NA	0.20 J	NA	ND (0.20)	ND (0.30)	NA
6-S-11	11/6/2001	ND (0.20)	NA	ND (0.10)	NA	ND (0.20)	ND (0.20)	NA
6-S-11	1/14/2002	ND (0.20)	NA	ND (0.10)	NA	ND (0.20)	ND (0.20)	NA
6-S-11	11/19/2002	ND (0.20)	NA	ND (0.10)	NA	ND (0.20)	ND (0.20)	NA
6-S-11	1/13/2003	ND (0.055)	NA	ND (0.048)	NA	ND (0.064)	ND (0.045)	NA
6-S-11	11/11/2003	ND (0.081)	NA	ND (0.066)	NA	ND (0.16)	ND (0.12)	ND (0.15)
6-S-11	1/19/2004	ND (0.081)	NA	ND (0.066)	NA	ND (0.16)	ND (0.12)	ND (0.20)
6-S-11	4/5/2004	ND (0.081)	NA	ND (0.066)	NA	ND (0.16)	ND (0.12)	ND (0.20)
6-S-11	11/2/2004	ND (0.081)	NA	ND (0.066)	NA	ND (0.16)	ND (0.12)	ND (0.47)
6-S-11	4/25/2005	ND (0.21)	NA	ND (0.16)	NA	ND (0.24)	ND (0.13)	**0.59 J**
6-S-11	11/1/2005	ND (0.21)	NA	ND (0.16)	NA	ND (0.24)	ND (0.13)	**1.4**
6-S-11	5/12/2006	ND (0.21)	NA	ND (0.16)	NA	ND (0.24)	ND (0.13)	**3.7**
6-S-11	11/17/2006	ND (0.21)	NA	ND (0.16)	NA	ND (0.24)	ND (0.13)	**3.0**
6-S-11	5/11/2007	0.20 J	0.21 J	0.030 J	NA	0.23 J	ND (0.13)	**3.2**
6-S-11	8/8/2013	NA	NA	NA	NA	NA	NA	**5.6**
6-S-11	2/12/2014	NA	NA	NA	NA	NA	NA	**5.2**
6-S-11	8/27/2014	ND (0.030)	NA	ND (0.020)	NA	ND (0.050)	ND (0.030)	**6.4**
6-S-11	3/2/2015	ND (0.030)	NA	ND (0.020)	NA	ND (0.050)	ND (0.030)	**6.1**
6-S-11	7/23/2015	ND (0.030)	NA	ND (0.020)	NA	ND (0.050)	ND (0.030)	**5.6**
6-S-11	1/27/2016	ND (0.030)	NA	ND (0.020)	NA	ND (0.050)	ND (0.030)	**6.0**
6-S-11	8/8/2016	ND (0.10)	NA	NA	NA	ND (0.080)	ND (0.075)	**5.1**
6-S-11	2/16/2017	ND (0.10)	NA	NA	NA	ND (0.080)	ND (0.075)	**5.5**
6-S-11	9/21/2017	ND (0.20)	NA	NA	NA	ND (0.20)	ND (0.10) UJ	**5.0**
6-S-11	2/14/2018	ND (0.10)	NA	NA	NA	ND (0.10)	ND (0.10)	**5.8**
6-S-11	9/18/2018	ND (0.10)	NA	NA	NA	ND (0.10)	ND (0.10)	**4.5**
6-S-11	2/21/2019	ND (0.10)	NA	NA	NA	ND (0.10)	ND (0.10)	**6.55**
6-S-11	9/3/2019	ND (0.10)	NA	NA	NA	ND (0.10)	ND (0.10)	**3.6**
6-S-11	2/12/2020	ND (0.10)	NA	NA	NA	ND (0.10)	ND (0.10)	**5.1**
6-S-11	9/15/2020	ND (0.15) UJ	ND (0.070) UJ	NA	NA	ND (0.070) UJ	ND (0.015) UJ	**2.0**
6-S-11	9/15/2020 (Dup)	ND (0.15) UJ	ND (0.070) UJ	NA	NA	ND (0.070) UJ	ND (0.015) UJ	**2.0**
6-S-12	12/8/1995	1.4	7.2	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-S-12	10/31/1996	1.9	5.2	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-S-12	1/28/1997	1.2	1.9	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-S-12	5/1/1997	ND (1.0)	1.5	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NA
6-S-12	7/24/1997	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NA
6-S-12	10/16/1997	0.71	1.6	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
6-S-12	10/20/1998	ND (0.20)	ND (0.50)	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
6-S-12	11/17/1999	ND (0.20)	2.7	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
6-S-12	10/31/2000	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.10)	ND (0.30)	NA
6-S-12	11/6/2001	ND (0.20)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.20)	ND (0.20)	NA
6-S-12	11/19/2002	ND (0.20)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.20)	ND (0.20)	NA
6-S-12	11/12/2003	ND (0.081)	ND (0.11)	ND (0.066)	ND (0.067)	ND (0.16)	ND (0.12)	ND (0.15)

Table C-2. OU 1 Area 6 Monitoring Well Analytical Results (continued)

Sample Location	Sample Date	Trichloroethene	1,1,1-Trichloroethane	1,1-Dichloroethane	cis-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,4-Dioxane
		Concentrations in µg/L						
	Remedial Goal	**5.0**	**200**	**--**	**--**	**7.0**	**0.029**	**0.44**
6-S-12	11/2/2004	ND (0.081)	ND (0.11)	ND (0.066)	ND (0.067)	ND (0.16)	ND (0.12)	ND (0.47)
6-S-12	11/3/2005	ND (0.21)	ND (0.21)	ND (0.16)	ND (0.13)	ND (0.24)	ND (0.13)	ND (0.47)
6-S-12	11/14/2006	ND (0.21)	ND (0.21)	ND (0.16)	ND (0.13)	ND (0.24)	ND (0.13)	ND (0.27)
6-S-13	2/13/1995	ND (25)	**340**	41	NA	ND (25)	ND (25)	NA
6-S-13	9/25/1995	ND (25)	**660**	310	NA	**25**	ND (25)	NA
6-S-13	12/8/1995	**12** J	**370**	580	NA	**36** J	ND (40)	NA
6-S-13	3/27/1996	ND (25)	160	460	NA	**10** J	ND (25)	NA
6-S-13	10/30/1996	ND (20)	**210**	250	NA	**12** J	ND (20)	NA
6-S-13	1/18/1997	ND (20)	**210**	510	NA	ND (20)	ND (20)	NA
6-S-13	4/30/1997	ND (10)	130	300	ND (10)	**17**	ND (10)	NA
6-S-13	7/28/1997	ND (10)	65	210	ND (10)	**7.9** J	ND (10)	NA
6-S-13	10/15/1997	5.0	68	330	0.66	**9.3**	**0.53**	NA
6-S-13	4/15/1998	1.8	54	240	ND (0.20)	**14**	ND (1.0)	NA
6-S-13	7/28/1998	0.25	160	370	ND (0.20)	**8.7**	ND (1.0)	NA
6-S-13	7/28/1998 (Dup)	0.25	140	360	ND (0.20)	**9.5**	ND (1.0)	NA
6-S-13	10/26/1998	ND (2.0)	44	190	ND (2.0)	5.7	ND (10)	NA
6-S-13	10/26/1998 (Dup)	ND (2.0)	51	190	ND (2.0)	5.9	ND (10)	NA
6-S-13	4/22/1999	ND (2.0)	51	110	ND (2.0)	5.5	ND (1.0)	NA
6-S-13	7/28/1999	4.0	36	110	ND (2.0)	5.3	ND (0.20)	NA
6-S-13	11/24/1999	1.5	100	240	0.63	**10**	ND (1.0)	NA
6-S-13	11/24/1999 (Dup)	2.0	160	360	ND (0.20)	**12**	ND (1.0)	NA
6-S-13	1/28/2000	0.65 J	130	260	ND (0.20)	**33**	ND (0.20)	NA
6-S-13	4/25/2000	ND (0.20)	44	120	ND (0.20)	7.0	ND (0.20)	NA
6-S-13	10/26/2000	ND (0.20)	93 J	120 J	ND (0.20)	**14** J	ND (0.30)	NA
6-S-13	1/11/2001	ND (2.0)	**210** D	180 D	ND (2.0)	**33** D	ND (3.0)	NA
6-S-13	4/11/2001	ND (0.50)	64	120 D	ND (0.50)	**13**	ND (0.50)	NA
6-S-13	11/13/2001	ND (0.20)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.20)	ND (0.20)	NA
6-S-13	1/15/2002	ND (0.20)	41 D	72	ND (0.10)	**12**	ND (0.20)	NA
6-S-13	4/16/2002	ND (1.0)	27 D	69 D	ND (0.50)	**10** D	ND (1.0)	NA
6-S-13	11/22/2002	ND (0.20)	35	73	ND (0.10)	**18**	ND (0.20)	NA
6-S-13	1/14/2003	ND (0.055)	49	81 D	ND (0.067)	**28** J	**0.25** J	NA
6-S-13	4/22/2003	ND (0.081)	27	79	ND (0.067)	**18**	**0.92**	NA
6-S-13	11/20/2003	ND (0.081)	21	45	ND (0.067)	**15**	**0.9**	ND (0.15)
6-S-13	1/21/2004	ND (0.081)	11	33	ND (0.067)	**8.3**	**1.3**	ND (0.20)
6-S-13	4/6/2004	ND (0.081)	17	48	ND (0.067)	**12**	ND (0.12)	ND (0.20)
6-S-13	11/5/2004	ND (0.081)	11	32	ND (0.067)	**8.5**	**0.45** J	ND (0.47)
6-S-13	1/24/2005	ND (0.081)	5.6	27	ND (0.069)	5.4	**0.75**	ND (0.47)
6-S-13	4/27/2005	ND (0.21)	14	38	ND (0.13)	**11**	ND (0.13)	ND (0.47)
6-S-13	11/3/2005	ND (0.21)	8.7	29	ND (0.13)	**7.5**	**0.54**	ND (0.47)
6-S-13	2/7/2006	0.42 J	8.0	47	0.15 J	**7.1**	ND (0.13)	ND (0.47)
6-S-13	5/8/2006	ND (0.21)	5.2	30	ND (0.13)	4.7	ND (0.13)	ND (0.47)
6-S-13	8/15/2006	ND (0.21)	3.7	37	ND (0.13)	6.4	ND (0.13)	ND (0.27)
6-S-13	11/9/2006	ND (0.21)	130 D	140 D	ND (0.13)	**110** D	**0.32** J	ND (0.27)
6-S-13	2/21/2007	ND (0.21)	59 D	130 D	ND (0.13)	**66** D	**0.83**	ND (0.27)
6-S-13	5/9/2007	ND (0.21)	22	55 D	ND (0.13)	**24**	**0.18** J	ND (0.27)
6-S-13	8/13/2007	ND (0.21)	38	81 D	ND (0.13)	**45**	**0.27** J	NA
6-S-14	2/14/1995	ND (1.0)	4.8	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-S-14	9/24/1995	ND (1.0)	ND (1.0)	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-S-14	3/26/1996	ND (1.0)	0.64 J	0.72 J	NA	ND (1.0)	**1.2**	NA
6-S-14	10/15/1997	4.1	13	1.1	0.37	0.38	**0.5**	NA
6-S-14	10/23/1998	ND (0.20)	ND (0.50)	1.1	ND (0.20)	ND (0.20)	ND (1.0)	NA
6-S-14	4/21/1999	ND (0.20)	ND (0.50)	0.61	ND (0.20)	ND (0.20)	ND (1.0)	NA
6-S-14	11/18/1999	ND (0.20)	ND (0.50)	0.48	ND (0.20)	ND (0.20)	ND (1.0)	NA
6-S-14	10/27/2000	ND (0.20)	ND (0.20)	1.7 J	ND (0.20)	ND (0.10)	ND (0.30)	NA
6-S-14	11/7/2001	ND (0.20)	ND (0.10)	0.83	ND (0.10)	ND (0.20)	**0.21** J	NA
6-S-14	11/20/2002	ND (0.20)	0.18 J	1.1	ND (0.10)	ND (0.20)	ND (0.20)	NA
6-S-14	11/13/2003	ND (0.081)	ND (0.11)	0.42 J	ND (0.067)	ND (0.16)	**0.13** J	**13**
6-S-14	11/4/2004	ND (0.081)	ND (0.11)	0.67	ND (0.067)	ND (0.16)	ND (0.12)	**12**
6-S-14	10/27/2005	ND (0.21)	ND (0.21)	0.73	ND (0.13)	ND (0.24)	ND (0.13)	**18**
6-S-14	11/16/2006	ND (0.21)	ND (0.21)	0.46 J	ND (0.13)	ND (0.24)	ND (0.13)	**16**
6-S-14	8/5/2010	ND (0.030)	ND (0.030)	0.65	ND (0.040)	ND (0.050)	ND (0.030)	**8.9**
6-S-14	2/15/2011	ND (0.030)	ND (0.030)	0.63	ND (0.040)	ND (0.050)	ND (0.030)	**8.8**
6-S-14	8/9/2011	ND (0.030)	0.03 J	0.72	ND (0.040)	ND (0.050)	ND (0.030)	**8.9**
6-S-14	2/8/2012	ND (0.030)	ND (0.030)	0.57	ND (0.040)	ND (0.050)	ND (0.030)	**11**
6-S-14	8/13/2012	ND (0.030)	ND (0.030)	0.73	ND (0.040)	ND (0.050)	ND (0.030)	**8.0**
6-S-14	2/11/2013	ND (0.030)	0.03 J	0.58	ND (0.040)	ND (0.050)	ND (0.030)	**7.6**
6-S-14	8/12/2013	ND (0.030)	0.03 J	0.56	ND (0.040)	ND (0.050)	ND (0.030)	**7.1**
6-S-14	2/6/2014	ND (0.030)	0.03 J	0.53	ND (0.040)	ND (0.050)	ND (0.030)	**6.5**
6-S-14	8/28/2014	ND (0.030)	0.05 J	0.66	ND (0.040)	ND (0.050)	ND (0.030)	**7.0**
6-S-14	2/26/2015	ND (0.030)	0.04 J	0.59	ND (0.040)	ND (0.050)	ND (0.030)	**5.4**

Table C-2. OU 1 Area 6 Monitoring Well Analytical Results (continued)

Sample Location	Sample Date	Trichloroethene	1,1,1-Trichloroethane	1,1-Dichloroethane	cis-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,4-Dioxane
		Concentrations in µg/L						
	Remedial Goal	**5.0**	**200**	**--**	**--**	**7.0**	**0.029**	**0.44**
6-S-14	7/23/2015	ND (0.030)	ND (0.030)	0.53	ND (0.040)	ND (0.050)	ND (0.030)	**6.1**
6-S-14	1/25/2016	ND (0.030)	ND (0.030)	0.47 J	ND (0.040)	ND (0.050)	ND (0.030)	**6.2**
6-S-14	8/10/2016	ND (0.10)	ND (0.075)	NA	NA	ND (0.080) UJ	ND (0.075) UJ	**5.7**
6-S-14	2/15/2017	ND (0.10)	ND (0.075)	NA	NA	ND (0.080)	ND (0.075)	**4.1**
6-S-14	9/18/2017	ND (0.20) UJ	ND (0.20) UJ	NA	NA	ND (0.20) UJ	ND (0.10) UJ	**4.4**
6-S-14	2/13/2018	ND (0.10)	ND (0.10)	NA	NA	ND (0.10)	ND (0.10)	**5.5**
6-S-14	9/13/2018	ND (0.10)	ND (0.10)	NA	NA	ND (0.10)	ND (0.10)	**3.7**
6-S-14	2/26/2019	ND (0.10)	ND (0.10)	NA	NA	ND (0.10)	ND (0.10)	**4.69**
6-S-14	9/3/2019	ND (0.10)	ND (0.10)	NA	NA	ND (0.10)	ND (0.10)	**2.7**
6-S-14	2/12/2020	ND (0.10)	ND (0.10)	NA	NA	ND (0.10)	ND (0.10)	**3.9**
6-S-14	9/10/2020	ND (0.15) UJ	ND (0.070) UJ	NA	NA	ND (0.070) UJ	ND (0.015) UJ	**2.6**
6-S-14	2/10/2021	ND (0.15)	ND (0.070)	NA	NA	ND (0.070)	ND (0.015)	**3.5**
6-S-14	9/19/2021	ND (0.15)	ND (0.070)	NA	NA	ND (0.070)	ND (0.015)	NA
6-S-14	9/30/2021	NA	NA	NA	NA	NA	NA	**2.9**
6-S-14	2/9/2022	ND (0.15)	ND (0.070)	NA	NA	ND (0.070)	ND (0.015)	**3.3**
6-S-14	9/26/2022	ND (0.50)	ND (0.80)	NA	NA	ND (0.50)	ND (0.50) UJ	**3.1** J
6-S-14	2/13/2023	ND (0.50)	ND (0.80)	NA	NA	ND (0.50)	ND (0.50)	**2.7**
6-S-15	2/14/1995	ND (1.0)	ND (1.0)	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-S-15	9/24/1995	ND (1.0)	1.7	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-S-15	12/6/1995	ND (1.0)	0.75 J	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-S-15	7/25/1997	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NA
6-S-15	10/28/1997	ND (0.20)	ND (0.50)	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
6-S-15	10/21/1998	ND (0.20)	ND (0.50)	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
6-S-15	8/13/2012	NA	NA	NA	NA	NA	NA	**3.7**
6-S-15	2/11/2013	NA	NA	NA	NA	NA	NA	**2.8**
6-S-15	8/12/2013	NA	NA	NA	NA	NA	NA	**3.2**
6-S-15	2/6/2014	NA	NA	NA	NA	NA	NA	**3.4**
6-S-15	8/28/2014	NA	NA	NA	NA	NA	NA	**3.6**
6-S-15	2/26/2015	NA	NA	NA	NA	NA	NA	**2.6**
6-S-15	7/23/2015	NA	NA	NA	NA	NA	NA	**3.5**
6-S-15	1/25/2016	NA	NA	NA	NA	NA	NA	**3.1**
6-S-15	8/4/2016	NA	NA	NA	NA	NA	NA	**2.7**
6-S-15	2/15/2017	NA	NA	NA	NA	NA	NA	**2.1**
6-S-15	9/18/2017	NA	NA	NA	NA	NA	NA	**1.8**
6-S-15	2/13/2018	NA	NA	NA	NA	NA	NA	**2.4**
6-S-15	9/13/2018	NA	NA	NA	NA	NA	NA	**2.4**
6-S-15	2/19/2019	NA	NA	NA	NA	NA	NA	**3.27**
6-S-15	8/28/2019	NA	NA	NA	NA	NA	NA	**1.0** J
6-S-15	2/12/2020	NA	NA	NA	NA	NA	NA	**2.7**
6-S-15	9/15/2020	NA	NA	NA	NA	NA	NA	**1.1**
6-S-15	2/10/2021	NA	NA	NA	NA	NA	NA	**2.9**
6-S-15	2/10/2021 (Dup)	NA	NA	NA	NA	NA	NA	**2.9**
6-S-15	9/30/2021	NA	NA	NA	NA	NA	NA	**2.2**
6-S-15	2/9/2022	NA	NA	NA	NA	NA	NA	**2.7**
6-S-15	9/26/2022	NA	NA	NA	NA	NA	NA	**2.7**
6-S-15	9/26/2022 (Dup)	NA	NA	NA	NA	NA	NA	**2.6**
6-S-15	2/13/2023	NA	NA	NA	NA	NA	NA	**2.0**
6-S-15	2/13/2023 (Dup)	NA	NA	NA	NA	NA	NA	**2.0**
6-S-16	4/10/2006	NA	NA	NA	NA	NA	NA	**3.9**
6-S-16	5/22/2006	NA	NA	NA	NA	NA	NA	**4.1**
6-S-16	8/18/2006	NA	NA	NA	NA	NA	NA	**5.5**
6-S-16	11/9/2006	NA	NA	NA	NA	NA	NA	**12**
6-S-16	2/26/2007	NA	NA	NA	NA	NA	NA	**4.9**
6-S-16	5/9/2007	NA	NA	NA	NA	NA	NA	**3.5**
6-S-16	8/13/2007	NA	NA	NA	NA	NA	NA	**4.7**
6-S-16	2/21/2008	NA	NA	NA	NA	NA	NA	**5.3**
6-S-16	8/28/2008	NA	NA	NA	NA	NA	NA	**3.3**
6-S-16	4/28/2009	NA	NA	NA	NA	NA	NA	**2.5**
6-S-16	8/14/2009	NA	NA	NA	NA	NA	NA	**1.4**
6-S-16	8/3/2010	ND (0.030)	1.1 J	0.35 J	ND (0.040)	ND (0.050)	**0.12** J	0.32 J
6-S-16	2/14/2011	ND (0.030)	1.3 J	0.45 J	0.05 J	0.07 J	**0.3**	0.18 J
6-S-16	8/10/2011	ND (0.030)	1.3 J	0.51	0.08 J	0.09 J	**0.34**	ND (0.16)
6-S-16	2/9/2012	ND (0.030)	1	0.37 J	0.09 J	0.06 J	**0.24**	ND (0.16)
6-S-16	8/14/2012	ND (0.030)	1.3	0.38 J	0.11 J	0.07 J	**0.38**	**0.52** J
6-S-16	2/12/2013	ND (0.030)	0.99	0.3 J	0.14	0.07 J	**0.07** J	ND (0.16)
6-S-16	8/13/2013	ND (0.030)	0.96	0.26 J	0.11 J	ND (0.050)	**0.07** J	ND (0.16)
6-S-16	2/10/2014	ND (0.030)	0.7	0.2 J	0.11 J	ND (0.050)	**0.07** J	ND (0.16)
6-S-16	8/28/2014	ND (0.030)	0.87	0.22 J	0.11 J	ND (0.050)	**0.04** J	ND (0.16)
6-S-16	2/26/2015	ND (0.030)	0.76	0.21 J	0.14 J	ND (0.050)	ND (0.030)	ND (0.16)
6-S-16	7/22/2015	ND (0.030)	0.53	0.16 J	0.12 J	ND (0.050)	ND (0.030)	ND (0.16)

Table C-2. OU 1 Area 6 Monitoring Well Analytical Results (continued)

Sample Location	Sample Date	Trichloroethene	1,1,1-Trichloroethane	1,1-Dichloroethane	cis-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,4-Dioxane
		Concentrations in µg/L						
	Remedial Goal	**5.0**	**200**	**--**	**--**	**7.0**	**0.029**	**0.44**
6-S-16	1/25/2016	ND (0.030)	0.54	0.15 J	0.13 J	ND (0.050)	**0.04** J	ND (0.16)
6-S-16	8/8/2016	ND (0.10)	0.5	NA	NA	ND (0.080)	ND (0.075)	ND (0.16)
6-S-16	2/13/2017	ND (0.10)	0.7	NA	NA	ND (0.080)	ND (0.075)	0.21 J
6-S-16	9/18/2017	ND (0.20) UJ	0.56 J	NA	NA	ND (0.20) UJ	ND (0.10) UJ	0.44
6-S-16	2/12/2018	ND (0.10)	0.55	NA	NA	ND (0.10)	**0.07** J	**0.56**
6-S-16	9/17/2018	ND (0.10)	0.35	NA	NA	ND (0.10)	ND (0.10)	**0.57**
6-S-16	2/21/2019	ND (0.10)	0.34	NA	NA	ND (0.10)	ND (0.10)	**0.539**
6-S-16	8/26/2019 & 9/4/2019	ND (0.15) UJJ1	0.46 JJ1	NA	NA	ND (0.15)	**0.1** M	0.25
6-S-16	2/5/2020	ND (0.15) M	0.44	NA	NA	ND (0.15)	**0.056**	**0.57**
6-S-16	9/9/2020	ND (0.15) UJ	0.57 J	NA	NA	0.04 J	**0.099** J	**0.59** J
6-S-16	2/9/2021	ND (0.15) M	0.39	NA	NA	ND (0.070)	ND (0.015)	**0.86** M
6-S-16	9/21/2021	ND (0.15)	0.45	NA	NA	ND (0.070)	ND (0.015)	**0.92**
6-S-16	2/14/2022	ND (0.15)	0.43	NA	NA	ND (0.070)	**0.067** J	**1.1**
6-S-16	9/19/2022	ND (0.15)	0.42	NA	NA	ND (0.070)	**0.17**	**0.67**
6-S-16	2/7/2023	ND (0.0100)	0.221	NA	NA	0.0170 J	0.0238	**2.2**
6-S-17	4/10/2006	NA	NA	NA	NA	NA	NA	**7.5**
6-S-17	5/22/2006	NA	NA	NA	NA	NA	NA	**17**
6-S-17	8/18/2006	NA	NA	NA	NA	NA	NA	**14**
6-S-17	11/9/2006	NA	NA	NA	NA	NA	NA	**17**
6-S-17	2/26/2007	NA	NA	NA	NA	NA	NA	**14**
6-S-17	5/9/2007	NA	NA	NA	NA	NA	NA	**11**
6-S-17	8/13/2007	NA	NA	NA	NA	NA	NA	**13**
6-S-17	2/22/2008	NA	NA	NA	NA	NA	NA	**11**
6-S-17	8/28/2008	NA	NA	NA	NA	NA	NA	**8.7**
6-S-17	4/28/2009	NA	NA	NA	NA	NA	NA	**10**
6-S-17	8/18/2009	NA	NA	NA	NA	NA	NA	**11**
6-S-17	8/3/2010	ND (0.030)	0.56 J	1.4	ND (0.040)	0.1 J	**0.09** J	**8.3**
6-S-17	2/15/2011	ND (0.030)	0.59 J	1.2	ND (0.040)	0.11 J	**0.09** J	**9.4**
6-S-17	8/10/2011	ND (0.030)	0.56 J	1.1	ND (0.040)	0.09 J	**0.05** J	**7.8**
6-S-17	2/9/2012	ND (0.030)	0.71	1.1	ND (0.040)	0.1 J	**0.07** J	**8.3**
6-S-17	8/14/2012	ND (0.030)	1.1	1.1	ND (0.040)	0.13 J	**0.1**	**1.8**
6-S-17	2/11/2013	ND (0.030)	1.3	1.1	ND (0.040)	0.13 J	**0.08** J	**1.0**
6-S-17	8/13/2013	ND (0.030)	1.1	1.1	ND (0.040)	0.1 J	**0.08** J	**0.74** J
6-S-17	2/10/2014	ND (0.030)	0.91	0.83	ND (0.040)	0.1 J	**0.04** J	**0.8** J
6-S-17	8/28/2014	ND (0.030)	1.1	0.85	ND (0.040)	0.11 J	**0.06** J	ND (0.16)
6-S-17	3/2/2015	ND (0.030)	0.94	0.76	ND (0.040)	0.08 J	ND (0.030)	0.3 J
6-S-17	7/22/2015	ND (0.030)	1	0.72	ND (0.040)	0.07 J	**0.04** J	0.4
6-S-17	1/25/2016	ND (0.030)	0.97	0.62	ND (0.040)	0.06 J	**0.05** J	0.31 J
6-S-17	8/4/2016	ND (0.10)	0.8	NA	NA	0.09 J	ND (0.075)	ND (0.16)
6-S-17	2/14/2017	ND (0.10)	1	NA	NA	ND (0.080)	ND (0.075)	ND (0.16)
6-S-17	9/18/2017	ND (0.20) UJ	1.2 J	NA	NA	0.1 J	ND (0.10) UJ	ND (0.20)
6-S-17	2/12/2018	ND (0.10)	0.83	NA	NA	0.1 J	ND (0.10)	0.15
6-S-17	9/17/2018	ND (0.10)	0.55	NA	NA	ND (0.10)	ND (0.10)	ND (0.20)
6-S-17	2/20/2019	ND (0.10)	0.63	NA	NA	0.06 J	ND (0.10)	0.122 J
6-S-17	8/26/2019 & 9/4/2019	ND (0.15)	0.91	NA	NA	ND (0.15) M	**0.041** M	0.086 J
6-S-17	2/5/2020	ND (0.15) M	0.86	NA	NA	ND (0.15)	**0.09** M	**0.53**
6-S-17	9/8/2020	ND (0.15) UJ	0.86 J	NA	NA	0.074 J	**0.087** J	**0.52**
6-S-17	2/8/2021	0.085 J	0.59	NA	NA	0.073 J	**0.032**	**0.5**
6-S-17	2/8/2021 (Dup)	ND (0.15)	0.54	NA	NA	0.069 J	ND (0.015)	**0.54**
6-S-17	9/19/2021	ND (0.15)	0.63	NA	NA	0.037 J	**0.056**	NA
6-S-17	9/30/2021	NA	NA	NA	NA	NA	NA	**0.47**
6-S-17	2/9/2022	ND (0.15)	0.54	NA	NA	0.038 J	ND (0.015)	**0.8**
6-S-17	9/19/2022	0.28	0.54	NA	NA	ND (0.070)	ND (0.015)	**1.1**
6-S-17	2/7/2023	ND (0.0100)	0.402	NA	NA	0.0485	**0.0293**	**1.5**
6-S-19	2/13/1995	ND (2.0)	7.7	ND (2.0)	NA	ND (2.0)	**2.5**	NA
6-S-19	9/21/1995	ND (5.0)	ND (50)	ND (5.0)	NA	ND (5.0)	ND (5.0)	NA
6-S-19	12/7/1995	ND (5.0)	6.7	ND (5.0)	NA	ND (5.0)	**4.2** J	NA
6-S-19	3/29/1996	**6.6**	42	ND (2.0)	NA	1.5 J	ND (2.0)	NA
6-S-19	8/27/1996	ND (1.0)	3.9	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-S-19	10/31/1996	4.7	20	ND (2.0)	NA	0.37 J	ND (2.0)	NA
6-S-19	1/28/1997	ND (2.0)	7.1	ND (2.0)	NA	ND (2.0)	ND (2.0)	NA
6-S-19	4/29/1997	ND (2.5)	5.1	ND (2.5)	ND (2.5)	ND (2.5)	**0.99** J	NA
6-S-19	7/23/1997	ND (2.5)	3.4	ND (2.5)	ND (2.5)	ND (2.5)	ND (2.5)	NA
6-S-19	10/14/1997	ND (0.20)	5.4	ND (0.20)	ND (0.20)	1.6	**2**	NA
6-S-19	1/19/1998	ND (0.20)	8.1	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
6-S-19	4/13/1998	ND (0.20)	8.4	ND (0.20)	ND (0.20)	ND (0.20)	**1.4**	NA
6-S-19	7/27/1998	ND (0.20)	8.7	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
6-S-19	10/22/1998	ND (0.20)	9.1	ND (0.20)	ND (0.20)	ND (0.20)	**1.3**	NA
6-S-19	10/22/1998 (Dup)	ND (0.20)	9.3	ND (0.20)	ND (0.20)	ND (0.20)	**1.3**	NA
6-S-19	1/25/1999	ND (0.20)	7.7	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA

Table C-2. OU 1 Area 6 Monitoring Well Analytical Results (continued)

Sample Location	Sample Date	Trichloroethene	1,1,1-Trichloroethane	1,1-Dichloroethane	cis-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,4-Dioxane
		Concentrations in µg/L						
	Remedial Goal	**5.0**	**200**	**--**	**--**	**7.0**	**0.029**	**0.44**
6-S-19	1/25/1999 (Dup)	ND (0.20)	7.5	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
6-S-19	4/21/1999	ND (0.20)	7.1	ND (0.20)	ND (0.20)	ND (0.20)	**1.9**	NA
6-S-19	4/21/1999 (Dup)	ND (0.20)	6.9	ND (0.20)	ND (0.20)	ND (0.20)	**1.8**	NA
6-S-19	7/26/1999	ND (0.20)	7.9	ND (0.20)	ND (0.20)	ND (0.20)	**3.2**	NA
6-S-19	7/26/1999 (Dup)	ND (0.20)	7.3	ND (0.20)	ND (0.20)	ND (0.20)	**3.2**	NA
6-S-19	11/19/1999	ND (0.20)	6.5	ND (0.20)	ND (0.20)	ND (0.20)	**3.6**	NA
6-S-19	1/25/2000	ND (0.20)	7.9	0.22 J	ND (0.20)	ND (0.24)	**1.6**	NA
6-S-19	1/25/2000 (Dup)	ND (0.20)	7.0	ND (0.20)	ND (0.20)	ND (0.24)	**1.5**	NA
6-S-19	4/24/2000	ND (0.20)	8.5	0.4 J	ND (0.20)	ND (0.30)	**3.3**	NA
6-S-19	4/24/2000 (Dup)	ND (0.20)	8.5	0.4 J	ND (0.20)	ND (0.30)	**3.3**	NA
6-S-19	7/24/2000	ND (0.50)	8.2	0.5 J	ND (0.50)	0.3 J	**2.9**	NA
6-S-19	10/26/2000	ND (0.20)	6.9 J	0.5 J	ND (0.20)	0.3 J	**3.0** J	NA
6-S-19	1/10/2001	ND (0.20)	9.0	0.52	ND (0.20)	0.3 J	**2.5**	NA
6-S-19	4/11/2001	ND (0.50)	ND (6.1)	0.57	ND (0.50)	0.3 J	**3.3**	NA
6-S-19	7/11/2001	ND (0.12)	5.5	0.58	ND (0.12)	0.29 J	**3.2**	NA
6-S-19	11/7/2001	ND (0.20)	6.4	0.74	ND (0.10)	0.31 J	**3.1**	NA
6-S-19	1/15/2002	ND (0.20)	10	1.3	ND (0.10)	0.39 J	**3.0**	NA
6-S-19	4/15/2002	ND (0.20)	5.7	0.64	ND (0.10)	0.34 J	**3.0**	NA
6-S-19	7/10/2002	ND (0.20)	6.7	1.1	ND (0.10)	0.41 J	**2.7**	NA
6-S-19	11/19/2002	ND (0.20)	6.2	1.1	ND (0.10)	0.39 J	**2.3**	NA
6-S-19	1/13/2003	ND (0.055)	5.7	0.66	ND (0.067)	ND (0.50)	**3.2**	NA
6-S-19	4/21/2003	ND (0.081)	7.1	0.96	ND (0.067)	0.58	**2.8**	NA
6-S-19	6/24/2003	ND (0.081)	6.4	0.99	ND (0.067)	ND (0.50)	**2.3**	**6.5** J
6-S-19	11/17/2003	ND (0.081)	7.0	1.3	ND (0.067)	0.72	**3.0**	**6.5**
6-S-19	1/19/2004	ND (0.081)	5.6	1.2	ND (0.067)	0.5	**2.3**	**6.3**
6-S-19	4/5/2004	ND (0.081)	6.1	1.7	ND (0.067)	0.86	**2.6**	**4.6**
6-S-19	7/19/2004	ND (0.081)	6.0	1.9	ND (0.067)	0.53	**2.6**	**4.5**
6-S-19	11/2/2004	ND (0.081)	5.2	1.9	ND (0.067)	0.53	**2.1**	**4.5**
6-S-19	1/17/2005	ND (0.081)	4.8	2.1	ND (0.069)	0.51	**1.7**	**4.8**
6-S-19	4/26/2005	ND (0.21)	5.9	2.7	ND (0.13)	0.57	**2.3**	**3.8**
6-S-19	7/26/2005	ND (0.21)	4.2	2.2	ND (0.13)	0.44 J	**2.4**	**8.8** J
6-S-19	10/27/2005	ND (0.21)	3.3	1.0	ND (0.13)	0.38 J	**1.9**	**7.8**
6-S-19	2/8/2006	ND (0.21)	2.7	3.0	ND (0.13)	0.38 J	**2.2**	**7.4**
6-S-19	5/8/2006	ND (0.21)	3.1	2.2	ND (0.13)	0.4 J	**1.9**	**6.9**
6-S-19	8/15/2006	ND (0.21)	2.3	1.5	ND (0.13)	0.32 J	**1.8**	**6.3**
6-S-19	11/7/2006	ND (0.21)	2.1	3.5	ND (0.13)	0.4 J	**1.5**	**4.7**
6-S-19	2/21/2007	ND (0.21)	2.2	1.9	ND (0.13)	0.39 J	**1.7**	**5.6**
6-S-19	5/7/2007	ND (0.21)	2.5	4.2	ND (0.13)	0.43 J	**1.4**	**10**
6-S-19	8/13/2007	ND (0.060)	2.3	3.8	ND (0.050)	0.41 J	**1.2**	**12**
6-S-19	8/28/2008	ND (0.50)	1.2	3.1	ND (0.50)	0.26 J	**1.4**	**9.5**
6-S-19	8/18/2009	ND (0.030)	1.9	4	ND (0.040)	0.44 J	**1.5**	**10**
6-S-19	8/2/2010	ND (0.030)	0.98 J	2.6	ND (0.040)	0.24 J	**1.2**	**5.7**
6-S-19	2/10/2011	ND (0.030)	1.6	3.8	ND (0.040)	0.38 J	**0.91**	**5.1**
6-S-19	8/9/2011	ND (0.030)	1.4	3.9	ND (0.040)	0.3 J	**0.63**	**3.2**
6-S-19	2/13/2012	ND (0.030)	1.7	4.5	ND (0.040)	0.4 J	**0.78**	**4.7**
6-S-19	8/14/2012	ND (0.030)	1.2	3.3	ND (0.040)	0.35 J	**1.1**	**6.7**
6-S-19	2/12/2013	ND (0.030)	1.1	3.2	ND (0.040)	0.32 J	**1.1**	**8.1**
6-S-19	8/13/2013	ND (0.030)	0.83	3.2	ND (0.040)	0.31 J	**0.89**	**5.7**
6-S-19	2/11/2014	ND (0.030)	0.49 J	3.3	ND (0.040)	0.3 J	**0.86**	**4.3**
6-S-19	9/2/2014	ND (0.030)	0.63	4.4	ND (0.040)	0.34 J	**0.62**	**5.4**
6-S-19	3/4/2015	ND (0.030)	0.65	4.4	ND (0.040)	0.31 J	**0.86**	**6.1**
6-S-19	7/27/2015	ND (0.030)	0.6	4.1	ND (0.040)	0.27 J	**1.0**	**7.2**
6-S-19	1/27/2016	ND (0.030)	0.63	3.8	ND (0.040)	0.25 J	**0.86**	**7.6**
6-S-19	8/8/2016	ND (0.10)	0.42 J	NA	NA	0.34 J	**0.85**	**9.1**
6-S-19	2/16/2017	ND (0.10)	0.17 J	NA	NA	0.19 J	**0.83**	**6.8**
6-S-19	9/20/2017	ND (0.20) UJ	0.86 J	NA	NA	0.35 J	**0.8** J	**7.2**
6-S-19	2/14/2018	ND (0.10)	1.1	NA	NA	0.23	**0.48**	**10**
6-S-19	9/17/2018	ND (0.10)	0.56	NA	NA	0.22	**0.55**	**7.6**
6-S-19	2/20/2019	ND (0.10)	0.63	NA	NA	0.26	**0.57**	**9.21**
6-S-19	8/28/2019	ND (0.10)	0.41	NA	NA	0.23	**0.46**	**4.6**
6-S-19	2/10/2020	ND (0.10)	0.1 J	NA	NA	ND (0.10)	ND (0.10)	**5.9**
6-S-19	9/14/2020	ND (0.15) UJ	0.45 J	NA	NA	0.29 J	**0.54** J	**1.1**
6-S-19	2/11/2021	ND (0.15)	0.51	NA	NA	0.26	**0.37**	**5.2**
6-S-19	9/21/2021	ND (0.15)	0.63	NA	NA	0.23	**0.4**	**4.1**
6-S-19	2/10/2022	ND (0.15)	0.46	NA	NA	0.21	**0.34**	**5.2**
6-S-19	9/20/2022	ND (0.50)	ND (0.80)	NA	NA	ND (0.50)	**0.29** J	**4.8**
6-S-19	2/9/2023	ND (0.50)	ND (0.80)	NA	NA	ND (0.50)	**0.30** J	**4.2**

Table C-2. OU 1 Area 6 Monitoring Well Analytical Results (continued)

Sample Location	Sample Date	Trichloroethene	1,1,1-Trichloroethane	1,1-Dichloroethane	cis-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,4-Dioxane
		Concentrations in µg/L						
	Remedial Goal	**5.0**	**200**	**--**	**--**	**7.0**	**0.029**	**0.44**
6-S-21	2/13/1995	ND (50)	**810**	ND (50)	NA	**29** J	ND (50)	NA
6-S-21	9/21/1995	ND (50)	**920**	ND (50)	NA	**32** J	ND (50)	NA
6-S-21	12/10/1995	ND (25)	**360**	ND (25)	NA	**17** J	ND (25)	NA
6-S-21	3/27/1996	ND (10)	**350**	ND (10)	NA	**11**	ND (10)	NA
6-S-21	8/27/1996	2.8 J	**260**	ND (10)	NA	**16**	ND (10)	NA
6-S-21	10/30/1996	ND (10)	**240**	ND (10)	NA	**7.9** J	ND (10)	NA
6-S-21	1/30/1997	ND (10)	160	ND (10)	NA	**8.7** J	ND (10)	NA
6-S-21	1/31/1997	ND (10)	**360**	ND (10)	NA	**12**	ND (10)	NA
6-S-21	2/3/1997	ND (10)	**340**	ND (10)	NA	**10**	ND (10)	NA
6-S-21	5/2/1997	ND (10)	**290**	ND (10)	ND (10)	**14**	ND (10)	NA
6-S-21	7/23/1997	ND (10)	**240**	ND (10)	ND (10)	**15**	ND (10)	NA
6-S-21	10/14/1997	0.26	**310**	0.64	ND (0.20)	**20**	ND (0.20)	NA
6-S-21	10/14/1997 (Dup)	0.28	**330**	0.64	ND (0.20)	**20**	ND (0.20)	NA
6-S-21	1/20/1998	ND (0.20)	**360**	ND (0.20)	ND (0.20)	**21**	ND (1.0)	NA
6-S-21	1/20/1998 (Dup)	ND (0.20)	**340**	ND (0.20)	ND (0.20)	**20**	ND (1.0)	NA
6-S-21	4/14/1998	ND (0.20)	**380**	ND (0.20)	ND (0.20)	**18**	ND (1.0)	NA
6-S-21	7/29/1998	2.1	**300**	0.25	ND (0.20)	**17**	ND (1.0)	NA
6-S-21	10/26/1998	ND (0.20)	**310**	ND (0.20)	ND (0.20)	**11**	ND (1.0)	NA
6-S-21	1/25/1999	ND (0.20)	82	ND (0.20)	ND (0.20)	**7.5**	ND (1.0)	NA
6-S-21	4/22/1999	ND (0.20)	120	ND (0.20)	ND (0.20)	**11**	ND (1.0)	NA
6-S-21	7/28/1999	ND (0.20)	110	ND (0.20)	ND (0.20)	**9.9**	ND (0.20)	NA
6-S-21	11/24/1999	ND (0.20)	87	ND (0.20)	ND (0.20)	**8.0**	ND (1.0)	NA
6-S-21	1/27/2000	4.9	110	ND (0.20)	0.28 J	**9.2**	ND (0.20)	NA
6-S-21	4/28/2000	ND (0.20)	84	ND (0.10)	ND (0.20)	**9.7**	ND (0.20)	NA
6-S-21	7/25/2000	ND (0.50)	92 D	ND (0.50)	ND (0.50)	**7.3**	ND (0.50)	NA
6-S-21	10/25/2000	ND (0.20)	0.4 J	ND (0.20)	ND (0.20)	ND (0.10)	ND (0.30)	NA
6-S-21	1/11/2001	ND (0.20)	ND (0.20)	ND (0.10)	ND (0.20)	ND (0.20)	ND (0.30)	NA
6-S-21	4/12/2001	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	NA
6-S-21	7/11/2001	ND (0.12)	2.8	ND (0.091)	ND (0.12)	0.64	ND (0.22)	NA
6-S-21	11/7/2001	ND (0.20)	0.39 J	ND (0.10)	ND (0.10)	ND (0.20)	ND (0.10)	NA
6-S-21	1/14/2002	ND (0.20)	2.1	ND (0.10)	ND (0.10)	0.31 J	ND (0.20)	NA
6-S-21	4/15/2002	ND (0.20)	1.2	ND (0.10)	ND (0.10)	0.65	ND (0.20)	NA
6-S-21	7/10/2002	ND (0.20)	5.4	ND (0.10)	ND (0.10)	1.5	ND (0.20)	NA
6-S-21	11/21/2002	ND (0.20)	5.6	ND (0.10)	ND (0.10)	0.5	ND (0.20)	NA
6-S-21	1/13/2003	ND (0.055)	6.6	ND (0.048)	ND (0.067)	ND (0.63)	ND (0.045)	NA
6-S-21	4/21/2003	ND (0.081)	5.3	ND (0.066)	ND (0.067)	0.38 J	ND (0.12)	NA
6-S-21	6/24/2003	ND (0.081)	ND (6.5)	ND (0.066)	ND (0.067)	ND (0.50)	ND (0.12)	**7.1** J
6-S-21	11/18/2003	ND (0.081)	5.7	ND (0.066)	ND (0.067)	0.48 J	ND (0.12)	**8.0**
6-S-21	1/21/2004	ND (0.081)	5.2	ND (0.066)	ND (0.067)	0.52	ND (0.12)	**7.5**
6-S-21	4/5/2004	ND (0.081)	3.9	ND (0.066)	ND (0.067)	ND (0.12)	ND (0.12)	**6.2**
6-S-21	7/19/2004	ND (0.081)	3.4	ND (0.066)	ND (0.067)	0.31 J	ND (0.12)	**6.2**
6-S-21	11/1/2004	ND (0.081)	7.5	ND (0.066)	ND (0.067)	0.85	ND (0.12)	**6.8** J
6-S-21	1/17/2005	ND (0.081)	3.9	ND (0.066)	ND (0.069)	0.72	ND (0.12)	**8.2**
6-S-21	4/25/2005	ND (0.21)	5.3 J	ND (0.16)	ND (0.13)	0.44 J	ND (0.13)	**5.9** J
6-S-21	7/26/2005	ND (0.21)	5.4	ND (0.16)	ND (0.13)	0.37 J	ND (0.13)	**8.6** J
6-S-21	10/31/2005	ND (0.21)	0.71	ND (0.16)	ND (0.13)	ND (0.24)	ND (0.13)	**8.1**
6-S-21	2/6/2006	ND (0.21)	4.2	ND (0.16)	ND (0.13)	0.28 J	ND (0.13)	**6.6**
6-S-21	5/9/2006	ND (0.21)	5.5	ND (0.16)	ND (0.13)	0.39 J	ND (0.13)	**6.9**
6-S-21	8/15/2006	ND (0.21)	1.7	ND (0.16)	ND (0.13)	ND (0.24)	ND (0.13)	**7.3**
6-S-21	11/9/2006	ND (0.21)	30	ND (0.16)	ND (0.13)	2.4	ND (0.13)	**6.8**
6-S-21	2/20/2007	ND (0.21)	13	ND (0.16)	ND (0.13)	1.7	ND (0.13)	**5.5**
6-S-21	5/1/2007	ND (0.21)	5.4	ND (0.16)	ND (0.13)	0.84	ND (0.13)	**6.3**
6-S-21	8/14/2007	ND (0.21)	9.3	ND (0.16)	ND (0.13)	1.7	ND (0.13)	NA
6-S-22	2/14/1995	**5.8**	14	ND (1.0)	NA	1.3	ND (1.0)	NA
6-S-22	9/25/1995	ND (1.0)	8.7	0.53 J	NA	ND (1.0)	ND (1.0)	NA
6-S-22	9/25/1995 (Dup)	ND (1.0)	9.1	0.57 J	NA	ND (1.0)	ND (1.0)	NA
6-S-22	12/11/1995	0.93 J	5.2	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-S-22	3/28/1996	1.7	ND (1.0)	0.56 J	NA	ND (1.0)	ND (1.0)	NA
6-S-22	11/5/1996	ND (1.0)	0.91 J	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-S-22	11/5/1996 (Dup)	ND (1.0)	0.73 J	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-S-22	1/30/1997	3.6	1.6	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-S-22	5/3/1997	**5.1**	1.7	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NA
6-S-22	7/25/1997	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NA
6-S-22	10/16/1997	0.44	0.87	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
6-S-22	10/21/1998	ND (0.20)	ND (0.50)	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
6-S-22	11/18/1999	ND (0.20)	1.2	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
6-S-22	10/25/2000	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.10)	ND (0.30)	NA
6-S-22	11/5/2001	ND (0.20)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.20)	ND (0.20)	NA
6-S-22	11/18/2002	ND (0.20)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.20)	ND (0.20)	NA
6-S-22	11/11/2003	ND (0.081)	ND (0.11)	ND (0.066)	ND (0.067)	ND (0.16)	ND (0.12)	**8.7**

Table C-2. OU 1 Area 6 Monitoring Well Analytical Results (continued)

Sample Location	Sample Date	Trichloroethene	1,1,1-Trichloroethane	1,1-Dichloroethane	cis-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,4-Dioxane
		Concentrations in µg/L						
	Remedial Goal	**5.0**	**200**	**--**	**--**	**7.0**	**0.029**	**0.44**
6-S-22	11/2/2004	ND (0.081)	ND (0.11)	ND (0.066)	ND (0.067)	ND (0.16)	ND (0.12)	**7.3**
6-S-22	10/31/2005	ND (0.21)	ND (0.21)	ND (0.16)	ND (0.13)	ND (0.24)	ND (0.13)	**8.7**
6-S-22	11/13/2006	ND (0.21)	ND (0.21)	ND (0.16)	ND (0.13)	ND (0.24)	ND (0.13)	**8.3**
6-S-23	9/10/1993	ND (1.0)	4.4	5.8	NA	ND (1.0)	**2.4**	NA
6-S-23	2/14/1995	ND (1.0)	3.6	1.1	NA	ND (1.0)	**0.47** J	NA
6-S-23	9/24/1995	**5.8**	32	3.4	NA	2.2 J	**2.6**	NA
6-S-23	3/26/1996	ND (1.0)	2.6	4.6	NA	ND (1.0)	**1.7**	NA
6-S-23	10/15/1997	**7.7**	38	4.2	0.77	1.0	**0.42**	NA
6-S-23	4/14/1998	ND (0.20)	ND (0.50)	6.7	ND (0.20)	ND (0.20)	**1.1**	NA
6-S-23	10/23/1998	ND (0.20)	1.8	5.3	ND (0.20)	ND (0.20)	ND (1.0)	NA
6-S-23	4/21/1999	ND (0.20)	0.83	3.4	ND (0.20)	ND (0.20)	ND (1.0)	NA
6-S-23	11/22/1999	ND (0.20)	0.78	2.6	0.48	ND (0.20)	ND (1.0)	NA
6-S-23	10/27/2000	ND (0.20)	0.63 J	4.3 J	0.4 J	ND (0.10)	**0.54** J	NA
6-S-23	11/7/2001	ND (0.20)	2.2	5.3	ND (0.10)	ND (0.20)	**1.9**	NA
6-S-23	11/20/2002	ND (0.20)	0.88	3.6	0.38 J	ND (0.20)	**0.49** J	NA
6-S-23	11/20/2003	ND (0.081)	1.1	3.2	0.27 J	0.17 J	**0.78**	**6.9**
6-S-23	11/4/2004	ND (0.081)	1.0	2.8	0.19 J	ND (0.16)	**0.82**	**1.5**
6-S-23	10/27/2005	ND (0.21)	0.96	2.0	0.14 J	0.26 J	**0.71**	**4.8**
6-S-23	11/9/2006	ND (0.21)	0.78	2.9	ND (0.13)	ND (0.24)	**0.51**	**8.3**
6-S-24	9/13/1993	ND (1.0)	ND (1.0)	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-S-24	2/15/1995	3.3 J	76	ND (5.0)	NA	**8.2**	ND (5.0)	NA
6-S-24	9/26/1995	2.0	64	ND (2.0)	NA	ND (2.0)	ND (2.0)	NA
6-S-24	12/8/1995	**21**	100	ND (5.0)	NA	6.4	ND (5.0)	NA
6-S-24	3/29/1996	**5.1**	34	0.80 J	NA	0.66 J	ND (1.0)	NA
6-S-24	8/17/1996	ND (4.0)	67	ND (4.0)	NA	0.88 J	ND (4.0)	NA
6-S-24	10/30/1996	1.6 J	120	ND (5.0)	NA	ND (5.0)	ND (5.0)	NA
6-S-24	1/28/1997	1.3 J	140	ND (5.0)	NA	ND (5.0)	ND (5.0)	NA
6-S-24	5/1/1997	ND (10)	**270**	ND (10)	ND (10)	ND (10)	ND (10)	NA
6-S-24	7/24/1997	ND (10)	**260**	ND (10)	ND (10)	ND (10)	ND (10)	NA
6-S-24	10/16/1997	1.6	**230**	ND (0.20)	ND (0.20)	**22**	ND (0.2)	NA
6-S-24	1/20/1998	ND (0.20)	98	ND (0.20)	ND (0.20)	0.44	ND (1.0)	NA
6-S-24	4/15/1998	**5.9**	29	ND (0.20)	0.55	0.87	ND (1.0)	NA
6-S-24	7/28/1998	1.1	26	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
6-S-24	10/26/1998	3.4	17	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
6-S-24	1/26/1999	ND (0.20)	11	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
6-S-24	4/22/1999	0.31	9.7	ND (0.20)	ND (0.20)	0.3	ND (1.0)	NA
6-S-24	7/26/1999	ND (0.20)	6.9	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	NA
6-S-24	11/19/1999	ND (0.20)	5.5	ND (0.20)	ND (0.20)	0.22	ND (1.0)	NA
6-S-24	1/26/2000	ND (0.20)	5.6	ND (0.20)	ND (0.20)	ND (0.24)	ND (0.20)	NA
6-S-24	4/24/2000	ND (0.20)	5.7	ND (0.10)	ND (0.20)	ND (0.30)	ND (0.20)	NA
6-S-24	7/25/2000	ND (0.50)	4.2	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	NA
6-S-24	10/31/2000	ND (0.20)	3.8 J	ND (0.20)	ND (0.20)	ND (0.10)	ND (0.30)	NA
6-S-24	1/10/2001	ND (0.20)	3.3	ND (0.10)	ND (0.20)	ND (0.20)	ND (0.30)	NA
6-S-24	4/11/2001	ND (0.50)	ND (30)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	NA
6-S-24	7/11/2001	ND (0.12)	3.4	ND (0.091)	ND (0.12)	ND (0.12)	ND (0.12)	NA
6-S-24	11/6/2001	ND (0.20)	4.5	ND (0.10)	ND (0.10)	ND (0.20)	ND (0.20)	NA
6-S-24	1/14/2002	ND (0.20)	4.2	ND (0.10)	ND (0.10)	ND (0.20)	ND (0.20)	NA
6-S-24	4/15/2002	ND (0.20)	4.0	ND (0.10)	ND (0.10)	ND (0.20)	ND (0.20)	NA
6-S-24	7/10/2002	ND (0.20)	3.8	ND (0.10)	ND (0.10)	ND (0.20)	ND (0.20)	NA
6-S-24	11/19/2002	ND (0.20)	3.8	ND (0.10)	ND (0.10)	ND (0.20)	ND (0.20)	NA
6-S-24	1/14/2003	ND (0.055)	4.7	ND (0.048)	ND (0.067)	ND (0.50)	ND (0.045)	NA
6-S-24	4/21/2003	ND (0.081)	5.5	ND (0.066)	ND (0.067)	ND (0.16)	ND (0.12)	NA
6-S-24	6/24/2003	ND (0.081)	ND (60)	ND (0.066)	ND (0.067)	ND (0.16)	ND (0.12)	ND (0.15)
6-S-24	11/12/2003	ND (0.081)	11	ND (0.066)	ND (0.067)	0.31 J	ND (0.12)	ND (0.15)
6-S-24	1/21/2004	ND (0.081)	16	ND (0.066)	ND (0.067)	0.29 J	ND (0.12)	ND (0.20)
6-S-24	4/6/2004	ND (0.081)	14	ND (0.066)	ND (0.067)	0.17 J	ND (0.12)	ND (0.20)
6-S-24	7/20/2004	ND (0.081)	33	ND (0.066)	ND (0.067)	0.79	ND (0.12)	ND (0.47)
6-S-24	11/2/2004	ND (0.081)	39	ND (0.066)	ND (0.067)	1.2	ND (0.12)	ND (0.47)
6-S-24	1/24/2005	ND (0.081)	ND (52)	ND (0.066)	ND (0.069)	1.1	ND (0.12)	ND (0.47)
6-S-24	4/26/2005	ND (0.21)	87	ND (0.16)	ND (0.13)	0.27 J	ND (0.13)	ND (0.47)
6-S-24	7/27/2005	ND (0.21)	100	ND (0.16)	ND (0.13)	ND (0.24)	ND (0.13)	ND (0.47)
6-S-24	11/7/2005	ND (0.21)	140 D	ND (0.16)	ND (0.13)	**10**	ND (0.13)	ND (0.47)
6-S-24	2/10/2006	ND (0.21)	130 D	ND (0.16)	ND (0.13)	ND (0.24)	ND (0.13)	ND (0.47)
6-S-24	5/12/2006	ND (0.21)	130 D	ND (0.16)	ND (0.13)	0.35 J	ND (0.13)	ND (0.47)
6-S-24	8/18/2006	ND (0.21)	160 D	ND (0.16)	ND (0.13)	0.37	ND (0.13)	ND (0.27)
6-S-24	11/14/2006	ND (0.21)	150 D	ND (0.16)	ND (0.13)	0.43 J	ND (0.13)	ND (0.27)
6-S-24	2/26/2007	ND (0.21)	140 D	ND (0.16)	ND (0.13)	4.4	ND (0.13)	ND (0.27)
6-S-24	5/11/2007	0.9 J	160 D	ND (0.16)	ND (0.13)	0.12 J	ND (0.13)	ND (0.27)
6-S-24	8/16/2007	0.16 J	140 D	ND (0.030)	ND (0.050)	0.55	ND (0.040)	ND (0.26)
6-S-24	2/22/2008	ND (0.060)	170 D	ND (0.030)	ND (0.050)	0.55	ND (0.040)	NA

Table C-2. OU 1 Area 6 Monitoring Well Analytical Results (continued)

Sample Location	Sample Date	Trichloroethene	1,1,1-Trichloroethane	1,1-Dichloroethane	cis-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,4-Dioxane
		Concentrations in µg/L						
	Remedial Goal	**5.0**	**200**	**--**	**--**	**7.0**	**0.029**	**0.44**
6-S-24	8/25/2008	ND (0.50)	160 D	ND (0.50)	ND (0.50)	0.65	ND (0.060)	NA
6-S-24	4/30/2009	ND (0.50)	160 D	ND (0.50)	ND (0.50)	1.0	ND (0.060)	NA
6-S-24	8/20/2009	0.26 J	140 D	ND (0.020)	ND (0.040)	1.3	ND (0.030)	NA
6-S-24	8/10/2010	ND (0.030)	120 D	ND (0.020)	ND (0.040)	0.9	ND (0.030)	ND (0.16)
6-S-24	2/9/2011	ND (0.030)	98 D	0.04 J	ND (0.040)	0.84	ND (0.030)	0.36 J
6-S-24	8/4/2011	ND (0.030)	120 D	ND (0.020)	ND (0.040)	0.87	ND (0.030)	ND (0.16)
6-S-24	2/7/2012	ND (0.030)	89 D	0.07 J	ND (0.040)	1.0	ND (0.030)	**0.57** J
6-S-24	8/7/2012	ND (0.030)	120 D	0.05 J	ND (0.040)	1.3	ND (0.030)	**0.8** J
6-S-24	2/6/2013	ND (0.030)	110 D	0.07 J	ND (0.040)	1.1	ND (0.030)	0.41 J
6-S-24	8/7/2013	ND (0.030)	130 D	0.06 J	ND (0.040)	1.3	ND (0.030)	0.33 J
6-S-24	2/4/2014	ND (0.030)	120 D	ND (0.020)	ND (0.040)	1.4	ND (0.030)	0.2 J
6-S-24	9/8/2014	ND (0.030)	150 D	ND (0.020)	ND (0.040)	1.3	ND (0.030)	ND (0.16)
6-S-24	3/9/2015	ND (0.030)	130 D	ND (0.020)	ND (0.040)	1.3	ND (0.030)	ND (0.16)
6-S-24	8/3/2015	ND (0.030)	110 D	ND (0.020)	ND (0.040)	1.3	ND (0.030)	ND (0.16)
6-S-24	2/3/2016	ND (0.20)	130	ND (0.20)	ND (0.20)	3.9	ND (0.20)	ND (0.16)
6-S-24	8/16/2016	ND (0.10)	120 D	NA	NA	1.2	ND (0.075)	0.17 J
6-S-24	2/23/2017	ND (0.10)	110 D	NA	NA	1.5	ND (0.075)	**0.54**
6-S-24	9/26/2017	ND (0.20)	100 EJ	NA	NA	1.5	ND (0.10)	ND (0.20)
6-S-24	2/20/2018	ND (0.10)	75	NA	NA	6.4	ND (0.10) UJ	0.1 J
6-S-24	9/24/2018	ND (0.10)	83.3	NA	NA	**7.58**	ND (0.10)	ND (0.20)
6-S-24	2/28/2019	ND (0.10)	87.2	NA	NA	4.31	ND (0.10)	ND (0.050)
6-S-24	9/10/2019	ND (0.10)	78.8	NA	NA	5.96	ND (0.10)	0.15 J
6-S-24	2/18/2020	ND (0.10)	75.9	NA	NA	**8.63**	ND (0.10)	0.083 JM
6-S-24	9/16/2020	ND (0.15) UJ	110 J	NA	NA	2.2 J	ND (0.015) UJ	ND (0.051) UJ
6-S-24	2/18/2021	ND (0.15)	110	NA	NA	1.6	ND (0.015) UJ	ND (0.051)
6-S-24	2/18/2021 (Dup)	ND (0.15)	120	NA	NA	1.6	ND (0.015)	ND (0.051)
6-S-24	9/27/2021	ND (0.15)	100	NA	NA	1.3 J	ND (0.15)	ND (0.049)
6-S-24	2/16/2022	ND (1.5)	100	NA	NA	2.1	ND (0.15)	ND (0.050)
6-S-24	2/16/2022 (Dup)	ND (1.5)	100	NA	NA	1.6 J	ND (0.15)	ND (0.051)
6-S-24	9/22/2022	ND (2.5)	89	NA	NA	1.8 J	ND (2.5)	ND (0.052)
6-S-24	9/22/2022 (Dup)	ND (2.5)	90	NA	NA	1.9 J	ND (2.5)	ND (0.050)
6-S-24	2/16/2023	ND (5.0)	57	NA	NA	ND (5.0)	ND (5.0)	ND (0.053)
6-S-24	2/16/2023 (Dup)	ND (5.0)	61	NA	NA	ND (5.0)	ND (5.0)	ND (0.052) UJ
6-S-25	9/9/1993	ND (200)	**3200**	ND (200)	NA	ND (200)	ND (200)	NA
6-S-25	2/13/1995	ND (100)	**2500**	ND (100)	NA	**26** J	ND (100)	NA
6-S-25	9/25/1995	ND (100)	**2400**	ND (100)	NA	ND (100)	ND (100)	NA
6-S-25	12/8/1995	**19** J	**1600**	ND (50)	NA	**56**	ND (50)	NA
6-S-25	3/27/1996	ND (100)	**1400**	ND (100)	NA	ND (100)	ND (100)	NA
6-S-25	8/17/1996	ND (200)	**3100**	ND (200)	NA	**67** J	ND (200)	NA
6-S-25	8/17/1996 (Dup)	ND (200)	**3200**	ND (200)	NA	ND (200)	ND (200)	NA
6-S-25	10/30/1996	ND (200)	**2300**	ND (200)	NA	ND (200)	ND (200)	NA
6-S-25	1/28/1997	ND (200)	**3500**	ND (200)	NA	ND (200)	ND (200)	NA
6-S-25	4/30/1997	ND (100)	**2700**	ND (100)	ND (100)	ND (100)	ND (100)	NA
6-S-25	7/28/1997	ND (100)	**3300**	ND (100)	ND (100)	ND (100)	ND (100)	NA
6-S-25	10/15/1997	**15**	**2200**	3.7	1.6	**25**	ND (0.20)	NA
6-S-25	1/20/1998	1.1	**4300**	2.1	ND (0.20)	**54**	ND (1.0)	NA
6-S-25	4/15/1998	3.3	**810**	7.9	ND (0.20)	**35**	ND (1.0)	NA
6-S-25	7/28/1998	0.51	**5100**	6.7	ND (0.20)	**67**	ND (1.0)	NA
6-S-25	10/26/1998	2.1	**3600**	4.3	ND (0.20)	**50**	ND (1.0)	NA
6-S-25	10/26/1998 (Dup)	2.3	**3800**	4.8	ND (0.20)	**50**	ND (1.0)	NA
6-S-25	1/26/1999	**17**	**2900**	1.1	2.3	**37**	ND (1.0)	NA
6-S-25	4/23/1999	**10**	**1800**	1.1	1.6	**57**	ND (1.0)	NA
6-S-25	7/28/1999	2.8	**2200**	2.0	ND (0.20)	**49**	ND (0.20)	NA
6-S-25	11/24/1999	2.3	**3200**	4.5	0.38	**110**	ND (1.0)	NA
6-S-25	1/28/2000	0.84 J	**3500**	4.6	ND (0.20)	**92**	ND (0.20)	NA
6-S-25	4/25/2000	ND (0.20)	**1800**	1.0	ND (0.20)	**59**	ND (0.20)	NA
6-S-25	7/24/2000	ND (0.50)	**1400** D	0.4 J	ND (0.50)	**130** D	ND (0.50)	NA
6-S-25	7/24/2000 (Dup)	ND (0.50)	**1500** D	0.4 J	ND (0.50)	**44** E	ND (0.50)	NA
6-S-25	10/26/2000	ND (0.20)	**1100** J	0.5 J	ND (0.20)	**44** J	ND (0.30)	NA
6-S-25	1/11/2001	ND (2.0)	**860** D	ND (1.0)	ND (2.0)	**24** D	ND (3.0)	NA
6-S-25	4/12/2001	ND (2.5)	**690** D	ND (2.5)	ND (2.5)	**29** D	ND (2.5)	NA
6-S-25	7/12/2001	ND (0.12)	**650** D	0.28 J	ND (0.12)	**31**	ND (0.22)	NA
6-S-25	11/13/2001	ND (0.20)	**510** D	0.23 J	ND (0.10)	**43**	ND (0.20)	NA
6-S-25	1/15/2002	ND (0.20)	**310** D	0.2 J	ND (0.10)	**27**	ND (0.20)	NA
6-S-25	4/16/2002	ND (20)	**330** D	ND (1.0)	ND (1.0)	**34** D	ND (2.0)	NA
6-S-25	7/11/2002	ND (0.20)	**310** D	0.15 J	ND (0.10)	**28**	ND (0.20)	NA
6-S-25	11/22/2002	0.25 J	**220**	0.16 J	ND (0.10)	**30**	ND (0.20)	NA
6-S-25	1/14/2003	ND (0.055)	**340** JD	0.25 J	ND (0.067)	**43** J	ND (0.045)	NA
6-S-25	4/23/2003	0.1 J	**350**	0.23 J	ND (0.067)	**47**	ND (0.12)	NA
6-S-25	6/25/2003	ND (0.081)	160	0.1 J	ND (0.067)	**26**	ND (0.12)	ND (0.15)

Table C-2. OU 1 Area 6 Monitoring Well Analytical Results (continued)

Sample Location	Sample Date	Trichloroethene	1,1,1-Trichloroethane	1,1-Dichloroethane	cis-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,4-Dioxane
		Concentrations in µg/L						
	Remedial Goal	**5.0**	**200**	**--**	**--**	**7.0**	**0.029**	**0.44**
6-S-25	11/20/2003	ND (0.081)	100	0.09 J	ND (0.067)	**22**	ND (0.12)	ND (0.15)
6-S-25	1/21/2004	ND (0.081)	100	0.09 J	ND (0.067)	**24**	ND (0.12)	ND (0.20)
6-S-25	4/6/2004	ND (0.081)	88	0.1 J	ND (0.067)	**20**	ND (0.12)	ND (0.20)
6-S-25	7/20/2004	ND (0.081)	65	ND (0.066)	ND (0.067)	**14**	ND (0.12)	ND (0.47)
6-S-25	11/8/2004	ND (0.081)	66	0.07 J	ND (0.067)	**17**	ND (0.12)	ND (0.47)
6-S-25	1/24/2005	ND (0.081)	110	0.11 J	ND (0.069)	**28**	ND (0.12)	ND (0.47)
6-S-25	4/27/2005	ND (0.21)	120	ND (0.16)	ND (0.13)	**24**	ND (0.13)	ND (0.47)
6-S-25	7/27/2005	ND (0.21)	130	ND (0.16)	ND (0.13)	**22**	ND (0.13)	ND (0.47)
6-S-25	11/7/2005	0.23 J	**220** D	ND (0.16)	ND (0.13)	**43**	ND (0.13)	ND (0.47)
6-S-25	2/9/2006	0.65	130 D	ND (0.16)	ND (0.13)	**22**	ND (0.13)	ND (0.47)
6-S-25	5/11/2006	ND (0.21)	78 D	ND (0.16)	ND (0.13)	**18**	ND (0.13)	ND (0.47)
6-S-25	8/17/2006	ND (0.21)	**480** D	0.19 J	ND (0.13)	**39**	ND (0.13)	ND (0.27)
6-S-25	11/17/2006	ND (0.21)	**510** D	0.32 J	ND (0.13)	**55**	ND (0.13)	ND (0.27)
6-S-25	2/23/2007	ND (0.21)	**240** D	ND (0.16)	ND (0.13)	**30**	ND (0.13)	ND (0.27)
6-S-25	5/10/2007	0.07 J	**220** D	0.06 J	ND (0.13)	**24**	ND (0.13)	ND (0.27)
6-S-25	8/15/2007	0.28 J	140 D	0.05 J	ND (0.050)	**17**	ND (0.040)	ND (0.26)
6-S-25	2/21/2008	ND (0.060)	**290** D	0.07 J	ND (0.050)	**26**	ND (0.040)	NA
6-S-25	8/27/2008	ND (0.070)	**760** D	0.34 J	ND (0.50)	**52**	ND (0.060)	NA
6-S-25	4/30/2009	0.08 J	**350** D	0.05 J	ND (0.50)	**27**	ND (0.060)	NA
6-S-25	8/20/2009	ND (0.030)	130 D	0.03 J	ND (0.040)	**14**	ND (0.030)	NA
6-S-25	8/5/2010	ND (0.030)	**290** D	0.05 J	ND (0.040)	**18**	ND (0.030)	ND (0.16)
6-S-25	2/16/2011	0.05 J	90 D	ND (0.020)	ND (0.040)	**8.2**	ND (0.030)	ND (0.16)
6-S-25	8/11/2011	0.18 J	110 D	0.03 J	ND (0.040)	**9.7**	ND (0.030)	ND (0.16)
6-S-25	2/15/2012	0.24 J	100 D	ND (0.020)	ND (0.040)	**7.8**	ND (0.030)	ND (0.16)
6-S-25	8/15/2012	0.12 J	100 D	0.03 J	ND (0.040)	**8.9**	ND (0.030)	ND (0.16)
6-S-25	2/14/2013	0.19 J	88 D	ND (0.020)	ND (0.040)	6.7	ND (0.030)	0.42 J
6-S-25	8/15/2013	ND (0.030)	75 D	ND (0.020)	ND (0.040)	5.7	ND (0.030)	0.34 J
6-S-25	2/19/2014	0.23 J	96 D	0.03 J	ND (0.040)	**7.6**	ND (0.030)	ND (0.16)
6-S-25	9/18/2014	0.03 J	84 D	ND (0.020)	ND (0.040)	5.3	ND (0.030)	ND (0.16)
6-S-25	3/10/2015	ND (0.030)	99 D	ND (0.020)	ND (0.040)	5.1	ND (0.030)	**1.2**
6-S-25	8/3/2015	ND (0.030)	79 D	ND (0.020)	ND (0.040)	4.5	ND (0.030)	**0.88**
6-S-25	2/3/2016	ND (0.20)	120	ND (0.20)	ND (0.20)	6.7	ND (0.20)	**0.46**
6-S-25	8/16/2016	ND (0.10)	110 D	NA	NA	4.1	ND (0.075)	ND (0.16)
6-S-25	2/22/2017	ND (0.10)	99 D	NA	NA	4.1	ND (0.075)	0.37 J
6-S-25	9/27/2017	ND (0.20)	100 D	NA	NA	3.3	ND (0.10)	ND (0.20) UJ
6-S-25	2/20/2018	ND (0.10)	75	NA	NA	**8.1**	ND (0.10) UJ	0.13 J
6-S-25	9/24/2018	ND (0.10)	76.8	NA	NA	**8.7**	ND (0.10)	ND (0.20)
6-S-25	2/27/2019	ND (0.10)	99	NA	NA	**7.86**	ND (0.10)	ND (0.050)
6-S-25	9/10/2019	ND (0.10)	82.6	NA	NA	**7.29**	ND (0.10)	ND (0.049)
6-S-25	2/19/2020	ND (0.10)	44.8	NA	NA	5.84	ND (0.10)	ND (0.049)
6-S-25	9/17/2020	ND (0.15) UJ	200 J	NA	NA	**15** J	ND (0.015) UJ	**0.46** J
6-S-25	2/18/2021	ND (0.15)	140	NA	NA	**9.7**	ND (0.015) UJ	0.29
6-S-25	9/27/2021	ND (1.5)	110	NA	NA	4.8	ND (0.15)	ND (0.048)
6-S-25	2/16/2022	ND (1.5)	120	NA	NA	**7.9**	ND (0.15)	ND (0.051)
6-S-25	9/22/2022	ND (2.5)	140	NA	NA	**8.2**	ND (2.5)	0.37
6-S-25	2/15/2023	ND (0.50)	120	NA	NA	6.0	ND (0.50)	ND (0.052) UJ
6-S-26	11/3/1996	ND (1.0)	0.48 J	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-S-26	2/3/1997	0.28 J	0.46 J	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-S-26	5/1/1997	ND (1.0)	0.69 J	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NA
6-S-26	7/28/1997	2.00	1.00	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NA
6-S-26	10/17/1997	0.87	1.4	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
6-S-26	10/19/1998	ND (0.20)	ND (0.50)	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
6-S-26	11/18/1999	ND (0.20)	1.7	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
6-S-26	10/26/2000	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.10)	ND (0.30)	NA
6-S-26	11/5/2001	ND (0.20)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.20)	ND (0.20)	NA
6-S-26	11/19/2002	ND (0.20)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.20)	ND (0.20)	NA
6-S-26	6/24/2003	ND (0.081)	ND (0.11)	ND (0.066)	ND (0.067)	ND (0.16)	ND (0.12)	**6.0** J
6-S-26	11/11/2003	ND (0.081)	ND (0.11)	ND (0.066)	ND (0.067)	ND (0.16)	ND (0.12)	**7.0**
6-S-26	11/1/2004	ND (0.081)	ND (0.11)	ND (0.066)	ND (0.067)	ND (0.16)	ND (0.12)	**6.1**
6-S-26	11/3/2005	ND (0.21)	ND (0.21)	ND (0.16)	ND (0.13)	ND (0.24)	ND (0.13)	**5.7**
6-S-26	11/16/2006	ND (0.21)	ND (0.21)	ND (0.16)	ND (0.13)	ND (0.24)	ND (0.13)	**5.8**
6-S-26	8/2/2010	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	**2.9**
6-S-26	2/14/2011	ND (0.030)	ND (0.030)	0.03 J	ND (0.040)	ND (0.050)	ND (0.030)	**3.2**
6-S-26	8/8/2011	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	**2.5**
6-S-26	2/8/2012	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	**3.1**
6-S-26	8/13/2012	ND (0.030)	ND (0.030)	0.03 J	ND (0.040)	ND (0.050)	ND (0.030)	**3.5**
6-S-26	2/7/2013	ND (0.030)	ND (0.030)	0.03 J	ND (0.040)	ND (0.050)	ND (0.030)	**1.7**
6-S-26	8/14/2013	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	**2.2**
6-S-26	2/5/2014	0.05 J	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	**1.7**
6-S-26	9/2/2014	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	**2.0**

Table C-2. OU 1 Area 6 Monitoring Well Analytical Results (continued)

Sample Location	Sample Date	Trichloroethene	1,1,1-Trichloroethane	1,1-Dichloroethane	cis-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,4-Dioxane
		Concentrations in µg/L						
	Remedial Goal	**5.0**	**200**	**--**	**--**	**7.0**	**0.029**	**0.44**
6-S-26	3/4/2015	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	**2.5**
6-S-26	7/28/2015	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	**2.8**
6-S-26	1/28/2016	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	**2.6**
6-S-26	8/4/2016	ND (0.10)	ND (0.075)	NA	NA	ND (0.080)	ND (0.075)	**2.2**
6-S-26	2/16/2017	ND (0.10)	ND (0.075)	NA	NA	ND (0.080)	ND (0.075)	**1.9**
6-S-26	9/14/2017	ND (0.20) UJ	ND (0.20) UJ	NA	NA	ND (0.20) UJ	ND (0.10) UJ	**2.3**
6-S-26	2/12/2018	ND (0.10)	ND (0.10)	NA	NA	ND (0.10)	ND (0.10)	**2.6**
6-S-26	9/19/2018	ND (0.10)	ND (0.10)	NA	NA	ND (0.10)	ND (0.10)	**2.0**
6-S-26	2/19/2019	ND (0.10)	ND (0.10)	NA	NA	ND (0.10)	ND (0.10)	**1.96**
6-S-26	8/28/2019	NA	NA	NA	NA	NA	NA	**1.3**
6-S-26	2/13/2020	NA	NA	NA	NA	NA	NA	**2.3**
6-S-26	9/10/2020	NA	NA	NA	NA	NA	NA	**1.6**
6-S-26	2/11/2021	NA	NA	NA	NA	NA	NA	**1.7**
6-S-26	9/22/2021	NA	NA	NA	NA	NA	NA	**0.61**
6-S-26	2/9/2022	NA	NA	NA	NA	NA	NA	**1.7**
6-S-26	9/19/2022	NA	NA	NA	NA	NA	NA	**1.5**
6-S-26	2/9/2023	NA	NA	NA	NA	NA	NA	**1.5**
6-S-27	9/16/1996	ND (10)	140	ND (10)	NA	4.7 J	ND (10)	NA
6-S-27	10/31/1996	ND (5.0)	73	ND (5.0)	NA	3.2 J	ND (5.0)	NA
6-S-27	1/28/1997	ND (5.0)	42	ND (5.0)	NA	ND (5.0)	ND (5.0)	NA
6-S-27	5/2/1997	ND (2.5)	34	ND (2.5)	ND (2.5)	2.7	ND (2.5)	NA
6-S-27	7/24/1997	1.2	20	ND (2.5)	ND (2.5)	1.9	ND (2.5)	NA
6-S-27	10/27/1997	1.0	25	ND (0.20)	ND (0.20)	3.7	ND (0.20)	NA
6-S-27	1/20/1998	ND (0.20)	18	ND (0.20)	ND (0.20)	2.1	ND (10)	NA
6-S-27	4/16/1998	4.2	19	ND (0.20)	ND (0.20)	2.2	ND (10)	NA
6-S-27	7/27/1998	ND (0.20)	17	ND (0.20)	ND (0.20)	1.4	ND (10)	NA
6-S-27	10/23/1998	ND (0.20)	9.8	ND (0.20)	ND (0.20)	1.2	ND (10)	NA
6-S-27	1/26/1999	ND (0.20)	6.5	ND (0.20)	ND (0.20)	1.1	ND (10)	NA
6-S-27	4/20/1999	ND (0.20)	2.3	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
6-S-27	7/26/1999	ND (0.20)	5.8	ND (0.20)	ND (0.20)	0.78	ND (0.20)	NA
6-S-27	11/19/1999	ND (0.20)	6.8	ND (0.20)	ND (0.20)	0.79	ND (1.0)	NA
6-S-27	1/27/2000	ND (0.20)	8.2	ND (0.20)	ND (0.20)	0.94 J	ND (0.20)	NA
6-S-27	4/25/2000	ND (0.20)	7.8	ND (0.20)	ND (0.20)	0.8	ND (0.20)	NA
6-S-27	7/25/2000	ND (0.50)	6.3	ND (0.50)	ND (0.50)	0.79	ND (0.50)	NA
6-S-27	10/31/2000	ND (0.20)	5.5 J	ND (0.20)	ND (0.20)	0.69 J	ND (0.30)	NA
6-S-27	1/10/2001	ND (0.20)	5.2	ND (0.10)	ND (0.20)	0.69	ND (0.30)	NA
6-S-27	4/11/2001	ND (0.50)	ND (4.7)	ND (0.50)	ND (0.50)	0.62	ND (0.50)	NA
6-S-27	7/11/2001	ND (0.12)	5.3	ND (0.091)	ND (0.12)	0.59	ND (0.22)	NA
6-S-27	11/6/2001	ND (0.20)	9.0	ND (0.10)	ND (0.10)	0.88	ND (0.20)	NA
6-S-27	1/14/2002	ND (0.20)	5.5	ND (0.10)	ND (0.10)	0.49 J	ND (0.20)	NA
6-S-27	4/16/2002	ND (0.20)	3.2	ND (0.10)	ND (0.10)	0.32 J	ND (0.20)	NA
6-S-27	7/10/2002	ND (0.20)	3.8	ND (0.10)	ND (0.10)	0.49 J	ND (0.20)	NA
6-S-27	11/20/2002	ND (0.20)	2.8	ND (0.10)	ND (0.10)	0.32 J	ND (0.20)	NA
6-S-27	1/14/2003	ND (0.055)	ND (3.4)	ND (0.048)	ND (0.067)	ND (0.50)	ND (0.045)	NA
6-S-27	4/22/2003	ND (0.081)	3.3	ND (0.066)	ND (0.067)	0.43 J	ND (0.12)	NA
6-S-27	6/25/2003	ND (0.081)	ND (2.9)	ND (0.066)	ND (0.067)	ND (0.50)	ND (0.12)	ND (0.15)
6-S-27	11/12/2003	ND (0.081)	3.3	ND (0.066)	ND (0.067)	0.66	ND (0.12)	ND (0.15)
6-S-27	1/20/2004	ND (0.081)	2.9	ND (0.066)	ND (0.067)	0.44 J	ND (0.12)	ND (0.20)
6-S-27	4/6/2004	ND (0.081)	2.4	ND (0.066)	ND (0.067)	0.2 J	ND (0.12)	ND (0.20)
6-S-27	7/20/2004	ND (0.081)	2.4	ND (0.066)	ND (0.067)	0.27 J	ND (0.12)	ND (0.47)
6-S-27	11/3/2004	ND (0.081)	1.5	ND (0.066)	ND (0.067)	ND (0.16)	ND (0.12)	ND (0.47)
6-S-27	1/18/2005	ND (0.081)	2.0	ND (0.066)	ND (0.069)	0.18 J	ND (0.12)	ND (0.47)
6-S-27	4/26/2005	ND (0.21)	1.5	ND (0.16)	ND (0.13)	ND (0.24)	ND (0.13)	ND (0.47)
6-S-27	7/27/2005	ND (0.21)	2.5	ND (0.16)	ND (0.13)	ND (0.24)	ND (0.13)	ND (0.47)
6-S-27	11/2/2005	ND (0.21)	3.4	ND (0.16)	ND (0.13)	0.29 J	ND (0.13)	ND (0.47)
6-S-27	2/9/2006	ND (0.21)	2.0	ND (0.16)	ND (0.13)	ND (0.24)	ND (0.13)	ND (0.47)
6-S-27	5/9/2006	ND (0.21)	3.0	ND (0.16)	ND (0.13)	0.27 J	ND (0.13)	ND (0.47)
6-S-27	8/16/2006	ND (0.21)	4.2	ND (0.16)	ND (0.13)	0.29 J	ND (0.13)	ND (0.27)
6-S-27	11/9/2006	ND (0.21)	4.7	ND (0.16)	ND (0.13)	0.35 J	ND (0.13)	ND (0.27)
6-S-27	2/22/2007	ND (0.21)	3.6	ND (0.16)	ND (0.13)	0.37 J	ND (0.13)	ND (0.27)
6-S-27	5/8/2007	ND (0.21)	3.4	0.05 J	ND (0.13)	0.25 J	ND (0.13)	ND (0.27)
6-S-27	8/15/2007	ND (0.060)	1.8	ND (0.32)	ND (0.050)	0.13 J	ND (0.040)	ND (0.26)
6-S-27	8/26/2008	ND (0.070)	2.2	ND (0.16)	ND (0.040)	0.18 J	ND (0.13)	NA
6-S-27	8/19/2009	ND (0.030)	1.3	ND (0.020)	ND (0.040)	0.12 J	ND (0.030)	NA
6-S-27	8/3/2010	ND (0.030)	1.3 J	ND (0.020)	ND (0.040)	0.12 J	ND (0.030)	ND (0.16)
6-S-27	2/9/2011	ND (0.030)	0.95	ND (0.020)	ND (0.040)	0.07 J	ND (0.030)	ND (0.16)
6-S-27	8/8/2011	ND (0.030)	1.1	ND (0.020)	ND (0.040)	0.08 J	ND (0.030)	ND (0.16)
6-S-27	2/6/2012	ND (0.030)	0.67	ND (0.020)	ND (0.040)	0.05 J	ND (0.030)	ND (0.16)
6-S-27	8/8/2012	ND (0.030)	0.96	ND (0.020)	ND (0.040)	0.07 J	ND (0.030)	ND (0.16)
6-S-27	2/6/2013	ND (0.030)	0.99	ND (0.020)	ND (0.040)	0.07 J	ND (0.030)	ND (0.16)

Table C-2. OU 1 Area 6 Monitoring Well Analytical Results (continued)

Sample Location	Sample Date	Trichloroethene	1,1,1-Trichloroethane	1,1-Dichloroethane	cis-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,4-Dioxane
		Concentrations in µg/L						
	Remedial Goal	**5.0**	**200**	**--**	**--**	**7.0**	**0.029**	**0.44**
6-S-27	8/7/2013	ND (0.030)	0.76	ND (0.020)	ND (0.040)	0.05 J	ND (0.030)	ND (0.16)
6-S-27	2/5/2014	ND (0.030)	1.1	ND (0.020)	ND (0.040)	0.07 J	ND (0.030)	ND (0.16)
6-S-27	8/27/2014	ND (0.030)	0.95	ND (0.020)	ND (0.040)	0.05 J	ND (0.030)	ND (0.16)
6-S-27	2/25/2015	ND (0.030)	0.78	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-S-27	7/22/2015	ND (0.030)	0.59	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-S-27	1/26/2016	ND (0.030)	0.58	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-S-27	8/9/2016	ND (0.10)	0.32 J	NA	NA	ND (0.080)	ND (0.075)	ND (0.16)
6-S-27	2/14/2017	ND (0.10)	0.62	NA	NA	ND (0.080)	ND (0.075)	ND (0.16)
6-S-27	9/13/2017	ND (0.20)	0.5	NA	NA	ND (0.20)	ND (0.10)	ND (0.20)
6-S-27	2/7/2018	ND (0.10)	0.43	NA	NA	ND (0.10)	ND (0.10)	ND (0.10)
6-S-27	9/12/2018	ND (0.10)	0.33	NA	NA	ND (0.10)	ND (0.10)	ND (0.20)
6-S-27	2/7/2019	ND (0.10)	0.6	NA	NA	0.08 J	ND (0.10)	ND (0.050)
6-S-27	8/27/2019	ND (0.15)	0.48	NA	NA	ND (0.15)	ND (0.017) UJQ	ND (0.048) Q
6-S-27	2/10/2020	ND (0.15) M	0.73	NA	NA	ND (0.15) M	ND (0.017)	0.11 J
6-S-27	9/9/2020	ND (0.15) UJ	0.77 J	NA	NA	0.046 J	ND (0.015) UJ	ND (0.050) UJ
6-S-27	2/9/2021	ND (0.15)	0.67	NA	NA	ND (0.070)	ND (0.015)	**0.67**
6-S-27	9/22/2021	ND (0.15)	0.42	NA	NA	ND (0.070)	ND (0.015)	0.43
6-S-27	2/14/2022	ND (0.15)	0.24 J	NA	NA	ND (0.070)	ND (0.015) UJ	0.28
6-S-27	9/20/2022	ND (0.15)	0.78	NA	NA	ND (0.070)	ND (0.015)	**1.3**
6-S-27	2/7/2023	ND (0.0100)	0.333	NA	NA	0.0123 J	ND (0.0100)	ND (0.050)
6-S-28	9/17/1996	ND (1.0)	ND (1.0)	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-S-28	10/31/1996	1.4	3.3	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-S-28	1/28/1997	**12**	11	ND (1.0)	NA	0.32 J	ND (1.0)	NA
6-S-28	5/2/1997	ND (1.0)	0.51 J	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NA
6-S-28	7/24/1997	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NA
6-S-28	10/27/1997	0.21	1.1	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	NA
6-S-28	4/14/1998	ND (0.20)	ND (0.50)	ND (0.20)	ND (0.20)	ND (0.20)	ND (10)	NA
6-S-28	10/20/1998	ND (0.20)	ND (0.50)	ND (0.20)	ND (0.20)	ND (0.20)	ND (10)	NA
6-S-28	4/20/1999	ND (0.20)	ND (0.50)	ND (0.20)	ND (0.20)	ND (0.20)	ND (10)	NA
6-S-28	11/17/1999	ND (0.20)	ND (0.50)	ND (0.20)	ND (0.20)	ND (0.20)	ND (10)	NA
6-S-28	10/31/2000	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.10)	ND (0.30)	NA
6-S-28	11/6/2001	ND (0.20)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.20)	ND (0.20)	NA
6-S-28	11/25/2002	ND (0.055)	ND (0.053)	ND (0.048)	ND (0.067)	ND (0.064)	ND (0.045)	NA
6-S-28	11/12/2003	ND (0.081)	ND (0.11)	ND (0.066)	ND (0.067)	ND (0.16)	ND (0.12)	ND (0.15)
6-S-28	11/3/2004	ND (0.081)	ND (0.11)	ND (0.066)	ND (0.067)	ND (0.16)	ND (0.12)	ND (0.47)
6-S-28	11/2/2005	ND (0.21)	ND (0.21)	ND (0.16)	ND (0.13)	ND (0.24)	ND (0.13)	ND (0.47)
6-S-28	11/9/2006	ND (0.21)	ND (0.21)	ND (0.16)	ND (0.13)	ND (0.24)	ND (0.13)	ND (0.27)
6-S-29	5/2/1997	0.63 J	7.8	2.2	ND (1.0)	ND (1.0)	**5.3**	NA
6-S-29	7/22/1997	ND (5.0)	5.5	ND (5.0)	ND (5.0)	ND (5.0)	**4.9** J	NA
6-S-29	10/28/1997	ND (0.20)	7.2	3.1	ND (0.20)	ND (0.20)	**4.4**	NA
6-S-29	10/28/1997 (Dup)	ND (0.20)	6.0	2.5	ND (0.20)	ND (0.20)	**3.3**	NA
6-S-29	1/19/1998	ND (0.20)	8.1	3.4	ND (0.20)	0.2	**5.2**	NA
6-S-29	4/13/1998	ND (0.20)	7.1	4.1	ND (0.20)	ND (0.20)	**5.6**	NA
6-S-29	7/28/1998	ND (0.20)	7.7	3.6	ND (0.20)	ND (0.20)	**4.2**	NA
6-S-29	10/22/1998	ND (0.20)	8.3	4.2	ND (0.20)	ND (0.20)	**5.5**	NA
6-S-29	10/22/1998 (Dup)	ND (0.20)	8.0	3.9	ND (0.20)	ND (0.20)	**5.3**	NA
6-S-29	1/25/1999	ND (0.20)	7.4	3.3	ND (0.20)	ND (0.20)	**4.8**	NA
6-S-29	4/21/1999	ND (0.20)	7.4	3.5	ND (0.20)	0.39	**5.9**	NA
6-S-29	7/26/1999	ND (0.20)	7.7	3.4	ND (0.20)	0.49	**9.0**	NA
6-S-29	11/24/1999	1.6	7.6	2.8	ND (0.20)	0.66	**4.1**	NA
6-S-29	11/24/1999 (Dup)	2.5	8.0	3.0	0.73	0.96	**3.9**	NA
6-S-29	1/26/2000	ND (0.20)	6.3	3.3	ND (0.20)	3.3	**3.0**	NA
6-S-29	4/24/2000	ND (0.20)	8.2	5.0	ND (0.20)	0.5 J	**4.7**	NA
6-S-29	7/24/2000	ND (0.50)	7.5	5.4	ND (0.50)	0.5 J	**4.2**	NA
6-S-29	10/26/2000	ND (0.20)	8.2 J	7.3 J	ND (0.20)	0.59 J	**4.6** J	NA
6-S-29	1/10/2001	ND (0.20)	9.1	7.2	ND (0.20)	0.66	**4.0**	NA
6-S-29	4/11/2001	ND (0.50)	7.3	7.4	ND (0.50)	0.57	**4.5**	NA
6-S-29	7/10/2001	ND (0.12)	6.0	7.1	ND (0.12)	0.58	**4.3**	NA
6-S-29	11/7/2001	ND (0.20)	3.6	5.3	ND (0.10)	0.28 J	**3.7**	NA
6-S-29	1/14/2002	ND (0.20)	7.6	8.8	ND (0.10)	0.61	**3.8**	NA
6-S-29	4/15/2002	ND (0.20)	5.6	7.4	ND (0.10)	0.54	**3.8**	NA
6-S-29	7/10/2002	ND (0.20)	5.7	7.5	ND (0.10)	0.67	**3.6**	NA
6-S-29	11/19/2002	ND (0.20)	3.9	5.5	ND (0.10)	0.41 J	**2.7**	NA
6-S-29	1/13/2003	ND (0.055)	3.4	4.1	ND (0.067)	ND (0.50)	**3.4**	NA
6-S-29	1/19/2003	ND (0.081)	3.8	5.6	ND (0.067)	0.64	**3.1**	**9.7**
6-S-29	4/21/2003	ND (0.081)	4.2	5.2	ND (0.067)	0.55	**3.4**	NA
6-S-29	6/24/2003	ND (0.081)	3.6	5.1	ND (0.067)	ND (0.50)	**2.9**	**8.4** J
6-S-29	11/17/2003	ND (0.081)	3.8	5.4	ND (0.067)	0.57	**3.8**	**9.7**
6-S-29	4/5/2004	ND (0.081)	2.3	3.6	ND (0.067)	0.41 J	**2.7**	**9.8**
6-S-29	7/19/2004	ND (0.081)	2.5	4.9	ND (0.067)	0.37 J	**2.2**	**10**

Table C-2. OU 1 Area 6 Monitoring Well Analytical Results (continued)

Sample Location	Sample Date	Trichloroethene	1,1,1-Trichloroethane	1,1-Dichloroethane	cis-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,4-Dioxane
		Concentrations in µg/L						
	Remedial Goal	**5.0**	**200**	**--**	**--**	**7.0**	**0.029**	**0.44**
6-S-29	11/2/2004	ND (0.081)	2.4	3.9	ND (0.067)	0.44 J	**2.5**	**8.0**
6-S-29	1/17/2005	ND (0.081)	3.0	7.5	ND (0.069)	0.7	**2.6**	**8.2**
6-S-29	4/26/2005	ND (0.21)	2.6	5.1	ND (0.13)	0.34 J	**2.5**	**9.9**
6-S-29	7/26/2005	ND (0.21)	1.7	4.4	ND (0.13)	0.28 J	**2.5**	**9.5 J**
6-S-29	10/27/2005	ND (0.21)	2.7	6.2	ND (0.13)	0.61	**1.7**	**14**
6-S-29	2/8/2006	ND (0.21)	1.8	7.8	ND (0.13)	0.41 J	**2.1**	**12**
6-S-29	5/8/2006	ND (0.21)	1.5	5.4	ND (0.13)	0.38 J	**1.7**	**13**
6-S-29	8/15/2006	ND (0.21)	1.7	7.5	ND (0.13)	0.45 J	**1.6**	**16**
6-S-29	11/7/2006	ND (0.21)	1.5	8.5	ND (0.13)	0.55	**1.6**	**16**
6-S-29	2/20/2007	ND (0.21)	1.3	6.5	ND (0.13)	0.38 J	**1.3**	**14**
6-S-29	5/7/2007	ND (0.21)	1.6	8.6	ND (0.13)	0.53	**1.7**	**17**
6-S-29	8/13/2007	ND (0.060)	1.4	8.2	ND (0.050)	0.51	**1.5**	**18**
6-S-29	2/21/2008	ND (0.060)	1.7	8.2	ND (0.050)	0.57	**1.4**	**16**
6-S-29	8/28/2008	ND (0.070)	0.97	7.5	ND (0.050)	0.46 J	**1.3**	**13**
6-S-29	4/29/2009	ND (0.070)	1.3	8.4	ND (0.050)	0.6 J	**1.1**	**9.6**
6-S-29	8/18/2009	ND (0.030)	1.1	8.4 J	ND (0.040)	0.55	**1.3**	**10**
6-S-29	8/2/2010	ND (0.030)	0.79 J	6.6	ND (0.040)	0.4 J	**0.75**	**7.0**
6-S-29	2/10/2011	ND (0.030)	1	6.4	ND (0.040)	0.42 J	**0.83**	**7.1**
6-S-29	8/9/2011	ND (0.030)	0.75	7.4	ND (0.040)	0.46 J	**0.79**	**8.0**
6-S-29	2/13/2012	ND (0.030)	0.94	6.8	ND (0.040)	0.43 J	**0.72**	**10**
6-S-29	8/14/2012	ND (0.030)	0.93	6.4	ND (0.040)	0.43 J	**0.75**	**9.4**
6-S-29	2/12/2013	ND (0.030)	0.91	5.8	ND (0.040)	0.39 J	**0.77**	**8.1**
6-S-29	8/13/2013	ND (0.030)	0.88	5.8	ND (0.040)	0.41 J	**0.81**	**20**
6-S-29	2/11/2014	ND (0.030)	0.41 J	3.7	ND (0.040)	0.23 J	**0.51**	**7.2**
6-S-29	9/3/2014	0.2 J	0.51	3.8	ND (0.040)	0.24 J	**0.44**	**7.7**
6-S-29	3/4/2015	ND (0.030)	0.45 J	3.9	ND (0.040)	0.22 J	**0.51**	**6.8**
6-S-29	7/28/2015	ND (0.030)	0.38 J	3.6	ND (0.040)	0.18 J	**0.51**	**7.9**
6-S-29	1/28/2016	ND (0.030)	0.44 J	3.8	ND (0.040)	0.2 J	**0.55**	**7.2**
6-S-29	8/11/2016	ND (0.10)	0.44 J	NA	NA	0.25 J	**0.59 J**	**7.2**
6-S-29	2/20/2017	ND (0.10)	0.12 J	NA	NA	ND (0.080)	**0.24**	**6.7**
6-S-29	9/20/2017	ND (0.20) UJ	0.43 J	NA	NA	0.2 J	**0.41 J**	**6.6 J**
6-S-29	2/13/2018	ND (0.10)	0.45	NA	NA	0.21	**0.39**	**8.3**
6-S-29	9/18/2018	ND (0.10)	0.4	NA	NA	0.18 J	**0.32**	**5.4**
6-S-29	2/20/2019	ND (0.10)	0.32	NA	NA	0.21	**0.38**	**8.27**
6-S-29	9/3/2019	ND (0.10)	0.27	NA	NA	0.15 J	**0.19 J**	**3.8**
6-S-29	2/12/2020	ND (0.10)	0.19 J	NA	NA	0.14 J	**0.13 J**	**6.6**
6-S-29	9/14/2020	ND (0.15) UJ	0.46 J	NA	NA	0.27 J	**0.42 J**	**2.0**
6-S-29	2/17/2021	0.17 J	0.3	NA	NA	0.18 J	**0.35 J**	**5.5**
6-S-29	9/22/2021	ND (0.15)	0.36	NA	NA	0.19 J	**0.31**	**4.1**
6-S-29	2/10/2022	ND (0.15)	0.26	NA	NA	0.18 J	**0.25**	**4.1**
6-S-29	9/19/2022	ND (0.50)	ND (0.80)	NA	NA	ND (0.50)	ND (0.50)	**3.3**
6-S-29	2/9/2023	ND (0.50)	ND (0.80)	NA	NA	ND (0.50)	**0.23 J**	**2.2**
6-S-30	11/18/2003	NA	50	ND (0.066)	ND (0.067)	**8.1**	ND (0.12)	**8.2**
6-S-30	1/21/2004	NA	30	ND (0.066)	ND (0.067)	5.7	ND (0.12)	**7.7**
6-S-30	4/6/2004	ND (0.081)	24	ND (0.066)	ND (0.067)	**7.3**	ND (0.12)	**5.7**
6-S-30	4/27/2004	ND (0.081)	26	ND (0.16)	ND (0.13)	3.6	ND (0.13)	**6.7**
6-S-30	7/19/2004	ND (0.081)	21	ND (0.066)	ND (0.067)	3.2	ND (0.12)	**5.8**
6-S-30	11/5/2004	ND (0.081)	27	ND (0.066)	ND (0.067)	4.1	ND (0.12)	**6.2**
6-S-30	1/24/2005	ND (0.081)	18	ND (0.066)	ND (0.069)	3.9	ND (0.12)	**6.8**
6-S-30	7/26/2005	ND (0.081)	25	ND (0.16)	ND (0.13)	3.5	ND (0.13)	**8.1 J**
6-S-30	11/4/2005	ND (0.21)	39	ND (0.16)	ND (0.13)	4.4	ND (0.13)	**7.8**
6-S-30	2/8/2006	ND (0.21)	36	ND (0.16)	ND (0.13)	3.5	ND (0.13)	**6.3**
6-S-30	5/10/2006	ND (0.21)	53	ND (0.16)	ND (0.13)	4.8	ND (0.13)	**6.9**
6-S-30	8/16/2006	ND (0.21)	59	ND (0.16)	ND (0.13)	5.2	ND (0.13)	**5.2**
6-S-30	11/13/2006	ND (0.21)	29	ND (0.16)	ND (0.13)	3.0	ND (0.13)	**6.9**
6-S-30	2/22/2007	ND (0.21)	24	ND (0.16)	ND (0.13)	3.6	ND (0.13)	**6.4**
6-S-30	5/8/2007	ND (0.21)	29	ND (0.16)	ND (0.13)	3.9	ND (0.13)	**6.1**
6-S-30	8/14/2007	ND (0.21)	25	ND (0.030)	ND (0.050)	3.8	ND (0.040)	**5.6**
6-S-30	8/27/2007	ND (0.21)	31	ND (0.040)	ND (0.040)	5.1	ND (0.060)	**4.2**
6-S-30	8/19/2009	ND (0.060)	30	ND (0.020)	ND (0.040)	5.3	ND (0.030)	**6.0**
6-S-30	8/4/2010	ND (0.070)	22	ND (0.020)	ND (0.040)	3.8	ND (0.030)	**3.6**
6-S-30	2/14/2011	ND (0.030)	14	ND (0.020)	ND (0.040)	2.8	ND (0.030)	**3.4**
6-S-30	8/8/2011	ND (0.030)	5.0	ND (0.020)	ND (0.040)	1.3	ND (0.030)	**3.2**
6-S-30	2/7/2012	ND (0.030)	19	ND (0.020)	ND (0.040)	4.1	ND (0.030)	**4.1**
6-S-30	8/15/2012	ND (0.030)	8.2	ND (0.020)	ND (0.040)	2.1	ND (0.030)	**3.8**
6-S-30	2/13/2013	ND (0.030)	10	ND (0.020)	ND (0.040)	1.8	ND (0.030)	**2.7**
6-S-30	8/12/2013	ND (0.030)	45	0.03 J	ND (0.040)	5.0	ND (0.030)	**2.3**
6-S-30	9/4/2013	ND (0.030)	7.6	ND (0.020)	ND (0.040)	1.9	ND (0.030)	**1.9**
6-S-30	2/12/2014	ND (0.030)	11	ND (0.020)	ND (0.040)	1.8	ND (0.030)	**1.6**
6-S-30	3/9/2015	ND (0.030)	3.0	ND (0.020)	ND (0.040)	0.83	ND (0.030)	**1.8**

Table C-2. OU 1 Area 6 Monitoring Well Analytical Results (continued)

Sample Location	Sample Date	Trichloroethene	1,1,1-Trichloroethane	1,1-Dichloroethane	cis-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,4-Dioxane
		Concentrations in µg/L						
	Remedial Goal	**5.0**	**200**	**--**	**--**	**7.0**	**0.029**	**0.44**
6-S-30	7/30/2015	ND (0.030)	3.4	ND (0.020)	ND (0.040)	0.86	ND (0.030)	**2.0**
6-S-30	2/2/2016	0.04 J	2.5	ND (0.10)	ND (0.10)	0.7	ND (0.10)	**2.2**
6-S-30	8/15/2016	ND (0.030)	3.1	NA	NA	0.89	ND (0.075)	**2.2**
6-S-30	2/21/2017	ND (0.10)	5.7	NA	NA	1.3	ND (0.075)	**2.0**
6-S-30	9/26/2017	ND (0.10)	5.8	NA	NA	0.93	ND (0.10)	**2.0**
6-S-30	2/20/2018	0.43 J	4.0	NA	NA	0.8	ND (0.10) UJ	**3.1**
6-S-30	9/19/2018	ND (0.20)	3.32	NA	NA	0.75	ND (0.10)	**2.4**
6-S-30	2/27/2019	ND (0.10)	2.92	NA	NA	0.64	ND (0.10)	**2.55**
6-S-30	8/28/2019	ND (0.10)	3.07	NA	NA	1.11	ND (0.10)	**1.1**
6-S-30	2/12/2020	ND (0.10)	0.44	NA	NA	0.11 J	ND (0.10)	**2.2**
6-S-30	9/10/2020	ND (7.5) UJ	160 J	NA	NA	**34** J	ND (0.75) UJ	**1.4**
6-S-30	2/17/2021	0.69	1.3	NA	NA	0.29 M	ND (0.015)	**1.7** M
6-S-30	9/27/2021	ND (0.15)	1.9	NA	NA	0.36	ND (0.015)	**1.7**
6-S-30	2/15/2022	ND (0.15)	1.5	NA	NA	0.32	ND (0.015)	**2.2**
6-S-30	2/15/2022 (Dup)	ND (0.15)	1.4	NA	NA	0.3	ND (0.015)	**2.2**
6-S-30	9/22/2022	ND (0.50)	1.9	NA	NA	ND (0.50)	ND (0.50)	**1.3**
6-S-30	9/22/2022 (Dup)	ND (0.50)	1.9	NA	NA	0.29 J	ND (0.50)	**1.3**
6-S-30	2/16/2023	ND (0.50)	1.6	NA	NA	ND (0.50)	ND (0.50)	**2.0**
6-S-30	2/16/2023 (Dup)	ND (0.50)	1.6	NA	NA	ND (0.50)	ND (0.50)	**1.7**
6-S-31	11/18/2003	**21**	75	0.13 J	0.33 J	**29**	ND (0.12)	**12**
6-S-31	1/21/2004	**22**	80	0.15 J	0.38 J	**27**	ND (0.12)	**9.5**
6-S-31	4/6/2004	**19**	92	0.17 J	0.35 J	**30**	ND (0.12)	**9.1**
6-S-31	7/19/2004	**14**	38	0.1 J	0.22 J	**8.9**	ND (0.12)	**8.7**
6-S-31	11/4/2004	**16**	58	0.13 J	0.23 J	**17**	ND (0.12)	**8.5**
6-S-31	1/24/2005	**17**	66	0.16 J	0.29 J	**19**	ND (0.12)	**8.9**
6-S-31	4/27/2005	**19**	92	0.22 J	0.36 J	**23**	ND (0.13)	**8.0**
6-S-31	7/26/2005	**19**	92	0.24 J	ND (0.13)	**15**	ND (0.13)	**7.8** J
6-S-31	11/4/2005	**18**	98 D	0.17 J	0.25 J	**20**	ND (0.13)	**6.5**
6-S-31	2/9/2006	**18**	66 D	0.24 J	0.31 J	**16**	ND (0.13)	**6.7**
6-S-31	5/10/2006	**30**	**230** D	0.56	0.53	**35**	ND (0.13)	**6.8**
6-S-31	8/16/2006	**22**	90 D	0.22 J	ND (0.13)	**22**	ND (0.13)	**7.1**
6-S-31	11/13/2006	**22**	78 D	0.21 J	0.38 J	**20**	ND (0.13)	**7.7**
6-S-31	2/22/2007	**16**	41	ND (0.16)	0.28 J	**12**	ND (0.13)	**6.8**
6-S-31	5/10/2007	**16**	54	0.14 J	0.24 J	**12**	ND (0.040)	**6.7**
6-S-31	8/14/2007	**17**	65	0.18 J	0.28 J	**15**	ND (0.040)	**7.1**
6-S-31	2/25/2008	**14**	48	0.15 J	0.23 J	**13**	ND (0.040)	**5.7**
6-S-31	8/28/2008	**17**	62	0.24 J	0.3 J	**14**	ND (0.060)	**5.1**
6-S-31	4/29/2009	**14**	43	0.13 J	0.22 J	**12**	ND (0.060)	**4.8**
6-S-31	8/19/2009	**17**	68	0.22 J	0.28 J	**15**	ND (0.030)	**6.7**
6-S-31	8/4/2010	**14**	45	0.15 J	0.29 J	**11**	ND (0.030)	**4.8**
6-S-31	2/16/2011	**12**	37	0.13 J	0.22 J	**8.9**	ND (0.030)	**5.6**
6-S-31	8/11/2011	**11**	33	0.11 J	0.18 J	**8.7**	ND (0.030)	**3.9**
6-S-31	2/14/2012	**13**	59	0.17 J	0.25 J	**12**	ND (0.030)	**3.7**
6-S-31	8/15/2012	**8.3**	30	0.09 J	0.14 J	**7.8**	ND (0.030)	**4.1**
6-S-31	2/13/2013	**8.9**	36	0.12 J	0.19 J	**9.0**	ND (0.030)	**3.2**
6-S-31	8/14/2013	**11**	79 D	0.03 J	0.2 J	**14**	ND (0.030)	**3.5**
6-S-31	2/18/2014	**7.6**	26	0.09 J	0.12 J	6.6	ND (0.030)	**2.5**
6-S-31	9/8/2014	**7.7**	29 J	0.09 J	0.12 J	6.3	ND (0.030)	**2.5**
6-S-31	3/9/2015	**10**	24	0.09 J	0.15 J	6.1	ND (0.030)	**2.5**
6-S-31	8/3/2015	**6.3**	13	0.06 J	0.09 J	3.8	ND (0.030)	**2.3**
6-S-31	2/3/2016	**6.1**	14	ND (0.10)	ND (0.10)	4.1	ND (0.10)	**2.5**
6-S-31	8/15/2016	**7.5**	15	NA	NA	4.7	ND (0.075)	**2.1**
6-S-31	2/23/2017	5.0	16	NA	NA	3.6	ND (0.075)	**1.6**
6-S-31	9/26/2017	**6.2**	22	NA	NA	5.9	ND (0.10)	**2.5**
6-S-31	2/19/2018	4.0	19	NA	NA	4.7	ND (0.10) UJ	**2.7**
6-S-31	9/20/2018	4.74	15.1	NA	NA	3.22	ND (0.10)	**2.6**
6-S-31	2/26/2019	4.34	17	NA	NA	4.01	ND (0.10)	**2.86**
6-S-31	9/9/2019	3.94	13	NA	NA	3.07	ND (0.10)	**2.1**
6-S-31	2/13/2020	2.98	8.66	NA	NA	2.28	ND (0.10)	**2.2**
6-S-31	9/16/2020	**5.9** J	20 J	NA	NA	4.1 J	ND (0.015) UJ	**1.6** J
6-S-31	2/18/2021	4.5	15	NA	NA	2.8	ND (0.015) UJ	**2.0**
6-S-31	9/23/2021	**5.5**	20	NA	NA	4.5	ND (0.015)	**1.6**
6-S-31	2/15/2022	4.6	12	NA	NA	2.3	ND (0.015)	**2.0**
6-S-31	9/21/2022	3.6	9.3	NA	NA	1.7	ND (0.50)	**2.3**
6-S-31	2/14/2023	4.2	12	NA	NA	2.1	ND (0.50)	**1.9** J
6-S-40	2/19/2008	NA	NA	NA	NA	NA	NA	ND (0.26)
6-S-40	8/25/2008	NA	NA	NA	NA	NA	NA	0.39 J
6-S-40	8/13/2009	NA	NA	NA	NA	NA	NA	ND (0.16)
6-S-40	8/9/2010	ND (0.030)	0.03 J	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-S-40	2/7/2011	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)

Table C-2. OU 1 Area 6 Monitoring Well Analytical Results (continued)

Sample Location	Sample Date	Trichloroethene	1,1,1-Trichloroethane	1,1-Dichloroethane	cis-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,4-Dioxane
		Concentrations in µg/L						
	Remedial Goal	5.0	200	--	--	7.0	0.029	0.44
6-S-40	8/3/2011	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-S-40	2/2/2012	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-S-40	8/7/2012	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-S-40	2/5/2013	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-S-40	8/6/2013	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-S-40	2/3/2014	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-S-40	8/26/2014	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-S-40	2/24/2015	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-S-40	7/20/2015	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-S-40	1/20/2016	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-S-40	8/1/2016	ND (0.10)	ND (0.075)	NA	NA	ND (0.080)	ND (0.075)	ND (0.16)
6-S-40	2/2/2017	ND (0.10)	ND (0.075)	NA	NA	ND (0.080)	ND (0.075)	ND (0.16)
6-S-40	9/12/2017	ND (0.20)	ND (0.20)	NA	NA	ND (0.20)	ND (0.10)	ND (0.20)
6-S-40	2/6/2018	ND (0.10)	ND (0.10)	NA	NA	ND (0.10)	ND (0.10)	ND (0.10)
6-S-40	9/11/2018	ND (0.10)	ND (0.10)	NA	NA	ND (0.10)	ND (0.10)	ND (0.20)
6-S-40	2/6/2019	ND (0.10)	ND (0.10)	NA	NA	ND (0.10)	ND (0.10)	ND (0.050)
6-S-41	2/20/2008	NA	NA	NA	NA	NA	NA	**0.82** J
6-S-41	8/25/2008	NA	NA	NA	NA	NA	NA	0.38 J
6-S-41	8/13/2009	NA	NA	NA	NA	NA	NA	**0.66** J
6-S-41	8/10/2010	ND (0.030)	0.04 J	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-S-41	2/7/2011	ND (0.030)	ND (0.040)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	**0.5** J
6-S-41	8/3/2011	ND (0.030)	ND (0.040)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	**0.75** J
6-S-41	2/2/2012	ND (0.030)	0.03 J	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	**1.5**
6-S-41	8/7/2012	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	**1.8**
6-S-41	2/5/2013	ND (0.030)	0.03 J	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	**0.82**
6-S-41	8/6/2013	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-S-41	2/4/2014	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-S-41	8/26/2014	ND (0.030)	0.03 J	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-S-41	2/24/2015	ND (0.030)	0.03 J	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-S-41	7/21/2015	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-S-41	1/20/2016	ND (0.030)	0.03 J	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-S-41	8/2/2016	ND (0.10)	ND (0.075)	NA	NA	ND (0.080)	ND (0.075)	ND (0.16)
6-S-41	2/2/2017	ND (0.10)	ND (0.075)	NA	NA	ND (0.080)	ND (0.075)	ND (0.16)
6-S-41	9/12/2017	ND (0.20)	ND (0.20)	NA	NA	ND (0.20)	ND (0.10)	ND (0.20)
6-S-41	2/6/2018	ND (0.10)	ND (0.10)	NA	NA	ND (0.10)	ND (0.10)	ND (0.10)
6-S-41	9/11/2018	ND (0.10)	ND (0.10)	NA	NA	ND (0.10)	ND (0.10)	0.34 J
6-S-41	2/6/2019	ND (0.10)	ND (0.10)	NA	NA	ND (0.10)	ND (0.10)	ND (0.050)
6-S-41	9/9/2019	NA	NA	NA	NA	NA	NA	ND (0.051)
6-S-41	2/13/2020	NA	NA	NA	NA	NA	NA	ND (0.048)
6-S-41	9/10/2020	NA	NA	NA	NA	NA	NA	ND (0.050)
6-S-41	2/10/2021	NA	NA	NA	NA	NA	NA	ND (0.050)
6-S-41	9/21/2021	ND (0.15)	0.085 J	NA	NA	ND (0.070)	ND (0.015)	ND (0.046) UJ
6-S-41	2/14/2022	NA	NA	NA	NA	NA	NA	ND (0.049)
6-S-41	9/21/2022	NA	NA	NA	NA	NA	NA	ND (0.050)
6-S-41	2/8/2023	NA	NA	NA	NA	NA	NA	ND (0.047) UJ
6-S-42	2/25/2008	NA	NA	NA	NA	NA	NA	**5.3**
6-S-42	8/25/2008	NA	NA	NA	NA	NA	NA	**7.8**
6-S-42	8/13/2009	NA	NA	NA	NA	NA	NA	**14**
6-S-42	8/10/2010	ND (0.030)	4.4	0.07 J	ND (0.040)	0.1 J	**0.3**	**14**
6-S-42	2/8/2011	ND (0.030)	4.0	0.09 J	ND (0.040)	ND (0.050)	**0.23**	**15**
6-S-42	8/4/2011	ND (0.030)	3.9	0.13 J	ND (0.040)	0.09 J	**0.15**	**17** J
6-S-42	2/7/2012	ND (0.030)	3.4	0.14 J	ND (0.040)	0.05 J	**0.17**	**18**
6-S-42	8/9/2012	ND (0.030)	3.6	0.2 J	ND (0.040)	0.11 J	**0.19**	**16**
6-S-42	2/7/2013	ND (0.030)	3.4	0.19 J	ND (0.040)	0.11 J	**0.17**	**12**
6-S-42	8/8/2013	ND (0.030)	2.9	0.21 J	ND (0.040)	0.09 J	**0.16**	**12**
6-S-42	2/4/2014	ND (0.030)	2.4	0.22 J	ND (0.040)	0.09 J	**0.2**	**10**
6-S-42	8/27/2014	ND (0.030)	2.8	0.31 J	ND (0.040)	0.1 J	**0.12**	**7.4**
6-S-42	2/25/2015	ND (0.030)	2.6	0.36 J	ND (0.040)	0.1 J	**0.13**	**5.4**
6-S-42	7/22/2015	ND (0.030)	2.1	0.33 J	ND (0.040)	0.07 J	**0.09** J	**4.5**
6-S-42	1/21/2016	ND (0.030)	2.0	0.33 J	ND (0.040)	0.07 J	**0.1**	**4.1**
6-S-42	8/3/2016	ND (0.10)	1.8	NA	NA	ND (0.080)	**0.09** J	**1.9**
6-S-42	2/13/2017	ND (0.10)	2.3	NA	NA	0.08 J	ND (0.075)	**0.87** J
6-S-42	9/13/2017	ND (0.20) UJ	2.2 J	NA	NA	0.09 J	ND (0.10) UJ	**1.0**
6-S-42	2/7/2018	ND (0.10)	1.6	NA	NA	0.12 J	ND (0.10)	**0.91**
6-S-42	9/11/2018	ND (0.10)	1.74	NA	NA	ND (0.10)	ND (0.10)	**0.62**
6-S-42	2/7/2019	ND (0.10)	1.65	NA	NA	0.26	ND (0.10)	0.312
6-S-42	8/27/2019	ND (0.15)	1.7	NA	NA	ND (0.15)	ND (0.017) UJQ	0.15 JQ
6-S-42	2/6/2020	ND (0.15) M	2.0	NA	NA	0.13 JM	ND (0.017) M	0.29
6-S-42	9/9/2020	ND (0.15) UJ	2.3 J	NA	NA	0.11 J	**0.031** J	ND (0.050)
6-S-42	2/9/2021	ND (0.15)	2.0	NA	NA	0.089 J	0.013 J	ND (0.048)

Table C-2. OU 1 Area 6 Monitoring Well Analytical Results (continued)

Sample Location	Sample Date	Trichloroethene	1,1,1-Trichloroethane	1,1-Dichloroethane	cis-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,4-Dioxane
		Concentrations in µg/L						
	Remedial Goal	**5.0**	**200**	**--**	**--**	**7.0**	**0.029**	**0.44**
6-S-42	9/20/2021	ND (0.15)	2.2	NA	NA	0.099 J	ND (0.015)	ND (0.046)
6-S-42	2/14/2022	ND (0.15)	2.1	NA	NA	ND (0.070)	ND (0.015) UJ	ND (0.055)
6-S-42	9/20/2022	ND (0.15)	2.1	NA	NA	ND (0.070)	ND (0.015)	ND (0.051)
6-S-42	2/7/2023	ND (0.0100)	1.23	NA	NA	0.0563	ND (0.0100)	ND (0.049)
6-S-42	2/7/2023 (Dup)	ND (0.0100)	1.23	NA	NA	0.0549	ND (0.0100)	NA
6-S-43	2/20/2008	NA	NA	NA	NA	NA	NA	**2.9**
6-S-43	8/25/2008	NA	NA	NA	NA	NA	NA	**2.3**
6-S-43	8/13/2009	NA	NA	NA	NA	NA	NA	**1.8**
6-S-43	8/10/2010	ND (0.030)	0.23 J	ND (0.020)	ND (0.040)	ND (0.050)	**2.7**	**3.7**
6-S-43	2/8/2011	ND (0.030)	0.27 J	ND (0.020)	ND (0.040)	ND (0.050)	**2.3**	**2.2**
6-S-43	8/4/2011	ND (0.030)	0.24 J	ND (0.020)	ND (0.040)	ND (0.050)	**1.8**	**2.3** J
6-S-43	2/6/2012	ND (0.030)	0.23 J	ND (0.020)	ND (0.040)	ND (0.050)	**2.6**	**4.8**
6-S-43	8/8/2012	ND (0.030)	0.22 J	0.03 J	ND (0.040)	ND (0.050)	**3.7**	**8.4**
6-S-43	2/7/2013	ND (0.030)	0.39 J	0.03 J	ND (0.040)	ND (0.050)	**3.1**	**4.6**
6-S-43	8/8/2013	ND (0.030)	0.33 J	ND (0.020)	ND (0.040)	ND (0.050)	**3.0**	**5.7**
6-S-43	2/4/2014	ND (0.030)	0.25 J	ND (0.020)	ND (0.040)	ND (0.050)	**2.9**	**5.0**
6-S-43	8/26/2014	ND (0.030)	0.28 J	0.03 J	ND (0.040)	ND (0.050)	**3.3**	**9.3**
6-S-43	2/25/2015	ND (0.030)	1.0	0.03 J	ND (0.040)	ND (0.050)	**3.2**	**8.0**
6-S-43	7/21/2015	ND (0.030)	2.6	ND (0.020)	ND (0.040)	ND (0.050)	**3.1**	**9.2**
6-S-43	1/21/2016	ND (0.030)	7.3	0.03 J	ND (0.040)	ND (0.050)	**2.9**	**10**
6-S-43	8/3/2016	ND (0.10)	6.4	NA	NA	ND (0.080)	**3.7**	**10**
6-S-43	2/13/2017	ND (0.10)	21	NA	NA	ND (0.080)	**2.9**	**6.8** J
6-S-43	9/26/2017	ND (0.20)	6.4	NA	NA	ND (0.20)	**3.6**	**7.9**
6-S-43	2/19/2018	ND (0.10)	70	NA	NA	6.1	**0.56** J	**5.5**
6-S-43	9/24/2018	ND (0.50)	82.4	NA	NA	5.58	**0.81** J	**4.4**
6-S-43	2/28/2019	ND (0.10)	46.3	NA	NA	0.95	**1.33**	**5.53**
6-S-43	9/10/2019	ND (0.10)	46.1	NA	NA	3.22	**1.31**	**4.0**
6-S-43	2/18/2020	ND (0.10)	46.1	NA	NA	5.22	**0.67**	**3.0**
6-S-43	9/17/2020	ND (0.15) UJ	61 J	NA	NA	0.6 J	**1.1** J	**1.7** J
6-S-43	9/17/2020 (Dup)	ND (0.15) UJ	63 J	NA	NA	0.66 J	**1.0** J	**1.7**
6-S-43	2/18/2021	ND (0.15)	35	NA	NA	0.31	**0.74** J	**1.8**
6-S-43	9/23/2021	ND (1.5)	79	NA	NA	0.46 J	ND (0.15)	0.36
6-S-43	2/16/2022	ND (0.15)	96	NA	NA	0.84	**0.059**	**0.47**
6-S-43	9/26/2022	ND (0.50)	61	NA	NA	0.83 J	ND (0.50) UJ	0.35
6-S-43	2/16/2023	ND (0.50)	67	NA	NA	0.9 J	ND (0.50)	ND (0.052) UJ
6-S-44	9/9/2019	1.67	1.33	NA	NA	0.2	ND (0.10)	**1.4**
6-S-44	2/18/2020	3.39	1.52	NA	NA	0.25	ND (0.10)	**2.3**
6-S-44	9/15/2020	**6.1** J	2.2 J	NA	NA	0.17 J	ND (0.015) UJ	**0.76**
6-S-44	9/15/2020 (Dup)	**5.9** J	2.1 J	NA	NA	0.18 J	ND (0.015) UJ	**0.77**
6-S-44	2/17/2021	4.0	1.5	NA	NA	0.11 J	ND (0.015) UJ	**2.1**
6-S-44	9/23/2021	4.3	1.7	NA	NA	0.14 J	ND (0.015)	**1.9**
6-S-44	2/15/2022	**5.5**	1.6	NA	NA	0.15 J	ND (0.015)	**2.0**
6-S-44	9/22/2022	4.5	1.7	NA	NA	ND (0.50)	ND (0.50)	**2.3**
6-S-44	2/15/2023	5.0	1.6	NA	NA	0.29 J	ND (0.50)	**1.5** J
6-S-49	9/20/2022	ND (0.50)	3.2	NA	NA	ND (0.50)	ND (0.50)	ND (0.052)
6-S-49	2/15/2023	ND (0.50)	1.6	NA	NA	ND (0.50)	ND (0.50)	ND (0.052)
6-S-50	9/26/2022	ND (0.50)	4.8	NA	NA	ND (0.50)	ND (0.50) UJ	**0.67**
6-S-50	2/16/2023	ND (0.50)	ND (0.80)	NA	NA	ND (0.50)	ND (0.50)	ND (0.052) UJ
6-S-51	9/20/2022	ND (0.50)	1.3	NA	NA	ND (0.50)	ND (0.50)	**0.89**
6-S-51	2/8/2023	ND (0.50)	0.86 J	NA	NA	ND (0.50)	ND (0.50)	**0.93**
6-S-52	9/20/2022	ND (0.50)	0.99 J	NA	NA	ND (0.50)	ND (0.50)	ND (0.053)
6-S-52	2/8/2023	ND (0.50)	0.72 J	NA	NA	ND (0.50)	ND (0.50)	ND (0.048)
6-S-53	9/20/2022	ND (0.50)	ND (0.80)	NA	NA	ND (0.50)	ND (0.50)	ND (0.051) UJ
6-S-53	2/8/2023	ND (0.50)	ND (0.80)	NA	NA	ND (0.50)	ND (0.50)	ND (0.048) UJ
6-S-54	9/20/2022	ND (0.50)	ND (0.80)	NA	NA	ND (0.50)	ND (0.50)	0.37
6-S-54	2/8/2023	ND (0.50)	ND (0.80)	NA	NA	ND (0.50)	ND (0.50)	ND (0.047)
MW-3B	2/9/2006	NA	NA	NA	NA	NA	NA	**0.92** J
MW-3B	5/9/2006	NA	NA	NA	NA	NA	NA	**1.2**
MW-3B	8/16/2006	NA	NA	NA	NA	NA	NA	**0.98** J
MW-3B	11/9/2006	NA	NA	NA	NA	NA	NA	**0.95** J
MW-3B	2/22/2007	NA	NA	NA	NA	NA	NA	**0.86** J
MW-3B	5/8/2007	NA	NA	NA	NA	NA	NA	**0.84** J
MW-3B	8/15/2007	NA	NA	NA	NA	NA	NA	**0.78** J
MW-3B	2/22/2008	NA	NA	NA	NA	NA	NA	**0.85** J
MW-3B	8/26/2008	NA	NA	NA	NA	NA	NA	**0.81** J
MW-3B	4/28/2009	NA	NA	NA	NA	NA	NA	**0.92** J
MW-3B	8/19/2009	NA	NA	NA	NA	NA	NA	**1.2** J
MW-3B	8/3/2010	ND (0.030)	36	0.04 J	ND (0.040)	1.1	ND (0.030)	**0.73** J
MW-3B	2/9/2011	ND (0.030)	33	ND (0.020)	ND (0.040)	1.2	ND (0.030)	**0.81** J
MW-3B	8/8/2011	ND (0.030)	34	ND (0.020)	ND (0.040)	1.3	ND (0.030)	ND (1.0)

Table C-2. OU 1 Area 6 Monitoring Well Analytical Results (continued)

Sample Location	Sample Date	Trichloroethene	1,1,1-Trichloroethane	1,1-Dichloroethane	cis-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,4-Dioxane
		Concentrations in µg/L						
	Remedial Goal	**5.0**	**200**	**--**	**--**	**7.0**	**0.029**	**0.44**
MW-3B	2/6/2012	ND (0.030)	27	ND (0.020)	ND (0.040)	1.2	ND (0.030)	**1.3**
MW-3B	8/8/2012	ND (0.030)	30	ND (0.020)	ND (0.040)	1.3	ND (0.030)	**1.5**
MW-3B	2/6/2013	ND (0.030)	33	ND (0.020)	ND (0.040)	1.3	ND (0.030)	**0.94** J
MW-3B	8/7/2013	ND (0.030)	33	0.05 J	ND (0.040)	1.3	ND (0.030)	**0.83** J
MW-3B	2/5/2014	ND (0.030)	25	0.04 J	ND (0.040)	1.1	ND (0.030)	**0.98** J
MW-3B	9/4/2014	ND (0.030)	23	0.04 J	ND (0.040)	1.2	ND (0.030)	**0.71** J
MW-3B	3/9/2015	ND (0.030)	23	ND (0.020)	ND (0.040)	1.1	ND (0.030)	**0.92** J
MW-3B	7/30/2015	0.04 J	21	0.04 J	ND (0.040)	1.2	ND (0.030)	**0.74** J
MW-3B	2/1/2016	ND (0.10)	21	ND (0.10)	ND (0.10)	1.7	ND (0.10)	**0.72**
MW-3B	8/15/2016	ND (0.10)	15	NA	NA	1.1	ND (0.075)	0.34 J
MW-3B	2/22/2017	0.21 J	16	NA	NA	1.1	ND (0.075)	0.38 J
MW-3B	9/26/2017	ND (0.20)	18	NA	NA	1.1	ND (0.10)	0.3 J
MW-3B	2/20/2018	ND (0.10)	12	NA	NA	1.4	ND (0.10) UJ	0.27
MW-3B	9/19/2018	ND (0.10)	8.45	NA	NA	0.71	ND (0.10)	0.23 J
MW-3B	2/27/2019	ND (0.10)	10.1	NA	NA	0.93	ND (0.10)	ND (0.050)
MW-3B	8/27/2019	ND (0.15)	7.1	NA	NA	0.45	ND (0.017) UJQ	0.09 JMQ
MW-3B	2/10/2020	ND (0.15) M	12	NA	NA	0.75	ND (0.017)	0.15 JM
MW-3B	9/10/2020	ND (0.15) UJ	13 J	NA	NA	1.2 J	ND (0.015) UJ	ND (0.050)
MW-3B	2/10/2021	ND (0.15)	10	NA	NA	0.93	ND (0.015)	ND (0.048)
MW-3B	9/23/2021	ND (0.15)	7.8	NA	NA	0.67	ND (0.015)	ND (0.048)
MW-3B	2/15/2022	ND (0.15)	8.0	NA	NA	0.94	ND (0.015)	**0.7**
MW-3B	9/20/2022	ND (0.15)	7.1	NA	NA	0.91	ND (0.015)	**0.96**
MW-3B	2/7/2023	ND (0.0100)	3.97	NA	NA	0.51	ND (0.0100)	**0.94** J
MW-5	9/13/1993	ND (1.0)	1.1	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
MW-5	2/15/1995	ND (2.0)	0.42 J	ND (2.0)	NA	ND (2.0)	ND (2.0)	NA
MW-5	9/27/1995	ND (1.0)	ND (1.0)	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
MW-5	12/11/1995	ND (2.0)	ND (2.0)	ND (2.0)	NA	ND (2.0)	ND (2.0)	NA
MW-5	3/28/1996	ND (1.0)	ND (1.0)	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
MW-5	8/16/1996	ND (1.0)	ND (1.0)	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
MW-5	11/1/1996	ND (1.0)	0.43 J	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
MW-5	1/29/1997	ND (1.0)	0.24 J	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
MW-5	5/2/1997	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NA
MW-5	7/24/1997	ND (1.0)	0.4 J	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NA
MW-5	10/27/1997	0.33	1.2	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
MW-5	4/14/1998	ND (0.20)	4.1	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
MW-5	10/20/1998	ND (0.20)	5.6	0.23	ND (0.20)	ND (0.20)	ND (1.0)	NA
MW-5	4/22/1999	ND (0.20)	5.3	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
MW-5	11/24/1999	ND (0.20)	5.1	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
MW-5	4/25/2000	ND (0.20)	27	0.6	ND (0.20)	ND (0.30)	ND (0.20)	NA
MW-5	11/1/2000	ND (0.20)	41 J	ND (0.20)	ND (0.20)	ND (0.10)	ND (0.30)	NA
MW-5	4/11/2001	ND (0.50)	32	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	NA
MW-5	11/8/2001	ND (0.20)	23	ND (0.10)	ND (0.10)	ND (0.20)	ND (0.20)	NA
MW-5	4/16/2002	ND (0.20)	25	ND (0.10)	ND (0.10)	ND (0.20)	ND (0.20)	NA
MW-5	11/20/2002	ND (0.20)	26	ND (0.10)	ND (0.10)	ND (0.20)	ND (0.20)	NA
MW-5	1/14/2003	ND (0.055)	67 D	ND (0.048)	ND (0.067)	ND (0.50)	ND (0.045)	NA
MW-5	4/22/2003	ND (0.081)	77	ND (0.066)	ND (0.067)	1.8	ND (0.12)	NA
MW-5	6/25/2003	ND (0.081)	82	ND (0.066)	ND (0.067)	ND (0.50)	ND (0.12)	ND (0.15)
MW-5	11/17/2003	ND (0.081)	74	ND (0.066)	ND (0.067)	0.78	ND (0.12)	0.24 J
MW-5	1/23/2004	ND (0.081)	84	ND (0.066)	ND (0.067)	1.4	ND (0.12)	ND (0.20)
MW-5	4/6/2004	ND (0.081)	89	ND (0.066)	ND (0.067)	0.82	ND (0.12)	ND (0.20)
MW-5	7/20/2004	ND (0.081)	65	ND (0.066)	ND (0.067)	0.78	ND (0.12)	ND (0.47)
MW-5	11/4/2004	ND (0.081)	66	0.07 J	ND (0.067)	2.0	ND (0.12)	ND (0.47)
MW-5	1/18/2005	ND (0.081)	60	0.2 J	ND (0.069)	2.1	ND (0.12)	ND (0.47)
MW-5	4/26/2005	ND (0.21)	44	ND (0.16)	ND (0.13)	0.35 J	ND (0.13)	ND (0.47)
MW-5	7/27/2005	ND (0.21)	47	0.27 J	ND (0.13)	0.32 J	ND (0.13)	**0.54** J
MW-5	11/2/2005	ND (0.21)	40	0.62	ND (0.13)	1.3	ND (0.13)	ND (0.47)
MW-5	2/9/2006	ND (0.21)	33	0.66	ND (0.13)	0.28 J	ND (0.13)	ND (0.47)
MW-5	5/9/2006	ND (0.21)	35	0.72	ND (0.13)	0.43 J	ND (0.13)	ND (0.47)
MW-5	8/16/2006	ND (0.21)	38	0.92	ND (0.13)	0.4 J	ND (0.13)	ND (0.27)
MW-5	11/9/2006	ND (0.21)	33	0.6	ND (0.13)	0.31 J	ND (0.13)	0.35 J
MW-5	2/27/2007	ND (0.21)	18	0.42 J	ND (0.13)	1.3	ND (0.13)	ND (0.27)
MW-5	5/8/2007	ND (0.040)	11	ND (0.030)	ND (0.050)	0.14 J	ND (0.040)	ND (0.27)
MW-5	8/15/2007	ND (0.060)	6.9	ND (0.030)	ND (0.050)	0.09 J	ND (0.040)	**0.78** J
MW-5	2/25/2008	ND (0.060)	16	0.24 J	ND (0.050)	0.46 J	ND (0.040)	**0.85** J
MW-5	8/26/2008	ND (0.070)	13	0.3 J	ND (0.50)	0.67	ND (0.24)	**0.81** J
MW-5	4/28/2009	ND (0.070)	12	0.21 J	ND (0.50)	0.84	ND (0.24)	**0.92** J
MW-5	8/19/2009	ND (0.030)	8.1	0.16 J	ND (0.040)	0.64	ND (0.030)	**1.2** J
MW-5	8/4/2010	ND (0.030)	5.5	0.09 J	ND (0.040)	0.25 J	ND (0.030)	**0.73** J
MW-5	2/10/2011	ND (0.030)	**600** D	0.32 J	ND (0.040)	1.8	ND (0.030)	**0.81** J
MW-5	8/9/2011	ND (0.030)	**790** D	0.47 J	ND (0.040)	2.7	ND (0.030)	ND (1.0)

Table C-2. OU 1 Area 6 Monitoring Well Analytical Results (continued)

Sample Location	Sample Date	Trichloroethene	1,1,1-Trichloroethane	1,1-Dichloroethane	cis-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,4-Dioxane
		Concentrations in µg/L						
	Remedial Goal	**5.0**	**200**	**--**	**--**	**7.0**	**0.029**	**0.44**
MW-5	2/7/2012	ND (0.030)	**750** D	0.68	ND (0.040)	5.3	ND (0.030)	ND (0.16)
MW-5	8/8/2012	ND (0.030)	**310** D	3.9	ND (0.040)	3.5	ND (0.030)	ND (0.16)
MW-5	2/7/2013	ND (0.030)	170 D	1.1	ND (0.040)	6.0	ND (0.030)	ND (0.16)
MW-5	8/8/2013	ND (0.030)	80	0.61	ND (0.040)	5.5	ND (0.030)	ND (0.16)
MW-5	2/5/2014	ND (0.030)	130 D	1.1	ND (0.040)	5.1	ND (0.030)	ND (0.16)
MW-5	8/28/2014	ND (0.030)	76	0.63	ND (0.040)	4.2	ND (0.030)	ND (0.16)
MW-5	2/26/2015	ND (0.030)	45	0.47 J	ND (0.040)	4.0	ND (0.030)	ND (0.16)
MW-5	7/22/2015	ND (0.030)	26	0.34 J	ND (0.040)	3.1	ND (0.030)	ND (0.16)
MW-5	1/26/2016	ND (0.030)	18	0.26 J	ND (0.040)	3.7	ND (0.030)	ND (0.16)
MW-5	8/9/2016	ND (0.10)	16	NA	NA	4.6	ND (0.075)	ND (0.16)
MW-5	1/30/2017	ND (0.10)	8.5	NA	NA	3.5	ND (0.075)	ND (0.16)
MW-5	9/13/2017	ND (0.20) UJ	9.8 J	NA	NA	2.7 J	ND (0.10) UJ	ND (0.20)
MW-5	2/7/2018	ND (0.10)	7.0	NA	NA	2.1	ND (0.10)	ND (0.10)
MW-5	9/26/2022	ND (0.50)	76	NA	NA	1.2	ND (0.50) UJ	**0.86**
MW-5	2/14/2023	ND (0.50)	47	NA	NA	5.5	ND (0.50)	0.38 J
MW-6	3/28/1996	ND (1.0)	ND (1.0)	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
MW-6	8/16/1996	ND (1.0)	ND (1.0)	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
MW-6	10/31/1996	ND (1.0)	ND (1.0)	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
MW-6	1/29/1997	ND (1.0)	ND (1.0)	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
MW-6	5/2/1997	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NA
MW-6	7/24/1997	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NA
MW-6	10/27/1997	0.53	0.71	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
MW-6	10/20/1998	ND (0.20)	0.58	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
MW-6	11/19/1999	ND (0.20)	ND (0.50)	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
MW-6	10/31/2000	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.10)	ND (0.30)	NA
MW-6	11/6/2001	ND (0.20)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.20)	ND (0.20)	NA
MW-6	11/20/2002	ND (0.20)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.20)	ND (0.20)	NA
MW-6	6/26/2003	ND (0.081)	ND (0.11)	ND (0.066)	ND (0.067)	ND (0.16)	ND (0.12)	ND (0.15)
MW-6	11/12/2003	ND (0.081)	ND (0.11)	ND (0.066)	ND (0.067)	ND (0.16)	ND (0.12)	ND (0.15)
MW-6	11/3/2004	ND (0.081)	ND (0.11)	ND (0.066)	ND (0.067)	ND (0.16)	ND (0.12)	ND (0.47)
MW-6	11/2/2005	ND (0.21)	ND (0.21)	ND (0.16)	ND (0.13)	ND (0.24)	ND (0.13)	ND (0.47)
MW-6	11/8/2006	ND (0.21)	ND (0.21)	ND (0.16)	ND (0.13)	ND (0.24)	ND (0.13)	ND (0.27)
MW-7	2/14/1995	**350** J	**3500**	ND (500)	NA	ND (500)	ND (500)	NA
MW-7	2/14/1995 (Dup)	**180** J	**2400**	ND (500)	NA	**350** J	ND (500)	NA
MW-7	9/22/1995	**390**	**3700**	ND (200)	NA	**330**	ND (200)	NA
MW-7	12/8/1995	**520**	**5200**	ND (500)	NA	ND (500)	ND (500)	NA
MW-7	3/28/1996	**480**	**5300**	160 J	NA	**380**	ND (200)	NA
MW-7	3/28/1996 (Dup)	**520**	**5400**	150 J	NA	**370**	ND (200)	NA
MW-7	8/27/1996	**670**	**3500**	110	NA	**270**	ND (100)	NA
MW-7	10/31/1996	**720**	**3300**	37 J	NA	**190** J	ND (200)	NA
MW-7	1/29/1997	**1000**	**1600**	150	NA	**120**	ND (50)	NA
MW-7	5/2/1997	**660**	**350**	63	290	**51**	ND (50)	NA
MW-7	5/2/1997 (Dup)	**790**	**450**	ND (50)	330	**67**	ND (50)	NA
MW-7	7/28/1997	**530**	**220**	65	230	**49**	ND (20)	NA
MW-7	7/28/1997 (Dup)	**800**	**290**	67	270	**57**	ND (20)	NA
MW-7	10/14/1997	**420**	140	49	160	**32**	**0.28**	NA
MW-7	1/20/1998	**440**	**230**	75	180	**48**	ND (1.0)	NA
MW-7	1/20/1998 (Dup)	**400**	190	71	160	**40**	ND (1.0)	NA
MW-7	4/15/1998	**280**	160	48	110	**23**	ND (1.0)	NA
MW-7	4/15/1998 (Dup)	**380**	**330**	85	170	**44**	ND (1.0)	NA
MW-7	7/29/1998	**450**	**600**	58	150	**41**	ND (1.0)	NA
MW-7	10/27/1998	**510**	**460**	63	180	**51**	ND (1.0)	NA
MW-7	1/26/1999	**340**	**760**	45	150	**63**	ND (1.0)	NA
MW-7	4/22/1999	**390**	**480**	55	120	**78**	ND (10)	NA
MW-7	7/28/1999	**270**	**380**	58	100	**92**	ND (0.20)	NA
MW-7	11/23/1999	**170**	**330**	34	88	**55**	ND (1.0)	NA
MW-7	1/27/2000	**270**	**560**	50	59	**78**	ND (0.20)	NA
MW-7	4/25/2000	**250**	**260**	59	48	**67**	ND (0.20)	NA
MW-7	10/25/2000	**260**	**210**	1.5	27	**51**	ND (0.30)	NA
MW-7	1/11/2001	**250** D	180 D	1.1	20	**46**	ND (0.30)	NA
MW-7	4/12/2001	**250** D	**210** D	1.0 J	18 D	**50** D	ND (2.5)	NA
MW-7	11/8/2001	**200** D	190 D	1.5	16	**48**	ND (0.20)	NA
MW-7	1/16/2002	**200** D	140 D	1.2 JD	13 D	**38** D	ND (20)	NA
MW-7	4/16/2002	**190** D	110 D	1.3 JD	13 D	**33** D	ND (1.0)	NA
MW-7	11/22/2002	**140**	84	0.74	8.8	**20**	ND (0.20)	NA
MW-7	1/14/2003	**150** D	86 D	0.62	8.9	**24** J	ND (0.045)	NA
MW-7	4/23/2003	**140**	76	0.51	8.1	**21**	ND (0.12)	NA
MW-7	11/21/2003	**110**	69	1.2	7.0	**19**	ND (0.12)	**13**
MW-7	1/21/2004	**140**	78	0.34 J	7.6	**25**	ND (0.12)	**17**
MW-7	4/7/2004	**120**	62	1.2	7.2	**18**	ND (0.12)	**12**

Table C-2. OU 1 Area 6 Monitoring Well Analytical Results (continued)

Sample Location	Sample Date	Trichloroethene	1,1,1-Trichloroethane	1,1-Dichloroethane	cis-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,4-Dioxane
		Concentrations in µg/L						
	Remedial Goal	**5.0**	**200**	**--**	**--**	**7.0**	**0.029**	**0.44**
MW-7	11/8/2004	**99**	59	0.4 J	5.2	**22**	ND (0.12)	**13**
MW-7	1/24/2005	**120**	64	1.4	6.3	**25**	ND (0.12)	**13**
MW-7	4/27/2005	**110**	55	0.77	5.4	**20**	ND (0.13)	**11**
MW-7	11/7/2005	**100** D	64 D	4.9	4.5	**23**	**0.19** J	**9.9**
MW-7	2/9/2006	**100** D	56	9.3	5.1	**18**	ND (0.13)	**6.7**
MW-7	5/10/2006	**85** D	49	4.4	4.6	**16**	ND (0.13)	**8.5**
MW-7	8/17/2006	**100** D	54	2.1	4.0	**15**	ND (0.13)	**8.9**
MW-7	11/16/2006	**99** D	51	3.3	4.3	**16**	ND (0.13)	**8.0**
MW-7	2/23/2007	**76** D	34	3.1	3.9	**11**	ND (0.13)	**6.9**
MW-7	5/10/2007	**110** D	54	0.33 J	3.9	**16**	ND (0.13)	**6.6**
MW-7	8/16/2007	**100** D	52	0.26 J	3.9	**17**	ND (0.040)	**7.0**
MW-7	2/25/2008	**80**	36	1.5	3.0	**9.8**	ND (0.040)	**6.2**
MW-7	8/29/2008	**67** D	37	0.89	2.5	**8.9**	ND (0.060)	**6.1**
MW-7	4/29/2009	**74** D	37	0.88	2.9	**11**	ND (0.060)	**5.3**
MW-7	8/20/2009	**76**	37	0.91	2.2	**9.6**	ND (0.030)	**8.1**
MW-7	8/5/2010	**68**	36	2.8	2.2	**7.8**	ND (0.030)	**5.1**
MW-7	2/16/2011	**53**	25	0.52	1.7	5.6	ND (0.030)	**5.4**
MW-7	8/11/2011	**53**	25	0.13 J	1.8	6.5	ND (0.030)	**5.0**
MW-7	2/15/2012	**63**	36	0.15 J	2.1	**9.7**	ND (0.030)	**3.9**
MW-7	8/15/2012	**49**	25	0.53	1.8	6.1	ND (0.030)	**6.0**
MW-7	2/14/2013	**46**	25	2.7	1.7	5.9	ND (0.030)	**3.9**
MW-7	8/15/2013	**45**	26	0.54	1.5	6.2	ND (0.030)	**4.0**
MW-7	2/18/2014	**45**	23	0.11 J	1.4	6.1	ND (0.030)	**3.0**
MW-7	9/4/2014	**39**	23	0.11 J	1.4	5.3	ND (0.030)	**3.3**
MW-7	3/5/2015	**35**	17	0.09 J	1.3	3.7	ND (0.030)	**2.6**
MW-7	7/29/2015	**37**	18	0.09 J	1.2	3.7	ND (0.030)	**2.9**
MW-7	2/2/2016	**27**	18	0.1 J	1.2	4.0	ND (0.10)	**2.6**
MW-7	8/15/2016	**34**	17	NA	NA	3.6	ND (0.075)	**2.6**
MW-7	2/21/2017	**28**	16	NA	NA	3.8	ND (0.075)	**1.8**
MW-7	9/25/2017	**30**	21	NA	NA	4.5	ND (0.10)	**2.7**
MW-7	2/15/2018	**21**	14	NA	NA	3.4	ND (0.10)	**2.5**
MW-7	9/20/2018	**18.8**	10.2	NA	NA	1.99	ND (0.10)	**2.6**
MW-7	2/26/2019	**21.2**	12.1	NA	NA	2.66	ND (0.10)	**2.82**
MW-7	9/9/2019	**18.2**	12.1	NA	NA	3.02	ND (0.10)	**2.1**
MW-7	2/13/2020	**16.6**	9.28	NA	NA	2.69	ND (0.10)	**2.7**
MW-7	9/16/2020	**28** J	18 J	NA	NA	4.1 J	ND (0.015) UJ	**1.8** J
MW-7	2/18/2021	**22**	13	NA	NA	2.4	ND (0.015) UJ	**2.3**
MW-7	9/23/2021	**28**	17	NA	NA	3.1	ND (0.015)	**1.8**
MW-7	2/15/2022	**23**	14	NA	NA	2.4	ND (0.015)	**2.1**
MW-7	9/22/2022	**18**	12	NA	NA	2.2	ND (0.50)	**0.94**
MW-7	2/15/2023	**21**	13	NA	NA	2.8	ND (0.50)	**1.9** J
MW-8	2/14/1995	ND (2.5)	5.1	ND (2.5)	NA	ND (2.5)	ND (2.5)	NA
MW-8	9/24/1995	ND (50)	3.7 J	ND (50)	NA	ND (50)	ND (50)	NA
MW-8	12/9/1995	1.2 J	13	ND (20)	NA	ND (20)	**0.89** J	NA
MW-8	12/9/1995 (Dup)	1.9 J	14	3.6 J	NA	ND (50)	ND (50)	NA
MW-8	3/28/1996	ND (20)	3.7	0.72 J	NA	ND (20)	**0.9** J	NA
MW-8	10/30/1996	**6.2**	8.8	0.54 J	NA	0.55 J	ND (20)	NA
MW-8	1/29/1997	ND (20)	4.4	0.62 J	NA	ND (20)	ND (20)	NA
MW-8	4/29/1997	ND (20)	2.0	ND (20)	ND (20)	ND (20)	**0.6** J	NA
MW-8	7/25/1997	ND (20)	2.6	ND (20)	ND (20)	ND (20)	**0.99** J	NA
MW-8	10/17/1997	0.5	6.0	1.3	ND (0.20)	0.55	**1.1**	NA
MW-8	10/22/1998	ND (0.20)	2.6	2.1	ND (0.20)	ND (0.20)	**1.1**	NA
MW-8	4/21/1999	ND (0.20)	2.5	2.3	ND (0.20)	ND (0.20)	**1.6**	NA
MW-8	11/24/1999	**92**	13	2.8	ND (0.20)	**55**	**1.1**	NA
MW-8	10/30/2000	ND (0.20)	3.3 J	4.1 J	ND (0.20)	0.2 J	**0.99** J	NA
MW-8	11/7/2001	ND (0.20)	2.1	ND (0.10)	ND (0.10)	ND (0.20)	**0.71**	NA
MW-8	11/21/2002	ND (0.20)	2.1	4.1	ND (0.10)	ND (0.20)	**0.52**	NA
MW-8	11/20/2003	ND (0.081)	2.8	3.4	ND (0.067)	0.25 J	**0.7**	**13**
MW-8	11/4/2004	ND (0.081)	3.9	2.4	ND (0.067)	0.27 J	**0.72**	**5.7**
MW-8	11/1/2005	ND (0.21)	2.9	2.0	ND (0.13)	0.3 J	**0.5**	**9.4**
MW-8	11/16/2006	ND (0.21)	1.4	2.1	ND (0.13)	ND (0.24)	ND (0.13)	**10**
MW-9	3/26/1996	ND (2.5)	7.8	ND (2.5)	NA	ND (2.5)	ND (2.5)	NA
MW-9	2/3/1997	0.5 J	6.3	ND (2.5)	NA	ND (2.5)	ND (2.5)	NA
MW-9	4/29/1997	ND (5.0)	5.7	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	NA
MW-9	7/25/1997	ND (5.0)	9.2	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	NA
MW-9	10/28/1997	ND (0.20)	13	0.65	ND (0.20)	ND (0.20)	ND (0.20)	NA
MW-9	10/22/1998	ND (0.20)	4	1.7	ND (0.20)	ND (0.20)	ND (1.0)	NA
MW-9	11/29/1999	1.4	11	2.5	ND (0.20)	0.72	ND (1.0)	NA
MW-9	10/30/2000	ND (0.20)	1.0 J	5.4 J	ND (0.20)	0.2 J	**0.57** J	NA
MW-9	11/8/2001	ND (0.20)	0.71	4.3	ND (0.10)	ND (0.20)	**0.83**	NA

Table C-2. OU 1 Area 6 Monitoring Well Analytical Results (continued)

Sample Location	Sample Date	Trichloroethene	1,1,1-Trichloroethane	1,1-Dichloroethane	cis-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,4-Dioxane
		Concentrations in µg/L						
	Remedial Goal	**5.0**	**200**	**--**	**--**	**7.0**	**0.029**	**0.44**
MW-9	11/21/2002	ND (0.20)	ND (0.10)	5.0	ND (0.10)	ND (0.20)	**0.42** J	NA
MW-9	11/18/2003	ND (0.081)	0.11 J	5.2	ND (0.067)	ND (0.16)	**0.64**	**8.2**
MW-9	11/5/2004	ND (0.081)	ND (0.11)	5.9	ND (0.067)	ND (0.16)	**0.85**	**8.8**
MW-9	10/27/2005	ND (0.21)	ND (0.21)	6.2	ND (0.13)	ND (0.24)	**0.52**	**5.9**
MW-9	11/16/2006	ND (0.21)	ND (0.21)	9.5	ND (0.13)	ND (0.24)	**0.69**	**6.5**
MW-9	8/28/2008	ND (0.070)	0.08 J	7.9	ND (0.040)	0.19 J	**0.53**	**3.0**
MW-9	8/19/2009	ND (0.030)	ND (0.50) *	8.7	0.5 J	0.26 J	**0.66**	**2.7**
MW-9	8/5/2010	0.05 J	ND (0.030)	7.1	0.09 J	0.19 J	**0.38**	**2.0**
MW-9	2/10/2011	ND (0.030)	0.04 J	6.9	0.13 J	0.21 J	**0.41**	**2.2**
MW-9	8/9/2011	ND (0.030)	0.06 J	5.9	0.08 J	0.16 J	**0.34**	ND (1.1) UJ
MW-9	2/13/2012	ND (0.030)	0.15 J	7.8	0.1 J	0.19 J	**0.41**	**1.2**
MW-9	8/14/2012	ND (0.030)	0.21 J	7.5	0.11 J	0.25 J	**0.4**	**1.3**
MW-9	2/13/2013	ND (0.030)	0.12 J	6.2	0.08 J	0.19 J	**0.48**	**1.4**
MW-9	8/14/2013	ND (0.030)	0.2 J	7.1	0.09 J	0.26 J	**0.5**	**1.1**
MW-9	2/11/2014	ND (0.030)	0.05 J	6.3	0.11 J	0.21 J	**0.41**	**0.81** J
MW-9	9/3/2014	0.06 J	0.08 J	5.6	0.11 J	0.22 J	**0.36**	**0.78** J
MW-9	3/4/2015	ND (0.030)	0.19 J	7.9	0.13 J	0.26 J	**0.46**	**0.9** J
MW-9	7/29/2015	ND (0.030)	0.19 J	6.0	0.1 J	0.18 J	**0.41**	**1.2**
MW-9	1/28/2016	ND (0.030)	0.17 J	5.3	0.09 J	0.2 J	**0.36**	**1.3**
MW-9	8/10/2016	ND (0.10)	0.42 J	NA	NA	0.11 J	**0.29** J	**0.6**
MW-9	2/20/2017	ND (0.10)	0.47 J	NA	NA	0.09 J	**0.27**	ND (0.16)
MW-9	9/21/2017	ND (0.20)	0.47 J	NA	NA	0.17 J	**0.19** J	**0.59**
MW-9	2/15/2018	ND (0.10)	0.34	NA	NA	0.08 J	**0.15** J	**0.91**
MW-9	9/18/2018	ND (0.10)	0.34	NA	NA	0.08 J	ND (0.10)	**1.1**
MW-9	2/21/2019	ND (0.10)	ND (0.10)	NA	NA	0.16 J	**0.23**	**0.96**
MW-9	9/3/2019	ND (0.10)	ND (0.10)	NA	NA	0.13 J	**0.15** J	**1.2**
MW-9	2/13/2020	ND (0.10)	ND (0.10)	NA	NA	0.13 J	**0.16** J	**1.7**
MW-9	9/14/2020	ND (0.15) UJ	0.1 J	NA	NA	0.26 J	**0.36** J	**0.59**
MW-9	2/11/2021	ND (0.15)	0.049 J	NA	NA	0.24	**0.37**	**1.6**
MW-9	9/21/2021	ND (0.15)	0.047 J	NA	NA	0.21	**0.31**	**2.4**
MW-9	2/10/2022	ND (0.15)	0.044 J	NA	NA	0.19 J	**0.2**	**2.5** J
MW-9	9/21/2022	ND (0.50)	ND (0.80)	NA	NA	ND (0.50)	**0.28** J	**3.4**
MW-9	2/9/2023	ND (0.50)	ND (0.80)	NA	NA	ND (0.50)	**0.32** J	**3.4** J
MW-10	2/14/1995	ND (2.5)	11	21	NA	ND (2.5)	**11**	NA
MW-10	9/24/1995	ND (50)	ND (50)	23	NA	ND (50)	**11**	NA
MW-10	12/6/1995	1.4 J	2.5 J	31	NA	ND (50)	**20**	NA
MW-10	3/26/1996	ND (1.0)	0.57 J	29	NA	ND (1.0)	ND (1.0)	NA
MW-10	7/25/1997	ND (2.0)	ND (2.0)	18	ND (2.0)	ND (2.0)	**3.4**	NA
MW-10	10/29/1997	ND (0.20)	ND (0.50)	19	0.27	ND (0.20)	**0.79**	NA
MW-10	10/29/1997 (Dup)	ND (0.20)	ND (0.50)	19	0.27	ND (0.20)	**0.81**	NA
MW-10	4/14/1998	ND (0.20)	ND (0.50)	25	0.37	ND (0.20)	**1.6**	NA
MW-10	10/22/1998	ND (0.20)	ND (0.50)	17	0.23	ND (0.20)	ND (1.0)	NA
MW-10	4/21/1999	ND (0.20)	ND (0.50)	15	0.36	ND (0.20)	**1.5**	NA
MW-10	11/23/1999	0.26	ND (0.50)	9.1	0.53	ND (0.20)	ND (1.0)	NA
MW-10	4/24/2000	ND (0.20)	ND (0.30)	8.7	0.2 J	ND (0.30)	**0.9**	NA
MW-10	10/30/2000	ND (0.20)	ND (0.20)	11 J	0.3 J	ND (0.10)	**0.4** J	NA
MW-10	4/10/2001	ND (0.50)	ND (0.50)	6.4	0.2 J	ND (0.50)	ND (0.50)	NA
MW-10	11/8/2001	ND (0.20)	ND (0.10)	6.9	0.22 J	ND (0.20)	**0.38** J	NA
MW-10	4/16/2002	ND (0.20)	ND (0.10)	18	0.26 J	ND (0.20)	**0.62**	NA
MW-10	11/21/2002	ND (0.20)	ND (0.10)	16	0.24 J	ND (0.20)	**0.67**	NA
MW-10	4/22/2003	ND (0.081)	ND (0.11)	16	0.15 J	ND (0.16)	**0.66**	NA
MW-10	11/18/2003	ND (0.081)	ND (0.11)	17	0.17 J	ND (0.16)	**0.97**	**3.5**
MW-10	4/5/2004	ND (0.081)	ND (0.11)	16	0.18 J	ND (0.16)	**0.85**	**1.8**
MW-10	11/5/2004	ND (0.081)	ND (0.11)	6.8	0.2 J	ND (0.16)	**0.81**	**3.5**
MW-10	4/25/2005	ND (0.21)	ND (0.21)	5.4	0.26 J	ND (0.24)	**0.65**	**0.87** J
MW-10	11/1/2005	ND (0.21)	ND (0.21)	5.6	0.27 J	ND (0.24)	**0.77**	**1.7**
MW-10	11/14/2006	ND (0.21)	ND (0.21)	7.4	0.3 J	ND (0.24)	**0.79**	**1.4**
MW-10	2/22/2008	ND (0.060)	ND (0.060)	3.6	0.39 J	ND (0.060)	**0.59**	NA
MW-10	8/28/2008	ND (0.070)	0.06 J	12	0.37 J	ND (0.060)	**1.2**	NA
MW-10	4/30/2009	ND (0.070)	0.22 J	4.7	0.31 J	0.07 J	**0.43** J	**3.4**
MW-10	8/20/2009	ND (0.50) *	ND (0.50) *	3.5	0.28 J	ND (0.50) *	**0.33** J	**4.7**
MW-10	8/9/2010	0.24 J	0.33 J	3.7	0.34 J	0.34 J	**0.23**	**2.2**
MW-10	2/15/2011	ND (0.030)	ND (0.030)	9.9	0.48 J	0.07 J	**0.66**	**0.53** J
MW-10	8/9/2011	ND (0.030)	ND (0.030)	1.4	0.22 J	ND (0.050)	**0.39**	**1.4**
MW-10	2/9/2012	ND (0.030)	ND (0.030)	3.2	0.29 J	ND (0.050)	**0.32**	**2.6**
MW-10	8/13/2012	ND (0.030)	ND (0.030)	6.3	0.45 J	ND (0.050)	**0.4**	**0.8** J
MW-10	2/11/2013	ND (0.030)	0.04 J	12	0.67	0.09 J	**0.81**	**1.2**
MW-10	8/12/2013	ND (0.030)	ND (0.030)	4.0	0.34 J	ND (0.050)	**0.56**	**1.8**
MW-10	2/12/2014	ND (0.030)	0.03 J	4.0	0.29 J	ND (0.050)	**0.34**	**0.92** J
MW-10	8/28/2014	ND (0.030)	0.05 J	11	0.57	0.07 J	**0.66**	**0.73** J

Table C-2. OU 1 Area 6 Monitoring Well Analytical Results (continued)

Sample Location	Sample Date	Trichloroethene	1,1,1-Trichloroethane	1,1-Dichloroethane	cis-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,4-Dioxane
		Concentrations in µg/L						
	Remedial Goal	**5.0**	**200**	**--**	**--**	**7.0**	**0.029**	**0.44**
MW-10	2/26/2015	ND (0.030)	0.04 J	11 J	0.52	0.06 J	**0.79** J	**0.53** J
MW-10	7/29/2015	ND (0.030)	0.03 J	9.5	0.56	ND (0.050)	**0.88**	**0.83** J
MW-10	1/28/2016	ND (0.030)	ND (0.030)	2.0	0.21 J	ND (0.050)	**0.33**	**1.2**
MW-10	8/4/2016	ND (0.10)	ND (0.075)	NA	NA	0.08 J	**0.73** J	**0.8**
MW-10	2/20/2017	ND (0.10)	ND (0.075)	NA	NA	0.08 J	**0.08** J	0.3
MW-10	9/25/2017	ND (0.20)	ND (0.20)	NA	NA	ND (0.20)	**0.26**	0.42
MW-10	2/15/2018	ND (0.10)	ND (0.10)	NA	NA	ND (0.10)	ND (0.10)	**0.61**
MW-10	9/18/2018	ND (0.10)	0.05 J	NA	NA	ND (0.10)	**0.41**	**0.94**
MW-10	2/26/2019	ND (0.10)	ND (0.10)	NA	NA	ND (0.10)	**0.28**	**0.648**
MW-10	9/4/2019	ND (0.10)	ND (0.10)	NA	NA	ND (0.10)	ND (0.10)	**0.59**
MW-10	2/12/2020	ND (0.10)	ND (0.10)	NA	NA	ND (0.10)	**0.34**	**0.58**
MW-10	9/10/2020	ND (0.15) UJ	ND (0.070) UJ	NA	NA	ND (0.070) UJ	**0.39** J	0.39
MW-10	2/11/2021	ND (0.15)	ND (0.070)	NA	NA	ND (0.070)	**0.58**	**0.54**
MW-10	9/19/2021	ND (0.15)	ND (0.070)	NA	NA	ND (0.070)	**0.5**	NA
MW-10	9/30/2021	NA	NA	NA	NA	NA	NA	**0.68**
MW-10	2/9/2022	ND (0.15)	0.031 J	NA	NA	0.063 J	**0.61**	**0.88**
MW-10	9/27/2022	ND (0.50)	ND (0.80)	NA	NA	ND (0.50)	**0.74** J	**1.2**
MW-10	2/13/2023	ND (0.50)	ND (0.80)	NA	NA	ND (0.50)	**0.93** J	**1.1** J
MW-11	9/24/1995	2.2	11	ND (1.0)	NA	0.71 J	ND (1.0)	NA
MW-11	12/8/1995	3.2	25	ND (1.0)	NA	1.6	ND (1.0)	NA
MW-11	3/26/1996	ND (1.0)	4.9	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
MW-11	11/1/1996	1.7	9.1	1.4	NA	0.21 J	ND (1.0)	NA
MW-11	1/29/1997	0.54 J	7.4	1.1	NA	ND (1.0)	ND (1.0)	NA
MW-11	4/30/1997	0.38 J	6.1	ND (1.0)	0.96 J	0.72 J	ND (1.0)	NA
MW-11	7/22/1997	0.43 J	4.8	0.68 J	0.97 J	ND (1.0)	ND (1.0)	NA
MW-11	10/28/1997	0.3	2.9	0.31	0.58	ND (0.20)	ND (1.0)	NA
MW-11	10/22/1998	ND (0.20)	2.0	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
MW-11	11/29/1999	0.63	3.6	0.28	0.45	ND (0.20)	ND (1.0)	NA
MW-11	11/1/2000	ND (0.20)	0.91 J	0.1 J	0.2 J	ND (0.10)	ND (0.30)	NA
MW-11	11/7/2001	ND (0.20)	0.66	ND (0.10)	ND (0.10)	ND (0.20)	ND (0.20)	NA
MW-11	11/21/2002	ND (0.20)	0.47 J	ND (0.10)	0.13 J	ND (0.20)	ND (0.20)	NA
MW-11	11/20/2003	ND (0.081)	0.45 J	ND (0.066)	0.08 J	ND (0.16)	ND (0.12)	ND (0.15)
MW-11	11/4/2004	ND (0.081)	0.29 J	ND (0.066)	ND (0.067)	ND (0.16)	ND (0.12)	ND (0.47)
MW-11	11/5/2004	ND (0.21)	0.29 J	ND (0.16)	ND (0.13)	ND (0.24)	ND (0.13)	ND (0.47)
MW-11	4/25/2005	ND (0.21)	0.29 J	ND (0.16)	ND (0.13)	ND (0.24)	ND (0.13)	ND (0.27)
MW-11	8/8/2013	NA	NA	NA	NA	NA	NA	**2.7**
MW-11	2/12/2014	NA	NA	NA	NA	NA	NA	**1.3**
MW-11	9/2/2014	NA	NA	NA	NA	NA	NA	**2.1**
MW-11	3/2/2015	NA	NA	NA	NA	NA	NA	**2.3**
MW-11	7/27/2015	NA	NA	NA	NA	NA	NA	**2.3**
MW-11	1/26/2016	NA	NA	NA	NA	NA	NA	**1.9**
MW-11	8/9/2016	NA	NA	NA	NA	NA	NA	**2.7**
MW-11	2/14/2017	NA	NA	NA	NA	NA	NA	**1.2**
MW-11	9/14/2017	NA	NA	NA	NA	NA	NA	**0.61**
MW-11	2/8/2018	NA	NA	NA	NA	NA	NA	**1.0**
MW-11	9/12/2018	NA	NA	NA	NA	NA	NA	**0.78**
MW-11	2/25/2019	NA	NA	NA	NA	NA	NA	**1.19**
MW-11	8/28/2019	NA	NA	NA	NA	NA	NA	**0.69**
MW-11	2/11/2020	NA	NA	NA	NA	NA	NA	**1.2**
MW-11	9/14/2020	NA	NA	NA	NA	NA	NA	**0.49**
MW-11	2/11/2021	NA	NA	NA	NA	NA	NA	**1.3**
MW-11	9/21/2021	NA	NA	NA	NA	NA	NA	**1.1** J
MW-11	2/10/2022	NA	NA	NA	NA	NA	NA	**1.8**
MW-11	9/21/2022	NA	NA	NA	NA	NA	NA	**1.9**
MW-11	2/13/2023	NA	NA	NA	NA	NA	NA	**2.0**
MW-12	9/3/2014	NA	NA	NA	NA	NA	NA	ND (0.16)
MW-12	3/5/2015	NA	NA	NA	NA	NA	NA	ND (0.16)
MW-12	7/30/2015	NA	NA	NA	NA	NA	NA	ND (0.16)
MW-12	2/2/2016	NA	NA	NA	NA	NA	NA	ND (0.16)
MW-12	8/11/2016	NA	NA	NA	NA	NA	NA	ND (0.16)
MW-12	9/14/2017	NA	NA	NA	NA	NA	NA	ND (0.20)
MW-12	2/8/2018	NA	NA	NA	NA	NA	NA	ND (0.10)
MW-12	9/12/2018	NA	NA	NA	NA	NA	NA	ND (0.20)
MW-12	2/25/2019	NA	NA	NA	NA	NA	NA	ND (0.050)
MW-12	8/27/2019	NA	NA	NA	NA	NA	NA	ND (0.049) Q
MW-12	2/11/2020	NA	NA	NA	NA	NA	NA	ND (0.048)
MW-12	9/14/2020	NA	NA	NA	NA	NA	NA	ND (0.055)
MW-12	2/11/2021	NA	NA	NA	NA	NA	NA	ND (0.051)
MW-12	9/21/2021	NA	NA	NA	NA	NA	NA	ND (0.046)
MW-12	2/10/2022	NA	NA	NA	NA	NA	NA	ND (0.050)

Table C-2. OU 1 Area 6 Monitoring Well Analytical Results (continued)

Sample Location	Sample Date	Trichloroethene	1,1,1-Trichloroethane	1,1-Dichloroethane	cis-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,4-Dioxane
		Concentrations in µg/L						
	Remedial Goal	**5.0**	**200**	**--**	**--**	**7.0**	**0.029**	**0.44**
MW-12	9/21/2022	NA	NA	NA	NA	NA	NA	ND (0.050)
MW-12	2/9/2023	NA	NA	NA	NA	NA	NA	ND (0.047) UJ
MW-13	9/2/2014	NA	NA	NA	NA	NA	NA	ND (0.16)
MW-13	3/2/2015	NA	NA	NA	NA	NA	NA	ND (0.16)
MW-13	7/27/2015	NA	NA	NA	NA	NA	NA	ND (0.16)
MW-13	1/26/2016	NA	NA	NA	NA	NA	NA	ND (0.16)
MW-13	8/9/2016	NA	NA	NA	NA	NA	NA	ND (0.16)
MW-13	9/14/2017	NA	NA	NA	NA	NA	NA	ND (0.20)
MW-13	2/8/2018	NA	NA	NA	NA	NA	NA	ND (0.10)
MW-13	9/12/2018	NA	NA	NA	NA	NA	NA	ND (0.20)
MW-13	2/25/2019	NA	NA	NA	NA	NA	NA	ND (0.050)
MW-14	3/26/1996	ND (1.0)	1.6	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
MW-14	11/2/1996	ND (1.0)	2.0	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
MW-14	1/29/1997	ND (1.0)	9.3	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
MW-14	4/30/1997	ND (1.0)	0.72 J	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NA
MW-14	7/22/1997	ND (1.0)	0.65 J	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NA
MW-14	10/28/1997	ND (0.20)	0.62	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
N6-37	9/11/1993	**370**	**890**	ND (50)	NA	ND (50)	ND (50)	NA
N6-37	2/14/1995	**450**	**930**	ND (100)	NA	**29** J	ND (100)	NA
N6-37	9/26/1995	**480**	**710**	ND (50)	NA	**29** J	ND (50)	NA
N6-37	12/11/1995	**280**	**240**	2.8 J	NA	**16**	ND (10)	NA
N6-37	3/28/1996	**230**	98	ND (10)	NA	3.3 J	ND (10)	NA
N6-37	11/5/1996	**150**	29	ND (1.0)	NA	2.3	ND (1.0)	NA
N6-37	1/30/1997	**180**	22	ND (10)	NA	ND (10)	ND (10)	NA
N6-37	5/3/1997	**100**	7.2	ND (5.0)	1.9 J	ND (5.0)	ND (5.0)	NA
N6-37	7/25/1997	**110**	9.5	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	NA
N6-37	10/27/1997	**100**	17	ND (0.20)	6.2	2.1	ND (0.20)	NA
N6-37	1/20/1998	**58**	37	ND (0.20)	3.5	2.0	ND (1.0)	NA
N6-37	4/15/1998	**62**	58	1.5	6.4	3.1	ND (1.0)	NA
N6-37	4/15/1998 (Dup)	**53**	60	1.6	5.9	3.2	ND (1.0)	NA
N6-37	7/28/1998	**61**	23	ND (0.20)	3.7	0.77	ND (1.0)	NA
N6-37	7/28/1998 (Dup)	**54**	24	ND (0.20)	3.6	0.75	ND (1.0)	NA
N6-37	10/27/1998	**120**	73	2.1	9.7	4.3	ND (1.0)	NA
N6-37	1/26/1999	**37**	12	ND (0.20)	2.0	ND (0.20)	ND (1.0)	NA
N6-37	1/26/1999 (Dup)	**35**	11	ND (0.20)	2.0	ND (0.20)	ND (1.0)	NA
N6-37	4/22/1999	**39**	14	ND (0.20)	2.1	1.1	ND (1.0)	NA
N6-37	7/27/1999	**39**	15	ND (0.20)	2.5	1.1	ND (0.20)	NA
N6-37	11/23/1999	**32**	25	ND (0.20)	7.9	1.2	ND (1.0)	NA
N6-37	1/27/2000	**31**	12	ND (0.20)	1.3	0.82 J	ND (0.20)	NA
N6-37	1/27/2000 (Dup)	**37**	16	ND (0.20)	2.0	0.93 J	ND (0.20)	NA
N6-37	4/25/2000	**59**	73	1.9	3.4	6.3	ND (0.20)	NA
N6-37	7/25/2000	**35**	15	0.1 J	1.8	0.91	ND (0.50)	NA
N6-37	10/25/2000	**21**	5.7	ND (0.20)	0.79	0.56	ND (0.30)	NA
N6-37	1/10/2001	**19**	5.3	ND (0.10)	0.62	0.5 J	ND (0.30)	NA
N6-37	4/11/2001	**29**	11	0.2 J	2.6	0.7	ND (0.50)	NA
N6-37	7/11/2001	**43**	20	0.62	6.7	0.96	ND (0.22)	NA
N6-37	11/8/2001	**52** D	26	0.73	9.7	1.2	ND (0.20)	NA
N6-37	1/15/2002	**72** D	31 D	0.98 JD	15 D	1.1 D	ND (0.40)	NA
N6-37	4/15/2002	**66** D	22 D	0.7 JD	12 D	1.3 JD	ND (1.0)	NA
N6-37	7/11/2002	**46**	19	0.7	11	1.2	ND (0.20)	NA
N6-37	11/21/2002	**40**	5.8	0.18 J	3.6	0.44 J	ND (0.20)	NA
N6-37	1/14/2003	**24**	6.8	0.08 J	1.0	ND (0.53)	ND (0.045)	NA
N6-37	4/22/2003	**30**	10	0.28 J	4.2	0.68	ND (0.12)	NA
N6-37	6/25/2003	**21**	ND (4.2)	ND (0.066)	0.79	ND (0.50)	ND (0.12)	**6.7** J
N6-37	11/20/2003	**20**	6.1	0.08 J	1.3	0.36 J	ND (0.12)	**7.4**
N6-37	1/21/2004	**21** J	7.5	0.13 J	2.5	0.62	ND (0.12)	**6.8**
N6-37	4/6/2004	**20**	5.3	0.13 J	2.3	0.57	ND (0.12)	**4.9**
N6-37	7/19/2004	**32**	3.6	0.1 J	2.4	0.16 J	ND (0.12)	**5.0**
N6-37	11/5/2004	**26**	3.8	0.08 J	1.3	0.22 J	ND (0.12)	**4.8**
N6-37	1/24/2005	**22**	5.6	0.17 J	3.4	0.43 J	ND (0.12)	**6.2**
N6-37	4/27/2005	**23**	4.6	ND (0.16)	1.6	ND (0.24)	ND (0.13)	**7.7**
N6-37	7/26/2005	**21**	3.6	ND (0.16)	1.3	ND (0.24)	ND (0.13)	**7.6** J
N6-37	11/4/2005	**10**	4.5	ND (0.16)	1.1	0.3 J	ND (0.13)	**6.7**
N6-37	2/8/2006	**12**	3.3	ND (0.16)	1.5	ND (0.24)	ND (0.13)	**6.1**
N6-37	5/10/2006	**23**	8.4	0.34 J	4.2	0.42 J	ND (0.13)	**5.5**
N6-37	8/17/2006	**28**	12	0.58	6.1	0.43 J	ND (0.13)	**5.3**
N6-37	11/13/2006	**13**	6.8	0.27 J	2.4	0.31 J	ND (0.13)	**5.8**
N6-37	2/21/2007	**11**	2.9	ND (0.16)	1.0	0.4 J	ND (0.13)	**6.0**
N6-37	5/10/2007	**19**	5.5	0.16 J	2.4	0.25 J	ND (0.13)	**5.1**
N6-37	8/14/2007	**34**	8.8	0.43 J	6.7	0.43 J	ND (0.040)	**4.7**

Table C-2. OU 1 Area 6 Monitoring Well Analytical Results (continued)

Sample Location	Sample Date	Trichloroethene	1,1,1-Trichloroethane	1,1-Dichloroethane	cis-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,4-Dioxane
		Concentrations in µg/L						
	Remedial Goal	**5.0**	**200**	**--**	**--**	**7.0**	**0.029**	**0.44**
N6-37	2/21/2008	**58**	16	0.85	12	0.88	ND (0.040)	NA
N6-37	8/27/2008	**97** D	25	2.0	27	1.1	ND (0.060)	NA
N6-37	4/29/2009	**63**	12 D	0.72	12	0.91	ND (0.060)	NA
N6-37	8/20/2009	**19**	4.7	0.14 J	1.7	0.42 J	ND (0.030)	**5.6**
N6-37	8/4/2010	**26**	6.3	0.41 J	5.0	0.4 J	ND (0.030)	**3.9**
N6-37	2/16/2011	**29**	6.2	0.29 J	4.6	0.47 J	ND (0.030)	**3.6**
N6-37	8/10/2011	3.6	0.87 J	ND (0.020)	0.17 J	0.06 J	ND (0.030)	**2.5**
N6-37	2/14/2012	**27**	7.5	0.57	6.4	0.41 J	ND (0.030)	**3.2**
N6-37	8/15/2012	**6.3**	2.0	0.09 J	0.83	0.14 J	ND (0.030)	**2.5**
N6-37	2/13/2013	**13**	3.0	0.17 J	2.3	0.21 J	ND (0.030)	**2.2**
N6-37	8/15/2013	**10**	4.0	0.19 J	1.7	0.24 J	ND (0.030)	**2.3**
N6-37	2/18/2014	**13**	2.8	0.2 J	3.0	0.2 J	ND (0.030)	**1.9**
N6-37	9/5/2014	**37**	6.2	0.43 J	7.1	0.38 J	ND (0.030)	**1.8**
N6-37	3/5/2015	**41**	5.3	0.27 J	5.3	0.45 J	ND (0.030)	**1.5**
N6-37	7/30/2015	**40**	5.7	0.28 J	4.2	0.47 J	ND (0.030)	**2.6**
N6-37	2/1/2016	**23**	3.6	0.1 J	1.9	0.5 J	ND (0.10)	**2.5**
N6-37	8/11/2016	**31** J	5.5 J	NA	NA	0.51 J	ND (0.075)	**2.3**
N6-37	2/21/2017	**15**	3.9	NA	NA	0.32 J	ND (0.075)	**1.4**
N6-37	9/25/2017	2.5	1.0	NA	NA	ND (0.20)	ND (0.10)	**2.3**
N6-37	2/19/2018	**8.0**	1.9	NA	NA	0.24	ND (0.10) UJ	**2.2**
N6-37	9/20/2018	**17.8**	3.0	NA	NA	0.25	ND (0.10)	**1.5**
N6-37	2/27/2019	**31.2**	6.85	NA	NA	0.43	ND (0.10)	**1.61**
N6-37	9/9/2019	**21.5**	4.73	NA	NA	0.6	ND (0.10)	**1.5**
N6-37	2/18/2020	**12.5**	2.07	NA	NA	0.39	ND (0.10)	**1.7**
N6-37	9/16/2020	**12** J	1.9 J	NA	NA	0.16 J	ND (0.015) UJ	**1.2** J
N6-37	2/17/2021	**11**	1.8	NA	NA	0.14 J	ND (0.015) UJ	**1.9**
N6-37	2/17/2021 (Dup)	**11**	1.7	NA	NA	0.14 J	ND (0.015) UJ	**2.0**
N6-37	9/23/2021	**13**	1.7	NA	NA	0.13 J	ND (0.015)	**2.3**
N6-37	9/23/2021 (Dup)	**13**	1.7	NA	NA	0.19 J	ND (0.015)	**2.5**
N6-37	2/15/2022	**12** J	1.7 J	NA	NA	0.13 J	ND (0.015)	**2.7**
N6-37	9/21/2022	**13**	2.0	NA	NA	ND (0.50)	ND (0.50)	**1.6**
N6-37	2/14/2023	**8.0**	1.1	NA	NA	ND (0.50)	ND (0.50)	**1.9** J
N6-38	3/29/1996	ND (100)	**3600**	ND (100)	NA	**91** J	ND (100)	NA
N6-38	11/5/1996	ND (100)	**1400**	ND (100)	NA	**46** J	ND (100)	NA
N6-38	1/30/1997	**23**	**670**	ND (20)	NA	**45**	ND (20)	NA
N6-38	5/3/1997	**8.4** J	**380**	ND (20)	ND (20)	**17** J	ND (20)	NA
N6-38	7/25/1997	**24**	**330**	ND (20)	ND (20)	**41**	ND (20)	NA
N6-38	10/27/1997	**38**	**680**	1.8	13	**87**	ND (0.20)	NA
N6-38	10/27/1997 (Dup)	**38**	**650**	1.7	13	**96**	ND (0.20)	NA
N6-38	1/20/1998	**19**	**250**	0.32	1.6	**32**	ND (1.0)	NA
N6-38	4/15/1998	**34**	**310**	3.4	6.2	**38**	ND (1.0)	NA
N6-38	7/29/1998	**27**	**540**	1.6	1.6	**42**	ND (1.0)	NA
N6-38	10/27/1998	**44**	**280**	0.98	3.7	**34**	ND (1.0)	NA
N6-38	10/27/1998 (Dup)	**46**	**290**	1.1	4.0	**34**	ND (1.0)	NA
N6-38	1/26/1999	**9.5**	190	ND (0.20)	ND (0.20)	**27**	ND (1.0)	NA
N6-38	4/22/1999	**18**	**260**	ND (0.20)	ND (0.20)	**38**	ND (5.0)	NA
N6-38	7/27/1999	**9.6**	98	ND (0.20)	ND (0.20)	**28**	ND (0.20)	NA
N6-38	11/23/1999	**8.2**	110	ND (0.20)	ND (0.20)	**30**	ND (1.0)	NA
N6-38	11/23/1999 (Dup)	**9.0**	100	ND (0.20)	ND (0.20)	**27**	ND (1.0)	NA
N6-38	1/27/2000	**11**	140	ND (0.20)	0.3 J	**31**	ND (0.20)	NA
N6-38	4/25/2000	**10**	88	ND (0.10)	ND (0.20)	**25**	ND (0.20)	NA
N6-38	7/25/2000	**10**	110 D	0.2 J	0.3 J	**28**	ND (0.50)	NA
N6-38	10/25/2000	**9.8**	78	0.2 J	0.3 J	**28**	ND (0.30)	NA
N6-38	1/10/2001	**8.7**	81 D	0.2 J	0.2 J	**23**	ND (0.30)	NA
N6-38	4/12/2001	**8.9**	74	0.2 J	0.2 J	**12**	ND (0.50)	NA
N6-38	7/11/2001	**9.5**	110 D	0.21 J	0.27 J	**24**	ND (0.22)	NA
N6-38	11/7/2001	**8.6**	109 D	0.15 J	ND (0.10)	**24**	ND (0.20)	NA
N6-38	1/15/2002	**7.1**	65 D	0.12 J	0.12 J	**23**	ND (0.20)	NA
N6-38	4/16/2002	**6.1** D	68 D	ND (0.20)	ND (0.20)	**16** D	ND (0.40)	NA
N6-38	7/11/2002	**7.1**	94 D	0.16 J	0.2 J	**17**	ND (0.20)	NA
N6-38	11/21/2002	**6.7**	100	0.14 J	0.15 J	**15**	ND (0.20)	NA
N6-38	1/14/2003	**6.9**	130 D	0.18 J	0.17 J	**18** J	ND (0.045)	NA
N6-38	4/22/2003	**5.2**	93	0.11 J	0.1 J	**15**	ND (0.12)	NA
N6-38	6/25/2003	**6.1**	100	0.15 J	0.14 J	**15**	ND (0.12)	**7.2** J
N6-38	11/20/2003	4.8	110	0.14 J	0.11 J	**14**	ND (0.12)	**7.8**
N6-38	1/21/2004	4.9	92	0.09 J	0.13 J	**12**	ND (0.12)	**7.8**
N6-38	4/6/2004	4.2	64	0.14 J	0.13 J	0.1 J	ND (0.12)	**6.0**
N6-38	7/20/2004	3.6	60	0.12 J	0.09 J	**8.8**	ND (0.12)	**6.2**
N6-38	11/8/2004	3.4	77	0.13 J	0.11 J	**9.0**	ND (0.12)	**6.3**
N6-38	1/18/2005	**5.4**	93	0.37 J	0.91	**15**	ND (0.12)	**8.2**

Table C-2. OU 1 Area 6 Monitoring Well Analytical Results (continued)

Sample Location	Sample Date	Trichloroethene	1,1,1-Trichloroethane	1,1-Dichloroethane	cis-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,4-Dioxane
		Concentrations in µg/L						
	Remedial Goal	**5.0**	**200**	**--**	**--**	**7.0**	**0.029**	**0.44**
N6-38	4/27/2005	3.0	29	ND (0.16)	ND (0.13)	**7.9**	ND (0.13)	**3.8**
N6-38	7/26/2005	4.1	110	0.2 J	ND (0.13)	**7.9**	ND (0.13)	**8.0** J
N6-38	11/4/2005	3.7	120 D	0.16 J	0.27 J	**18**	ND (0.13)	**6.8**
N6-38	2/8/2006	3.7	61 D	0.21 J	0.26 J	**7.1**	ND (0.13)	**6.2**
N6-38	5/10/2006	3.7	68 D	0.2 J	0.27 J	**7.8**	ND (0.13)	**6.6**
N6-38	8/15/2006	5.0	100 D	0.47 J	0.72	**8.6**	ND (0.13)	**7.4**
N6-38	11/13/2006	4.2	110 J	0.39 J	0.37 J	**9.8**	ND (0.13)	**7.0**
N6-38	2/21/2007	2.9	39	ND (0.16)	0.14 J	6.8	ND (0.13)	**6.5**
N6-38	5/10/2007	2.8	40	0.08 J	0.13 J	5.9	ND (0.13)	**5.4**
N6-38	8/14/2007	3.4	54	0.19 J	0.31 J	**8.1**	ND (0.040)	**5.7**
N6-38	2/21/2008	3.3	42	0.12 J	0.31 J	**7.7**	ND (0.040)	NA
N6-38	8/27/2008	3.7	55	0.14 J	0.27 J	**8.2**	ND (0.060)	NA
N6-38	4/29/2009	3.7	40	0.09 J	0.16 J	**8.2**	ND (0.060)	NA
N6-38	8/20/2009	**5.5**	63	0.23 J	0.44 J	**12**	ND (0.030)	**8.2**
N6-38	8/5/2010	3.3	40	0.11 J	0.16 J	**7.9**	ND (0.030)	**3.5**
N6-38	2/16/2011	1.9	15	0.05 J	0.06 J	3.6	ND (0.030)	**3.3**
N6-38	8/10/2011	1.8	21	0.05 J	0.08 J	4.5	ND (0.030)	**2.7**
N6-38	2/14/2012	3.7	40	0.12 J	0.22 J	**7.3**	ND (0.030)	**3.5**
N6-38	8/15/2012	2.2	32	0.1 J	0.13 J	4.7	ND (0.030)	**3.1**
N6-38	2/13/2013	2.1	21	0.06 J	0.08 J	2.9	ND (0.030)	**2.5**
N6-38	8/15/2013	1.8	25	0.08 J	0.11 J	4.5	ND (0.030)	**2.2**
N6-38	2/18/2014	1.8	19	0.07 J	0.08 J	3.7	ND (0.030)	**2.2**
N6-38	9/4/2014	1.9	16	0.04 J	0.1 J	3.6	ND (0.030)	**1.7**
N6-38	3/5/2015	1.9	12	0.05 J	0.16 J	2.7	ND (0.030)	**1.8**
N6-38	7/30/2015	1.9	14	0.06 J	0.17 J	3.6	ND (0.030)	**2.4**
N6-38	2/2/2016	1.5	8.4	ND (0.10)	ND (0.10)	2.4	ND (0.10)	**2.5**
N6-38	8/11/2016	1.3 J	9.8 J	NA	NA	2.6 J	ND (0.075)	**2.5**
N6-38	2/21/2017	3.3	22	NA	NA	4.9	ND (0.075)	**1.6**
N6-38	9/25/2017	1.3	13	NA	NA	2.7	ND (0.10)	**2.3**
N6-38	2/19/2018	0.94	8.3	NA	NA	1.9	ND (0.10) UJ	**2.3**
N6-38	9/24/2018	1.13	10.9	NA	NA	2.56	ND (0.10)	**2.4**
N6-38	2/27/2019	1.18	9.08	NA	NA	1.81	ND (0.10)	**2.6**
N6-38	9/9/2019	0.98	9.05	NA	NA	2.18	ND (0.10)	**1.7**
N6-38	2/18/2020	0.8	5.06	NA	NA	1.63	ND (0.10)	**2.1**
N6-38	9/16/2020	0.85 J	9.9 J	NA	NA	2.0 J	ND (0.015) UJ	**1.3** J
N6-38	2/17/2021	0.94	6.9	NA	NA	1.4	ND (0.015) UJ	**2.4**
N6-38	9/23/2021	0.93	6.7	NA	NA	1.5	ND (0.015)	**1.8**
N6-38	2/15/2022	0.74	4.7	NA	NA	1.1	ND (0.015)	**2.5**
N6-38	9/21/2022	0.82 J	5.6	NA	NA	0.96 J	ND (0.50)	**2.1**
N6-38	2/14/2023	ND (0.50)	ND (0.80)	NA	NA	ND (0.50)	ND (0.50)	**1.9** J
6-I-1	9/25/1995	ND (1.0)	1.9	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-I-1	12/11/1995	0.41 J	2.7	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-I-1	3/28/1996	0.93	3.0	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-I-1	11/5/1996	0.39 J	0.97 J	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-I-1	1/30/1997	2.6	2.8	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-I-1	5/3/1997	ND (1.0)	0.66 J	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NA
6-I-1	7/25/1997	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NA
6-I-1	10/16/1997	0.36	0.62	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
6-I-1	10/21/1998	ND (0.20)	ND (0.50)	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
6-I-1	11/17/1999	ND (0.20)	ND (0.50)	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
6-I-1	10/25/2000	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.10)	ND (0.30)	NA
6-I-1	11/5/2001	ND (0.20)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.20)	ND (0.20)	NA
6-I-1	11/18/2002	ND (0.20)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.20)	ND (0.20)	NA
6-I-1	11/11/2003	ND (0.081)	ND (0.11)	ND (0.066)	ND (0.067)	ND (0.16)	ND (0.12)	ND (0.15)
6-I-1	11/2/2004	ND (0.081)	ND (0.11)	ND (0.066)	ND (0.067)	ND (0.16)	ND (0.12)	ND (0.47)
6-I-1	10/31/2005	ND (0.21)	ND (0.21)	ND (0.16)	ND (0.13)	ND (0.24)	ND (0.13)	ND (0.47)
6-I-1	11/13/2006	ND (0.21)	ND (0.21)	ND (0.16)	ND (0.13)	ND (0.24)	ND (0.13)	ND (0.27)
6-I-3	2/14/1995	ND (1.0)	3.9	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-I-3	9/27/1995	ND (1.0)	0.82 J	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-I-3	12/7/1995	ND (1.0)	0.52 J	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-I-3	3/27/1996	ND (1.0)	ND (1.0)	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-I-3	10/30/1996	ND (1.0)	ND (1.0)	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-I-3	1/29/1997	4.0	4.7	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-I-3	5/2/1997	ND (1.0)	0.96 J	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NA
6-I-3	7/23/1997	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NA
6-I-3	10/15/1997	1.9	1.1	ND (0.20)	0.2	0.21	ND (1.0)	NA
6-I-3	10/21/1998	ND (0.20)	ND (0.50)	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
6-I-3	11/16/1999	ND (0.20)	ND (0.50)	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
6-I-3	10/26/2000	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.10)	ND (0.30)	NA
6-I-3	11/8/2001	ND (0.20)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.20)	ND (0.20)	NA

Table C-2. OU 1 Area 6 Monitoring Well Analytical Results (continued)

Sample Location	Sample Date	Trichloroethene	1,1,1-Trichloroethane	1,1-Dichloroethane	cis-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,4-Dioxane
		Concentrations in µg/L						
	Remedial Goal	**5.0**	**200**	**--**	**--**	**7.0**	**0.029**	**0.44**
6-I-3	11/21/2002	ND (0.20)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.20)	ND (0.20)	NA
6-I-3	11/18/2003	ND (0.081)	ND (0.11)	ND (0.066)	ND (0.067)	ND (0.16)	ND (0.12)	ND (0.15)
6-I-3	11/3/2004	ND (0.081)	ND (0.11)	ND (0.066)	ND (0.067)	ND (0.16)	ND (0.12)	ND (0.47)
6-I-3	10/31/2005	ND (0.21)	ND (0.21)	ND (0.16)	ND (0.13)	ND (0.24)	ND (0.13)	ND (0.47)
6-I-3	11/16/2006	ND (0.21)	ND (0.21)	ND (0.16)	ND (0.13)	ND (0.24)	ND (0.13)	ND (0.27)
6-I-6	2/15/1995	1.3	5.9	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-I-6	9/27/1995	0.24 J	1.4	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-I-6	12/9/1995	ND (1.0)	3.0	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-I-6	3/27/1996	ND (1.0)	0.35 J	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-I-6	11/2/1996	ND (1.0)	0.42 J	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-I-6	1/29/1997	0.31 J	0.74 J	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-I-6	4/30/1997	ND (1.0)	0.48 J	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NA
6-I-6	7/24/1997	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NA
6-I-6	10/16/1997	1.3	2.0	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
6-I-6	10/21/1998	ND (0.20)	ND (0.50)	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
6-I-6	11/17/1999	ND (0.20)	ND (0.50)	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
6-I-8	2/13/1995	ND (1.0)	ND (1.0)	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-I-8	9/21/1995	ND (1.0)	1.4	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-I-8	12/10/1995	0.38 J	3.0	0.48 J	NA	ND (1.0)	ND (1.0)	NA
6-I-8	3/27/1996	ND (1.0)	ND (1.0)	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-I-8	10/30/1996	ND (1.0)	ND (1.0)	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-I-8	1/31/1997	1.1	1.3	ND (1.0)	NA	ND (1.0)	ND (1.0)	NA
6-I-8	5/2/1997	ND (1.0)	0.54 J	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NA
6-I-8	7/23/1997	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NA
6-I-8	10/14/1997	ND (0.20)	ND (0.50)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	NA
6-I-8	10/21/1998	ND (0.20)	ND (0.50)	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
6-I-8	11/16/1999	ND (0.20)	ND (0.50)	ND (0.20)	ND (0.20)	ND (0.20)	ND (1.0)	NA
6-I-8	10/25/2000	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.10)	ND (0.30)	NA
6-I-8	11/5/2001	ND (0.20)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.20)	ND (0.20)	NA
6-I-8	11/18/2002	ND (0.20)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.20)	ND (0.20)	NA
6-I-8	11/10/2003	ND (0.081)	ND (0.11)	ND (0.066)	ND (0.067)	ND (0.16)	ND (0.12)	ND (0.15)
6-I-8	11/1/2004	ND (0.081)	ND (0.11)	ND (0.066)	ND (0.067)	ND (0.16)	ND (0.12)	ND (0.47)
6-I-8	10/31/2005	ND (0.21)	ND (0.21)	ND (0.16)	ND (0.13)	ND (0.24)	ND (0.13)	ND (0.47)
6-I-8	11/13/2005	ND (0.21)	ND (0.21)	ND (0.16)	ND (0.13)	ND (0.24)	ND (0.13)	ND (0.27)

Notes:
µg/L – Micrograms per liter.
Bold indicates exceedance of the remedial goal.
Dup – Field duplicate.
NA – Not analyzed for the indicated parameter.
ND ( ) – Parameter is not detected; detection limit in parenthesis.
J – Estimated value; detected, but less than quantitation limit or qualified as estimated due to a QC outlier.
UJ – Analyte is not detected at an estimated method detection limit.
D – Diluted.
J^1 – Sample exceeded holding time, estimated concentration.
E – The result is an estimated value that exceeded the calibration range of the instrument.
Q – One or more quality control criteria associated with the result were not met.
M – A manual integration was performed on the chromatographic peak.

Table C-3. OU 1 Area 6 Domestic Well Analytical Results

Sample Location	Sample Date	Trichloroethene	1,1,1-Trichloroethane	1,1-Dichloroethane	cis-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,4-Dioxane
		Concentrations in µg/L						
	Remedial Goal	5	200	--	--	7.0	0.029	0.44
6-DW-38	4/10/2006	NA	NA	NA	NA	NA	NA	2.3 J
6-DW-38	5/23/2006	NA	NA	NA	NA	NA	NA	2.9
6-DW-38	8/21/2006	NA	NA	NA	NA	NA	NA	2.8
6-DW-38	11/15/2006	NA	NA	NA	NA	NA	NA	2.7
6-DW-38	2/20/2008	NA	NA	NA	NA	NA	NA	3.0
6-DW-38	8/25/2008	NA	NA	NA	NA	NA	NA	ND (1.0)
6-DW-38	8/14/2009	NA	NA	NA	NA	NA	NA	ND (0.16)
6-DW-38	8/9/2010	0.03 J	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	0.75 J
6-DW-38	2/8/2011	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	2.9
6-DW-38	8/2/2011	ND (0.030)	0.07 J	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-DW-38	2/2/2012	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	1.0
6-DW-38	8/7/2012	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	6.4
6-DW-38	2/5/2013	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	6.2
6-DW-38	8/6/2013	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	6.2
6-DW-38	2/4/2014	ND (0.030)	0.09 J	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	7.7
6-DW-38	8/26/2014	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	6.8
6-DW-38	3/5/2015	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	5.6
6-DW-38	7/21/2015	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	8.3
6-DW-38	1/20/2016	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	7.9
6-DW-38	8/3/2016	ND (0.10)	ND (0.075)	NA	NA	ND (0.080)	ND (0.075)	7.3
6-DW-38	2/13/2017	ND (0.10)	ND (0.075)	NA	NA	ND (0.080)	ND (0.075)	5.3 J
6-DW-38	9/12/2017	ND (0.20) UJ	ND (0.20) UJ	NA	NA	ND (0.20) UJ	ND (0.10) UJ	9.6
6-DW-38	2/6/2018	ND (0.10)	ND (0.10)	NA	NA	ND (0.10)	ND (0.10)	9.5 J
6-DW-38	9/11/2018	ND (0.10)	ND (0.10)	NA	NA	ND (0.10)	ND (0.10)	7.6
6-DW-38	2/7/2019	ND (0.10)	ND (0.10)	NA	NA	ND (0.10)	ND (0.10)	10.7
6-DW-38	8/26/2019	ND (0.15)	ND (0.070)	NA	NA	ND (0.15)	ND (0.017)	5.4
6-DW-38	9/10/2019	ND (0.15)	ND (0.070)	NA	NA	ND (0.15)	ND (0.017)	5.4
6-DW-38	2/5/2020	ND (0.15) M	ND (0.070)	NA	NA	ND (0.15)	ND (0.017) M	11
6-DW-38	9/9/2020	ND (0.15) UJ	ND (0.070) UJ	NA	NA	ND (0.070) UJ	ND (0.015) UJ	8.6
6-DW-38	2/9/2021	ND (0.15)	ND (0.070)	NA	NA	ND (0.070)	0.021	12
6-DW-38	9/20/2021	ND (0.15)	ND (0.070)	NA	NA	ND (0.070)	ND (0.015)	9.2
6-DW-38	2/14/2022	ND (0.15)	ND (0.070)	NA	NA	ND (0.070)	ND (0.015) UJ	12
6-DW-38	9/20/2022	ND (0.15)	ND (0.070)	NA	NA	ND (0.070)	ND (0.015)	13
6-DW-38	2/6/2023	0.014 J	ND (0.0100)	NA	NA	ND (0.0100)	0.0747	13
6-DW-38B	8/14/2009	NA	NA	NA	NA	NA	NA	ND (0.16)
6-DW-38B	8/9/2010	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-DW-38B	2/8/2011	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-DW-38B	8/2/2011	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-DW-38B	2/2/2012	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-DW-38B	8/7/2012	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-DW-38B	2/5/2013	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-DW-47	4/10/2006	NA	NA	NA	NA	NA	NA	ND (0.47)
6-DW-47	5/23/2006	NA	NA	NA	NA	NA	NA	ND (0.47)
6-DW-47	8/21/2006	NA	NA	NA	NA	NA	NA	ND (0.27)
6-DW-47	11/15/2006	NA	NA	NA	NA	NA	NA	ND (0.27)
6-DW-47	8/20/2009	NA	NA	NA	NA	NA	NA	ND (1.0)
6-DW-47	8/10/2010	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-DW-47	2/8/2011	ND (0.030)	ND (0.030)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-DW-48	4/10/2006	NA	NA	NA	NA	NA	NA	ND (0.47)
6-DW-48	5/23/2006	NA	NA	NA	NA	NA	NA	ND (0.47)
6-DW-48	8/21/2006	NA	NA	NA	NA	NA	NA	ND (0.27)
6-DW-48	11/15/2006	NA	NA	NA	NA	NA	NA	ND (0.27)
6-DW-48	8/14/2009	NA	NA	NA	NA	NA	NA	ND (0.16)
6-DW-48	8/9/2010	ND (0.030)	ND (0.020)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-DW-48	2/8/2011	ND (0.030)	ND (0.020)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-DW-48	8/3/2011	ND (0.030)	ND (0.020)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-DW-48	2/2/2012	ND (0.030)	ND (0.020)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-DW-48	8/8/2012	0.03 J	ND (0.020)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-DW-48	2/6/2013	0.03 J	ND (0.020)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-DW-48	8/6/2013	ND (0.030)	ND (0.020)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-DW-48	2/4/2014	ND (0.030)	ND (0.020)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-DW-48	8/25/2014	ND (0.030)	ND (0.020)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-DW-48	2/24/2015	ND (0.030)	ND (0.020)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-DW-48	7/21/2015	ND (0.030)	ND (0.020)	ND (0.020)	ND (0.040)	ND (0.050)	ND (0.030)	ND (0.16)
6-DW-48	1/20/2016	ND (0.030) UJ	ND (0.020)	ND (0.020)	ND (0.040)	ND (0.050) UJ	ND (0.030) UJ	ND (0.16)
6-DW-48	8/2/2016	ND (0.075)	NA	NA	NA	ND (0.080)	ND (0.075)	ND (0.16)
6-DW-48	1/31/2017	ND (0.075)	NA	NA	NA	ND (0.080)	ND (0.075)	ND (0.16)
6-DW-48	9/12/2017	ND (0.20)	NA	NA	NA	ND (0.20)	ND (0.10)	ND (0.20)

Table C-3. OU 1 Area 6 Domestic Well Analytical Results (continued)

Sample Location	Sample Date	Trichloroethene	1,1,1-Trichloroethane	1,1-Dichloroethane	cis-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,4-Dioxane
		Concentrations in µg/L						
	Remedial Goal	**5**	**200**	**--**	**--**	**7.0**	**0.029**	**0.44**
6-DW-48	2/6/2018	ND (0.10)	NA	NA	NA	ND (0.10)	ND (0.10)	ND (0.10)
6-DW-48	9/11/2018	ND (0.10)	NA	NA	NA	ND (0.10)	ND (0.10)	**0.58**
6-DW-48	2/6/2019	ND (0.10)	NA	NA	NA	ND (0.10)	ND (0.10)	ND (0.050)
6-DW-48	8/26/2019	ND (0.070)	NA	NA	NA	ND (0.15)	ND (0.017)	ND (0.049)
6-DW-48	9/10/2019	ND (0.070)	NA	NA	NA	ND (0.15)	ND (0.017)	ND (0.049)
6-DW-48	2/5/2020	ND (0.070)	NA	NA	NA	ND (0.15)	ND (0.017)	ND (0.051)
6-DW-48	9/16/2020	ND (0.15) UJ	ND (0.070) UJ	NA	NA	ND (0.070) UJ	ND (0.015) UJ	ND (0.054) UJ
6-DW-48	2/18/2021	ND (0.15)	ND (0.070)	NA	NA	ND (0.070)	ND (0.015) UJ	ND (0.052)
6-DW-48	9/22/2021	ND (0.15)	ND (0.070)	NA	NA	ND (0.070)	ND (0.015)	ND (0.048)
6-DW-48	2/16/2022	ND (0.15)	ND (0.070)	NA	NA	ND (0.070)	ND (0.015)	ND (0.048)
6-DW-48	9/20/2022	ND (0.15)	ND (0.070)	NA	NA	ND (0.070)	ND (0.015)	ND (0.052)
6-DW-48	2/8/2023	ND (0.0100)	ND (0.0100)	NA	NA	ND (0.0100)	ND (0.0100)	ND (0.048) UJ

Notes:
µg/L – Micrograms per liter.
Bold indicates exceedance of the remedial goal.
NA – Not analyzed for the indicated parameter.
ND ( ) – Parameter is not detected; detection limit in parenthesis.
J – Estimated value; detected, but less than quantitation limit or qualified as estimated due to a QC outlier.
UJ – Analyte is not detected at an estimated method detection limit.
M – A manual integration was performed on the chromatographic peak.

Table C-4. Western Treatment Plant Influent and Effluent Analytical Results

Sample Location	Sample Date	Trichloroethene	1,1,1-Trichloroethane	1,1-Dichloroethene	Vinyl Chloride	1,4-Dioxane
		Concentrations in µg/L				
	Remedial Goal	**5**	**200**	**7**	**0.029**	**0.44**
Influent	8/2/2018	**19.3**	24.5	**8.45**	**0.10 J**	**1.6**
	2/28/2019	**24.0**	25.8	**8.62**	**0.090 J**	**1.8**
	9/30/2019	**19.4**	25.3	**9.55**	**0.090 J**	**2.7**
	3/9/2020	**23.7**	25.8	**9.64**	ND (0.10)	**2.8**
	9/17/2020	**25**	21	3.7	**0.085**	NA
	2/10/2021	**21**	14	2.6	**0.13**	NA
	9/9/2021	**27**	31	**13**	**0.13**	NA
	2/17/2022	**31**	24	**11**	**0.073**	NA
Effluent (Swale)	8/2/2018	0.87	0.56	0.11 J	ND (0.10)	**1.6**
	2/28/2019	0.78	0.39	ND (0.10)	ND (0.10)	**1.7**
	9/30/2019	0.19 J	0.13 J	ND (0.10)	ND (0.10)	**2.0**
	3/9/2020	0.18 J	0.09 J	ND (0.10)	ND (0.10)	**2.9**
	9/17/2020	0.23	0.077 J	ND(0.070)	ND(0.015)	NA
	2/10/2021	0.25	0.067	ND(0.070)	ND(0.015)	NA
	9/9/2021	0.34	0.25	0.061 J	ND (0.015)	NA
	2/17/2022	0.25	1.2	ND (0.070)	ND (0.015)	NA

Notes:
Bold indicates exceedance of the remedial goal.
µg/L – Micrograms per liter.
J – Estimated value; detected, but less than quantitation limit or qualified as estimated due to a QC outlier.
NA – Not analyzed for indicated parameter.
ND ( ) – Parameter is not detected; detection limit in parenthesis.

Table C-5. Southern Treatment Plant Influent and Effluent Analytical Results

Sample Location	Sample Date	Trichloroethene	1,1,1-Trichloroethane	1,1-Dichloroethene	Vinyl Chloride	1,4-Dioxane	PFHxA	PFHpA	PFOA	PFNA	PFDA	PFDoA	PFDoA	PFTrDA	PFTeDA	PFBS	PFHxS	PFOS	NMeFOSAA	NEtFOSAA
		Concentrations in µg/L					Concentrations in ng/L													
	Remedial Goal	5	200	7	0.029	0.44	N/A													
Influent	10/13/2021	0.25 U	15.7	0.27 J	**0.43**	**0.87**	10.8	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4.3 J	4 U	4 U	8 U	8 U
	10/20/2021	0.25 U	15.1	0.28 J	**0.46**	0.2 U	13.7	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	5 J	2.6 J	4 U	8 U	8 U
	10/27/2021	0.25 U	14.5	0.27 J	**0.42**	0.2 U	14.2	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	5 J	2.6 J	4 U	8 U	8 U
	11/3/2021	0.25 U	14	0.28 J	**0.42**	**1.4**	13.7	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	5.1 J	2.8 J	4 U	8 U	8 U
	11/10/2021	0.25 U	15.1	0.29 J	**0.34**	**1.2**	12.9	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4.6 J	3 J	4 U	8 U	8 U
	11/17/2021	0.25 U	13.7	0.35 J	**0.32**	**0.96**	11.7	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4.1 J	2.5 J	4 U	8 U	8 U
	11/22/2021	0.25 U	14.1	0.37 J	**0.32**	**0.97**	13.7	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	5 J	4 U	4 U	8 U	8 U
	12/1/2021	0.25 U	13.2	0.33 J	**0.31**	**0.78**	13.5	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	5.3 J	3.3 J	4 U	8 U	8 U
	12/8/2021	0.25 U	12.3	0.25 J	**0.31**	**0.98**	14.6	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	6.1 J	4.4 J	4 U	8 U	8 U
	12/13/2021	0.25 U	13.7	0.36 J	**0.38**	**0.94**	12.1	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4.7 J	3.5 J	4 U	8 U	8 U
	12/20/2021	0.25 U	15.3	0.35 J	**0.52**	**1**	14.1	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4.8 J	4.4 J	4 U	8 U	8 U
	1/6/2022	0.25 U	11.7	0.44 J	**0.29**	0.19 U	11.7	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4.1 J	3.1 J	4 U	8 U	8 U
	1/12/2022	0.25 U	15	0.4 J	**0.056**	0.19 U	11.4	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4.3 J	3 J	4 U	8 U	8 U
	1/19/2022	0.25 U	12.3	0.39 J	**0.3**	0.19 U	11.8	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 J	4.5 J	4 U	8 U	8 U
	1/26/2022	0.25 U	13.9	0.35 J	**0.13**	0.19 U	12.3	2.2 J	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4.5 J	3.9 J	4 U	8 U	8 U
	2/2/2022	0.25 U	14.3	0.32 J	**0.21**	0.19 U	14.6	2.1 J	4 U	4 U	4 U	4 U	4 U	4 U	20 U	5.3 J	3.7 J	4 U	8 U	8 U
	2/9/2022	0.25 U	12.5	0.29 J	**0.24**	**0.51**	14.1	2.6 J	2.3 J	4 U	4 U	4 U	4 U	4 U	4 U	4 J	3.8 J	4 U	8 U	8 U
	2/15/2022	0.25 U	13	0.26 J	**0.36**	**0.56**	15.6	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	5.1 J	4.5 J	4 U	8 U	8 U
	2/22/2022	0.25 U	10.6	0.20 J	**0.38**	**0.81**	12.8	4 U	2.1 J	4 U	4 U	4 U	4 U	4 U	4 U	4.4 J	3.6 J	4 U	8 U	8 U
	3/1/2022	0.25 U	9.3	0.18 J	**0.37**	**1.2**	12.2	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4.4 J	3.4 J	4 U	8 U	8 U
	3/8/2022	0.25 U	9.2	0.19 J	**0.37**	0.19 U	15.9	2.1 J	2.3 J	4 U	4 U	4 U	4 U	4 U	4 U	5.6 J	4.7 J	4 U	8 U	8 U
	3/15/2022	0.25 U	10	0.30 J	**0.39**	**0.93**	11.1	4.2 U	4.2 U	4.2 U	4.2 U	4.2 U	4.2 U	4.2 U	4.2 U	4.5 J	4.3 J	4.2 U	8.3 U	8.3 U
	3/22/2022	0.25 U	10.8	0.27 J	**0.49**	**3.5**	12.4	4.2 U	4.2 U	4.2 U	4.2 U	4.2 U	4.2 U	4.2 U	4.2 U	4.8 J	4.3 J	4.2 U	8.3 U	8.3 U
	3/29/2022	0.25 U	11.7	0.35 J	**0.41**	**0.89**	13.9	4 U	2.1 J	4 U	4 U	4 U	4 U	4 U	4 U	4.7 J	4.7 J	4 U	8 U	8 U
	4/1/2022	0.25 U	13.1	0.37 J	**0.53**	**0.89**	15.5	2.2 J	2.5 J	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	5.8 J	6.4 J	3.8 U	7.7 U	7.7 U
	5/1/2022	0.25 U	13.9	0.35 J	**0.16**	0.19 U	12.3	2.2 J	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4.5 J	3.9 J	4 U	8 U	8 U
	6/1/2022	0.25 U	10.2	0.3 J	**0.29**	**0.76**	13.3	2.3 J	4 U	4 U	4 U	4 U	4 U	4 U	4 U	5.3 J	7.6 J	4 U	8 U	8 U
	7/1/2022	0.25 U	9.2	0.36 J	**0.51**	**0.59**	14	2.6 J	2.4 J	4 U	4 U	4 U	4 U	4 U	4 U	5.1 J	9.9	4 U	8 U	8 U
	8/1/2022	0.25 U	10.6	0.33 J	**0.39**	**0.6**	14.3	2.8 J	2.7 J	4 U	4 U	4 U	4 U	4 U	4 U	5.4 J	13.5	4 U	8 U	8 U
	9/1/2022	0.25 U	10.5	0.36 J	**0.36**	**0.51**	17.2	3.3 J	3.1 J	4 U	4 U	4 U	4 U	4 U	4 U	6.3 J	16.7	4 U	8 U	8 U
Effluent	10/13/2021	0.15 U	13	0.070 U	0.015 U	0.20 U	11.3	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4.1 J	4	4 U	8 U	8 U
	10/20/2021	0.15 U	13	0.070 U	0.015 U	0.20 U	13.3	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	5.3 J	2.2 J	4 U	8 U	8 U
	10/27/2021	0.15 U	11	0.970 Q	0.015 U	0.20 U	14.5	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4.9 J	2.3 J	4 U	8 U	8 U
	11/3/2021	0.15 U	11	2.1	0.015 U	0.20 U	13.8	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4.9 J	2.8 J	4 U	8 U	8 U
	11/10/2021	0.15 U	12	0.070 U	0.015 U	0.20 U	12.8	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4.8 J	2.5 J	4 U	8 U	8 U
	11/17/2021	0.15 U	13	0.070 U	0.015 U	0.20 U	11.4	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4.2 J	2.2 J	4 U	8 U	8 U
	11/22/2021	0.15 U	13	0.070 U	0.015 UQJ	0.20 U	13.5	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	5 J	4 U	4 U	8 U	8 U
	12/1/2021	0.15 U	13	0.070 U	0.015 UQ	0.19 U	13.3	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	5.1	3.3 J	4 U	8 U	8 U
	12/8/2021	0.085 JM	13	0.070 U	0.015 U	0.2 J	14.9	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	5.5 J	4.2 J	4 U	8 U	8 U
	12/13/2021	0.15 UM	12	0.070 UM	0.015 UM	0.19 U	12.3	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4.3 J	3.5 J	4 U	8 U	8 U
	12/20/2021	0.15 UM	12	0.070 UM	0.015 U	0.2 U	14.3	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	5 J	4 J	4 U	8 U	8 U
	1/6/2022	0.15 U	14 Q	1.4 Q	0.015 UQ	0.19 U	13.1	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4.6 J	3.2 J	4 U	8 U	8 U
	1/12/2022	0.15 U	18	1.4	0.015 U	0.19 U	11.9	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4.3 J	3.2 J	4 U	8 U	8 U
	1/19/2022	0.15 U	13	0.070 U	0.015 U	0.19 U	10.4	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	3.9 J	2.9 J	4 U	8 U	8 U
	1/26/2022	0.15 U	18	0.070 U	0.015 U	0.19 U	12.1	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4.5 J	4.2 J	4 U	8 U	8 U
	2/2/2022	0.15 U	15	0.070 U	0.015 U	0.19 U	14.6	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	5.2 J	4 J	4 U	8 U	8 U
	2/9/2022	0.15 UM	13	0.070 UM	0.015 U	0.19 U	14.7	2.1 J	2.1 J	4 U	4 U	4 U	4 U	4 U	4 U	5 J	4.3 J	4 U	8 U	8 U
	2/15/2022	0.15 U	13	0.070 U	0.015 U	0.19 U	14.9	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4.9 J	4.2 J	4 U	8 U	8 U
	2/22/2022	0.15 U	11	0.070 U	0.015 U	0.19 U	13.5	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4.8 J	3.6 J	4 U	8 U	8 U
	3/1/2022	0.15 U	10	0.070 U	0.015 U	0.19 U	12.5	4 U	4 U	4 U	4 U	4 U	4 U	4 U	20 U	4.5 J	4.1 J	4 U	8 U	8 U
	3/8/2022	0.15 U	10	0.070 U	0.015 U	0.19 U	15.6	2.3 J	2.4 J	4 U	4 U	20 U	20 U	20 U	4 U	5.7 J	5.6 J	4 U	8 U	8 U
	3/15/2022	0.15 UM	9.9	0.070 UM	0.015 UM	0.23 J	11.7	4.2 U	4.2 U	4.2 U	4.2 U	4.2 U	4.2 U	4.2 U	4.2 U	4.2 J	4.5 J	4.2 U	8.3 U	8.3 U
	3/22/2022	0.074 JM	11	0.070 UM	0.015 UM	**3.9**	14.3	4.2 U	4.2 U	4.2 U	4.2 U	4.2 U	4.2 U	4.2 U	21	4.8 J	4.3 J	4.2 U	8.3 U	8.3 U
	3/29/2022	0.14 J	9.8	0.070 U	0.015 U	0.19 J	12.9	4 U	2.2 J	4 U	4 U	4 U	4 U	4 U	4 U	4.5 J	4.7 J	4 U	8 U	8 U
	4/1/2022	0.015 U	9.2	0.15 U	0.07 U	0.18 J	15.1	2.2 J	2.4 J	4 U	4 U	4 U	4 U	4 U	4 U	5.5 J	6 J	4 U	8 U	8 U
	5/1/2022	0.15 U	18	0.07 U	0.015 U	0.19 U	12.1	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4.5 J	4.2 J	4 U	8 U	8 U
	6/1/2022	1	11	0.07 U	0.015 U	0.27 J	13.3	2.3 J	4 U	4 U	4 U	4 U	4 U	4 U	4 U	5.1 J	7.5 J	4 U	8 U	8 U
	7/1/2022	0.15 UM	11	0.07 U	0.015 UQ	0.19 U	16.3	3.1 J	2.7 J	4 U	4 U	4 U	4 U	4 U	4 U	5.8 J	11.6	4 U	8 U	8 U
	8/1/2022	0.15 U	11	0.07 U	0.015 U	0.15 J	14.7	2.9 J	2.9 J	4 U	4 U	4 U	4 U	4 U	4 U	5.2 J	13	4 U	8 U	8 U
	9/1/2022	0.15 U	11	0.07 U	0.015 U	0.19 U	16.5	3.2 J	3.2 J	4 U	4 U	4 U	4 U	4 U	4 U	5.8 J	16.9	4 U	8 U	8 U

Notes:
Bold indicates exceedance of the remedial goal.
µg/L – Micrograms per liter.
J – Estimated value; detected, but less than quantitation limit or qualified as estimated due to a QC outlier.
NA – Not analyzed for indicated parameter.
ND ( ) – Parameter is not detected; detection limit in parenthesis.
U – Not detected; the analyte was analyzed for, but not detected above the associated detection limit.
were non-detect for this analyte, no impact on data.
M – Manual integrated compound.

Table C-6. OU 5 Area 31 Groundwater Monitoring Analytical Results

Sample Location	Date	pH	Diesel Range Organics	Gasoline Range Organics	Residual Range Organics	Benzene	Naphthalene	Vinyl Chloride	Dissolved Manganese	Total Manganese
			Concentrations in µg/L							
		Remedial Goal	1000	1000	1000	5	320	0.1	142	--
MW31-34	9/29/2022	6.67	440	70 J	340 J	ND (0.50)	ND (2.0) UJ	ND (0.50) UJ	ND (0.68)	1100
MW31-9A	3/1/2007	6.41	**8700** Y	**3900** Y	560 L	NA	NA	NA	NA	NA
MW31-9A	5/15/2007	6.37	**15000** Y	**4200** Y	450 J	**190** D	74 D	**0.61**	**9670**	NA
MW31-9A	8/22/2007	6.45	**11000** Y	**4300** Y	520 J	NA	NA	NA	NA	NA
MW31-9A	4/27/2009	6.39	NA	NA	NA	NA	NA	NA	5.3	NA
MW31-9A	8/11/2010	6.33	**17000** Y	**3300** DY	ND (800) UJ	**150** D	120 D	**0.34**	**8180**	8280
MW31-9A	8/1/2011	6.74	**24000** Y	**2800** J	770 L	**92** D	110 D	0.090 J	**5230**	5380
MW31-9A	8/16/2012	6.35	**11000** YJ	**4100** Y	720 L	**70** D	140 D	0.090 J	**5700** J	5630 J
MW31-9A	8/20/2013	6.5	**15000** Y	**6100** Y	**1400** L	**76**	170 D	ND (0.080)	**3520**	3570
MW31-9A	9/10/2014	6.47	**20000** DY	**5900** DY	**1900** DL	**46**	170 EJ	ND (0.080)	**4610**	4760
MW31-9A	8/5/2015	6.55	**11000** Y	**2400** Y	**1300** O	**35**	NA	0.080 J	**6450**	6450
MW31-9A	8/17/2016	6.55	**15000** Y	**2400** Y	**1900** L	**54**	120 D	ND (0.080)	**7180**	6760
MW31-9A	9/28/2017	6.12	**8190** DJ	**3100** H	491 J	**25**	160 D	ND (0.10)	**3160**	3170
MW31-9A	7/24/2018	7.36	**9900**	**4700** J Q	**1600**	**34**	120	0.041 J M	**5100** D	5100 D
MW31-9A	9/25/2018	8.88	**1300**	**4720** J	207	**13**	147	ND (0.10)	**3600** J	3580 J
MW31-9A	9/5/2019	6.24	**2880**	**4640**	330	**19.4**	180	ND (0.10)	**5960**	5460
MW31-9A	9/23/2020	6.27	**2800**	**1900**	450	**15** J	120 J	ND (0.015)	**4000**	3700
MW31-9A	9/23/2020 (Dup)	NA	**2600**	**1800**	410 J	**14** J	100 J	0.033 J	**3800**	3800
MW31-9A	9/27/2021	6.63	**2600**	**1400**	420	**16**	230	ND (0.15)	**2800**	2800
MW31-9A	9/29/2022	7.24	**2600**	830 J	890	**6.5**	39 J	ND (0.50) UJ	**2700**	2600
OWS-1	3/1/2007	6.52	**1300** Y	820 Y	110 J	NA	NA	NA	NA	NA
OWS-1	5/15/2007	6.39	**1200** Y	640 Y	68 J	**11**	4.5	**0.42** J	**3400**	NA
OWS-1	8/22/2007	6.47	**2800** Y	**1200** Y	150 J	NA	NA	NA	NA	NA
OWS-1	8/11/2010	6.28	**2500** Y	**2000** DY	ND (540)	**65**	150 D	**0.80**	**5210**	5360
OWS-1	8/1/2011	6.76	**6400** Y	**2200** Y	390 J	**35**	85 D	**0.16**	**4920**	4920
OWS-1	8/16/2012	6.35	**5100** YJ	**1400** Y	300 J	**78** D	110 D	**0.19** J	**4130** J	4280 J
OWS-1	8/20/2013	6.53	**3000** Y	**1100** Y	270 L	**27**	120 JD	**0.20** J	**3960**	4020
OWS-1	9/10/2014	6.54	**6500** Y	**2800** DY	590 L	**46** D	**560** JED	**0.22** JD	**5560**	5570
OWS-1	8/5/2015	6.51	**6200** Y	**2100** Y	770 L	**39**	NA	**0.19**	**4750**	4710
OWS-1	8/17/2016	6.59	**4200** Y	**1900** Y	480 L	**25**	100 D	**0.14**	**4460**	4390
OWS-1	9/28/2017	6.19	**5110** DJ	**1800** H	946 J	**30**	210 D	**0.21**	**5350**	5080
OWS-1	7/24/2018	7.03	**5100**	**2400** J Q	800	**24**	110 D	0.078 J M	**4500** D	4400 D
OWS-1	9/25/2018	7.06	925	**5190** J	ND (100)	**21**	**327**	0.10 J	**4910** J	5000 J
OWS-1	9/18/2019	6.11	**4050**	**4490**	256	**27.1**	231	0.09 J	**4180** D	4010 D
OWS-1	9/23/2020	5.98	**3300**	**2900**	ND (310)	**31** J	210 J	**0.15** J	**3400**	3400
OWS-1	9/27/2021	6.52	**3900** J	**1800**	660 J	**8.6**	31	ND (0.15)	**3700**	3800
OWS-1	9/27/2021 (Dup)	NA	**3700** J	**1900**	650 J	**8.7**	33	ND (0.15)	**3700**	3800
OWS-1	9/29/2022	6.6	**14000**	**5200** J	**1300**	**13**	**380** J	ND (0.50) UJ	**4300**	4200
OWS-1	9/29/2022 (Dup)	NA	**14000**	**4700** J	**1300**	**12**	**400** J	ND (0.50) UJ	**4200**	4100

Table C-6. OU 5 Area 31 Groundwater Monitoring Analytical Results (continued)

Sample Location	Date	pH	Diesel Range Organics	Gasoline Range Organics	Residual Range Organics	Benzene	Naphthalene	Vinyl Chloride	Dissolved Manganese	Total Manganese
			Concentrations in µg/L							
		Remedial Goal	1000	1000	1000	5	320	0.1	142	--
OWS-3	8/5/2015	6.27	510 Y	20 J	230 O	ND (0.060)	NA	ND (0.080)	**3030**	3170
OWS-3	8/17/2016	6.12	1000 Y	ND (250)	260 L	ND (0.060)	ND (0.09)	ND (0.080)	**4060**	3990
OWS-3	9/28/2017	5.97	**2190** J	260 Y	352 J	**9.2**	2.3 J	**0.24**	**5480**	5840
OWS-3	7/24/2018	7.03	600	210 J Q	210 J	0.05 J	0.24 J M	0.026 M	**3100**	3200
OWS-3	9/25/2018	6.82	44 J	79.8 J	ND (100)	0.84	ND (0.50)	ND (0.10)	**3920** J	3730 J
OWS-3	9/18/2019	5.89	**2320**	186	244	1.11	0.15 J	ND (0.10)	**4230** D	4180 D
OWS-3	9/23/2020	6.32	**1600**	170 J	ND (310)	1.4	4.9 J	0.051	**3100** J	3000
OWS-3	9/27/2021	6.5	**2200** J	230 J	510	**9.4**	0.64 J	**0.14**	**3600** J	3300 J
OWS-3	9/29/2022	5.92	340	ND (40)	230 J	ND (0.50)	2.1 J	ND (0.50) UJ	**1800**	1800
WI-AF-MW-635	9/29/2022	6.41	75 J	ND (40)	140 J	ND (0.50)	ND (2.0) UJ	ND (0.50) UJ	37	50

Notes:
µg/L – Micrograms per liter.
Bold indicates exceedance of the remedial goal.
Dup – Field duplicate.
-- – Remedial goal is not available for the indicated parameter.
NA – Not analyzed for the indicated parameter.
ND ( ) – Parameter is not detected; detection limit in parenthesis.
D – Diluted
E – The result is an estimated value that exceeded the calibration range of the instrument.
J – Estimated value; detected, but below quantitation limit or qualified as estimated due to a QC outlier.
L – The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
O – The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y – The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
UJ – Analyte is not detected at an estimated method detection limit.
M – A manual integration was performed on the chromatographic peak.

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Appendix D:
1,000-foot Exclusion Area for OU 1 Area 5, OU 1 Area 6, and City of Oak Harbor Landfills

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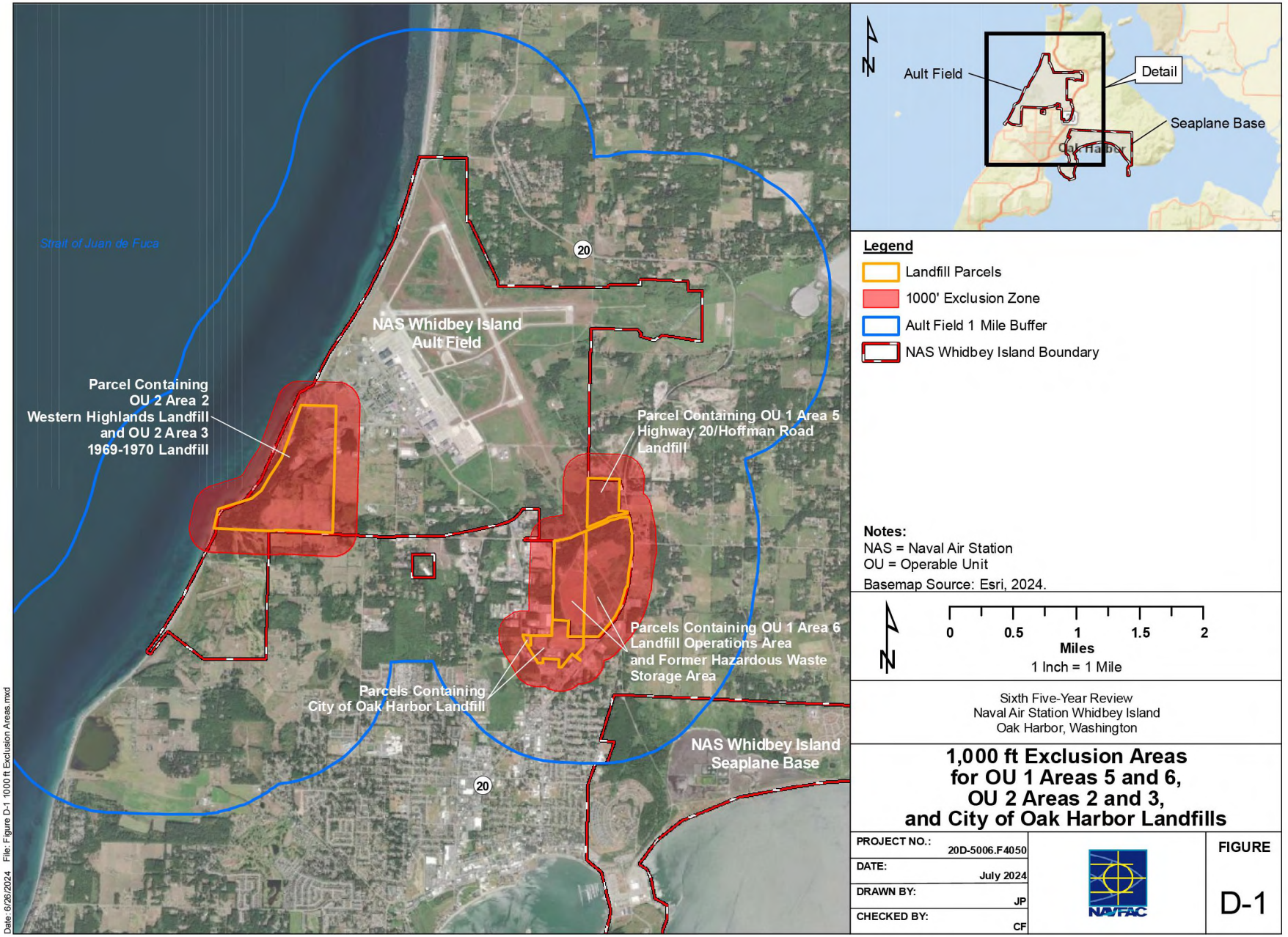
Strait of Juan de Fuca
NAS Whidbey Island
Ault Field
Parcel Containing
OU 2 Area 2
Western Highlands Landfill
and OU 2 Area 3
1969-1970 Landfill
Parcel Containing OU 1 Area 5
Highway 20/Hoffman Road
Landfill
Parcels Containing OU 1 Area 6
Landfill Operations Area
and Former Hazardous Waste
Storage Area
Parcels Containing
City of Oak Harbor Landfill
NAS Whidbey Island
Seaplane Base
20
20
N
Ault Field
Detail
Seaplane Base
Oak Harbor
Legend
Landfill Parcels
1000' Exclusion Zone
Ault Field 1 Mile Buffer
NAS Whidbey Island Boundary
Notes:
NAS = Naval Air Station
OU = Operable Unit
Basemap Source: Esri, 2024.
N
0
0.5
1
1.5
2
Miles
1 Inch = 1 Mile
Sixth Five-Year Review
Naval Air Station Whidbey Island
Oak Harbor, Washington
1,000 ft Exclusion Areas
for OU 1 Areas 5 and 6,
OU 2 Areas 2 and 3,
and City of Oak Harbor Landfills
PROJECT NO.: 20D-5006.F4050
DATE: July 2024
DRAWN BY: JP
CHECKED BY: CF
NAVFAC
FIGURE
D-1
Date: 6/26/2024 File: Figure D-1 1000 ft Exclusion Areas.mxd

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Appendix E:
OU 2 Areas 2/3 Field Logs, Analytical Reports, and Data Validation from August 2023

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INSTRUMENT CALIBRATION REPORT

Pine Environmental Services LLC
3225 South 116th St.
Building 1 Suite 181
Tukwila, WA 98168
425-285-9102

Pine Environmental Services, Inc.

Instrument ID 33384
Description Solinst WLM
Calibrated 8/22/2023 11:19:40AM

Manufacturer	Solinst	**State Certified**	
Model Number	WLM	**Status**	Pass
Serial Number/ Lot Number	252671	**Temp °C**	23
Location	Seattle	**Humidity %**	36
Department			

Calibration Specifications

Group # 1
Group Name
Test Performed: Yes **As Found Result: Pass** **As Left Result: Pass**

Test Instruments Used During the Calibration **(As Of Cal Entry Date)**

Test Standard ID	Description	Manufacturer	Model Number	Serial Number / Lot Number	Next Cal Date / Last Cal Date/ Expiration Date Opened Date

Notes about this calibration

Calibration Result Calibration Successful
Who Calibrated Dzung Pham

All instruments are calibrated by Pine Environmental Services LLC according to the manufacturer's specifications, but it is the customer's responsibility to calibrate and maintain this unit in accordance with the manufacturer's specifications and/or the customer's own specific needs.

Notify Pine Environmental Services LLC of any defect within 24 hours of receipt of equipment
Please call 800-301-9663 for Technical Assistance

Groundwater Monitoring Field Data Form
Site: NASWI FYR

File No.: 5006234050

3-MW-2

Date:	08/24/2023	Casing Material:	PVC	Depth to Water (ft bmp):	56.73
Purge Method:	Low Flow - Geotech Pump	Casing Diameter (in):	4	Well Depth (ft bmp)	100.6
Volume Units:	ml	Pump Intake (ft bmp)	90	Water Column (ft)	43.87
Screen Interval (ft bmp):	85-95 feet bgs	Water Quality Meter:	YSI		
Comments:	Total purge: 1.8 gallons				

Sampling Summary

Sample Date:	08/24/2023	COC:	Arsenic, Manganese
Sample Time:	11:02	Analysis:	Total metals (As, Mn) by EPA Method 6010D Dissolved Metals (As, Mn) by EPA Method 6010D
Sample ID:	2-MW-3-2023	Bottles:	
Duplicate Sample ID:	NA	Odor:	
Duplicate Sample Time:	NA	Remarks:	

Field Stabilization Parameters

Time	Cuml Volume	DTW	Temp	pH	Conductivity	ORP	Dissolved Oxygen	Turbidity	Remarks
		(ft bmp)	(C)	(SU)	(uS/cm)	(mV)	(mg/l)		
Historical Range:									
10:17	300	56.73	14.1	8.64	623	140	2.67	13	
10:26	3000	57.69	13.9	8.66	620	125.4	2.15	13.6	
10:32	4800	58.01	14.5	8.46	623	79.5	1.54	8.66	
10:36	5800	58.36	13	8.49	603	58.3	1.46	14.3	
10:41	6800	58.60	14.1	8.44	622	37.0	1.40	16.13	
10:46	7800	58.88	13.6	8.45	612	8.8	1.35	18.40	
10:51	8800	59.02	14.6	8.39	629	5.6	1.35	19.48	
10:55	9600	59.12	15.0	8.38	634	0.1	1.34	18.53	
11:00	10600	59.24	14.9	8.37	632	-1.1	1.32	19.69	

Groundwater Monitoring Field Data Form
Site: NASWI FYR

File No.: 5006234050

N2-6C

Date:	08/24/2023	Casing Material:	PVC	Depth to Water (ft bmp):	57.94
Purge Method:	Low Flow - Geotech Pump	Casing Diameter (in):	2	Well Depth (ft bmp)	71
Volume Units:	ml	Pump Intake (ft bmp)	66	Water Column (ft)	13.06
Screen Interval (ft bmp):	75-85 feet bgs	Water Quality Meter:	YSI		
Comments:	Total purge: 7 gallons				

Sampling Summary

Sample Date:	08/24/2023	COC:	Arsenic, Manganese
Sample Time:	16:25	Analysis:	Total metals (As, Mn) by EPA Method 6010D Dissolved Metals (As, Mn) by EPA Method 6010D
Sample ID:	N2-6C-2023	Bottles:	
Duplicate Sample ID:	NA	Odor:	
Duplicate Sample Time:	NA	Remarks:	

Field Stabilization Parameters

Time	Cuml Volume	DTW	Temp	pH	Conductivity	ORP	Dissolved Oxygen	Turbidity	Remarks
		(ft bmp)	(C)	(SU)	(uS/cm)	(mV)	(mg/l)		
Historical Range:									
15:20	1200	57.94	12.8	17.88	297.1	-19.3	3.01	178.37	
15:24	2800.0	57.89	12.9	15.65	323.7	11.1	2.02	74.35	
15:28	4400.0	57.86	13.2	12.24	340.0	11.9	0.82	38.64	
15:32	6000.0	58.86	13.3	10.45	344.7	10.6	0.45	16.43	
15:37	8000.0	57.88	13.5	10.29	347.0	10.4	0.31	10.23	
15:41	9600.0	57.88	13.5	10.02	347.4	10.0	0.27	7.95	
15:45	11200.0	57.88	13.4	9.61	346.8	9.3	0.24	7.15	
15:49	12800.0	57.88	13.4	11.47	346.9	8.5	0.22	5.51	
15:53	14432.0	57.88	13.2	11.42	345.6	8.1	0.20	5.28	
15:58	16432.0	57.92	13.3	11.16	346.6	7.6	0.19	5.30	
16:01	17632.0	57.89	13.3	10.78	346.8	7.0	0.18	4.94	
16:06	19632.0	57.78	13.7	9.78	350.3	7.0	0.17	4.54	
16:11	21632.0	57.78	13.8	9.16	351.2	6.7	0.17	4.69	
16:14	22832.0	57.78	13.7	9.35	350.1	6.0	0.17	5.81	
16:17	24032.0	57.79	13.6	9.27	349.6	4.9	0.17	6.06	
16:20	25232.0	57.83	13.7	9.21	350.2	4.2	0.16	3.93	
16:23	26432.0	57.80	13.8	9.24	350.7	4.0	0.17	3.89	

Groundwater Monitoring Field Data Form
Site: NASWI FYR

File No.: 5006234050

N3-12

Date:	08/24/2023	Casing Material:	PVC	Depth to Water (ft bmp):	51.02
Purge Method:	Low Flow - Geotech Pump	Casing Diameter (in):	2	Well Depth (ft bmp)	58.98
Volume Units:	ml	Pump Intake (ft bmp)	55	Water Column (ft)	7.96
Screen Interval (ft bmp):	48-58 feet bgs	Water Quality Meter:	YSI		
Comments:	Total purge: 7 gallons				

Sampling Summary

Sample Date:	08/24/2023	COC:	Arsenic, Manganese, Vinyl Chloride
Sample Time:	13:40	Analysis:	Total metals (As, Mn) by EPA Method 6010D Dissolved Metals (As, Mn) by EPA Method 6010D VC by EPA Method 8260D SIM
Sample ID:	N3-12-2023	Bottles:	
Duplicate Sample ID:	DUP-2023	Odor:	
Duplicate Sample Time:	12:00	Remarks:	

Groundwater Monitoring Field Data Form
Site: NASWI FYR

File No.: 5006234050

Field Stabilization Parameters

Time	Cuml Volume	DTW	Temp	pH	Conductivity	ORP	Dissolved Oxygen	Turbidity	Remarks
		(ft bmp)	(C)	(SU)	(uS/cm)	(mV)	(mg/l)		
Historical Range:									
11:45		51.02	13.3	16.70	505	-75.1	2.10	66.30	Pump issue, had to restart
12:23	600	51.04	15.1	17.79	535	-73.7	0.9	328	
12:28	1600.0	51.03	13.9	17.84	517	-66.5	0.49	207	
12:33	2600.0	51.03	14.0	17.55	518	-65.9	0.4	151	
12:38	3850.0	51.03	13.9	15.56	516	-66.5	0.33	111	
12:43	5100.0	51.01	14.0	14.54	518	-67.2	0.29	90.0	
12:48	6350.0	51.03	13.9	13.60	517	-68.1	0.26	75.3	
12:52	7150.0	51.03	13.6	12.40	511	-68.2	0.24	64.49	
12:57	8150.0	51.04	14.0	12.12	518	-69.7	0.18	40.25	
13:02	9150.0	51.01	13.4	11.67	513	-70.9	0.17	37.85	
13:07	10150.0	51.03	14.0	11.20	518	-71.2	0.16	33.75	
13:12	11150.0	51.04	14.1	10.97	518	-71.4	0.16	31.83	
13:15	11750.0	51.04	13.6	10.95	511	-71.1	0.15	28.48	
13:19	12550.0	51.06	13.2	10.30	508	-71.5	0.12	17.65	
13:23	13350.0	51.06	13.0	10.23	504	-72.0	0.10	13.73	
13:26	13950.0	51.06	12.9	9.29	503	-72.3	0.10	12.72	
13:30	14750.0	51.06	13.0	9.11	505	-72.3	0.09	11.44	
13:33	15350.0	51.06	12.9	9.04	507	-72.3	0.09	11.95	
13:36	15950.0	51.05	13.1	9.03	507	-72.6	0.09	8.73	

2023 CERCLA Sixth Five Year Review Sampling and Analysis Plan
NAS Whidbey Island, Oak Harbor, Washington

Attachment 3. Field Forms

DAILY FIELD REPORT

DATE: 8/24/23 PAGE 1 OF 1
JOB NO: _____ FACILITY: NASWI
SITE: Areas 2/3
HWP NOS: _____ LOGBOOK NO: 001
RECORDED BY: Christian Briggs

ADDITIONAL FIELD STAFF/ROLES: Chelsea Foster
SUBCONTRACTOR: None
WEATHER CONDITIONS: 75°F, light winds

EQUIPMENT	HOURS WORKED	WORK PERFORMED
None		GW sampling

FIELD ACTIVITIES/COMMENTS:

0730 Arrive onsite. Begin locating and gauging all 5 wells.
0900 Finish gauging wells. Begin setting up for sampling on 3-MW-2. Check calibration of WQ meter.
Turbidity = 120 NTU, std: 126. pH = 7.3, std = 7.0
and Cond = 1220 µS/cm, std: 1413. ORP = 247, std = 240
1025 Cal check passed. Begin purging.
1102 Collect sample at 3-MW-2.
1120 Set up on well N3-12.
1145 Begin purging
1200 Troubleshoot pump
1223 Resume purging
1340 Collect sample and duplicate (time for dup = 1200). Collect MS/MSD.
1410 Finish sampling. Pack up at well.
1430 Collect equipment blank on pump. Head to N2-6C
1519 Begin purging at ~~N2-6B~~ N2-6C. Water is very turbid
1630 Finish purging. Collect sample.
1706 Set up IDW area at FF3
1710 Collect IDW sample (see COC for exact time). Label IDW container. 1 Drum, ⅓ full of purge water. Located in NE corner of FF3 parking lot.
1730 Pack up samples. Plan to drop at lab tomorrow.
1830 Demob

DATA TRANSMITTED WITH THIS REPORT:
1) COC #s:
2) Sample Nos.:
3) Health & Safety Issues: None

Attachment 1 to SOP-WSP-01
Daily PFAS Protocol Checklist

Date: 8/24/23 Installation Name: NASWI

Weather: 70 - 75°F, Light winds (temp/precipitation) Investigation Area: Areas 2/3

Field Clothing and PPE:

- ☑ Field crew in compliance with Tables 1 and 2, SOP WSP-01
- ☑ Field crew has not used fabric softener on clothing
- ☑ Field crew has not used cosmetics, moisturizers, hand cream, or other related products on exposed body parts this morning
- ☑ Field crew has not applied unacceptable sunscreen or insect repellant

Field Equipment:

- ☐ No Teflon® containing materials on-site
- ☑ All sample materials made from stainless steel, HDPE, acetate, silicon, or polypropylene
- ☐ No waterproof field books on-site other than Rite in the Rain products
- ☐ No plastic clipboards, binders, or spiral hard cover notebooks on-site
- ☐ No adhesives (Post-It Notes) on-site
- ☐ Coolers filled with regular ice only. No chemical (blue) ice packs in possession

Sample Containers:

- ☑ All sample containers made of HDPE or polypropylene. Samples are not stored in containers made of LDPE
- ☑ Caps are lined or unlined and made of HDPE or polypropylene

Wet Weather (as applicable):

- ☑ For personnel in direct contact with samples and/or sampling equipment, wet weather gear made of vinyl, polyurethane, PVC, wax or rubber- coated materials only

Equipment Decontamination:

- ☑ "PFAS-free" water on-site for decontamination of sample equipment
- ☑ Alconox and Liquinox to be used as decontamination materials

Food Considerations:

- ☑ No food or drink on-site with exception of bottled water and/or hydration drinks (i.e., Gatorade and Powerade) that is available for consumption only in the staging area

If any applicable boxes cannot be checked, the Field Manager shall describe the noncompliance issues below and work with field personnel to address noncompliance issues prior to commencement of that day's work. Corrective action shall include removal of noncompliance items from the investigation area or removal of worker offsite until in compliance. Repeated failure to comply with PFAS sample protocols will result in the permanent removal of worker(s) from the investigation area.

Describe the noncompliance issues (include personnel not in compliance) and action/outcome of noncompliance:

Field Manager Name: Christian Briggs

Field Manager Signature: Christian Briggs Date/Time: 8/24/23 / 0700

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Water Level Gauging
Site: NASWI FYR

Project No: 5006234050

Gauging

Location	Date	Time	DTW (ft)
3-MW-2	08/24/2023	08:51	57.14
N2-6C	08/24/2023	08:05	57.69
N2-8	08/24/2023	08:16	56.28
N2-9	08/24/2023	08:27	49.11
N3-12	08/24/2023	08:45	51.00

Photos

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eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Christian Briggs
Nicklaus Engineering
9275 Sky Park Court
Ste 105
San Diego CA 92123

Generated 9/8/2023 4:01 PM

JOB DESCRIPTION

NASWI FYR

JOB NUMBER

580-130928-1

Eurofins Seattle
5755 8th Street East
Tacoma WA 98424

See page two for job notes and contact information.

myEOL

Eurofins Seattle

Job Notes

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The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northwest, LLC Project Manager.

Authorization

Tracy Dutton

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Authorized for release by
Tracy L Dutton, Client Relations Manager
Tracy.Dutton@et.eurofinsus.com
253 248-4970

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Definitions/Glossary

Client: Nicklaus Engineering
Project/Site: NASWI FYR

Job ID: 580-130928-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
M	Manual integrated compound.
U	Undetected at the Limit of Detection.

Metals

Qualifier	Qualifier Description
D	The reported value is from a dilution.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

CASE NARRATIVE

Client: Nicklaus Engineering
Project: NASWI FYR
Report Number: 580-130928-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

Following DoD QSM guidelines, manual integrations were performed only when necessary and are in compliance with the laboratory's standard operating procedure, Acceptable Manual Integration Practices, SOP No.: Q-S-002. The reason(s) for manual integration have been documented on the affected chromatogram(s), which is/are provided in the raw data package. The raw data also includes the original chromatogram(s) prior to any manual integration being performed. Manual integrations are detailed in the manual integration summary forms following this narrative.

It should be noted that samples with elevated Limits of Quantitation (LOQs) resulting from a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the LOQs are an unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes within the calibration range of the instrument or that reduces the interferences thereby enabling the quantification of target analytes.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT
The samples were received on 08/25/2023; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 5.3 C.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

VOLATILE ORGANIC COMPOUNDS (GC/MS-SIM)
Samples N3-12-2023 (580-130928-3), DUP-2023 (580-130928-4), EBlank-2023 (580-130928-5) and Trip Blank-20230824 (580-130928-6) were analyzed for Volatile Organic Compounds (GC/MS-SIM) in accordance with 8260D SIM. The samples were analyzed on 08/30/2023.

A deviation from the Standard Operating Procedure (SOP) occurred. Details are as follows: The CCV, LCS/LCSD, and CCVC were half spiked at a concentration of 2.5ppb. The SOP requires 5ppb. The results falls within acceptance limits and the data are reported.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DISSOLVED METALS (ICP)
Samples 3-MW-2-2023 (580-130928-1), N2-6C-2023 (580-130928-2), N3-12-2023 (580-130928-3) and DUP-2023 (580-130928-4) were analyzed for dissolved metals (ICP) in accordance with 6010D. The samples were prepared on 09/01/2023 and analyzed on 09/05/2023.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

METALS (ICP)
Samples 3-MW-2-2023 (580-130928-1), N2-6C-2023 (580-130928-2), N3-12-2023 (580-130928-3), DUP-2023 (580-130928-4) and EBlank-2023 (580-130928-5) were analyzed for Metals (ICP) in accordance with 6010D. The samples were prepared on 08/29/2023 and analyzed on 08/30/2023.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Nicklaus Engineering
Project/Site: NASWI FYR

Job ID: 580-130928-1

Client Sample ID: 3-MW-2-2023 — Lab Sample ID: 580-130928-1

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.010	J	0.060	0.0072	mg/L	1		6010D	Total Recoverable
Manganese	0.038		0.020	0.0017	mg/L	1		6010D	Total Recoverable
Manganese	0.019	J	0.020	0.0017	mg/L	1		6010D	Dissolved

Client Sample ID: N2-6C-2023 — Lab Sample ID: 580-130928-2

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Manganese	1.0		0.020	0.0017	mg/L	1		6010D	Total Recoverable
Manganese	0.70		0.020	0.0017	mg/L	1		6010D	Dissolved

Client Sample ID: N3-12-2023 — Lab Sample ID: 580-130928-3

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Vinyl chloride	0.62		0.10	0.014	ug/L	1		8260D SIM	Total/NA
Arsenic	0.041	J	0.060	0.0072	mg/L	1		6010D	Total Recoverable
Manganese	1.9		0.020	0.0017	mg/L	1		6010D	Total Recoverable
Arsenic	0.025	J	0.060	0.0072	mg/L	1		6010D	Dissolved
Manganese	1.7		0.020	0.0017	mg/L	1		6010D	Dissolved

Client Sample ID: DUP-2023 — Lab Sample ID: 580-130928-4

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Vinyl chloride	0.64		0.10	0.014	ug/L	1		8260D SIM	Total/NA
Arsenic	0.036	J	0.060	0.0072	mg/L	1		6010D	Total Recoverable
Manganese	1.8		0.020	0.0017	mg/L	1		6010D	Total Recoverable
Arsenic	0.021	J	0.060	0.0072	mg/L	1		6010D	Dissolved
Manganese	1.7		0.020	0.0017	mg/L	1		6010D	Dissolved

Client Sample ID: EBlank-2023 — Lab Sample ID: 580-130928-5

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Manganese	0.0017	J	0.020	0.0017	mg/L	1		6010D	Total Recoverable

Client Sample ID: Trip Blank-20230824 — Lab Sample ID: 580-130928-6

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Nicklaus Engineering
Project/Site: NASWI FYR

Job ID: 580-130928-1

Client Sample ID: 3-MW-2-2023

Lab Sample ID: 580-130928-1
Matrix: Water
Date Collected: 08/24/23 11:02
Date Received: 08/25/23 09:29

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.010	J	0.060	0.0072	mg/L		08/29/23 15:45	08/30/23 18:40	1
Manganese	0.038		0.020	0.0017	mg/L		08/29/23 15:45	08/30/23 18:40	1

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.029	U	0.060	0.0072	mg/L		09/01/23 15:45	09/05/23 21:54	1
Manganese	0.019	J	0.020	0.0017	mg/L		09/01/23 15:45	09/05/23 21:54	1

Client Sample ID: N2-6C-2023

Lab Sample ID: 580-130928-2
Matrix: Water
Date Collected: 08/24/23 16:25
Date Received: 08/25/23 09:29

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.029	U	0.060	0.0072	mg/L		08/29/23 15:45	08/30/23 18:43	1
Manganese	1.0		0.020	0.0017	mg/L		08/29/23 15:45	08/30/23 18:43	1

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.029	U	0.060	0.0072	mg/L		09/01/23 15:45	09/05/23 21:58	1
Manganese	0.70		0.020	0.0017	mg/L		09/01/23 15:45	09/05/23 21:58	1

Client Sample ID: N3-12-2023

Lab Sample ID: 580-130928-3
Matrix: Water
Date Collected: 08/24/23 13:40
Date Received: 08/25/23 09:29

Method: SW846 8260D SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	0.62		0.10	0.014	ug/L			08/30/23 15:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*95*		*80 - 120*		*08/30/23 15:22*	*1*
1,2-Dichloroethane-d4 (Surr)	*98*		*65 - 123*		*08/30/23 15:22*	*1*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*		*08/30/23 15:22*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*		*08/30/23 15:22*	*1*

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.041	J	0.060	0.0072	mg/L		08/29/23 15:45	08/30/23 18:12	1
Manganese	1.9		0.020	0.0017	mg/L		08/29/23 15:45	08/30/23 18:12	1

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.025	J	0.060	0.0072	mg/L		09/01/23 15:45	09/05/23 21:24	1
Manganese	1.7		0.020	0.0017	mg/L		09/01/23 15:45	09/05/23 21:24	1

Client Sample Results

Client: Nicklaus Engineering
Project/Site: NASWI FYR

Job ID: 580-130928-1

Client Sample ID: DUP-2023

Lab Sample ID: 580-130928-4
Matrix: Water
Date Collected: 08/24/23 12:00
Date Received: 08/25/23 09:29

Method: SW846 8260D SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	0.64		0.10	0.014	ug/L			08/30/23 15:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*95*		*80 - 120*		*08/30/23 15:48*	*1*
1,2-Dichloroethane-d4 (Surr)	*98*		*65 - 123*		*08/30/23 15:48*	*1*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*		*08/30/23 15:48*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*		*08/30/23 15:48*	*1*

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.036	J	0.060	0.0072	mg/L		08/29/23 15:45	08/30/23 18:46	1
Manganese	1.8		0.020	0.0017	mg/L		08/29/23 15:45	08/30/23 18:46	1

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.021	J	0.060	0.0072	mg/L		09/01/23 15:45	09/05/23 22:01	1
Manganese	1.7		0.020	0.0017	mg/L		09/01/23 15:45	09/05/23 22:01	1

Client Sample ID: EBlank-2023

Lab Sample ID: 580-130928-5
Matrix: Water
Date Collected: 08/24/23 14:30
Date Received: 08/25/23 09:29

Method: SW846 8260D SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	0.050	U	0.10	0.014	ug/L			08/30/23 14:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*96*		*80 - 120*		*08/30/23 14:56*	*1*
1,2-Dichloroethane-d4 (Surr)	*96*		*65 - 123*		*08/30/23 14:56*	*1*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*		*08/30/23 14:56*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 120*		*08/30/23 14:56*	*1*

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.029	U	0.060	0.0072	mg/L		08/29/23 15:45	08/30/23 18:50	1
Manganese	0.0017	J	0.020	0.0017	mg/L		08/29/23 15:45	08/30/23 18:50	1

Client Sample ID: Trip Blank-20230824

Lab Sample ID: 580-130928-6
Matrix: Water
Date Collected: 08/24/23 00:01
Date Received: 08/25/23 09:29

Method: SW846 8260D SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	0.050	U M	0.10	0.014	ug/L			08/30/23 14:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*80 - 120*		*08/30/23 14:29*	*1*
1,2-Dichloroethane-d4 (Surr)	*88*		*65 - 123*		*08/30/23 14:29*	*1*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*		*08/30/23 14:29*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*		*08/30/23 14:29*	*1*

Default Detection Limits

Client: Nicklaus Engineering
Project/Site: NASWI FYR

Job ID: 580-130928-1

Method: 8260D SIM - Volatile Organic Compounds (GC/MS)

Analyte	LOQ	DL	Units
Vinyl chloride	0.10	0.014	ug/L

Method: 6010D - Metals (ICP) - Total Recoverable

Prep: 3005A

Analyte	LOQ	DL	Units
Arsenic	0.060	0.0072	mg/L
Manganese	0.020	0.0017	mg/L

Method: 6010D - Metals (ICP) - Dissolved

Prep: 3005A

Analyte	LOQ	DL	Units
Arsenic	0.060	0.0072	mg/L
Manganese	0.020	0.0017	mg/L

Surrogate Summary

Client: Nicklaus Engineering
Project/Site: NASWI FYR

Job ID: 580-130928-1

Method: 8260D SIM - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	TOL (80-120)	DCA (65-123)	BFB (80-120)	DBFM (80-120)
580-130928-3	N3-12-2023	95	98	99	102
580-130928-3 MS	N3-12-2023	100	94	99	102
580-130928-3 MSD	N3-12-2023	101	93	100	102
580-130928-4	DUP-2023	95	98	99	101
580-130928-5	EBlank-2023	96	96	97	100
580-130928-6	Trip Blank-20230824	100	88	98	104
LCS 580-436188/4	Lab Control Sample	97	96	101	100
LCSD 580-436188/5	Lab Control Sample Dup	99	94	100	101
MB 580-436188/7	Method Blank	97	98	98	104

Surrogate Legend

TOL = Toluene-d8 (Surr)
DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)

QC Sample Results

Client: Nicklaus Engineering
Project/Site: NASWI FYR

Job ID: 580-130928-1

Method: 8260D SIM - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-436188/7
Matrix: Water
Analysis Batch: 436188

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	0.050	U	0.10	0.014	ug/L			08/30/23 13:35	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*95*		*80 - 120*		*08/30/23 13:3,*	*1*
1,2-i dt loroea 4ne-d6 (Surr)	*98*		*B, - 123*		*08/30/23 13:3,*	*1*
6-mrof obuorozen7ene (Surr)	*98*		*80 - 120*		*08/30/23 13:3,*	*1*
i zrof obuorof ea 4ne (Surr)	*106*		*80 - 120*		*08/30/23 13:3,*	*1*

Lab Sample ID: LCS 580-436188/4
Matrix: Water
Analysis Batch: 436188

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Vinyl chloride	2.50	2.10		ug/L		84	49 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*95*		*80 - 120*
1,2-i dt loroea 4ne-d6 (Surr)	*9B*		*B, - 123*
6-mrof obuorozen7ene (Surr)	*101*		*80 - 120*
i zrof obuorof ea 4ne (Surr)	*100*		*80 - 120*

Lab Sample ID: LCSD 580-436188/5
Matrix: Water
Analysis Batch: 436188

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Vinyl chloride	2.50	2.14		ug/L		85	49 - 150	2	16

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*99*		*80 - 120*
1,2-i dt loroea 4ne-d6 (Surr)	*96*		*B, - 123*
6-mrof obuorozen7ene (Surr)	*100*		*80 - 120*
i zrof obuorof ea 4ne (Surr)	*101*		*80 - 120*

Lab Sample ID: 580-130928-3 MS
Matrix: Water
Analysis Batch: 436188

Client Sample ID: N3-12-2023
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Vinyl chloride	0.62		5.00	6.20		ug/L		112	49 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*100*		*80 - 120*
1,2-i dt loroea 4ne-d6 (Surr)	*96*		*B, - 123*
6-mrof obuorozen7ene (Surr)	*99*		*80 - 120*
i zrof obuorof ea 4ne (Surr)	*102*		*80 - 120*

QC Sample Results

Client: Nicklaus Engineering
Project/Site: NASWI FYR

Job ID: 580-130928-1

Method: 8260D SIM - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 580-130928-3 MSD
Matrix: Water
Analysis Batch: 436188

Client Sample ID: N3-12-2023
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Vinyl chloride	0.62		5.00	6.58		ug/L		119	49 - 150	6	16

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*101*		*80 - 120*
1D2-i dnt loroea 4ne-d6 (Surr)	*93*		*B, - 123*
6-mrof obuorozen7ene (Surr)	*100*		*80 - 120*
i crof obuorof ea 4ne (Surr)	*102*		*80 - 120*

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 580-436117/15-A
Matrix: Water
Analysis Batch: 436306

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 436117

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.029	U	0.060	0.0072	mg/L		08/29/23 15:45	08/30/23 16:29	1
Manganese	0.0068	U	0.020	0.0017	mg/L		08/29/23 15:45	08/30/23 16:29	1

Lab Sample ID: LCS 580-436117/16-A
Matrix: Water
Analysis Batch: 436306

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 436117

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	1.00	1.03		mg/L		103	87 - 113
Manganese	1.00	1.02		mg/L		102	90 - 114

Lab Sample ID: LCSD 580-436117/17-A
Matrix: Water
Analysis Batch: 436306

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 436117

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	1.00	1.02		mg/L		102	87 - 113	0	20
Manganese	1.00	1.02		mg/L		102	90 - 114	0	20

Lab Sample ID: 580-130928-3 MS
Matrix: Water
Analysis Batch: 436306

Client Sample ID: N3-12-2023
Prep Type: Total Recoverable
Prep Batch: 436117

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	0.041	J	1.00	1.06		mg/L		102	87 - 113
Manganese	1.9		1.00	2.84		mg/L		94	90 - 114

Lab Sample ID: 580-130928-3 MSD
Matrix: Water
Analysis Batch: 436306

Client Sample ID: N3-12-2023
Prep Type: Total Recoverable
Prep Batch: 436117

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	0.041	J	1.00	1.06		mg/L		102	87 - 113	0	20
Manganese	1.9		1.00	2.83		mg/L		94	90 - 114	0	20

QC Sample Results

Client: Nicklaus Engineering
Project/Site: NASWI FYR

Job ID: 580-130928-1

Method: 6010D - Metals (ICP) (Continued)

Lab Sample ID: 580-130928-3 DU
Matrix: Water
Analysis Batch: 436306

Client Sample ID: N3-12-2023
Prep Type: Total Recoverable
Prep Batch: 436117

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	0.041	J	0.0408	J	mg/L		1	20
Manganese	1.9		1.90		mg/L		0.3	20

Lab Sample ID: MB 580-436480/22-A
Matrix: Water
Analysis Batch: 436715

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 436480

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.029	U	0.060	0.0072	mg/L		09/01/23 15:46	09/05/23 21:14	1
Manganese	0.0068	U	0.020	0.0017	mg/L		09/01/23 15:46	09/05/23 21:14	1

Lab Sample ID: LCS 580-436480/23-A
Matrix: Water
Analysis Batch: 436715

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 436480

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	1.00	0.970		mg/L		97	87 - 113
Manganese	1.00	0.969		mg/L		97	90 - 114

Lab Sample ID: LCSD 580-436480/24-A
Matrix: Water
Analysis Batch: 436715

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 436480

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	1.00	0.977		mg/L		98	87 - 113	1	20
Manganese	1.00	0.962		mg/L		96	90 - 114	1	20

Lab Sample ID: 580-130928-3 MS
Matrix: Water
Analysis Batch: 436715

Client Sample ID: N3-12-2023
Prep Type: Dissolved
Prep Batch: 436480

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	0.025	J	1.00	1.03		mg/L		100	87 - 113
Manganese	1.7		1.00	2.64		mg/L		96	90 - 114

Lab Sample ID: 580-130928-3 MSD
Matrix: Water
Analysis Batch: 436715

Client Sample ID: N3-12-2023
Prep Type: Dissolved
Prep Batch: 436480

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	0.025	J	1.00	0.992		mg/L		97	87 - 113	3	20
Manganese	1.7		1.00	2.62		mg/L		93	90 - 114	1	20

Lab Sample ID: 580-130928-3 DU
Matrix: Water
Analysis Batch: 436715

Client Sample ID: N3-12-2023
Prep Type: Dissolved
Prep Batch: 436480

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	0.025	J	0.0232	J	mg/L		8	20
Manganese	1.7		1.74		mg/L		3	20

QC Association Summary

Client: Nicklaus Engineering
Project/Site: NASWI FYR

Job ID: 580-130928-1

GC/MS VOA

Analysis Batch: 436188

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-130928-3	N3-12-2023	Total/NA	Water	8260D SIM	
580-130928-4	DUP-2023	Total/NA	Water	8260D SIM	
580-130928-5	EBlank-2023	Total/NA	Water	8260D SIM	
580-130928-6	Trip Blank-20230824	Total/NA	Water	8260D SIM	
MB 580-436188/7	Method Blank	Total/NA	Water	8260D SIM	
LCS 580-436188/4	Lab Control Sample	Total/NA	Water	8260D SIM	
LCSD 580-436188/5	Lab Control Sample Dup	Total/NA	Water	8260D SIM	
580-130928-3 MS	N3-12-2023	Total/NA	Water	8260D SIM	
580-130928-3 MSD	N3-12-2023	Total/NA	Water	8260D SIM	

Metals

Prep Batch: 436117

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-130928-1	3-MW-2-2023	Total Recoverable	Water	3005A	
580-130928-2	N2-6C-2023	Total Recoverable	Water	3005A	
580-130928-3	N3-12-2023	Total Recoverable	Water	3005A	
580-130928-4	DUP-2023	Total Recoverable	Water	3005A	
580-130928-5	EBlank-2023	Total Recoverable	Water	3005A	
MB 580-436117/15-A	Method Blank	Total Recoverable	Water	3005A	
LCS 580-436117/16-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCSD 580-436117/17-A	Lab Control Sample Dup	Total Recoverable	Water	3005A	
580-130928-3 MS	N3-12-2023	Total Recoverable	Water	3005A	
580-130928-3 MSD	N3-12-2023	Total Recoverable	Water	3005A	
580-130928-3 DU	N3-12-2023	Total Recoverable	Water	3005A	

Analysis Batch: 436306

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-130928-1	3-MW-2-2023	Total Recoverable	Water	6010D	436117
580-130928-2	N2-6C-2023	Total Recoverable	Water	6010D	436117
580-130928-3	N3-12-2023	Total Recoverable	Water	6010D	436117
580-130928-4	DUP-2023	Total Recoverable	Water	6010D	436117
580-130928-5	EBlank-2023	Total Recoverable	Water	6010D	436117
MB 580-436117/15-A	Method Blank	Total Recoverable	Water	6010D	436117
LCS 580-436117/16-A	Lab Control Sample	Total Recoverable	Water	6010D	436117
LCSD 580-436117/17-A	Lab Control Sample Dup	Total Recoverable	Water	6010D	436117
580-130928-3 MS	N3-12-2023	Total Recoverable	Water	6010D	436117
580-130928-3 MSD	N3-12-2023	Total Recoverable	Water	6010D	436117
580-130928-3 DU	N3-12-2023	Total Recoverable	Water	6010D	436117

Prep Batch: 436480

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-130928-1	3-MW-2-2023	Dissolved	Water	3005A	
580-130928-2	N2-6C-2023	Dissolved	Water	3005A	
580-130928-3	N3-12-2023	Dissolved	Water	3005A	
580-130928-4	DUP-2023	Dissolved	Water	3005A	
MB 580-436480/22-A	Method Blank	Total Recoverable	Water	3005A	
LCS 580-436480/23-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCSD 580-436480/24-A	Lab Control Sample Dup	Total Recoverable	Water	3005A	
580-130928-3 MS	N3-12-2023	Dissolved	Water	3005A	
580-130928-3 MSD	N3-12-2023	Dissolved	Water	3005A	

QC Association Summary

Client: Nicklaus Engineering
Project/Site: NASWI FYR

Job ID: 580-130928-1

Metals (Continued)

Prep Batch: 436480 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-130928-3 DU	N3-12-2023	Dissolved	Water	3005A	

Analysis Batch: 436715

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-130928-1	3-MW-2-2023	Dissolved	Water	6010D	436480
580-130928-2	N2-6C-2023	Dissolved	Water	6010D	436480
580-130928-3	N3-12-2023	Dissolved	Water	6010D	436480
580-130928-4	DUP-2023	Dissolved	Water	6010D	436480
MB 580-436480/22-A	Method Blank	Total Recoverable	Water	6010D	436480
LCS 580-436480/23-A	Lab Control Sample	Total Recoverable	Water	6010D	436480
LCSD 580-436480/24-A	Lab Control Sample Dup	Total Recoverable	Water	6010D	436480
580-130928-3 MS	N3-12-2023	Dissolved	Water	6010D	436480
580-130928-3 MSD	N3-12-2023	Dissolved	Water	6010D	436480
580-130928-3 DU	N3-12-2023	Dissolved	Water	6010D	436480

Lab Chronicle

Client: Nicklaus Engineering
Project/Site: NASWI FYR

Job ID: 580-130928-1

Client Sample ID: 3-MW-2-2023

Lab Sample ID: 580-130928-1
Matrix: Water
Date Collected: 08/24/23 11:02
Date Received: 08/25/23 09:29

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3005A			436480	TMH	EET SEA	09/01/23 15:45
Dissolved	Analysis	6010D		1	436715	JLS	EET SEA	09/05/23 21:54
Total Recoverable	Prep	3005A			436117	TMH	EET SEA	08/29/23 15:45
Total Recoverable	Analysis	6010D		1	436306	JLS	EET SEA	08/30/23 18:40

Client Sample ID: N2-6C-2023

Lab Sample ID: 580-130928-2
Matrix: Water
Date Collected: 08/24/23 16:25
Date Received: 08/25/23 09:29

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3005A			436480	TMH	EET SEA	09/01/23 15:45
Dissolved	Analysis	6010D		1	436715	JLS	EET SEA	09/05/23 21:58
Total Recoverable	Prep	3005A			436117	TMH	EET SEA	08/29/23 15:45
Total Recoverable	Analysis	6010D		1	436306	JLS	EET SEA	08/30/23 18:43

Client Sample ID: N3-12-2023

Lab Sample ID: 580-130928-3
Matrix: Water
Date Collected: 08/24/23 13:40
Date Received: 08/25/23 09:29

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D SIM		1	436188	ITR	EET SEA	08/30/23 15:22
Dissolved	Prep	3005A			436480	TMH	EET SEA	09/01/23 15:45
Dissolved	Analysis	6010D		1	436715	JLS	EET SEA	09/05/23 21:24
Total Recoverable	Prep	3005A			436117	TMH	EET SEA	08/29/23 15:45
Total Recoverable	Analysis	6010D		1	436306	JLS	EET SEA	08/30/23 18:12

Client Sample ID: DUP-2023

Lab Sample ID: 580-130928-4
Matrix: Water
Date Collected: 08/24/23 12:00
Date Received: 08/25/23 09:29

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D SIM		1	436188	ITR	EET SEA	08/30/23 15:48
Dissolved	Prep	3005A			436480	TMH	EET SEA	09/01/23 15:45
Dissolved	Analysis	6010D		1	436715	JLS	EET SEA	09/05/23 22:01
Total Recoverable	Prep	3005A			436117	TMH	EET SEA	08/29/23 15:45
Total Recoverable	Analysis	6010D		1	436306	JLS	EET SEA	08/30/23 18:46

Client Sample ID: EBlank-2023

Lab Sample ID: 580-130928-5
Matrix: Water
Date Collected: 08/24/23 14:30
Date Received: 08/25/23 09:29

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D SIM		1	436188	ITR	EET SEA	08/30/23 14:56
Total Recoverable	Prep	3005A			436117	TMH	EET SEA	08/29/23 15:45
Total Recoverable	Analysis	6010D		1	436306	JLS	EET SEA	08/30/23 18:50

Lab Chronicle

Client: Nicklaus Engineering
Project/Site: NASWI FYR

Job ID: 580-130928-1

Client Sample ID: Trip Blank-20230824
Date Collected: 08/24/23 00:01
Date Received: 08/25/23 09:29

Lab Sample ID: 580-130928-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D SIM		1	436188	ITR	EET SEA	08/30/23 14:29

Laboratory References:
EET SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: Nicklaus Engineering
Project/Site: NASWI FYR

Job ID: 580-130928-1

Laboratory: Eurofins Seattle

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2236	01-19-25
Washington	State	C788	07-13-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
6010D	3005A	Water	Arsenic
6010D	3005A	Water	Manganese
8260D SIM		Water	Vinyl chloride

Method Summary

Client: Nicklaus Engineering
Project/Site: NASWI FYR

Job ID: 580-130928-1

Method	Method Description	Protocol	Laboratory
8260D SIM	Volatile Organic Compounds (GC/MS)	SW846	EET SEA
6010D	Metals (ICP)	SW846	EET SEA
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET SEA
5030B	Purge and Trap	SW846	EET SEA

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Sample Summary

Client: Nicklaus Engineering
Project/Site: NASWI FYR

Job ID: 580-130928-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-130928-1	3-MW-2-2023	Water	08/24/23 11:02	08/25/23 09:29
580-130928-2	N2-6C-2023	Water	08/24/23 16:25	08/25/23 09:29
580-130928-3	N3-12-2023	Water	08/24/23 13:40	08/25/23 09:29
580-130928-4	DUP-2023	Water	08/24/23 12:00	08/25/23 09:29
580-130928-5	EBlank-2023	Water	08/24/23 14:30	08/25/23 09:29
580-130928-6	Trip Blank-20230824	Water	08/24/23 00:01	08/25/23 09:29

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 432388

Lab Sample ID: IC 580-432388/3 Client Sample ID:

Date Analyzed: 07/23/23 18:34 Lab File ID: 072323_003.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Vinyl chloride	1.81	Incomplete Integration	PHC3	07/24/23 10:00
cis-1,2-Dichloroethene	6.43	Baseline	PHC3	07/24/23 10:09
Benzene	7.80	Baseline	PHC3	07/24/23 10:10
Tetrachloroethene	10.58	Baseline	PHC3	07/24/23 10:10
Ethylene Dibromide	10.96	Assign Peak	PHC3	07/24/23 10:10
Naphthalene	15.14	Incomplete Integration	PHC3	07/24/23 10:11

Lab Sample ID: IC 580-432388/4 Client Sample ID:

Date Analyzed: 07/23/23 19:00 Lab File ID: 072323_004.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Vinyl chloride	1.81	Incomplete Integration	PHC3	07/24/23 09:58
Tetrachloroethene	10.58	Baseline	PHC3	07/24/23 09:59
Ethylene Dibromide	10.96	Assign Peak	PHC3	07/24/23 09:59
Naphthalene	15.15	Incomplete Integration	PHC3	07/24/23 10:11

Lab Sample ID: IC 580-432388/5 Client Sample ID:

Date Analyzed: 07/23/23 19:26 Lab File ID: 072323_005.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Vinyl chloride	1.80	Baseline	PHC3	07/24/23 09:56
Tetrachloroethene	10.58	Baseline	PHC3	07/24/23 09:57
Ethylene Dibromide	10.96	Assign Peak	PHC3	07/24/23 09:57

8260D SIM

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 432388

Lab Sample ID: IC 580-432388/6 Client Sample ID:

Date Analyzed: 07/23/23 19:52 Lab File ID: 072323_006.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Tetrachloroethene	10.57	Baseline	PHC3	07/24/23 09:54

Lab Sample ID: IC 580-432388/11 Client Sample ID:

Date Analyzed: 07/23/23 22:02 Lab File ID: 072323_011.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dichlorobenzene-d4	13.34	Peak assignment corrected	PHC3	07/24/23 09:52

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 436188

Lab Sample ID: 580-130928-6 Client Sample ID: Trip Blank-20230824

Date Analyzed: 08/30/23 14:29 Lab File ID: 082923_008.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Vinyl chloride		Wrong peak	PHC3	08/31/23 12:37

8260D SIM

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
5X SUR/IS_00028							1,3-Dichloropropene, Total	
							Tentatively Identified Compound	
					VOARSURR/IS_00054	5 mL	1,2-Dichloroethane-d4 (Surr)	50 ppm
							1,4-Dichlorobenzene-d4	50 ppm
							4-Bromofluorobenzene (Surr)	50 ppm
							BFB	50 ppm
							Chlorobenzene-d5	50 ppm
							Dibromofluoromethane (Surr)	50 ppm
							Fluorobenzene (IS)	50 ppm
							TBA-d9 (IS)	1000 ppm
							Toluene-d8 (Surr)	50 ppm
.VOARSURR/IS_00054	04/30/27		Restek, Lot A0183986		(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	250 ug/mL
							1,4-Dichlorobenzene-d4	250 ug/mL
							4-Bromofluorobenzene (Surr)	250 ug/mL
							BFB	250 ug/mL
							Chlorobenzene-d5	250 ug/mL
							Dibromofluoromethane (Surr)	250 ug/mL
							Fluorobenzene (IS)	250 ug/mL
							TBA-d9 (IS)	5000 ug/mL
							Toluene-d8 (Surr)	250 ug/mL
5X SUR/IS_00031							1,3-Dichloropropene, Total	
							Tentatively Identified Compound	
					VOARSURR/IS_00054	5 mL	1,2-Dichloroethane-d4 (Surr)	50 ppm
							1,4-Dichlorobenzene-d4	50 ppm
							4-Bromofluorobenzene (Surr)	50 ppm
							BFB	50 ppm
							Chlorobenzene-d5	50 ppm
							Dibromofluoromethane (Surr)	50 ppm
							Fluorobenzene (IS)	50 ppm
							TBA-d9 (IS)	1000 ppm
							Toluene-d8 (Surr)	50 ppm
.VOARSURR/IS_00054	04/30/27		Restek, Lot A0183986		(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	250 ug/mL
							1,4-Dichlorobenzene-d4	250 ug/mL
							4-Bromofluorobenzene (Surr)	250 ug/mL
							BFB	250 ug/mL
							Chlorobenzene-d5	250 ug/mL
							Dibromofluoromethane (Surr)	250 ug/mL
							Fluorobenzene (IS)	250 ug/mL
							TBA-d9 (IS)	5000 ug/mL
							Toluene-d8 (Surr)	250 ug/mL
ICP CAL 1_00027	06/07/25		CPI, Lot 1370764		(Purchased Reagent)		Arsenic	100 mg/L
							As (Bioaccessible)	100 mg/L
							As (Fine)	100 mg/L
							Ba	100 mg/L
							Be	100 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Cd	100 mg/L
							Co	100 mg/L
							Cr	100 mg/L
							Cu	100 mg/L
							Li	100 mg/L
							Manganese	100 mg/L
							Mo	100 mg/L
							Ni	100 mg/L
							Pb	100 mg/L
							Pb (Bioaccessible)	100 mg/L
							Pb [Fine]	100 mg/L
							Sb	100 mg/L
							Se	100 mg/L
							Si	1000 mg/L
							SiO2	2140 mg/L
							Sn	100 mg/L
							Sr	100 mg/L
							Ti	100 mg/L
							Tl	100 mg/L
							V	100 mg/L
ICP CAL 2_00024	11/23/24		CPI, Lot 1359083-1		(Purchased Reagent)		Al	2000 mg/L
							Ca	2000 mg/L
							Fe	2000 mg/L
							K	2000 mg/L
							Mg	2000 mg/L
							Na	2000 mg/L
ICP ICSA_00117	02/25/24	07/17/23	DI, Lot NA	500 mL	FE-10000PPM_00003	15 mL	Fe	500 mg/L
					ICP ICSA_00112	50 mL	Al	500 mg/L
							Ca	500 mg/L
							Fe	500 mg/L
							Mg	500 mg/L
.FE-10000PPM_00003	04/05/27		AccuStandard, Lot 222035160		(Purchased Reagent)		Fe	10000 mg/L
.ICP ICSA_00112	02/25/24		CPI, Lot 1207637-1		(Purchased Reagent)		Al	5000 ug/mL
							Ca	5000 ug/mL
							Fe	2000 ug/mL
							Mg	5000 ug/mL
ICP ICSAB_00099	10/07/24	06/01/23	H2O, Lot NA	500 mL	FE-10000PPM_00003	15 mL	Fe	500 mg/L
					ICP ICSA_00116	50 mL	Al	500 mg/L
							Ca	500 mg/L
							Fe	500 mg/L
							Mg	500 mg/L
					ICSAB A_00006	5 mL	Mo	1 mg/L
							Sb	1 mg/L
							Si	10 mg/L
							Sn	1 mg/L
							Ti	1 mg/L
					ICSAB B_00006	5 mL	Ag	1 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Arsenic	1 mg/L
							B	10 mg/L
							Ba	1 mg/L
							Be	0.5 mg/L
							Cd	1 mg/L
							Co	1 mg/L
							Cr	1 mg/L
							Cu	1 mg/L
							K	10 mg/L
							Manganese	1 mg/L
							Na	10 mg/L
							Ni	1 mg/L
							P	10 mg/L
							Pb	1 mg/L
							Se	1 mg/L
							Sr	1 mg/L
							Tl	1 mg/L
							V	1 mg/L
							Zn	1 mg/L
.FE-10000PPM_00003	04/05/27		AccuStandard, Lot 222035160		(Purchased Reagent)		Fe	10000 mg/L
.ICP ICSA_00116	10/07/24		CPI, Lot 1336399-1		(Purchased Reagent)		Al	5000 ug/mL
							Ca	5000 ug/mL
							Fe	2000 ug/mL
							Mg	5000 ug/mL
.ICSAB A_00006	10/07/24		CPI, Lot 1333444-1		(Purchased Reagent)		Mo	100 mg/L
							Sb	100 mg/L
							Si	1000 mg/L
							Sn	100 mg/L
							Ti	100 mg/L
.ICSAB B_00006	10/07/24		CPI, Lot 1333445-1		(Purchased Reagent)		Ag	100 mg/L
							Arsenic	100 mg/L
							B	1000 mg/L
							Ba	100 mg/L
							Be	50 mg/L
							Cd	100 mg/L
							Co	100 mg/L
							Cr	100 mg/L
							Cu	100 mg/L
							K	1000 mg/L
							Manganese	100 mg/L
							Na	1000 mg/L
							Ni	100 mg/L
							P	1000 mg/L
							Pb	100 mg/L
							Se	100 mg/L
							Sr	100 mg/L
							Tl	100 mg/L
							V	100 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Zn	100 mg/L
ICP ICV_00051	11/17/23	08/16/23	H2O, Lot NA	500 mL	ICP ICV 1_00006	10 mL	Arsenic	2 mg/L
							Manganese	2 mg/L
.ICP ICV 1_00006	11/17/23		CPI, Lot 1217102-1		(Purchased Reagent)		Arsenic	100 mg/L
							Manganese	100 mg/L
ICP-CCV_00035	01/31/24	08/22/23	DI, Lot N/A	1000 mL	ICP CAL 1_00025	50 mL	Arsenic	5 mg/L
							Manganese	5 mg/L
.ICP CAL 1_00025	11/02/24		CPI, Lot 1321095-1		(Purchased Reagent)		Arsenic	100 mg/L
							Manganese	100 mg/L
ICP-RL-Spex_00016	03/30/24	08/15/23	DI, Lot NA	1000 mL	ICPRL SolASpx_00006	1 mL	Manganese	0.02 mg/L
					ICPRL SolBSpx_00004	1 mL	Arsenic	0.06 mg/L
.ICPRL SolASpx_00006	03/30/24		SPEX CertiPrep, Lot 9-106AJ		(Purchased Reagent)		Manganese	20 mg/L
.ICPRL SolBSpx_00004	03/30/24		SPEX CertiPrep, Lot 9-107AJ		(Purchased Reagent)		Arsenic	60 mg/L
MET Spike 3C_00045	05/31/24	07/18/23	DI, Lot DI	500 mL	AG-1000_00012	50 mL	Ag	100 mg/L
					B-10000_00008	50 mL	B	1000 mg/L
					ICP CAL 3_00020	250 mL	P	500 mg/L
							Sulfur	500 mg/L
							U	50 mg/L
							W	50 mg/L
					Nitric Acid_00101	50 mL	Nitric acid	100000 mg/L
					ZN-1000PPM_00004	50 mL	Zn	100 mg/L
.AG-1000_00012	08/13/26		AccuStandard, Lot 221085037		(Purchased Reagent)		Ag	1000 mg/L
.B-10000_00008	04/16/26		AccuStandard, Lot 221045032		(Purchased Reagent)		B	10000 mg/L
.ICP CAL 3_00020	05/31/24		CPI, Lot 1285834-1		(Purchased Reagent)		P	1000 mg/L
							Sulfur	1000 mg/L
							U	100 mg/L
							W	100 mg/L
.Nitric Acid_00101	05/16/27		Macron, Lot 22F2462005		(Purchased Reagent)		Nitric acid	100 %
.ZN-1000PPM_00004	08/03/27		AccuStandard, Lot 220065028-01		(Purchased Reagent)		Zn	1000 mg/L
MET Spike 3C_00046	05/31/24	08/30/23	DI, Lot DI	500 mL	AG-1000_00012	50 mL	Ag	100 mg/L
					B-10000_00008	50 mL	B	1000 mg/L
					ICP CAL 3_00020	250 mL	P	500 mg/L
							Sulfur	500 mg/L
							U	50 mg/L
							W	50 mg/L
					Nitric Acid_00101	50 mL	Nitric acid	100000 mg/L
					ZN-1000PPM_00004	50 mL	Zn	100 mg/L
.AG-1000_00012	08/13/26		AccuStandard, Lot 221085037		(Purchased Reagent)		Ag	1000 mg/L
.B-10000_00008	04/16/26		AccuStandard, Lot 221045032		(Purchased Reagent)		B	10000 mg/L
.ICP CAL 3_00020	05/31/24		CPI, Lot 1285834-1		(Purchased Reagent)		P	1000 mg/L
							Sulfur	1000 mg/L
							U	100 mg/L
							W	100 mg/L
.Nitric Acid_00101	05/16/27		Macron, Lot 22F2462005		(Purchased Reagent)		Nitric acid	100 %
.ZN-1000PPM_00004	08/03/27		AccuStandard, Lot 220065028-01		(Purchased Reagent)		Zn	1000 mg/L
VOAMasterMix_00104	01/05/24	07/05/23	MeOH, Lot 288059	50 mL	VOARMegMix__00049	1000 uL	1,1-Dichloroethene	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2-Dichloroethane	50 ug/mL
							Benzene	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							Ethylene Dibromide	50 ug/mL
							Naphthalene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Trichloroethene	50 ug/mL
.VOARMegMix__00049	09/30/24		Restek, Lot A0183568		(Purchased Reagent)		1,1-Dichloroethene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							Benzene	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							Ethylene Dibromide	2500 ug/mL
							Naphthalene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Trichloroethene	2500 ug/mL
VOAMasterSEC_00082	10/11/23	05/01/23	MeOH, Lot 288059	25 mL	VOASGAS2__00030	500 uL	Vinyl chloride	50 ug/mL
.VOASGAS2__00030	06/30/25		Restek, Lot A0186584		(Purchased Reagent)		Vinyl chloride	2500 ug/mL
VOASTDGASweek_00145	01/09/24	07/09/23	methanol, Lot 288059	25 mL	VOARGAS__00041	500 uL	Vinyl chloride	50 mg/L
.VOARGAS__00041	08/31/25		Restek, Lot A0189184		(Purchased Reagent)		Vinyl chloride	2500 ug/mL
VOASTDGASweek_00146	02/01/24	08/01/23	methanol, Lot 22L0562016	25 mL	VOARGAS__00041	500 uL	Vinyl chloride	50 mg/L
.VOARGAS__00041	08/31/25		Restek, Lot A0189184		(Purchased Reagent)		Vinyl chloride	2500 ug/mL

Reagent

5X SUR/IS_00031

Reagent

AG-1000_00012

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CERTIFICATE OF ANALYSIS

AccuTrace™ Reference Standard

Catalog No: ICP-MS-53N-0.1X-1
Description: Silver ICP-MS Standard
Element: Silver (Ag)
SRM: 3151
Lot: 221085037
Matrix: 2-5% Nitric acid
Hazards: *Refer to SDS for complete safety information*

3270293
ID: AG-1000_00012
Exp 08/13/26 Prod FCW Opn 08/06/22
1000 ppm AG

Date Certified: Aug 13, 2021
Expiration: Aug 13, 2026
Density: 1.011 g/mL
Sample Size: 100 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Signal Word: Danger

Certified Reference Material

ANAB AR-1463 ilac-MRA

Certified Concentration: 1000 µg/mL

Trace Elements in µg/mL

Ag	*	Ce	nd<0.2	Gd	nd<0.02	Lu	nd<0.02	Pb	N/A	Sc	nd<0.02	Ti	nd<0.02
Al	N/A	Co	nd<0.02	Ge	nd<0.2	Mg	nd<0.02	Pd	nd<0.2	Se	nd<0.2	Tl	nd<0.2
As	nd<0.2	Cr	nd<0.02	Hf	nd<0.02	Mn	nd<0.02	Pr	nd<0.2	Si	nd<0.2	Tm	nd<0.02
Au	nd<0.02	Cs	N/A	Hg	nd<0.2	Mo	nd<0.02	Pt	nd<0.2	Sm	nd<0.2	U	nd<0.2
B	nd<0.2	Cu	nd<0.02	Ho	nd<0.02	Na	0.02	Rb	N/A	Sn	N/A	V	nd<0.02
Ba	nd<0.02	Dy	nd<0.02	In	N/A	Nb	nd<0.2	Re	nd<0.2	Sr	nd<0.02	W	N/A
Be	nd<0.02	Er	nd<0.02	Ir	nd<0.2	Nd	nd<0.02	Rh	nd<0.2	Ta	nd<0.2	Y	nd<0.02
Bi	N/A	Eu	nd<0.02	K	nd<0.2	Ni	nd<0.02	Ru	nd<0.02	Tb	nd<0.02	Yb	nd<0.02
Ca	nd<0.02	Fe	nd<0.02	La	nd<0.02	Os	N/A	S	N/A	Te	nd<0.2	Zn	nd<0.02
Cd	nd<0.02	Ga	nd<0.02	Li	nd<0.02	P	N/A	Sb	nd<0.2	Th	nd<0.02	Zr	nd<0.02

This Certified Reference Material was verified in accordance with ISO/IEC 17025

This solution was assayed titrimetrically, using a Volhard titration calibrated against 99.999% silver shot.

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

The gravimetric uncertainty for this product is ±0.24%. The CRM uncertainty is ±2.4%.

In order to verify the concentration(s), the final solution was checked by plasma emission spectroscopy (ICP) against material traceable to the above listed NIST SRM(s).

We use the highest purity raw materials available to minimize impurity levels in the final solution. Typically 99.999%+ pure starting materials are used as well as high purity acids and ASTM Type I 18 megohm deionized water.

All trace level elemental impurities were determined via plasma emission spectroscopy on the concentrate.

All weights are traceable through NIST, Test No. 684/289671-17

All glassware used in preparation is Class A.

All bottles are acid leached and triple rinsed with deionized water prior to use.

Shake bottle prior to use and do not pipette directly out of the bottle. Use only cleaned Class A volumetric glassware. Keep bottle tightly capped.

Certified By: Morgan O'Leary
Morgan O'Leary, Inorganic QC Manager

Page 1 of 1 - Rev. 1

For use in routine laboratory analysis

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

QR-ORG/IND-001
Rev. 7/20

Reagent

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CERTIFICATE OF ANALYSIS

3070063
ID: B-10000_00008
10000 ppm B

AccuTrace™ Reference Standard

Catalog No: ICP-07W-10X-5
Description: Boron ICP Standard
Element: Boron (B)
SRM: 3107
Lot: 221045032
Matrix: Water, tr NH4OH
Hazards: *Refer to SDS for complete safety information*

Signal Word: None

Date Certified: Apr 16, 2021
Expiration: Apr 16, 2026
Sample Size: 500 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB AR-1463

Certified Concentration: 10000 µg/mL

Trace Elements in µg/mL

Ag	nd<0.02	Ce	nd<0.2	Gd	nd<0.02	Lu	nd<0.02	Pb	N/A	Sc	nd<0.02	Ti	nd<0.02
Al	nd<0.02	Co	nd<0.02	Ge	N/A	Mg	nd<0.02	Pd	nd<0.2	Se	nd<0.2	Tl	nd<0.2
As	nd<0.2	Cr	nd<0.02	Hf	nd<0.02	Mn	nd<0.02	Pr	N/A	Si	0.25	Tm	nd<0.02
Au	nd<0.02	Cs	N/A	Hg	N/A	Mo	nd<0.02	Pt	nd<0.2	Sm	nd<0.2	U	N/A
B	*	Cu	nd<0.02	Ho	nd<0.02	Na	0.06	Rb	N/A	Sn	N/A	V	nd<0.02
Ba	nd<0.02	Dy	nd<0.02	In	N/A	Nb	nd<0.2	Re	N/A	Sr	nd<0.02	W	nd<0.2
Be	nd<0.02	Er	nd<0.02	Ir	N/A	Nd	nd<0.02	Rh	N/A	Ta	nd<0.2	Y	nd<0.02
Bi	N/A	Eu	nd<0.02	K	nd<0.2	Ni	nd<0.02	Ru	nd<0.02	Tb	N/A	Yb	nd<0.02
Ca	0.11	Fe	nd<0.02	La	nd<0.02	Os	N/A	S	N/A	Te	nd<0.2	Zn	nd<0.02
Cd	nd<0.02	Ga	nd<0.02	Li	nd<0.02	P	N/A	Sb	nd<0.2	Th	nd<0.02	Zr	nd<0.02

This Certified Reference Material was verified in accordance with ISO/IEC 17025

This solution was assayed by acid/base titration using NaOH which was standardized against NIST SRM #84J (potassium hydrogen phthalate).

The gravimetric uncertainty for this product is ±0.24%. The CRM uncertainty is ±2.4%.

In order to verify the concentration(s), the final solution was checked by plasma emission spectroscopy (ICP) against material traceable to the above listed NIST SRM(s).

We use the highest purity raw materials available to minimize impurity levels in the final solution. Typically 99.999%+ pure starting materials are used as well as high purity acids and ASTM Type I 18 megohm deionized water.

All trace level elemental impurities were determined via plasma emission spectroscopy on the concentrate.

All glassware used in preparation is Class A.

All weights are traceable through NIST, Test No. 684/289671-17

All bottles are acid leached and triple rinsed with deionized water prior to use.

Shake bottle prior to use and do not pipette directly out of the bottle. Use only cleaned Class A volumetric glassware. Keep bottle tightly capped.

Certified By: Megan O'Leary
Megan O'Leary, Inorganic QC Manager

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For use in routine laboratory analysis.

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

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CERTIFICATE OF ANALYSIS

AccuTrace™ Reference Standard

Catalog No: ICP-27N-10X-1
Description: Iron ICP Standard
Element: Iron (Fe)
SRM: 3126a
Lot: 222035160
Matrix: 2-5% Nitric acid
Hazards: *Refer to SDS for complete safety information*



Signal Word: Danger

Date Certified: Apr 5, 2022
Expiration: Apr 5, 2027
Density: 1.061 g/mL
Sample Size: 100 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB AR-1463

Certified Concentration: 10000 µg/mL

Trace Elements in µg/mL

Ag	nd<0.02	Ce	nd<0.2	Gd	nd<0.02	Lu	nd<0.02	Pb	N/A	Sc	nd<0.02	Ti	nd<0.02
Al	nd<0.02	Co	N/A	Ge	N/A	Mg	nd<0.02	Pd	nd<0.2	Se	N/A	Tl	nd<0.2
As	nd<0.2	Cr	nd<0.02	Hf	nd<0.02	Mn	nd<0.02	Pr	nd<0.2	Si	N/A	Tm	nd<0.02
Au	nd<0.02	Cs	N/A	Hg	N/A	Mo	nd<0.02	Pt	N/A	Sm	nd<0.2	U	nd<0.2
B	nd<0.2	Cu	N/A	Ho	nd<0.02	Na	0.13	Rb	N/A	Sn	N/A	V	nd<0.02
Ba	nd<0.02	Dy	nd<0.02	In	nd<0.2	Nb	nd<0.2	Re	nd<0.2	Sr	nd<0.02	W	nd<0.2
Be	nd<0.02	Er	nd<0.02	Ir	nd<0.2	Nd	nd<0.02	Rh	nd<0.2	Ta	N/A	Y	nd<0.02
Bi	N/A	Eu	nd<0.02	K	nd<0.2	Ni	nd<0.02	Ru	nd<0.02	Tb	N/A	Yb	nd<0.02
Ca	0.14	Fe	*	La	nd<0.02	Os	N/A	S	N/A	Te	N/A	Zn	N/A
Cd	nd<0.02	Ga	N/A	Li	nd<0.02	P	N/A	Sb	nd<0.2	Th	nd<0.02	Zr	N/A

This Certified Reference Material was verified in accordance with ISO/IEC 17025

This solution was assayed titrimetrically, using EDTA which was standardized against NIST SRM #915a (calcium carbonate).

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

The gravimetric uncertainty for this product is ±0.24%. The CRM uncertainty is ±2.4%.

In order to verify the concentration(s), the final solution was checked by plasma emission spectroscopy (ICP) against material traceable to the above listed NIST SRM(s).

We use the highest purity raw materials available to minimize impurity levels in the final solution. Typically 99.999%+ pure starting materials are used as well as high purity acids and ASTM Type I 18 megohm deionized water.

All trace level elemental impurities were determined via plasma emission spectroscopy on the concentrate.

All weights are traceable through NIST, Test No. 684/289871-17

All glassware used in preparation is Class A.

All bottles are acid leached and triple rinsed with deionized water prior to use.

Shake bottle prior to use and do not pipette directly out of the bottle. Use only cleaned Class A volumetric glassware. Keep bottle tightly capped.

Certified By: Meigan O'Leary

Meigan O'Leary, Inorganic QC Manager

Page 1 of 1

For use in routine laboratory analysis.

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

1. **Quality Standards:**

   ISO 17034:2016 – General Requirements for the Competence of Reference Material Producers

   ISO/IEC 17025:2017 – General Requirements for the Competence of Testing And Calibration Laboratories

   ISO 9001:2015 – Quality Management System – Requirements Eagle Registrations

2. **Intended Use:** The product covered by this certificate is designed for calibration or for use in quality control procedures for the specified chemical compounds listed on the reverse side. This product can be used for quantification and/or identification. This product can also be used as a reference material to validate analytical procedures, subject to the conditions under Section 7.

3. **Manufacturing:** All balances are calibrated daily using an in-house procedure with weights that are compared annually to master weights and traceable to NIST. The balances are also calibrated annually by an ISO/IEC 17025 accredited calibration laboratory. Please refer to the NIST test number listed on the front of this certificate. Class A glassware is used in the manufacture and quality control of all standards. Good Laboratory Practices have been used throughout the preparation of this Standard.

4. **Homogeneity:** This product is sufficiently homogeneous and any sample size would be within the uncertainty budget.

5. **Stability:** The manufacturer guarantees the stability of this solution through the expiration date stated on the label, when handled and stored according to the conditions stated on the label

6. **Uncertainty:** The uncertainty values as stated on the face of this certificate have been determined using the EURACHEM/CITAC Guide. We report a combined expanded uncertainty equal to the positive square root of the total variance of the uncertainty of the components using the following formula: $u_a = \sqrt{(u(V))^2 + (u(m))^2 + (u(IV))^2 + (u(RO))^2}$ This formula represents uncertainty components from the mass, volume, short-term stability, long-term stability and homogeneity factors associated with the production of this product. The expanded uncertainty, assumes a normal distribution and a coverage factor of k=2 is chosen using approximately a 95% confidence level.

7. **Legal Notice and Limit of Liability:** This product is for routine laboratory analysis and research purposes only. The company's liability will be limited to replacement of product or refund of purchase price. Notice of claims must be made within thirty (30) days from date of delivery.

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Reagent

ICP CAL 1_00025

CPI INTERNATIONAL

CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM — Product #: TA-CAL1

ICP ICPMS CAL Mix # 1 — Lot #: 1321095-1

Matrix: 5% HNO_3/tr. HF

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
As	99.95 ± 0.50 mg/L	Li	99.98 ± 0.50 mg/L	Si	1000 ± 5 mg/L
Ba	100.1 ± 0.5 mg/L	Mn	99.99 ± 0.50 mg/L	Sn	99.99 ± 0.50 mg/L
Be	100.0 ± 0.5 mg/L	Mo	100.0 ± 0.5 mg/L	Sr	100.0 ± 0.5 mg/L
Cd	99.99 ± 0.50 mg/L	Ni	100.0 ± 0.5 mg/L	Ti	100.0 ± 0.5 mg/L
Co	99.95 ± 0.50 mg/L	Pb	100.0 ± 0.5 mg/L	Tl	100.0 ± 0.5 mg/L
Cr	100.0 ± 0.5 mg/L	Sb	99.99 ± 0.50 mg/L	V	99.99 ± 0.50 mg/L
Cu	100.0 ± 0.5 mg/L	Se	99.99 ± 0.50 mg/L		

Source Material Lot # Chart

Element	Source Material Lot #	Element	Source Material Lot #	Element	Source Material Lot #
As	1299133	Li	1195499	Si	1271053
Ba	1162561	Mn	1136846	Sn	1116280
Be	1270256	Mo	1205113	Sr	1123421
Cd	1240656	Ni	1084161	Ti	1237770
Co	1237802	Pb	1035677	Tl	1059794
Cr	1242583	Sb	978317	V	1139942
Cu	1207839	Se	1285040		

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see final page)**. The solution was stabilized using high purity nitric acid (HNO_3), trace hydrofluoric acid (HF) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see final page)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

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Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

May 2, 2023
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Further Information: Please contact CPI International for further information about this material.

Quality Certifications: This material was prepared under a quality management system that is registered/accredited to the following:

- ISO 17034 Accredited: Reference Materials Producer, A2LA Certificate No. 2848.02 – General Requirements for the Competence of Reference Material Producers
  - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
- ISO/IEC 17025 Accredited: Chemical Testing, A2LA Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

This CRM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM
Ag	3151	-	Hf	3122	-	S	3154	2770
Al	3101a	-	Hg	3133	3133	Sb	3102a	3102a
As	3103a	3103a	Ho	3123a	-	Sc	3148a	3148a
Au	3121	-	In	3124a	3124a	Se	3149	3149
B	3107	3107	K	3141a	3141a	Si	3150	-
Ba	3104a	-	La	3127a	3127a	Sm	3147a	-
Be	3105a	3105a	Li	3129a	3129a	Sn	3161a	-
Bi	3106	3106	Lu	3130a	-	SO_4^{-2}	3181	-
Br	3184	-	Mg	3131a	3131a	Sr	3153a	3153a
Ca	3109a	3109a	Mn	3132	3132	Ta	3155	-
Cd	3108	-	Mo	3134	3134	Tb	3157a	-
Ce	3110	3110	Na	3152a	-	Te	3156	-
Cl	3182	1818a	Nb	3137	-	Th	-	-
Co	3113	3113	Nd	3135a	-	Ti	3162a	3162a
Cr	3112a	-	Ni	3136	-	Tl	3158	3158
Cs	3111a	-	NO_3^-	3185	-	Tm	3160a	-
Cu	3114	-	P	3139a	3139a	U	3164	-
Dy	3115a	-	Pb	3128	-	V	3165	-
Er	3116a	-	Pd	3138	-	W	3163	3163
Eu	3117a	-	PO_4^{-3}	3186	-	Y	3167a	3167a
F-	3183	-	Pr	3142a	-	Yb	3166a	-
Fe	3126a	-	Pt	3140	3140	Zn	3168a	3168a
Ga	3119a	-	Rb	3145a	-	Zr	3169	3169
Gd	3118a	-	Re	3143	-			
Ge	3120a	-	Rh	3144	3144			

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Reagent

ICP CAL 1_00027

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CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM — Product #: TA-CAL1

ICP ICPMS CAL Mix # 1 — Lot #: 1370764

Matrix: 5% HNO_3/tr. HF — *Expiration Date: 7 June 2025

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
As	100.0 ± 0.5 mg/L	Li	100.0 ± 0.5 mg/L	Si	999.9 ± 5.0 mg/L
Ba	100.1 ± 0.5 mg/L	Mn	99.99 ± 0.50 mg/L	Sn	99.99 ± 0.50 mg/L
Be	100.0 ± 0.5 mg/L	Mo	100.0 ± 0.5 mg/L	Sr	100.1 ± 0.5 mg/L
Cd	100.0 ± 0.5 mg/L	Ni	99.98 ± 0.50 mg/L	Ti	100.0 ± 0.5 mg/L
Co	100.1 ± 0.5 mg/L	Pb	99.98 ± 0.50 mg/L	Tl	100.0 ± 0.5 mg/L
Cr	100.0 ± 0.5 mg/L	Sb	100.0 ± 0.5 mg/L	V	100.0 ± 0.5 mg/L
Cu	100.0 ± 0.5 mg/L	Se	100.1 ± 0.5 mg/L		

Source Material Lot # Chart

Element	Source Material Lot #	Element	Source Material Lot #	Element	Source Material Lot #
As	1338706	Li	1316990	Si	1271053
Ba	1282477	Mn	1283873	Sn	1116280
Be	1270256	Mo	1240650	Sr	1123421
Cd	1240656	Ni	1275877	Ti	1237770
Co	1237802	Pb	1035677	Tl	1222802
Cr	1076194	Sb	1162568	V	1294996
Cu	1360466	Se	1146840		

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see final page)**. The solution was stabilized using high purity nitric acid (HNO_3), trace hydrofluoric acid (HF) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see final page)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

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Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution until the date shown above or ***12 Months** from the date opened, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer	7 June 2023 **Certification Date**	**Date Opened**

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Further Information: Please contact CPI International for further information about this material.

Quality Certifications: This material was prepared under a quality management system that is registered/accredited to the following:

- ISO 17034 Accredited: Reference Materials Producer, A2LA Certificate No. 2848.02 – General Requirements for the Competence of Reference Material Producers
  - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
- ISO/IEC 17025 Accredited: Chemical Testing, A2LA Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

This CRM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM
Ag	3151	-	Hf	3122	-	S	3154	2770
Al	3101a	-	Hg	3133	3133	Sb	3102a	3102a
As	3103a	3103a	Ho	3123a	-	Sc	3148a	3148a
Au	3121	-	In	3124a	3124a	Se	3149	3149
B	3107	3107	K	3141a	3141a	Si	3150	-
Ba	3104a	-	La	3127a	3127a	Sm	3147a	-
Be	3105a	3105a	Li	3129a	3129a	Sn	3161a	-
Bi	3106	3106	Lu	3130a	-	SO_4^{-2}	3181	-
Br	3184	-	Mg	3131a	3131a	Sr	3153a	3153a
Ca	3109a	3109a	Mn	3132	3132	Ta	3155	-
Cd	3108	-	Mo	3134	3134	Tb	3157a	-
Ce	3110	3110	Na	3152a	-	Te	3156	-
Cl	3182	1818a	Nb	3137	-	Th	-	-
Co	3113	3113	Nd	3135a	-	Ti	3162a	3162a
Cr	3112a	-	Ni	3136	-	Tl	3158	3158
Cs	3111a	-	NO_3	3185	-	Tm	3160a	-
Cu	3114	-	P	3139a	3139a	U	3164	-
Dy	3115a	-	Pb	3128	-	V	3165	-
Er	3116a	-	Pd	3138	-	W	3163	3163
Eu	3117a	-	PO_4^{-3}	3186	-	Y	3167a	3167a
F-	3183	-	Pr	3142a	-	Yb	3166a	-
Fe	3126a	-	Pt	3140	3140	Zn	3168a	3168a
Ga	3119a	-	Rb	3145a	-	Zr	3169	3169
Gd	3118a	-	Re	3143	-			
Ge	3120a	-	Rh	3144	3144			

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Reagent

ICP CAL 2_00024

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CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM — Product #: TA-CAL2

ICP ICPMS CAL Mix # 2 — Lot #: 1359083-1

Matrix: 5% HNO_3

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
Al	2000 ± 10 mg/L	Fe	2000 ± 10 mg/L	Mg	2002 ± 10 mg/L
Ca	2000 ± 10 mg/L	K	2000 ± 10 mg/L	Na	2000 ± 10 mg/L

Source Material Lot # Chart

Element	Source Material Lot #	Element	Source Material Lot #	Element	Source Material Lot #
Al	1249289	Fe	1249266	Mg	1222806
Ca	1344004	K	1287603	Na	1344394

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see reverse side)**. The solution was stabilized using high purity nitric acid (HNO_3) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see reverse side)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware; (2) not pipette directly from the CRM's original container; (3) never pour used product back into the original container; (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes; (5) use a minimum sub-sample size of 500 µL; and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau, Certifying Officer — Certification Date: May 23, 2023

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the product/data described herein.

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Health and Safety Information: Refer to the Safety Data Sheet (SDS)

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the instructions for use, as doing so will invalidate the certified values and uncertainties.

Further Information: Please contact CPI International for further information about this material.

Quality Certifications: This material was prepared under a quality management system that is registered/accredited to the following:

- ISO 17034 Accredited. Reference Materials Producer, A2LA Certificate No. 2848.02 – General Requirements for the Competence of Reference Material Producers
  - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
- ISO/IEC 17025 Accredited. Chemical Testing, A2LA Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001 Certified. Quality Management Systems. Certificate Registration No. 56 100 18560101 – Requirements *(Registrar: TUV NORD)*

This CRM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM
Ag	3151	-	Hf	3122	-	S	3154	2770
Al	3101a	-	Hg	3133	3133	Sb	3102a	3102a
As	3103a	3103a	Ho	3123a	-	Sc	3148a	3148a
Au	3121	-	In	3124a	3124a	Se	3149	3149
B	3107	3107	K	3141a	3141a	Si	3150	-
Ba	3104a	-	La	3127a	3127a	Sm	3147a	-
Be	3105a	3105a	Li	3128a	3129a	Sn	3161a	-
Bi	3106	3106	Lu	3130a	-	SO_4^{-2}	3181	-
Br	3184	-	Mg	3131a	3131a	Sr	3153a	3153a
Ca	3109a	3109a	Mn	3132	3132	Ta	3155	-
Cd	3108	-	Mo	3134	3134	Tb	3157a	-
Ce	3110	3110	Na	3152a	-	Te	3156	-
Cl	3182	1818a	Nb	3137	-	Th	-	-
Co	3113	3113	Nd	3135a	-	Ti	3162a	3162a
Cr	3112a	-	Ni	3136	-	Tl	3158	3158
Cs	3111a	-	NO_3	3185	-	Tm	3160a	-
Cu	3114	-	P	3139a	3139a	U	3164	-
Dy	3115a	-	Pb	3128	-	V	3165	-
Er	3116a	-	Pd	3138	-	W	3163	3163
Eu	3117a	-	PO_4^{-3}	3186	-	Y	3167a	3167a
F-	3183	-	Pr	3142a	-	Yb	3166a	-
Fe	3126a	-	Pt	3140	3140	Zn	3168a	3168a
Ga	3119a	-	Rb	3145a	-	Zr	3169	3169
Gd	3118a	-	Re	3143	-			
Ge	3120a	-	Rh	3144	3144			

Reagent

ICP CAL 3_00020

3341398
ID: ICP CAL 3_00020
ICP ICPMS CAL Mix 3

CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM — Product #: TA-CAL3

ICP ICPMS CAL Mix # 3 — Lot #: 1285834-1

Matrix: 5% HNO_3/tr. HF

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
P	1000 ± 5 mg/L	U	100.0 ± 0.5 mg/L
S	1000 ± 5 mg/L	W	100.0 ± 0.5 mg/L

Source Material Lot # Chart

Element	Source Material Lot #	Element	Source Material Lot #
P	1225600	U	AR19-22UX
S	1207779	W	1130700

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see reverse side)**. The solution was stabilized using high purity nitric acid (HNO_3), trace hydrofluoric acid (HF) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see reverse side)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer — November 7, 2022 **Certification Date**

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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ICP ICSA_00112

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CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

Product #: TA-ICP-ICSA

Lot #: 1207637-1

ICP ICSA Mix

Matrix: 5% HNO_3

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
Al	5000 ± 25 mg/L	Fe	2000 ± 10 mg/L
Ca	5000 ± 25 mg/L	Mg	5000 ± 25 mg/L

Source Material Lot # Chart

Element	Source Material Lot #	Element	Source Material Lot #
Al	1077624	Fe	1114543
Ca	1121798	Mg	1075231

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to, **ISO 17034**, **ISO/IEC 17025** and **ISO 9001**. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see reverse side)**. The solution was stabilized using high purity nitric acid (HNO_3) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see reverse side)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Indicative Values: ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)

Ag	<0.5	Fe	MAJOR	Sb	<0.5
Al	MAJOR	Hg	<0.5	Se	<2
As	<0.5	K	<50	Sn	<0.5
Ba	<2	Li	<2	Sr	44
Be	<0.5	Mg	MAJOR	Th	<0.5
Ca	MAJOR	Mn	92	Ti	<2
Cd	<0.5	Mo	<0.5	Tl	<0.5
Co	<0.5	Na	197.9	U	<0.5
Cr	<1	Ni	<1	V	<2
Cu	<1	Pb	<0.5	Zn	<2

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Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

August 25, 2022
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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Health and Safety Information: Refer to the Safety Data Sheet (SDS)

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Further Information: Please contact CPI International for further information about this material.

Quality Certifications: This material was prepared under a quality management system that is registered/accredited to the following:

- ISO 17034 Accredited: Reference Materials Producer, A2LA Certificate No. 2848.02 – General Requirements for the Competence of Reference Material Producers
  - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
- ISO/IEC 17025 Accredited: Chemical Testing, A2LA Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

This CRM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM
Ag	3151	-	Hf	3122	-	S	3154	2770
Al	3101a	-	Hg	3133	3133	Sb	3102a	3102a
As	3103a	3103a	Ho	3123a	-	Sc	3148a	3148a
Au	3121	-	In	3124a	3124a	Se	3149	3149
B	3107	3107	K	3141a	3141a	Si	3150	-
Ba	3104a	-	La	3127a	3127a	Sm	3147a	-
Be	3105a	3105a	Li	3129a	3129a	Sn	3161a	-
Bi	3106	3106	Lu	3130a	-	SO_4^{-2}	3181	-
Br	3184	-	Mg	3131a	3131a	Sr	3153a	3153a
Ca	3109a	3109a	Mn	3132	3132	Ta	3155	-
Cd	3108	-	Mo	3134	3134	Tb	3157a	-
Ce	3110	3110	Na	3152a	-	Te	3156	-
Cl	3182	1818a	Nb	3137	-	Th	-	-
Co	3113	3113	Nd	3135a	-	Ti	3162a	3162a
Cr	3112a	-	Ni	3136	-	Tl	3158	3158
Cs	3111a	-	NO_3^-	3185	-	Tm	3160a	-
Cu	3114	-	P	3139a	3139a	U	3164	-
Dy	3115a	-	Pb	3128	-	V	3165	-
Er	3116a	-	Pd	3138	-	W	3163	3163
Eu	3117a	-	PO_4^{-3}	3186	-	Y	3167a	3167a
F-	3183	-	Pr	3142a	-	Yb	3166a	-
Fe	3126a	-	Pt	3140	3140	Zn	3168a	3168a
Ga	3119a	-	Rb	3145a	-	Zr	3169	3169
Gd	3118a	-	Re	3143	-			
Ge	3120a	-	Rh	3144	3144			

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Reagent

ICP ICSA_00116

CPI INTERNATIONAL

CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

Product #: TA-ICP-ICSA

ICP ICSA Mix

Lot #: 1336399-1

Matrix: 5% HNO_3

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
Al	5000 ± 25 mg/L	Fe	2000 ± 10 mg/L
Ca	5000 ± 25 mg/L	Mg	5000 ± 25 mg/L

Source Material Lot # Chart

Element	Source Material Lot #	Element	Source Material Lot #
Al	1249289	Fe	1249266
Ca	1232112	Mg	1222806

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to, **ISO 17034**, **ISO/IEC 17025** and **ISO 9001**. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see reverse side)**. The solution was stabilized using high purity nitric acid (HNO_3) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see reverse side)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Indicative Values: ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)

Ag	1	Fe	MAJOR	Sb	10
Al	MAJOR	Hg	<0.5	Se	<2
As	<0.5	K	56	Sn	2
Ba	14	Li	<2	Sr	22
Be	<0.5	Mg	MAJOR	Th	<0.5
Ca	MAJOR	Mn	13	Ti	7
Cd	<0.5	Mo	2	Tl	<0.5
Co	7	Na	786	U	0.8
Cr	21	Ni	4	V	<2
Cu	4	Pb	3	Zn	20

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F: 707.545.7901

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1013BG Amsterdam F: +31 20 420 28 36
The Netherlands

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Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

April 7, 2023
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Further Information: Please contact CPI International for further information about this material.

Quality Certifications: This material was prepared under a quality management system that is registered/accredited to the following:

- ISO 17034 Accredited: Reference Materials Producer, A2LA Certificate No. 2848.02 – General Requirements for the Competence of Reference Material Producers
  - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
- ISO/IEC 17025 Accredited: Chemical Testing, A2LA Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

This CRM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM
Ag	3151	-	Hf	3122	-	S	3154	2770
Al	3101a	-	Hg	3133	3133	Sb	3102a	3102a
As	3103a	3103a	Ho	3123a	-	Sc	3148a	3148a
Au	3121	-	In	3124a	3124a	Se	3149	3149
B	3107	3107	K	3141a	3141a	Si	3150	-
Ba	3104a	-	La	3127a	3127a	Sm	3147a	-
Be	3105a	3105a	Li	3129a	3129a	Sn	3161a	-
Bi	3106	3106	Lu	3130a	-	SO_4^{-2}	3181	-
Br	3184	-	Mg	3131a	3131a	Sr	3153a	3153a
Ca	3109a	3109a	Mn	3132	3132	Ta	3155	-
Cd	3108	-	Mo	3134	3134	Tb	3157a	-
Ce	3110	3110	Na	3152a	-	Te	3156	-
Cl	3182	1818a	Nb	3137	-	Th	-	-
Co	3113	3113	Nd	3135a	-	Ti	3162a	3162a
Cr	3112a	-	Ni	3136	-	Tl	3158	3158
Cs	3111a	-	NO_3^-	3185	-	Tm	3160a	-
Cu	3114	-	P	3139a	3139a	U	3164	-
Dy	3115a	-	Pb	3128	-	V	3165	-
Er	3116a	-	Pd	3138	-	W	3163	3163
Eu	3117a	-	PO_4^{-3}	3186	-	Y	3167a	3167a
F^-	3183	-	Pr	3142a	-	Yb	3166a	-
Fe	3126a	-	Pt	3140	3140	Zn	3168a	3168a
Ga	3119a	-	Rb	3145a	-	Zr	3169	3169
Gd	3118a	-	Re	3143	-			
Ge	3120a	-	Rh	3144	3144			

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Reagent

ICP ICV 1_00006

CPI INTERNATIONAL

3213686
ID: ICP ICV 1_00006
Exp: 11/17/23 Prod Tech Opn: 6/11/22
ICP ICPMS ICV Mix 1

CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

Product #: TA-CAL1-SS

ICP ICPMS CAL Mix # 1

Lot #: 1217102-1

Matrix: 5% HNO_3/tr. HF

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
As	100.0 ± 0.5 mg/L	Li	99.93 ± 0.50 mg/L	Si	1000 ± 5 mg/L
Ba	100.0 ± 0.5 mg/L	Mn	100.0 ± 0.5 mg/L	Sn	100.0 ± 0.5 mg/L
Be	100.0 ± 0.5 mg/L	Mo	100.0 ± 0.5 mg/L	Sr	100.0 ± 0.5 mg/L
Cd	100.0 ± 0.5 mg/L	Ni	100.0 ± 0.5 mg/L	Ti	100.0 ± 0.5 mg/L
Co	99.98 ± 0.50 mg/L	Pb	100.0 ± 0.5 mg/L	Tl	100.0 ± 0.5 mg/L
Cr	99.99 ± 0.50 mg/L	Sb	100.0 ± 0.5 mg/L	V	99.99 ± 0.50 mg/L
Cu	99.99 ± 0.50 mg/L	Se	100.0 ± 0.5 mg/L		

Source Material Lot # Chart

Element	Source Material Lot #	Element	Source Material Lot #	Element	Source Material Lot #
As	AN18-150ASX	Li	AZ18-87LIX	Si	AR18-114SIX
Ba	AP18-151BAX	Mn	AP18-121MNX	Sn	AK18-174SNX
Be	AS18-180BEX	Mo	2011930	Sr	1065634
Cd	173171	Ni	1084161	Ti	1929801
Co	AR18-131COX	Pb	AT18-115PBX	Tl	2035150
Cr	1076194	Sb	2007136	V	1139942
Cu	AV18-101CUX	Se	929078		

Intended Use: This solution is intended for use as a second source certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see final page)**. The solution was stabilized using high purity nitric acid (HNO_3), trace hydrofluoric acid (HF) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see final page)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

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Rev. 2

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

May 17, 2022
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Further Information: Please contact CPI International for further information about this material.

Quality Certifications: This material was prepared under a quality management system that is registered/accredited to the following:

- ISO 17034 Accredited: Reference Materials Producer, A2LA Certificate No. 2848.02 – General Requirements for the Competence of Reference Material Producers
  - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
- ISO/IEC 17025 Accredited: Chemical Testing, A2LA Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

This CRM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM
Ag	3151	-	Hf	3122	-	S	3154	2770
Al	3101a	-	Hg	3133	3133	Sb	3102a	3102a
As	3103a	3103a	Ho	3123a	-	Sc	3148a	3148a
Au	3121	-	In	3124a	3124a	Se	3149	3149
B	3107	3107	K	3141a	3141a	Si	3150	-
Ba	3104a	-	La	3127a	3127a	Sm	3147a	-
Be	3105a	3105a	Li	3129a	3129a	Sn	3161a	-
Bi	3106	3106	Lu	3130a	-	SO_4^{-2}	3181	-
Br	3184	-	Mg	3131a	3131a	Sr	3153a	3153a
Ca	3109a	3109a	Mn	3132	3132	Ta	3155	-
Cd	3108	-	Mo	3134	3134	Tb	3157a	-
Ce	3110	3110	Na	3152a	-	Te	3156	-
Cl	3182	1818a	Nb	3137	-	Th	-	-
Co	3113	3113	Nd	3135a	-	Ti	3162a	3162a
Cr	3112a	-	Ni	3136	-	Tl	3158	3158
Cs	3111a	-	NO_3	3185	-	Tm	3160a	-
Cu	3114	-	P	3139a	3139a	U	3164	-
Dy	3115a	-	Pb	3128	-	V	3165	-
Er	3116a	-	Pd	3138	-	W	3163	3163
Eu	3117a	-	PO_4^{-3}	3186	-	Y	3167a	3167a
F-	3183	-	Pr	3142a	-	Yb	3166a	-
Fe	3126a	-	Pt	3140	3140	Zn	3168a	3168a
Ga	3119a	-	Rb	3145a	-	Zr	3169	3169
Gd	3118a	-	Re	3143	-			
Ge	3120a	-	Rh	3144	3144			



Reagent

ICPRL SolASpx_00006

spex certiprep

Reference Materials Producer Cert #2495.01

SPEXertificate®

Certificate of Reference Material

Chemical Testing Cert #2495.02

Catalog Number: XEFPA-5-100 **Lot No.** 9-106AJ

Description: Custom Assurance Standard

Matrix: 5% HNO_3

This **ASSURANCE®** Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for analytical instrumentation such as ICP-OES, DCP, AA, ICP-MS, and XRF. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

The CRM is prepared from high purity single element concentrates of individual elements using Class A laboratory ware to give precise concentrations.

Instrumental Analysis by ICP Spectrometer:

Analyte	Labeled	Uncertainty	SRM	Analyte	Labeled	Uncertainty	SRM
K	3300 µg/mL	±70 µg/mL	3141a*	Ag	50 µg/mL	±1 µg/mL	3151*
Al	500 µg/mL	±10 µg/mL	3101a*	Cu	50 µg/mL	±1 µg/mL	3114*
B	500 µg/mL	±10 µg/mL	3107*	Zn	40 µg/mL	±0.8 µg/mL	3168a*
Ca	500 µg/mL	±10 µg/mL	3109a*	Pb	30 µg/mL	±0.6 µg/mL	3128*
Fe	500 µg/mL	±10 µg/mL	3126a*	Cr	25 µg/mL	±0.5 µg/mL	3112a*
Mg	500 µg/mL	±10 µg/mL	3131a*	Ba	20 µg/mL	±0.4 µg/mL	3104a*
Na	500 µg/mL	±10 µg/mL	3152a*	Be	20 µg/mL	±0.4 µg/mL	3105a*
Bi	280 µg/mL	±6 µg/mL	3106*	Cd	20 µg/mL	±0.4 µg/mL	3108*
Li	100 µg/mL	±2 µg/mL	3129a*	Co	20 µg/mL	±0.4 µg/mL	3113*
Sr	100 µg/mL	±2 µg/mL	3153a*	Mn	20 µg/mL	±0.4 µg/mL	3132*
Tl	100 µg/mL	±2 µg/mL	3158*	Ni	20 µg/mL	±0.4 µg/mL	3136*

* - indicates NIST SRM † - indicates SPEX CertiPrep CRM (when NIST SRM is not available)

SPEX CertiPrep Reference Multi: Lot# MULTI1YP

Balances are calibrated regularly with weight sets traceable to NIST#s 32856, 32867 and others. This CRM is guaranteed stable and accurate to ±2% of the labeled value. This includes uncertainty components due to preparation, measurement, homogeneity, and short-ter m and long-term stability. This guarantee is valid for a period of one year from the date of certification only when the material is kept tightly capped and stored under ambient laboratory conditions.

Date of Certification: MAR -- 2023 Certifying Officer: Katherine Cullinan

Katherine Cullinan, QC Manager

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Rev. 0

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Report of Certification

This Certified Reference Material (CRM) has been prepared and certified under an ISO 9001 (certified by DQS), ISO/IEC 17025 (accredited by A2LA) and ISO 17034 (accredited by A2LA) quality system consistent with the following guides:

- ISO 9001: Quality management systems – Requirements
- ISO/IEC 17025: General requirements for the competence of testing and calibration laboratories
- ISO 17034: General requirements for the competence of reference material producers
- ISO Guide 30: Reference Materials – Selected terms and definitions
- ISO Guide 31: Reference Materials – Contents of certificates, labels, and accompanying documentation
- ISO Guide 35: Reference Materials – Guidance for characterization and assessment of homogeneity and stability
- Guide to the Expression of Uncertainty in Measurement, 2008
- EURACHEM/CITAC Guide: Qualifying Uncertainty in Analytical Measurement – Third Edition
- NIST Technical Note 1297

Material Source:
All analytes and matrix materials are obtained and verified by Spex CertiPrep from pre-qualified vendors as per ISO 9001, ISO/IEC 17025 and ISO 17034 guidelines. Vendor identifications are proprietary; however, sources of all materials used in the preparation and testing of Spex CertiPrep CRMs are tracked and documented. For further assistance, please contact Sales Support at USMet-CRMSales@antylia.com.

Instructions for Use:
Primary usage of this CRM is in neat form or diluted serially with matrix of a purity at or greater than the purity of the original matrix solution. If dilution is required, the diluent must be compatible with all certified analytes and contain stabilizers appropriate for the period of intended use. The CRM can also be used as a spike or with a spike, again with appropriate compatibility considerations. All solutions should be thoroughly mixed, by shaking, prior to use and never pipetted directly from the bottle. Do not return excess solution to the bottle. All surfaces that come in contact with the solution must be thoroughly cleaned and leached prior to use. Dilutions should be performed only with Class A volumetric glassware. See SDS for health and safety information.

Method of Preparation:
Clean laboratory procedures and techniques have been used throughout the preparation. All materials, equipment, analytical instrumentation and personnel have been qualified prior to use. The highest purity acids applicable, 18 megohm, double deionized water, acid-leached double-rinsed bottles (where appropriate), and Class A/calibrated volumetrics have been used in all preparations.

Homogeneity:
The homogeneity of the CRM has been confirmed by procedures consistent with ISO/IEC 17025, ISO 17034, and ASTM D6362-98 Appendix X2. Random, replicate samples of the final, packaged material have been analyzed to prove homogeneity in accordance with our internal procedure 4600-HOMOGEN-1A. Since the product is highly homogeneous, any sample size taken for analysis would be within the uncertainty budget. This is consistent with the intended use of the CRM.

Statistical Estimator and Confidence Limits:
The certified value 'X' listed on the reverse of this document is at the 95% level of confidence and can be expressed as:

- $X = x \pm U$ where X = certified value, U = expanded uncertainty, x = property value
- $U = ku_c$ where k = 2 is the coverage factor at the 95% confidence level
- u_c = combined standard uncertainty obtained by combining the individual element standard uncertainty components u_i and $u_c = \sqrt{\Sigma u_i^2}$

Certification Report:
All certified values reported were derived from the Certification Report. Spex CertiPrep's traceability documentation, identified by the lot number of this CRM. During the stated period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution. For further assistance, please contact Sales Support at USMet-CRMSales@antylia.com.

Legal Notice:
Spex CertiPrep reference materials are not for any cosmetic, drug or household application and are to be used only by qualified individuals who are trained in appropriate procedures. No claims against Spex CertiPrep, LLC. of any kind whatsoever, whether based on breach of warranty, alleged negligence, or otherwise, with respect to this Reference Material shall be greater than the purchase price. In no event shall Spex CertiPrep, LLC. be liable for any loss of profits or any incidental, special, or consequential damages.

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Reagent

ICPRL SolBSpx_00004

spex certiprep

ACCREDITED
Reference Materials Producer
Cert #2495.01

SPEXertificate®

Certificate of Reference Material

ACCREDITED
Chemical Testing
Cert #2495.02

Catalog Number: XEFPA-6-100 **Lot No.** 9-107AJ

Description: Custom Assurance Standard

Matrix: 2% HNO_3 / Tr. Tart. Acid / Tr. HF

This **ASSURANCE®** Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for analytical instrumentation such as ICP-OES, DCP, AA, ICP-MS, and XRF. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

The CRM is prepared from high purity single element concentrates of individual elements using Class A laboratory ware to give precise concentrations.

Instrumental Analysis by ICP Spectrometer:

Analyte	Labeled	Uncertainty	SRM	Analyte	Labeled	Uncertainty	SRM
Si	1045 µg/mL	±20 µg/mL	3150*	As	60 µg/mL	±1 µg/mL	3103a*
P	100 µg/mL	±2 µg/mL	3139a*	Sb	60 µg/mL	±1 µg/mL	3102a*
Se	100 µg/mL	±2 µg/mL	3149*	Mo	40 µg/mL	±0.8 µg/mL	3134*
Sn	100 µg/mL	±2 µg/mL	3161a*	Ti	30 µg/mL	±0.6 µg/mL	3162a*
W	100 µg/mL	±2 µg/mL	3163*	V	30 µg/mL	±0.6 µg/mL	3165*

* - indicates NIST SRM † - indicates SPEX CertiPrep CRM (when NIST SRM is not available)

SPEX CertiPrep Reference Multi: Lot# MULTI1YP

Balances are calibrated regularly with weight sets traceable to NIST#s 32856, 32867 and others. This CRM is guaranteed stable and accurate to ±2% of the labeled value. This includes uncertainty components due to preparation, measurement, homogeneity, and short-ter m and long-term stability. This guarantee is valid for a period of one year from the date of certification only when the material is kept tightly capped and stored under ambient laboratory conditions.

Date of Certification: MAR -- 2023 Certifying Officer: Katherine Cullinan

Katherine Cullinan, QC Manager

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Rev. 0

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Report of Certification

This Certified Reference Material (CRM) has been prepared and certified under an ISO 9001 (certified by DQS), ISO/IEC 17025 (accredited by A2LA) and ISO 17034 (accredited by A2LA) quality system consistent with the following guides:

- ISO 9001: Quality management systems – Requirements
- ISO/IEC 17025: General requirements for the competence of testing and calibration laboratories
- ISO 17034: General requirements for the competence of reference material producers
- ISO Guide 30: Reference Materials – Selected terms and definitions
- ISO Guide 31: Reference Materials – Contents of certificates, labels, and accompanying documentation
- ISO Guide 35: Reference Materials – Guidance for characterization and assessment of homogeneity and stability
- Guide to the Expression of Uncertainty in Measurement, 2008
- EURACHEM/CITAC Guide: Qualifying Uncertainty in Analytical Measurement – Third Edition
- NIST Technical Note 1297

Material Source:
All analytes and matrix materials are obtained and verified by Spex CertiPrep from pre-qualified vendors as per ISO 9001, ISO/IEC 17025 and ISO 17034 guidelines. Vendor identifications are proprietary; however, sources of all materials used in the preparation and testing of Spex CertiPrep CRMs are tracked and documented. For further assistance, please contact Sales Support at USMet-CRMSales@antylia.com.

Instructions for Use:
Primary usage of this CRM is in neat form or diluted serially with matrix of a purity at or greater than the purity of the original matrix solution. If dilution is required, the diluent must be compatible with all certified analytes and contain stabilizers appropriate for the period of intended use. The CRM can also be used as a spike or with a spike, again with appropriate compatibility considerations. All solutions should be thoroughly mixed, by shaking, prior to use and never pipetted directly from the bottle. Do not return excess solution to the bottle. All surfaces that come in contact with the solution must be thoroughly cleaned and leached prior to use. Dilutions should be performed only with Class A volumetric glassware. See SDS for health and safety information.

Method of Preparation:
Clean laboratory procedures and techniques have been used throughout the preparation. All materials, equipment, analytical instrumentation and personnel have been qualified prior to use. The highest purity acids applicable, 18 megohm, double deionized water, acid-leached PFA/single-rinsed bottles (where appropriate), and Class A/calibrated volumetrics have been used in all preparations.

Homogeneity:
The homogeneity of the CRM has been confirmed by procedures consistent with ISO/IEC 17025, ISO 17034, and ASTM D6362-98 Appendix X2. Random, replicate samples of the final, packaged material have been analyzed to prove homogeneity in accordance with our internal procedure 4600-HOMOGEN-1A. Since the product is highly homogeneous, any sample size taken for analysis would be within the uncertainty budget. This is consistent with the intended use of the CRM.

Statistical Estimator and Confidence Limits:
The certified value 'X' listed on the reverse of this document is at the 95% level of confidence and can be expressed as:

- $X = x \pm U$ where X = certified value, U = expanded uncertainty, x = property value
- $U = ku_c$ where k = 2 is the coverage factor at the 95% confidence level
- u_c = combined standard uncertainty obtained by combining the individual element standard uncertainty components u_i and $u_c = \sqrt{\Sigma u_i^2}$

Certification Report:
All certified values reported were derived from the Certification Report. Spex CertiPrep's traceability documentation, identified by the lot number of this CRM. During the stated period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution. For further assistance, please contact Sales Support at USMet-CRMSales@antylia.com.

Legal Notice:
Spex CertiPrep reference materials are not for any cosmetic, drug or household application and are to be used only by qualified individuals who are trained in appropriate procedures. No claims against Spex CertiPrep, LLC. of any kind whatsoever, whether based on breach of warranty, alleged negligence, or otherwise, with respect to this Reference Material shall be greater than the purchase price. In no event shall Spex CertiPrep, LLC. be liable for any loss of profits or any incidental, special, or consequential damages.

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Reagent

ICSAB A_00006

CPI INTERNATIONAL

CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

Product #: TA-ICP-ICSAB-1

ICP ICSAB Mix Solution 1

Lot #: 1333444-1

Matrix: 5% HNO_3/0.5% HF

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
Mo	99.93 ± 0.50 mg/L	Si	999.9 ± 5.0 mg/L	Ti	100.2 ± 0.5 mg/L
Sb	99.98 ± 0.50 mg/L	Sn	100.1 ± 0.5 mg/L		

Source Material Lot # Chart

Element	Source Material Lot #	Element	Source Material Lot #	Element	Source Material Lot #
Mo	1240650	Si	1275128	Ti	1237770
Sb	1162568	Sn	1116280		

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see reverse side)**. The solution was stabilized using high purity nitric acid (HNO_3), hydrofluoric acid (HF) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see reverse side)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau, Certifying Officer

April 7, 2023
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

USA
5580 Skylane Boulevard P: 707.525.5788
Santa Rosa, CA 95403 P: 800.878.7654
F: 707.545.7901

Europe
Nieuwe Hemweg 7P P: +31 20 638 05 97
1013BG Amsterdam F: +31 20 420 28 36
The Netherlands

www.cpiinternational.com

9/8/2023 4:01 PM

Health and Safety Information: Refer to the Safety Data Sheet (SDS)

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Further Information: Please contact CPI International for further information about this material.

Quality Certifications: This material was prepared under a quality management system that is registered/accredited to the following:

- ISO 17034 Accredited: Reference Materials Producer, A2LA Certificate No. 2848.02 – General Requirements for the Competence of Reference Material Producers
  - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
- ISO/IEC 17025 Accredited: Chemical Testing, A2LA Certificate No. 2848.01 – General Requirements for the Competence of Testing and Calibration Laboratories
- ISO 9001 Certified: Quality Management Systems, Certificate Registration No. 56 100 19560101 – Requirements *(Registrar: TUV NORD)*

This CRM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM
Ag	3151	-	Hf	3122	-	S	3154	2770
Al	3101a	-	Hg	3133	3133	Sb	3102a	3102a
As	3103a	3103a	Ho	3123a	-	Sc	3148a	3148a
Au	3121	-	In	3124a	3124a	Se	3149	3149
B	3107	3107	K	3141a	3141a	Si	3150	-
Ba	3104a	-	La	3127a	3127a	Sm	3147a	-
Be	3105a	3105a	Li	3129a	3129a	Sn	3161a	-
Bi	3106	3106	Lu	3130a	-	SO_4^{-2}	3181	-
Br	3184	-	Mg	3131a	3131a	Sr	3153a	3153a
Ca	3109a	3109a	Mn	3132	3132	Ta	3155	-
Cd	3108	-	Mo	3134	3134	Tb	3157a	-
Ce	3110	3110	Na	3152a	-	Te	3156	-
Cl	3182	1818a	Nb	3137	-	Th	-	-
Co	3113	3113	Nd	3135a	-	Ti	3162a	3162a
Cr	3112a	-	Ni	3136	-	Tl	3158	3158
Cs	3111a	-	NO_3	3165	-	Tm	3160a	-
Cu	3114	-	P	3139a	3139a	U	3164	-
Dy	3115a	-	Pb	3128	-	V	3165	-
Er	3116a	-	Pd	3138	-	W	3163	3163
Eu	3117a	-	PO_4^{-3}	3186	-	Y	3167a	3167a
F-	3183	-	Pr	3142a	-	Yb	3166a	-
Fe	3126a	-	Pt	3140	3140	Zn	3168a	3168a
Ga	3119a	-	Rb	3145a	-	Zr	3169	3169
Gd	3118a	-	Re	3143	-			
Ge	3120a	-	Rh	3144	3144			

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Reagent

ICSAB B_00006

CPI INTERNATIONAL

CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

Product #: TA-ICP-ICSAB-2

ICP ICSAB Mix Solution 2

Lot #: 1333445-1

Matrix: 5% HNO_3

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
Ag	100.0 ± 0.5 mg/L	Cr	100.0 ± 0.5 mg/L	Pb	100.0 ± 0.5 mg/L
As	99.94 ± 0.50 mg/L	Cu	100.0 ± 0.5 mg/L	Se	100.0 ± 0.5 mg/L
B	1000 ± 5 mg/L	K	1000 ± 5 mg/L	Sr	100.0 ± 0.5 mg/L
Ba	99.99 ± 0.50 mg/L	Mn	100.0 ± 0.5 mg/L	Tl	100.0 ± 0.5 mg/L
Be	50.02 ± 0.25 mg/L	Na	1000 ± 5 mg/L	V	100.1 ± 0.5 mg/L
Cd	99.99 ± 0.50 mg/L	Ni	100.0 ± 0.5 mg/L	Zn	99.98 ± 0.50 mg/L
Co	100.0 ± 0.5 mg/L	P	1000 ± 5 mg/L		

Source Material Lot # Chart

Element	Source Material Lot #	Element	Source Material Lot #	Element	Source Material Lot #
Ag	1198373	Cr	1242583	Pb	992969
As	AN18-150ASX	Cu	1207839	Se	1285040
B	1237794	K	1287603	Sr	1244946
Ba	1216157	Mn	1136846	Tl	1059794
Be	1270256	Na	1245609	V	1139942
Cd	1240656	Ni	1084161	Zn	1149838
Co	1237802	P	1035677		

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

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1013BG Amsterdam F: +31 20 420 28 36
The Netherlands

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

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Chuck Goudreau

Chuck Goudreau, Certifying Officer

April 7, 2023
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO 17034 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with internal procedures for the assessment of homogeneity and stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

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  - ISO 17034 references additional requirements specified in ISO Guide 31 and ISO Guide 35
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Ag	3151	-	Hf	3122	-	S	3154	2770
Al	3101a	-	Hg	3133	3133	Sb	3102a	3102a
As	3103a	3103a	Ho	3123a	-	Sc	3148a	3148a
Au	3121	-	In	3124a	3124a	Se	3149	3149
B	3107	3107	K	3141a	3141a	Si	3150	-
Ba	3104a	-	La	3127a	3127a	Sm	3147a	-
Be	3105a	3105a	Li	3129a	3129a	Sn	3161a	-
Bi	3106	3106	Lu	3130a	-	SO_4^{2-}	3181	-
Br	3184	-	Mg	3131a	3131a	Sr	3153a	3153a
Ca	3109a	3109a	Mn	3132	3132	Ta	3155	-
Cd	3108	-	Mo	3134	3134	Tb	3157a	-
Ce	3110	3110	Na	3152a	-	Te	3156	-
Cl-	3182	1818a	Nb	3137	-	Th	-	-
Co	3113	3113	Nd	3135a	-	Ti	3162a	3162a
Cr	3112a	-	Ni	3136	-	Tl	3158	3158
Cs	3111a	-	NO_3^-	3185	-	Tm	3160a	-
Cu	3114	-	P	3139a	3139a	U	3164	-
Dy	3115a	-	Pb	3128	-	V	3165	-
Er	3116a	-	Pd	3138	-	W	3163	3163
Eu	3117a	-	PO_4^{3-}	3186	-	Y	3167a	3167a
F-	3183	-	Pr	3142a	-	Yb	3166a	-
Fe	3126a	-	Pt	3140	3140	Zn	3168a	3168a
Ga	3119a	-	Rb	3145a	-	Zr	3169	3169
Gd	3118a	-	Re	3143	-			
Ge	3120a	-	Rh	3144	3144			

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Reagent

Nitric Acid_00101

Nitric Acid
AR Select® (ACS)
For Trace Element Analysis

avantor™ | MACRON FINE CHEMICALS™

Material No.: 6623-46
Batch No.: 22F2462005
Manufactured Date: 2022-05-17
Retest Date: 2027-05-16
Revision No.: 0

Certificate of Analysis

Meets ACS Reagent Chemical Requirements,

Test	Specification	Result
ACS – Assay (HNO_3)	68.0 – 70.0 %	69.7 %
Appearance	Passes Test	Passes Test
ACS – Color (APHA)	≤ 10	5
ACS – Arsenic (As)	≤ 0.010 ppm	< 0.002 ppm
ACS – Arsenic and Antimony (as As)	≤ 0.005 ppm	< 0.002 ppm
ACS – Chloride (Cl)	≤ 0.04 ppm	< 0.03 ppm
ACS – Heavy Metals (as Pb)	≤ 0.05 ppm	< 0.05 ppm
ACS – Residue after Ignition	≤ 5 ppm	2 ppm
ACS – Sulfate (SO_4)	≤ 0.4 ppm	< 0.2 ppm
Determine by Flame Photometry ICP – Aluminum (Al)	≤ 50.0 ppb	0.5 ppb
Determine by Flame Photometry ICP – Barium (Ba)	≤ 1.0 ppb	< 0.2 ppb
Determine by Flame Photometry ICP – Beryllium (Be)	≤ 1.0 ppb	< 1.0 ppb
Determine by Flame Photometry ICP – Bismuth (Bi)	≤ 10.0 ppb	< 1.0 ppb
Determine by Flame Photometry ICP – Boron (B)	≤ 10.0 ppb	< 1.0 ppb
Determine by Flame Photometry ICP – Cadmium (Cd)	≤ 1.0 ppb	< 1.0 ppb
Determine by Flame Photometry ICP – * Calcium (Ca)	≤ 200.0 ppb	1.6 ppb
Determine by Flame Photometry ICP – Chromium (Cr)	≤ 10.0 ppb	1.8 ppb
Determine by Flame Photometry ICP – Cobalt (Co)	≤ 5.0 ppb	< 0.3 ppb
Determine by Flame Photometry ICP – Copper (Cu)	≤ 1.0 ppb	0.3 ppb
Determine by Flame Photometry ICP – Gallium (Ga)	≤ 20.0 ppb	< 1.0 ppb
Determine by Flame Photometry ICP – Germanium (Ge)	≤ 10.0 ppb	< 2.0 ppb
Determine by Flame Photometry ICP – Gold (Au)	≤ 10.0 ppb	< 1.0 ppb
Determine by Flame Photometry ICP – Iron (Fe)	≤ 40.0 ppb	7.1 ppb
Determine by Flame Photometry ICP – Lead (Pb)	≤ 1.0 ppb	< 0.5 ppb
Determine by Flame Photometry ICP – Lithium (Li)	≤ 5.0 ppb	< 0.2 ppb
Determine by Flame Photometry ICP – Magnesium (Mg)	≤ 10.0 ppb	< 0.2 ppb
Determine by Flame Photometry ICP – Manganese (Mn)	≤ 1.0 ppb	< 0.4 ppb
Determine by Flame Photometry ICP – Mercury (Hg)	≤ 1.0 ppb	< 0.1 ppb

>>> Continued on page 2 >>>

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone 610.386.1700

Nitric Acid
AR Select® (ACS)
For Trace Element Analysis

avantor™ | MACRON FINE CHEMICALS™

Material No.: 6623-46
Batch No.: 22F2462005

Test	Specification	Result
Determine by Flame Photometry ICP – Molybdenum (Mo)	≤ 5.0 ppb	< 3.0 ppb
Determine by Flame Photometry ICP – Nickel (Ni)	≤ 5.0 ppb	< 0.2 ppb
Determine by Flame Photometry ICP – Potassium (K)	≤ 20.0 ppb	< 2.0 ppb
Determine by Flame Photometry ICP – * Silicon (Si)	≤ 50.0 ppb	< 1.0 ppb
Determine by Flame Photometry ICP – Silver (Ag)	≤ 5.0 ppb	< 1.0 ppb
Determine by Flame Photometry ICP – * Sodium (Na)	≤ 500.0 ppb	0.7 ppb
Determine by Flame Photometry ICP – Strontium (Sr)	≤ 1.0 ppb	< 1.0 ppb
Determine by Flame Photometry ICP – Thallium (Tl)	≤ 20.0 ppb	< 2.0 ppb
Determine by Flame Photometry ICP – Tin (Sn)	≤ 10.0 ppb	< 0.8 ppb
Determine by Flame Photometry ICP – Vanadium (V)	≤ 1.0 ppb	< 1.0 ppb
Determine by Flame Photometry ICP – Zinc (Zn)	≤ 5.0 ppb	0.8 ppb
Determine by Flame Photometry ICP – Zirconium (Zr)	≤ 10.0 ppb	< 1.0 ppb

For Laboratory,Research,or Manufacturing Use
Determine by Flame Photometry & ICP
* May change over time due to extraction from glass container.

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

James T Ethier
Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone 610.386.1700

Reagent

VOARGAS__00041

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569722 **Lot No.:** A0189184

Description : 8260 List 1 / Std #3 Gases (2015)

8260 List 1 / Std #3 Gases (2015) 2,500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : August 31, 2025 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Dichlorodifluoromethane (CFC-12)	2,500.3 µg/mL	+/- 18.6878	µg/mL	Gravimetric
	CAS # 75-71-8 (Lot 00012554)		+/- 140.6792	µg/mL	Unstressed
	Purity 99%		+/- 143.9483	µg/mL	Stressed
2	Chloromethane (methyl chloride)	2,500.0 µg/mL	+/- 17.9318	µg/mL	Gravimetric
	CAS # 74-87-3 (Lot SHBK6571)		+/- 140.5648	µg/mL	Unstressed
	Purity 99%		+/- 143.8357	µg/mL	Stressed
3	Vinyl chloride	2,500.2 µg/mL	+/- 20.7208	µg/mL	Gravimetric
	CAS # 75-01-4 (Lot 00015559)		+/- 140.9576	µg/mL	Unstressed
	Purity 99%		+/- 144.2201	µg/mL	Stressed
4	1,3-Butadiene	2,499.9 µg/mL	+/- 18.9759	µg/mL	Gravimetric
	CAS # 106-99-0 (Lot 00019375)		+/- 140.6968	µg/mL	Unstressed
	Purity 99%		+/- 143.9645	µg/mL	Stressed
5	Bromomethane (methyl bromide)	2,500.1 µg/mL	+/- 19.8264	µg/mL	Gravimetric
	CAS # 74-83-9 (Lot 101604)		+/- 140.8262	µg/mL	Unstressed
	Purity 99%		+/- 144.0915	µg/mL	Stressed
6	Chloroethane (ethyl chloride)	2,500.6 µg/mL	+/- 23.7833	µg/mL	Gravimetric
	CAS # 75-00-3 (Lot 107-401039114-1)		+/- 141.4639	µg/mL	Unstressed
	Purity 99%		+/- 144.7161	µg/mL	Stressed
7	Dichlorofluoromethane (CFC-21)	2,500.0 µg/mL	+/- 14.5352	µg/mL	Gravimetric
	CAS # 75-43-4 (Lot 12841600)		+/- 140.1725	µg/mL	Unstressed
	Purity 99%		+/- 143.4524	µg/mL	Stressed

8	Trichlorofluoromethane (CFC-11)		2,500.3	µg/mL	+/-	18.9529	µg/mL	Gravimetric
	CAS # 75-69-4	(Lot MKCL8411)			+/-	140.7175	µg/mL	Unstressed
	Purity 99%				+/-	143.9858	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:
Raw material may contain trace amounts of tert-Butanol.

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

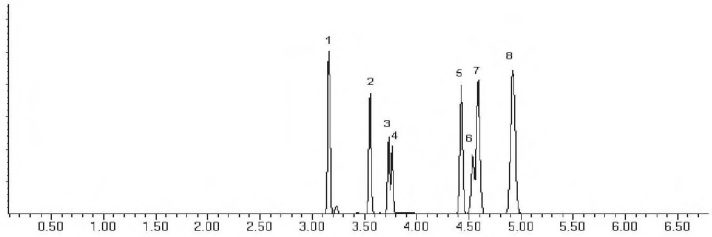
Carrier Gas:
helium-constant pressure 30 psi

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cathleen Soltis - Mix Technician

Date Mixed: 31-Aug-2022 **Balance:** B251644995

Christie Mills - Operations Tech II - ARM QC

Date Passed: 14-Sep-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.

Reagent

VOARMegMix__00049

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571992 **Lot No.:** A0183568

Description : 8260 List 1 / Std #1 MegaMix (2017)

8260 List 1 / Std #1 MegaMix (2017) 1,250-62,500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : September 30, 2024 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Diethyl ether (ethyl ether) CAS # 60-29-7 (Lot SHBN4280) Purity 99%	2,506.6 µg/mL	+/- 14.5737 µg/mL +/- 151.2358 µg/mL +/- 151.5949 µg/mL	Gravimetric Unstressed Stressed
2	1,1,2-Trichlorotrifluoroethane (CFC-113) CAS # 76-13-1 (Lot 00016133) Purity 99%	2,514.5 µg/mL	+/- 14.6195 µg/mL +/- 151.7109 µg/mL +/- 152.0711 µg/mL	Gravimetric Unstressed Stressed
3	1,1-dichloroethene CAS # 75-35-4 (Lot SHBG8609V) Purity 99%	2,515.1 µg/mL	+/- 14.6232 µg/mL +/- 151.7486 µg/mL +/- 152.1089 µg/mL	Gravimetric Unstressed Stressed
4	tert-Butanol (TBA) CAS # 75-65-0 (Lot 101619K21F-1) Purity 99%	25,080.8 µg/mL	+/- 145.8140 µg/mL +/- 1,513.2321 µg/mL +/- 1,516.8247 µg/mL	Gravimetric Unstressed Stressed
5	Methyl acetate CAS # 79-20-9 (Lot SHBM1320) Purity 99%	5,026.6 µg/mL	+/- 29.2252 µg/mL +/- 303.2786 µg/mL +/- 303.9986 µg/mL	Gravimetric Unstressed Stressed
6	Iodomethane (methyl iodide) CAS # 74-88-4 (Lot RD220125) Purity 99%	2,505.3 µg/mL	+/- 14.5657 µg/mL +/- 151.1528 µg/mL +/- 151.5117 µg/mL	Gravimetric Unstressed Stressed
7	Allyl chloride (3-chloropropene) CAS # 107-05-1 (Lot RD211021) Purity 99%	2,509.1 µg/mL	+/- 14.5883 µg/mL +/- 151.3866 µg/mL +/- 151.7460 µg/mL	Gravimetric Unstressed Stressed

8	Methylene chloride (dichloromethane) **CAS #** 75-09-2 **Purity** 99%	(Lot SHBP1417)	2,513.3	µg/mL	+/- 14.6123 +/- 151.6355 +/- 151.9955	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	Carbon disulfide **CAS #** 75-15-0 **Purity** 99%	(Lot N28F701)	2,510.1	µg/mL	+/- 14.5941 +/- 151.4470 +/- 151.8065	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	Acrylonitrile **CAS #** 107-13-1 **Purity** 99%	(Lot SHBK4954)	25,102.9	µg/mL	+/- 145.9426 +/- 1,514.5670 +/- 1,518.1628	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	Methyl-tert-butyl ether (MTBE) **CAS #** 1634-04-4 **Purity** 99%	(Lot SHBN6497)	2,513.8	µg/mL	+/- 14.6152 +/- 151.6657 +/- 152.0258	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	cis-1,2-Dichloroethene **CAS #** 156-59-2 **Purity** 99%	(Lot MKCP7830)	2,515.1	µg/mL	+/- 14.6232 +/- 151.7486 +/- 152.1089	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	n-Hexane (C6) **CAS #** 110-54-3 **Purity** 99%	(Lot SHBL9879)	2,515.5	µg/mL	+/- 14.6253 +/- 151.7713 +/- 152.1316	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	1,1-Dichloroethane **CAS #** 75-34-3 **Purity** 99%	(Lot 760200)	2,517.9	µg/mL	+/- 14.6391 +/- 151.9146 +/- 152.2752	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	2,2-Dichloropropane **CAS #** 594-20-7 **Purity** 99%	(Lot RD211103)	2,517.9	µg/mL	+/- 14.6391 +/- 151.9146 +/- 152.2752	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	trans-1,2-Dichloroethene **CAS #** 156-60-5 **Purity** 99%	(Lot MKBH9850V)	2,511.4	µg/mL	+/- 14.6014 +/- 151.5224 +/- 151.8821	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	Isobutanol (2-Methyl-1-propanol) **CAS #** 78-83-1 **Purity** 99%	(Lot 098794J01H)	62,633.1	µg/mL	+/- 364.1354 +/- 3,778.9321 +/- 3,787.9040	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
18	chloroform **CAS #** 67-66-3 **Purity** 99%	(Lot SHBN8469)	2,510.9	µg/mL	+/- 14.5984 +/- 151.4922 +/- 151.8519	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
19	Bromochloromethane **CAS #** 74-97-5 **Purity** 99%	(Lot 00008541)	2,517.0	µg/mL	+/- 14.6341 +/- 151.8618 +/- 152.2223	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
20	Tetrahydrofuran **CAS #** 109-99-9 **Purity** 99%	(Lot SHBN3757)	5,036.1	µg/mL	+/- 29.2805 +/- 303.8517 +/- 304.5731	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
21	1,1,1-trichloroethane **CAS #** 71-55-6 **Purity** 99%	(Lot RD220215)	2,509.6	µg/mL	+/- 14.5912 +/- 151.4168 +/- 151.7763	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
22	Cyclohexane **CAS #** 110-82-7 **Purity** 99%	(Lot EA003-US)	2,510.0	µg/mL	+/- 14.5934 +/- 151.4394 +/- 151.7990	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
23	1,1-Dichloropropene **CAS #** 563-58-6 **Purity** 99%	(Lot 220217JLM)	2,513.8	µg/mL	+/- 14.6152 +/- 151.6657 +/- 152.0258	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

24	carbon tetrachloride **CAS #** 56-23-5 **Purity** 99%	(Lot SHBL8097)	2,513.5	µg/mL	+/- 14.6737 +/- 151.6506 +/- 152.0106	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
25	n-Heptane (C7) **CAS #** 142-82-5 **Purity** 99%	(Lot SGBL9221)	2,511.4	µg/mL	+/- 14.6014 +/- 151.5224 +/- 151.8821	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	1,2-Dichloroethane **CAS #** 107-06-2 **Purity** 99%	(Lot MKCN9758)	2,514.4	µg/mL	+/- 14.6188 +/- 151.7034 +/- 152.0636	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	Benzene **CAS #** 71-43-2 **Purity** 99%	(Lot MKCM9242)	2,509.3	µg/mL	+/- 14.5890 +/- 151.3942 +/- 151.7536	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	Trichloroethene **CAS #** 79-01-6 **Purity** 99%	(Lot SHBL5816)	2,507.5	µg/mL	+/- 14.5788 +/- 151.2886 +/- 151.6478	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	Methylcyclohexane **CAS #** 108-87-2 **Purity** 99%	(Lot SHBL0078)	2,510.3	µg/mL	+/- 14.5948 +/- 151.4545 +/- 151.8141	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	1,2-Dichloropropane **CAS #** 78-87-5 **Purity** 99%	(Lot BCBR0882V)	2,510.9	µg/mL	+/- 14.5984 +/- 151.4922 +/- 151.8519	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	1,4-Dioxane **CAS #** 123-91-1 **Purity** 99%	(Lot SHBM9675)	50,187.5	µg/mL	+/- 291.7792 +/- 3,028.0328 +/- 3,035.2219	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	Dibromomethane **CAS #** 74-95-3 **Purity** 99%	(Lot 10201030)	2,511.0	µg/mL	+/- 14.5992 +/- 151.4998 +/- 151.8594	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	cis-1,3-Dichloropropene **CAS #** 10061-01-5 **Purity** 99%	(Lot RD220311)	2,513.8	µg/mL	+/- 14.6152 +/- 151.6657 +/- 152.0258	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	Toluene **CAS #** 108-88-3 **Purity** 99%	(Lot MKCQ2779)	2,518.4	µg/mL	+/- 14.6420 +/- 151.9447 +/- 152.3055	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	Ethyl methacrylate **CAS #** 97-63-2 **Purity** 99%	(Lot MKCL0907)	2,511.4	µg/mL	+/- 14.6014 +/- 151.5224 +/- 151.8821	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	trans-1,3-Dichloropropene **CAS #** 10061-02-6 **Purity** 98%	(Lot RD211104)	2,504.5	µg/mL	+/- 14.5615 +/- 151.1083 +/- 151.4671	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	1,1,2-Trichloroethane **CAS #** 79-00-5 **Purity** 99%	(Lot FGB01)	2,513.6	µg/mL	+/- 14.6144 +/- 151.6581 +/- 152.0182	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	1,3-Dichloropropane **CAS #** 142-28-9 **Purity** 99%	(Lot BCBC6265)	2,513.6	µg/mL	+/- 14.6144 +/- 151.6581 +/- 152.0182	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	Tetrachloroethene **CAS #** 127-18-4 **Purity** 99%	(Lot SHBJ7422)	2,507.5	µg/mL	+/- 14.5788 +/- 151.2886 +/- 151.6478	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

40	dibromochloromethane **CAS #** 124-48-1 **Purity** 99%	(Lot MKCM8659)	2,514.8	µg/mL	+/- 14.6210 +/- 151.7260 +/- 152.0862	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	1,2-Dibromoethane (EDB) **CAS #** 106-93-4 **Purity** 99%	(Lot BCCF5058)	2,513.9	µg/mL	+/- 14.6159 +/- 151.6732 +/- 152.0333	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	Chlorobenzene **CAS #** 108-90-7 **Purity** 99%	(Lot SHBL8110)	2,507.9	µg/mL	+/- 14.5810 +/- 151.3112 +/- 151.6704	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
43	m-Xylene **CAS #** 108-38-3 **Purity** 99%	(Lot Q13G020)	1,260.0	µg/mL	+/- 7.3257 +/- 76.0214 +/- 76.2019	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
44	p-Xylene **CAS #** 106-42-3 **Purity** 99%	(Lot 10234437)	1,258.6	µg/mL	+/- 7.3178 +/- 75.9384 +/- 76.1187	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
45	Ethylbenzene **CAS #** 100-41-4 **Purity** 99%	(Lot SHBM4308)	2,516.0	µg/mL	+/- 14.6282 +/- 151.8014 +/- 152.1618	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
46	1,1,1,2-Tetrachloroethane **CAS #** 630-20-6 **Purity** 99%	(Lot TMWGK)	2,519.1	µg/mL	+/- 14.6464 +/- 151.9900 +/- 152.3508	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
47	o-Xylene **CAS #** 95-47-6 **Purity** 98%	(Lot SHBN5105)	2,513.5	µg/mL	+/- 14.6134 +/- 151.6479 +/- 152.0079	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
48	Styrene **CAS #** 100-42-5 **Purity** 99%	(Lot MKCP3941)	2,509.1	µg/mL	+/- 14.5883 +/- 151.3866 +/- 151.7460	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
49	Isopropylbenzene (cumene) **CAS #** 98-82-8 **Purity** 99%	(Lot Z20D022)	2,518.5	µg/mL	+/- 14.6428 +/- 151.9523 +/- 152.3130	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
50	bromoform **CAS #** 75-25-2 **Purity** 98%	(Lot SHBK4455)	2,511.0	µg/mL	+/- 14.5992 +/- 151.5001 +/- 151.8597	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
51	bromodichloromethane **CAS #** 75-27-4 **Purity** 99%	(Lot MKCM7156)	2,518.1	µg/mL	+/- 14.6406 +/- 151.9296 +/- 152.2903	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
52	1,1,2,2-Tetrachloroethane **CAS #** 79-34-5 **Purity** 99%	(Lot CFA4D)	2,515.5	µg/mL	+/- 14.6253 +/- 151.7713 +/- 152.1316	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
53	1,2,3-Trichloropropane **CAS #** 96-18-4 **Purity** 99%	(Lot 332900)	2,512.5	µg/mL	+/- 14.6079 +/- 151.5903 +/- 151.9502	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
54	trans-1,4-dichloro-2-butene **CAS #** 110-57-6 **Purity** 95%	(Lot RD220405A)	2,511.8	µg/mL	+/- 14.6038 +/- 151.5480 +/- 151.9078	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
55	n-Propylbenzene **CAS #** 103-65-1 **Purity** 99%	(Lot MKCN1126)	2,515.6	µg/mL	+/- 14.6261 +/- 151.7788 +/- 152.1392	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

56	Bromobenzene		2,516.9	µg/mL	+/- 14.6333	µg/mL	Gravimetric
	CAS # 108-86-1	(Lot MKBD4032V)			+/- 151.8542	µg/mL	Unstressed
	Purity 99%				+/- 152.2147	µg/mL	Stressed
57	1,3,5-Trimethylbenzene		2,512.3	µg/mL	+/- 14.6064	µg/mL	Gravimetric
	CAS # 108-67-8	(Lot BCCD0427)			+/- 151.5752	µg/mL	Unstressed
	Purity 99%				+/- 151.9350	µg/mL	Stressed
58	2-Chlorotoluene		2,510.9	µg/mL	+/- 14.5984	µg/mL	Gravimetric
	CAS # 95-49-8	(Lot MKCF5243)			+/- 151.4922	µg/mL	Unstressed
	Purity 99%				+/- 151.8519	µg/mL	Stressed
59	4-Chlorotoluene		2,513.1	µg/mL	+/- 14.6115	µg/mL	Gravimetric
	CAS # 106-43-4	(Lot MKCC8496)			+/- 151.6280	µg/mL	Unstressed
	Purity 99%				+/- 151.9880	µg/mL	Stressed
60	tert-Butylbenzene		2,514.6	µg/mL	+/- 14.6202	µg/mL	Gravimetric
	CAS # 98-06-6	(Lot STBD6954V)			+/- 151.7185	µg/mL	Unstressed
	Purity 99%				+/- 152.0787	µg/mL	Stressed
61	1,2,4-Trimethylbenzene		2,517.1	µg/mL	+/- 14.6348	µg/mL	Gravimetric
	CAS # 95-63-6	(Lot WXBC9428V)			+/- 151.8696	µg/mL	Unstressed
	Purity 98%				+/- 152.2302	µg/mL	Stressed
62	sec-Butylbenzene		2,519.3	µg/mL	+/- 14.6471	µg/mL	Gravimetric
	CAS # 135-98-8	(Lot MKCN2920)			+/- 151.9975	µg/mL	Unstressed
	Purity 99%				+/- 152.3584	µg/mL	Stressed
63	p-Isopropyltoluene (p-Cymene)		2,512.0	µg/mL	+/- 14.6050	µg/mL	Gravimetric
	CAS # 99-87-6	(Lot MKCP6638)			+/- 151.5601	µg/mL	Unstressed
	Purity 99%				+/- 151.9199	µg/mL	Stressed
64	1,3-Dichlorobenzene		2,515.5	µg/mL	+/- 14.6253	µg/mL	Gravimetric
	CAS # 541-73-1	(Lot BCBZ7498)			+/- 151.7713	µg/mL	Unstressed
	Purity 99%				+/- 152.1316	µg/mL	Stressed
65	1,4-Dichlorobenzene		2,513.4	µg/mL	+/- 14.6130	µg/mL	Gravimetric
	CAS # 106-46-7	(Lot MKBS4401V)			+/- 151.6431	µg/mL	Unstressed
	Purity 99%				+/- 152.0031	µg/mL	Stressed
66	n-Butylbenzene		2,511.0	µg/mL	+/- 14.5992	µg/mL	Gravimetric
	CAS # 104-51-8	(Lot 09418JJ)			+/- 151.4998	µg/mL	Unstressed
	Purity 99%				+/- 151.8594	µg/mL	Stressed
67	1,2-Dichlorobenzene		2,511.4	µg/mL	+/- 14.6014	µg/mL	Gravimetric
	CAS # 95-50-1	(Lot SHBN3835)			+/- 151.5224	µg/mL	Unstressed
	Purity 99%				+/- 151.8821	µg/mL	Stressed
68	1,2-Dibromo-3-chloropropane		2,512.4	µg/mL	+/- 14.6074	µg/mL	Gravimetric
	CAS # 96-12-8	(Lot HBMVB)			+/- 151.5855	µg/mL	Unstressed
	Purity 97%				+/- 151.9454	µg/mL	Stressed
69	1,2,4-Trichlorobenzene		2,510.4	µg/mL	+/- 14.5955	µg/mL	Gravimetric
	CAS # 120-82-1	(Lot SHBM0526)			+/- 151.4620	µg/mL	Unstressed
	Purity 99%				+/- 151.8216	µg/mL	Stressed
70	Hexachlorobutadiene		2,509.3	µg/mL	+/- 14.5890	µg/mL	Gravimetric
	CAS # 87-68-3	(Lot X05J)			+/- 151.3942	µg/mL	Unstressed
	Purity 99%				+/- 151.7536	µg/mL	Stressed
71	Naphthalene		2,520.6	µg/mL	+/- 14.6551	µg/mL	Gravimetric
	CAS # 91-20-3	(Lot MKCH0219)			+/- 152.0805	µg/mL	Unstressed
	Purity 99%				+/- 152.4415	µg/mL	Stressed

72	1,2,3-Trichlorobenzene		2,513.0	µg/mL	+/- 14.6108	µg/mL	Gravimetric
	CAS # 87-61-6	(Lot MKBX7627V)			+/- 151.6204	µg/mL	Unstressed
	Purity 99%				+/- 151.9804	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

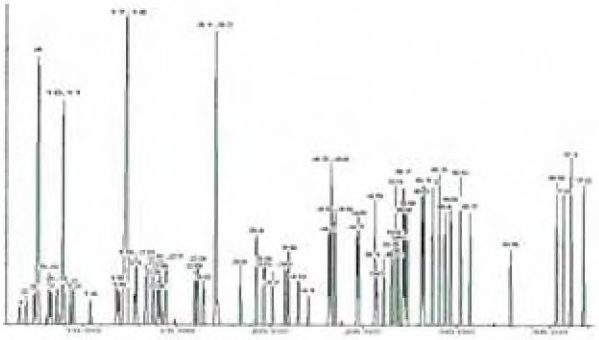
Carrier Gas:
helium-constant pressure 30 psi

Temp. Program:
40°C (hold 6 min.) to 240°C
@ 6°C/min. (hold 10 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Tom Suckar - Mix Technician

Date Mixed: 31-Mar-2022 **Balance:** B707717271

Date Passed: 21-Apr-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.

Reagent

VOARSURR/IS_00054

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 570812 **Lot No.:** A0183986

Description : 8260 IS/Surrogate Mix (2016)

8260 IS/Surrogate Mix (2016) 250-5,000µg/mL, P&T Methanol, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : April 30, 2027 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	tert-Butyl-d9-alcohol	5,000.4 µg/mL	+/- 29.0709	µg/mL	Gravimetric
	CAS # 25725-11-5 (Lot CD-107)		+/- 107.0577	µg/mL	Unstressed
	Purity 99%		+/- 110.1701	µg/mL	Stressed
2	Dibromofluoromethane	250.2 µg/mL	+/- 1.4578	µg/mL	Gravimetric
	CAS # 1868-53-7 (Lot 012021)		+/- 5.3567	µg/mL	Unstressed
	Purity 99%		+/- 5.5123	µg/mL	Stressed
3	1,2-Dichloroethane-d4	250.0 µg/mL	+/- 1.4569	µg/mL	Gravimetric
	CAS # 17060-07-0 (Lot PR-32845)		+/- 5.3534	µg/mL	Unstressed
	Purity 99%		+/- 5.5090	µg/mL	Stressed
4	1,4-Dioxane-d8	5,000.2 µg/mL	+/- 29.0701	µg/mL	Gravimetric
	CAS # 17647-74-4 (Lot RP220225)		+/- 107.0545	µg/mL	Unstressed
	Purity 99%		+/- 110.1667	µg/mL	Stressed
5	Fluorobenzene	250.1 µg/mL	+/- 1.4575	µg/mL	Gravimetric
	CAS # 462-06-6 (Lot BCBZ5549)		+/- 5.3556	µg/mL	Unstressed
	Purity 99%		+/- 5.5112	µg/mL	Stressed
6	Toluene-d8	250.2 µg/mL	+/- 1.4578	µg/mL	Gravimetric
	CAS # 2037-26-5 (Lot PR-31958)		+/- 5.3567	µg/mL	Unstressed
	Purity 99%		+/- 5.5123	µg/mL	Stressed
7	Chlorobenzene-d5	250.0 µg/mL	+/- 1.4569	µg/mL	Gravimetric
	CAS # 3114-55-4 (Lot PR-29571)		+/- 5.3534	µg/mL	Unstressed
	Purity 99%		+/- 5.5090	µg/mL	Stressed

8	1-Bromo-4-fluorobenzene (BFB)		250.0 µg/mL	+/- 1.4569	µg/mL	Gravimetric
	CAS # 460-00-4	(Lot 20401KO)		+/- 5.3534	µg/mL	Unstressed
	Purity 99%			+/- 5.5090	µg/mL	Stressed
9	1,4-Dichlorobenzene-d4		250.0 µg/mL	+/- 1.4569	µg/mL	Gravimetric
	CAS # 3855-82-1	(Lot PR-30447)		+/- 5.3534	µg/mL	Unstressed
	Purity 99%			+/- 5.5090	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

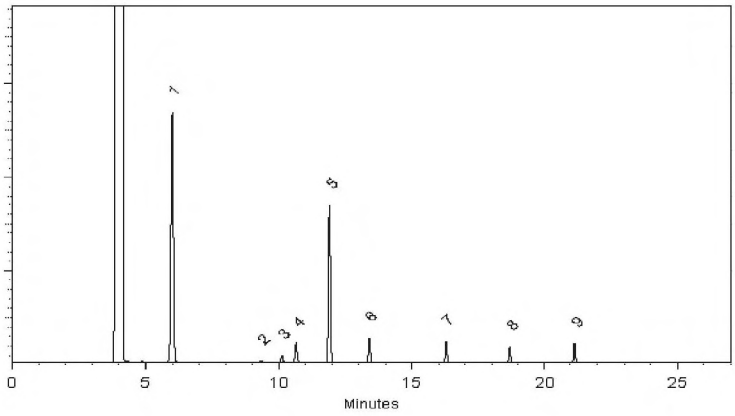
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Josh McCloskey - Operations Technician I

Clara Windle - Operations Technician I

Date Mixed: 12-Apr-2022 **Balance:** 1128342314

Date Passed: 14-Apr-2022

**Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397**

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.

Reagent

VOASGAS2__00030

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569722.SEC **Lot No.:** A0186584

Description : 8260 List 1 / Std #3 Gases (2015)

8260 List 1 / Std #3 Gases (2015) 2,500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2025 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Dichlorodifluoromethane (CFC-12)	2,496.8 µg/mL	+/- 18.9786	µg/mL	Gravimetric
	CAS # 75-71-8.SEC (Lot 27545)		+/- 140.5231	µg/mL	Unstressed
	Purity 99%		+/- 143.7866	µg/mL	Stressed
2	Chloromethane (methyl chloride)	2,503.1 µg/mL	+/- 22.2077	µg/mL	Gravimetric
	CAS # 74-87-3.SEC (Lot 18343)		+/- 141.3425	µg/mL	Unstressed
	Purity 99%		+/- 144.6037	µg/mL	Stressed
3	Vinyl chloride	2,500.0 µg/mL	+/- 23.4271	µg/mL	Gravimetric
	CAS # 75-01-4.SEC (Lot MKBK6872V)		+/- 141.3687	µg/mL	Unstressed
	Purity 99%		+/- 144.6213	µg/mL	Stressed
4	1,3-Butadiene	2,496.8 µg/mL	+/- 21.9304	µg/mL	Gravimetric
	CAS # 106-99-0.SEC (Lot 26996)		+/- 140.9532	µg/mL	Unstressed
	Purity 99%		+/- 144.2070	µg/mL	Stressed
5	Bromomethane (methyl bromide)	2,506.4 µg/mL	+/- 22.1918	µg/mL	Gravimetric
	CAS # 74-83-9.SEC (Lot 00017022)		+/- 141.5223	µg/mL	Unstressed
	Purity 99%		+/- 144.7879	µg/mL	Stressed
6	Chloroethane (ethyl chloride)	2,503.4 µg/mL	+/- 22.5874	µg/mL	Gravimetric
	CAS # 75-00-3.SEC (Lot 00004202)		+/- 141.4203	µg/mL	Unstressed
	Purity 98%		+/- 144.6805	µg/mL	Stressed
7	Dichlorofluoromethane (CFC-21)	2,500.0 µg/mL	+/- 14.6714	µg/mL	Gravimetric
	CAS # 75-43-4 * (Lot 12841600)		+/- 140.1867	µg/mL	Unstressed
	Purity 99%		+/- 143.4662	µg/mL	Stressed

8	Trichlorofluoromethane (CFC-11)		2,497.2	µg/mL	+/-	20.5278	µg/mL	Gravimetric
	CAS # 75-69-4.SEC	(Lot 00010739)			+/-	140.7628	µg/mL	Unstressed
	Purity 99%				+/-	144.0218	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

*** Restek is unable to identify a reliable and/or acceptable second source for this material - the same batch of neat material may have been used to produce both the primary and secondary standard. The primary and secondary standards were prepared using different equipment and personnel.**

Tech Tips:
Raw material may contain trace amounts of tert-Butanol.

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

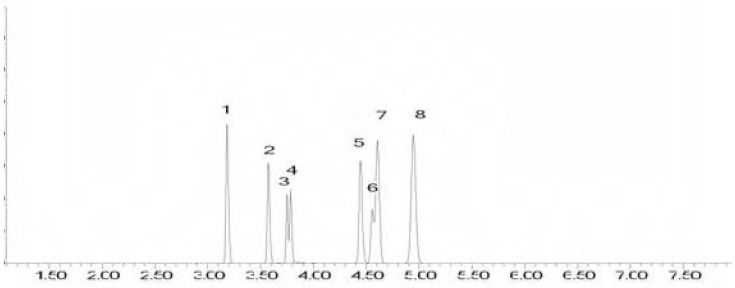
Carrier Gas:
helium-constant pressure 30 psi

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Brandon Reish - Mix Technician

Date Mixed: 23-Jun-2022 **Balance:** 1127510105

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 27-Jun-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.

Reagent

ZN-1000PPM_00004

125 Market Street
New Haven, CT 06513
USA

AccuStandard®

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CERTIFICATE OF ANALYSIS

AccuTrace™ Reference Standard

Catalog No: ICP-MS-70N-0.1X-1
Description: Zinc ICP-MS Standard
Element: Zinc (Zn)
SRM: 3168a
Lot: 220065028-01
Matrix: 2-5% Nitric acid
Hazards: *Refer to SDS for complete safety information*

3270317
ID: ZN-1000PPM_00004
1000 ppm ZN

Signal Word: Danger

Date Certified: Aug 3, 2022
Expiration: Aug 3, 2027
Density: 1.014 g/mL
Sample Size: 100 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB AR-1463 ILAC-MRA

Certified Concentration: 1000 µg/mL

Trace Elements in µg/mL

Ag	nd<0.02	Ce	nd<0.2	Gd	nd<0.02	Lu	nd<0.02	Pb	N/A	Sc	nd<0.02	Ti	nd<0.02
Al	nd<0.02	Co	nd<0.02	Ge	nd<0.2	Mg	nd<0.02	Pd	nd<0.2	Se	N/A	Tl	nd<0.2
As	nd<0.2	Cr	nd<0.02	Hf	nd<0.02	Mn	nd<0.02	Pr	nd<0.2	Si	N/A	Tm	nd<0.02
Au	nd<0.02	Cs	N/A	Hg	nd<0.2	Mo	nd<0.02	Pt	nd<0.2	Sm	nd<0.2	U	nd<0.2
B	nd<0.2	Cu	N/A	Ho	nd<0.02	Na	nd<0.02	Rb	N/A	Sn	N/A	V	nd<0.02
Ba	nd<0.02	Dy	nd<0.02	In	nd<0.2	Nb	nd<0.2	Re	nd<0.2	Sr	nd<0.02	W	N/A
Be	nd<0.02	Er	nd<0.02	Ir	nd<0.2	Nd	nd<0.02	Rh	nd<0.2	Ta	N/A	Y	nd<0.02
Bi	N/A	Eu	nd<0.02	K	nd<0.2	Ni	nd<0.02	Ru	nd<0.02	Tb	nd<0.02	Yb	nd<0.02
Ca	nd<0.02	Fe	nd<0.02	La	nd<0.02	Os	N/A	S	N/A	Te	N/A	Zn	*
Cd	nd<0.02	Ga	nd<0.02	Li	nd<0.02	P	N/A	Sb	nd<0.2	Th	nd<0.02	Zr	nd<0.02

This Certified Reference Material was verified in accordance with ISO/IEC 17025.

This solution was assayed titrimetrically, using EDTA which was standardized against NIST SRM #915a (calcium carbonate).

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

The gravimetric uncertainty for this product is ±0.24%. The CRM uncertainty is ±2.4%.

In order to verify the concentration(s), the final solution was checked by plasma emission spectroscopy (ICP) against material traceable to the above listed NIST SRM(s).

We use the highest purity raw materials available to minimize impurity levels in the final solution. Typically 99.999%+ pure starting materials are used as well as high purity acids and ASTM Type I 18 megohm deionized water.

All trace level elemental impurities were determined via plasma emission spectroscopy on the concentrate.

All weights are traceable through NIST, Test No. 684/269871-17

All glassware used in preparation is Class A.

All bottles are acid leached and triple rinsed with deionized water prior to use.

Shake bottle prior to use and do not pipette directly out of the bottle. Use only cleaned Class A volumetric glassware. Keep bottle tightly capped.

Certified By: Megan O'Leary

Megan O'Leary, Inorganic QC Manager

Page 1 of 1

For use in routine laboratory analysis.

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

QR-ORGINO-001
Rev. 2.00

8260D_SIM_DOD5

Volatile Organic Compounds (GC/MS)

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): 624SIL-MS ID: 0.25(mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
N3-12-2023	580-130928-3	102	98	95	99
DUP-2023	580-130928-4	101	98	95	99
EBlank-2023	580-130928-5	100	96	96	97
Trip Blank-20230824	580-130928-6	104	88	100	98
	MB 580-436188/7	104	98	97	98
	LCS 580-436188/4	100	96	97	101
	LCSD 580-436188/5	101	94	99	100
N3-12-2023 MS	580-130928-3 MS	102	94	100	99
N3-12-2023 MSD	580-130928-3 MSD	102	93	101	100

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	80-120
DCA = 1,2-Dichloroethane-d4 (Surr)	65-123
TOL = Toluene-d8 (Surr)	80-120
BFB = 4-Bromofluorobenzene (Surr)	80-120

Column to be used to flag recovery values

FORM II 8260D SIM

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 082923_004.D

Lab ID: LCS 580-436188/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Vinyl chloride	2.50	2.10	84	49-150	

Column to be used to flag recovery and RPD values

FORM III 8260D SIM

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 082923_005.D

Lab ID: LCSD 580-436188/5 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Vinyl chloride	2.50	2.14	85	2	16	49-150	

Column to be used to flag recovery and RPD values

FORM III 8260D SIM

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 082923_012.D

Lab ID: 580-130928-3 MS Client ID: N3-12-2023 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Vinyl chloride	5.00	0.62	6.20	112	49-150	

Column to be used to flag recovery and RPD values

FORM III 8260D SIM

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 082923_013.D

Lab ID: 580-130928-3 MSD Client ID: N3-12-2023 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Vinyl chloride	5.00	6.58	119	6	16	49-150	

Column to be used to flag recovery and RPD values

FORM III 8260D SIM

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

Lab File ID: 082923_007.D Lab Sample ID: MB 580-436188/7

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: TAC048 Date Analyzed: 08/30/2023 13:35

GC Column: 624SIL-MS ID: 0.25(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 580-436188/4	082923_004.D	08/30/2023 12:16
	LCSD 580-436188/5	082923_005.D	08/30/2023 12:42
Trip Blank-20230824	580-130928-6	082923_008.D	08/30/2023 14:29
EBlank-2023	580-130928-5	082923_009.D	08/30/2023 14:56
N3-12-2023	580-130928-3	082923_010.D	08/30/2023 15:22
DUP-2023	580-130928-4	082923_011.D	08/30/2023 15:48
N3-12-2023 MS	580-130928-3 MS	082923_012.D	08/30/2023 16:15
N3-12-2023 MSD	580-130928-3 MSD	082923_013.D	08/30/2023 16:41

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

Lab File ID: 072323_002.D BFB Injection Date: 07/23/2023

Instrument ID: TAC048 BFB Injection Time: 18:08

Analysis Batch No.: 432388

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	50 - 200% of m/z 174	100.7
96	5 - 9% of m/z 95	6.8
173	Less than 2% of m/z 174	0.8
174	50 - 200% of m/z 95	99.3
175	5 - 9% of m/z 174	7.8
176	95 -105% of m/z 174	98.2
177	5 - 10% of m/z 176	6.8

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 580-432388/3	072323_003.D	07/23/2023	18:34
	IC 580-432388/4	072323_004.D	07/23/2023	19:00
	IC 580-432388/5	072323_005.D	07/23/2023	19:26
	IC 580-432388/6	072323_006.D	07/23/2023	19:52
	IC 580-432388/7	072323_007.D	07/23/2023	20:18
	ICIS 580-432388/8	072323_008.D	07/23/2023	20:44
	IC 580-432388/9	072323_009.D	07/23/2023	21:10
	IC 580-432388/10	072323_010.D	07/23/2023	21:36
	IC 580-432388/11	072323_011.D	07/23/2023	22:02
	ICV 580-432388/13	072323_013.D	07/23/2023	22:54

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

Lab File ID: 082923_002.D BFB Injection Date: 08/30/2023

Instrument ID: TAC048 BFB Injection Time: 11:23

Analysis Batch No.: 436188

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	50 - 200% of m/z 174	104.4
96	5 - 9% of m/z 95	6.8
173	Less than 2% of m/z 174	1.0
174	50 - 200% of m/z 95	95.8
175	5 - 9% of m/z 174	7.3
176	95 -105% of m/z 174	95.3
177	5 - 10% of m/z 176	7.3

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 580-436188/3	082923_003.D	08/30/2023	11:49
	LCS 580-436188/4	082923_004.D	08/30/2023	12:16
	LCSD 580-436188/5	082923_005.D	08/30/2023	12:42
	MB 580-436188/7	082923_007.D	08/30/2023	13:35
Trip Blank-20230824	580-130928-6	082923_008.D	08/30/2023	14:29
EBlank-2023	580-130928-5	082923_009.D	08/30/2023	14:56
N3-12-2023	580-130928-3	082923_010.D	08/30/2023	15:22
DUP-2023	580-130928-4	082923_011.D	08/30/2023	15:48
N3-12-2023 MS	580-130928-3 MS	082923_012.D	08/30/2023	16:15
N3-12-2023 MSD	580-130928-3 MSD	082923_013.D	08/30/2023	16:41
	CCVC 580-436188/14	082923_014.D	08/30/2023	17:07

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

Sample No.: ICIS 580-432388/8 Date Analyzed: 07/23/2023 20:44

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm)

Lab File ID (Standard): 072323_008.D Heated Purge: (Y/N) N

Calibration ID: 36149

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1411610	8.23	852325	11.37	429698	13.34
UPPER LIMIT		2823220	8.40	1704650	11.54	859396	13.51
LOWER LIMIT		705805	8.06	426163	11.20	214849	13.18
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 580-432388/13		1276332	8.23	727863	11.37	367357	13.34

FB = Fluorobenzene (IS)
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.1666 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

Sample No.: CCVIS 580-436188/3 Date Analyzed: 08/30/2023 11:49

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm)

Lab File ID (Standard): 082923_003.D Heated Purge: (Y/N) N

Calibration ID: 36149

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		628274	8.22	347788	11.36	184405	13.34
UPPER LIMIT		1256548	8.38	695576	11.53	368810	13.51
LOWER LIMIT		314137	8.05	173894	11.19	92203	13.17
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 580-436188/4		802746	8.22	497260	11.36	245436	13.34
LCSD 580-436188/5		767724	8.22	455887	11.37	224666	13.34
MB 580-436188/7		732855	8.22	437537	11.37	219188	13.34
580-130928-6	Trip Blank-20230824	547801	8.22	307624	11.37	155324	13.34
580-130928-5	EBlank-2023	790358	8.22	492885	11.37	240049	13.34
580-130928-3	N3-12-2023	773875	8.22	482750	11.37	240702	13.34
580-130928-4	DUP-2023	783582	8.22	493189	11.37	246540	13.34
580-130928-3 MS	N3-12-2023 MS	775446	8.23	455040	11.37	219871	13.34
580-130928-3 MSD	N3-12-2023 MSD	742359	8.22	427956	11.37	212211	13.34
CCVC 580-436188/14		591608	8.22	311118	11.37	156157	13.34

FB = Fluorobenzene (IS)
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.1666 minutes of internal standard RT

Column used to flag values outside QC limits

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Seattle | Job No.: 580-130928-1

SDG No.:

Client Sample ID: N3-12-2023 | Lab Sample ID: 580-130928-3

Matrix: Water | Lab File ID: 082923_010.D

Analysis Method: 8260D SIM | Date Collected: 08/24/2023 13:40

Sample wt/vol: 10(mL) | Date Analyzed: 08/30/2023 15:22

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: 624SIL-MS ID: 0.25(mm)

Purge Volume: 10.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 436188 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	DL
75-01-4	Vinyl chloride	0.62		0.10	0.014

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	95		80-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		65-123
460-00-4	4-Bromofluorobenzene (Surr)	99		80-120
1868-53-7	Dibromofluoromethane (Surr)	102		80-120

Report Date: 31-Aug-2023 12:38:34 Chrom Revision: 2.3 21-Aug-2023 17:14:06

Eurofins Seattle
Target Compound Quantitation Report

Data File: \\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\082923_010.D
Lims ID: 580-130928-B-3
Client ID: N3-12-2023
Sample Type: Client
Inject. Date: 30-Aug-2023 15:22:29 ALS Bottle#: 0 Worklist Smp#: 10
Purge Vol: 10.000 mL Dil. Factor: 1.0000
Sample Info: 580-130928-B-3
Operator ID: itr Instrument ID: TAC048

Method: \\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\8260_SIMAK_WATER.m
Limit Group: 8260C SIM QSM 5.0
Last Update: 31-Aug-2023 12:38:33 Calib Date: 23-Jul-2023 22:02:46
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_011.D

Column 1 : 624-SIL-MS (0.25 mm) Det: MS SCAN
Process Host: CTX1640

First Level Reviewer: PHC3 Date: 31-Aug-2023 12:38:33

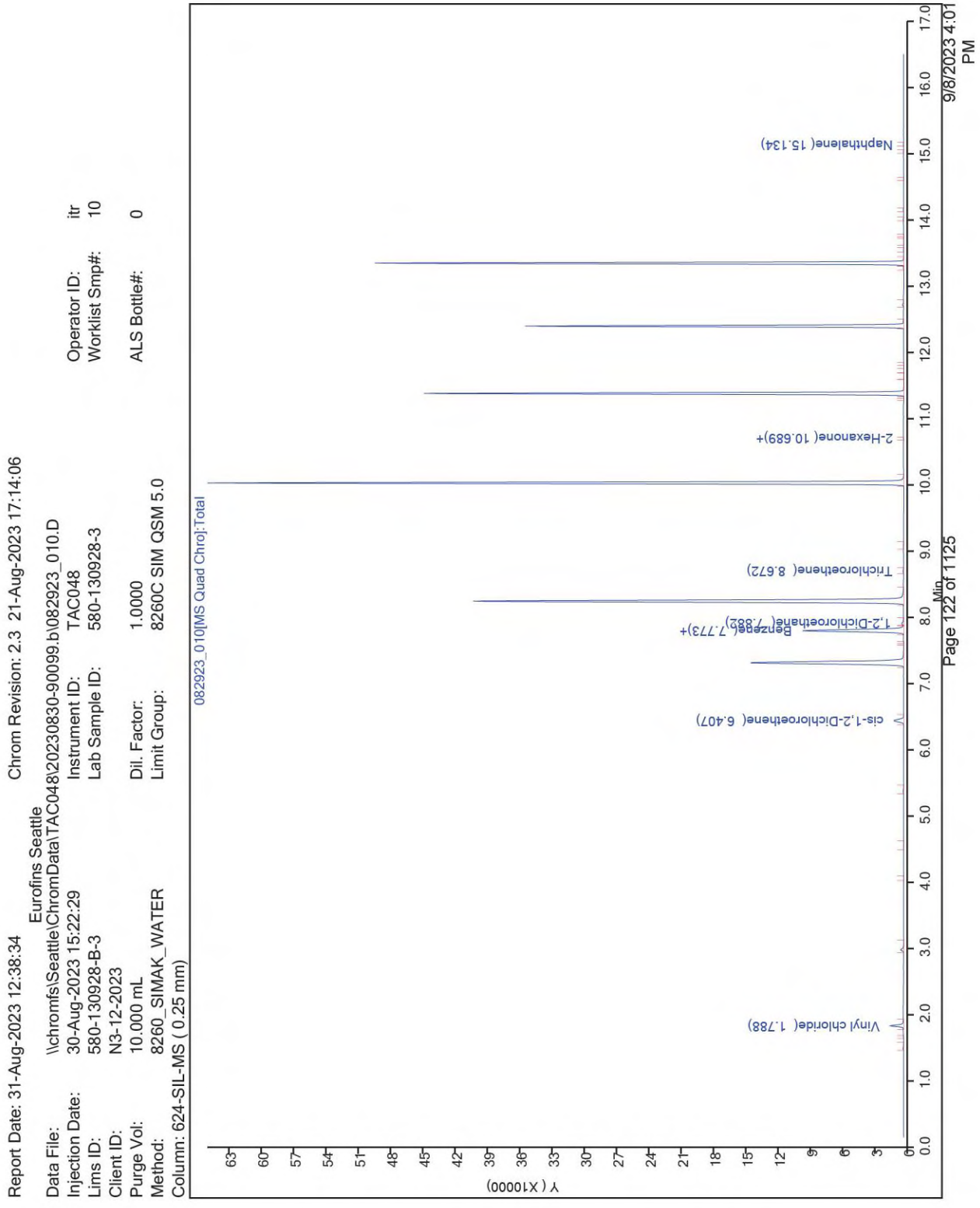
Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/L	Flags
2 Vinyl chloride	62	1.788	1.789	0.000	100	15836	0.6237	
4 1,1-Dichloroethene	96	3.229	3.235	-0.006	74	46	0.002073	7a
7 cis-1,2-Dichloroethene	96	6.412	6.407	0.005	81	8848	0.3645	
$ 9 Dibromofluoromethane (Surr)	113	7.289	7.284	0.005	100	167444	10.2	
$ 10 1,2-Dichloroethane-d4 (Surr)	65	7.773	7.767	0.006	100	115865	9.79	
11 Benzene	78	7.778	7.773	0.005	99	7403	0.0899	
12 1,2-Dichloroethane	62	7.882	7.877	0.005	99	1971	0.1330	
* 13 Fluorobenzene (IS)	96	8.221	8.215	0.006	100	773875	10.0	
14 Trichloroethene	132	8.672	8.672	0.000	95	397	0.0173	
$ 18 Toluene-d8 (Surr)	98	10.009	10.004	0.005	99	671893	9.52	
21 Tetrachloroethene	164	10.564	10.564	0.000	80	85	0.004752	7M
22 2-Hexanone	58	10.722	10.716	0.006	98	50	0.0364	M
* 25 Chlorobenzene-d5	117	11.366	11.360	0.006	97	482750	10.0	
$ 28 4-Bromofluorobenzene (Surr)	174	12.385	12.385	0.000	87	175992	9.89	
* 30 1,4-Dichlorobenzene-d4	152	13.339	13.339	0.000	99	240702	10.0	
32 Hexachlorobutadiene	225	15.026	15.026	0.000	92	140	0.009743	7a
33 Naphthalene	128	15.134	15.129	0.005	98	242	0.009373	a
$ 49 BFB								

QC Flag Legend

Processing Flags
7 - Failed Limit of Detection
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

5X SUR/IS_00031 Amount Added: 2.00 Units: uL Run Reagent


Report Date: 31-Aug-2023 12:38:34
Chrom Revision: 2.3 21-Aug-2023 17:14:06
Eurofins Seattle
Data File: \\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\082923_010.D
Injection Date: 30-Aug-2023 15:22:29
Instrument ID: TAC048
Operator ID: itr
Lims ID: 580-130928-B-3
Lab Sample ID: 580-130928-3
Worklist Smp#: 10
Client ID: N3-12-2023
Purge Vol: 10.000 mL
Dil. Factor: 1.0000
ALS Bottle#: 0
Method: 8260_SIMAK_WATER
Limit Group: 8260C SIM QSM 5.0
Column: 624-SIL-MS (0.25 mm)
082923_010[MS Quad Chro]:Total
Vinyl chloride(1.788)
cis-1,2-Dichloroethene(6.407)
Benzene(7.773)+
1,2-Dichloroethane(7.882)
Trichloroethene(8.672)
2-Hexanone(10.689)+
Naphthalene(15.134)
Y (X10000)
Min
9/8/2023 4:01 PM
Page 122 of 1125

Report Date: 31-Aug-2023 12:38:34 Chrom Revision: 2.3 21-Aug-2023 17:14:06

Eurofins Seattle
Recovery Report

Data File:	\\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\082923_010.D				
Lims ID:	580-130928-B-3				
Client ID:	N3-12-2023				
Sample Type:	Client				
Inject. Date:	30-Aug-2023 15:22:29	ALS Bottle#:	0	Worklist Smp#:	10
Purge Vol:	10.000 mL	Dil. Factor:	1.0000		
Sample Info:	580-130928-B-3				
Operator ID:	itr	Instrument ID:	TAC048		
Method:	\\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\8260_SIMAK_WATER.m				
Limit Group:	8260C SIM QSM 5.0				
Last Update:	31-Aug-2023 12:38:33	Calib Date:	23-Jul-2023 22:02:46		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_011.D				
Column 1 :	624-SIL-MS (0.25 mm)		Det: MS SCAN		
Process Host:	CTX1640				

First Level Reviewer: PHC3 Date: 31-Aug-2023 12:38:33

Compound	Amount Added	Amount Recovered	% Rec.
$ 9 Dibromofluoromethane (Surr)	10.0	10.2	102.13
$ 10 1,2-Dichloroethane-d4 (Surr)	10.0	9.79	97.87
$ 18 Toluene-d8 (Surr)	10.0	9.52	95.20
$ 28 4-Bromofluorobenzene (Surr)	10.0	9.89	98.91

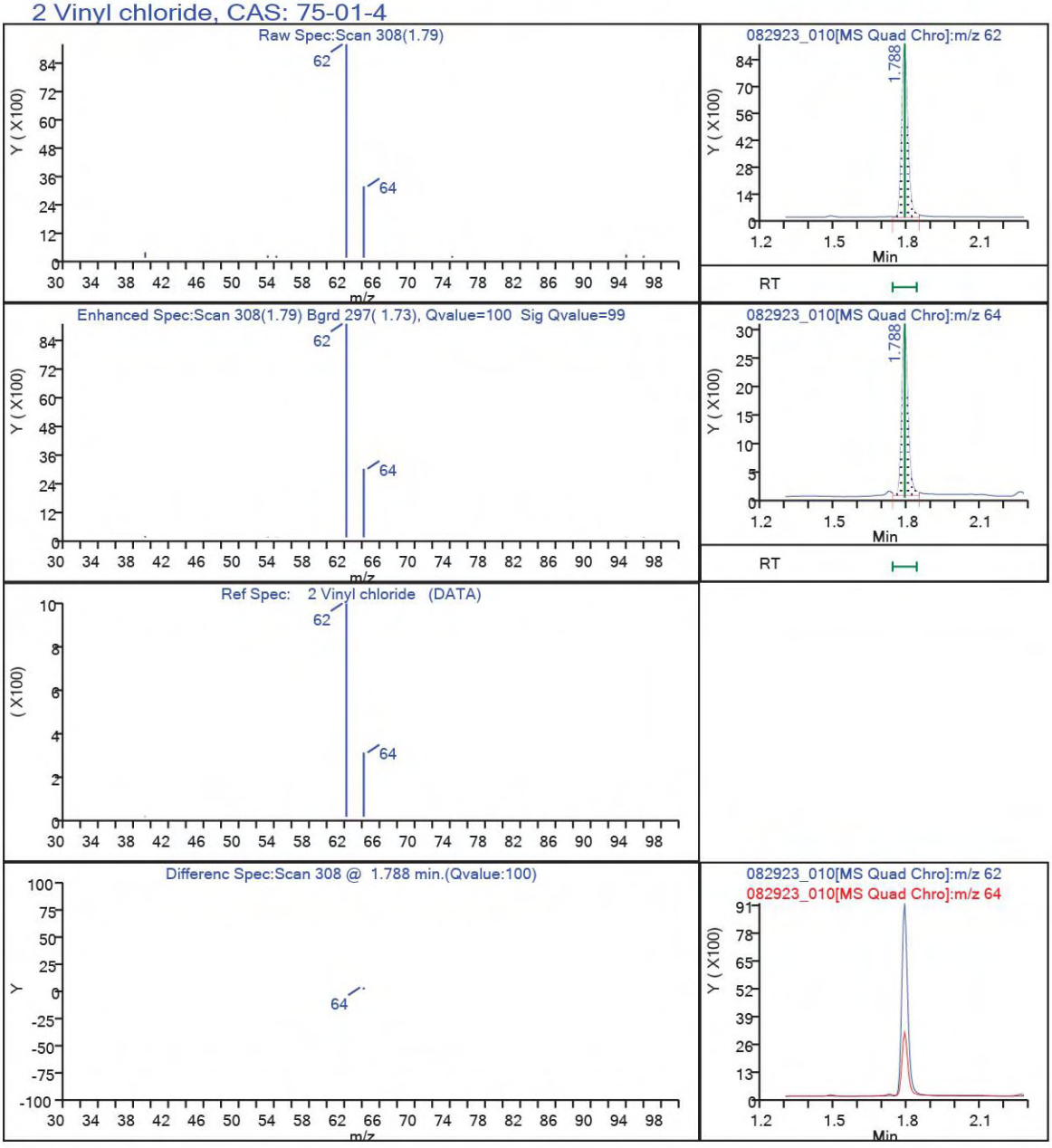
Report Date: 31-Aug-2023 12:38:34 Chrom Revision: 2.3 21-Aug-2023 17:14:06

Eurofins Seattle

Data File: \\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\082923_010.D

Injection Date:	30-Aug-2023 15:22:29	Instrument ID:	TAC048
Lims ID:	580-130928-B-3	Lab Sample ID:	580-130928-3
Client ID:	N3-12-2023		
Operator ID:	itr	ALS Bottle#:	0 Worklist Smp#: 10
Purge Vol:	10.000 mL	Dil. Factor:	1.0000
Method:	8260_SIMAK_WATER	Limit Group:	8260C SIM QSM 5.0
Column:	624-SIL-MS (0.25 mm)	Detector	MS SCAN

2 Vinyl chloride, CAS: 75-01-4



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Seattle | Job No.: 580-130928-1
SDG No.:
Client Sample ID: DUP-2023 | Lab Sample ID: 580-130928-4
Matrix: Water | Lab File ID: 082923_011.D
Analysis Method: 8260D SIM | Date Collected: 08/24/2023 12:00
Sample wt/vol: 10(mL) | Date Analyzed: 08/30/2023 15:48
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: 624SIL-MS ID: 0.25(mm)
Purge Volume: 10.0(mL) | Heated Purge: (Y/N) N pH:
% Moisture: % Solids: | Level: (low/med) Low
Analysis Batch No.: 436188 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	DL
75-01-4	Vinyl chloride	0.64		0.10	0.014

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	95		80-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		65-123
460-00-4	4-Bromofluorobenzene (Surr)	99		80-120
1868-53-7	Dibromofluoromethane (Surr)	101		80-120

Report Date: 31-Aug-2023 12:38:46 Chrom Revision: 2.3 21-Aug-2023 17:14:06

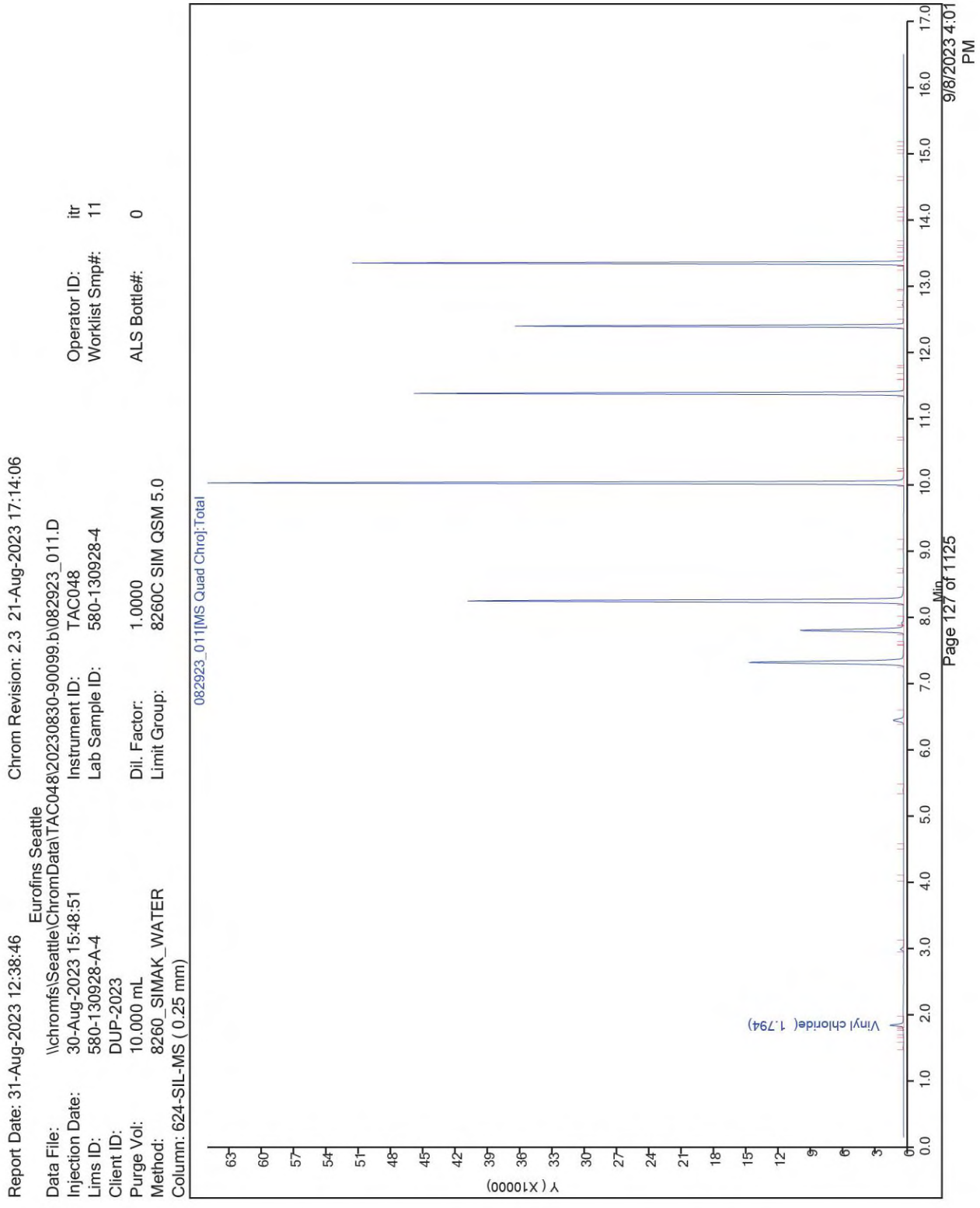
Eurofins Seattle
Target Compound Quantitation Report

Data File:	\\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\082923_011.D				
Lims ID:	580-130928-A-4				
Client ID:	DUP-2023				
Sample Type:	Client				
Inject. Date:	30-Aug-2023 15:48:51	ALS Bottle#:	0	Worklist Smp#:	11
Purge Vol:	10.000 mL	Dil. Factor:	1.0000		
Sample Info:	580-130928-A-4				
Operator ID:	itr	Instrument ID:	TAC048		
Method:	\\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\8260_SIMAK_WATER.m				
Limit Group:	8260C SIM QSM 5.0				
Last Update:	31-Aug-2023 12:38:33	Calib Date:	23-Jul-2023 22:02:46		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_011.D				
Column 1 :	624-SIL-MS (0.25 mm)		Det: MS SCAN		
Process Host:	CTX1640				
First Level Reviewer: PHC3		Date:	31-Aug-2023 12:38:45		

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/L	Flags
2 Vinyl chloride	62	1.794	1.789	0.006	100	16459	0.6405	
$ 9 Dibromofluoromethane (Surr)	113	7.289	7.284	0.005	100	168333	10.1	
$ 10 1,2-Dichloroethane-d4 (Surr)	65	7.778	7.767	0.011	100	117370	9.79	
* 13 Fluorobenzene (IS)	96	8.221	8.215	0.006	100	783582	10.0	
$ 18 Toluene-d8 (Surr)	98	10.009	10.004	0.005	99	683034	9.47	
* 25 Chlorobenzene-d5	117	11.366	11.360	0.006	97	493189	10.0	
$ 28 4-Bromofluorobenzene (Surr)	174	12.385	12.385	0.000	87	180620	9.94	
* 30 1,4-Dichlorobenzene-d4	152	13.339	13.339	0.000	99	246540	10.0	

QC Flag Legend
Processing Flags

Reagents:
5X SUR/IS_00031 Amount Added: 2.00 Units: uL Run Reagent


Report Date: 31-Aug-2023 12:38:46
Chrom Revision: 2.3 21-Aug-2023 17:14:06
Eurofins Seattle
Data File: \\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\082923_011.D
Injection Date: 30-Aug-2023 15:48:51
Instrument ID: TAC048
Operator ID: itr
Lims ID: 580-130928-A-4
Lab Sample ID: 580-130928-4
Worklist Smp#: 11
Client ID: DUP-2023
Purge Vol: 10.000 mL
Dil. Factor: 1.0000
ALS Bottle#: 0
Method: 8260_SIMAK_WATER
Limit Group: 8260C SIM QSM 5.0
Column: 624-SIL-MS (0.25 mm)
082923_011[MS Quad Chro]:Total
Vinyl chloride(1.794)
Y (X10000)
Min
9/8/2023 4:01 PM
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Report Date: 31-Aug-2023 12:38:46 Chrom Revision: 2.3 21-Aug-2023 17:14:06

Eurofins Seattle
Recovery Report

Data File:	\\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\082923_011.D				
Lims ID:	580-130928-A-4				
Client ID:	DUP-2023				
Sample Type:	Client				
Inject. Date:	30-Aug-2023 15:48:51	ALS Bottle#:	0	Worklist Smp#:	11
Purge Vol:	10.000 mL	Dil. Factor:	1.0000		
Sample Info:	580-130928-A-4				
Operator ID:	itr	Instrument ID:	TAC048		
Method:	\\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\8260_SIMAK_WATER.m				
Limit Group:	8260C SIM QSM 5.0				
Last Update:	31-Aug-2023 12:38:33	Calib Date:	23-Jul-2023 22:02:46		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_011.D				
Column 1 :	624-SIL-MS (0.25 mm)		Det: MS SCAN		
Process Host:	CTX1640				

First Level Reviewer: PHC3 Date: 31-Aug-2023 12:38:45

Compound	Amount Added	Amount Recovered	% Rec.
$ 9 Dibromofluoromethane (Surr)	10.0	10.1	101.40
$ 10 1,2-Dichloroethane-d4 (Surr)	10.0	9.79	97.91
$ 18 Toluene-d8 (Surr)	10.0	9.47	94.73
$ 28 4-Bromofluorobenzene (Surr)	10.0	9.94	99.36

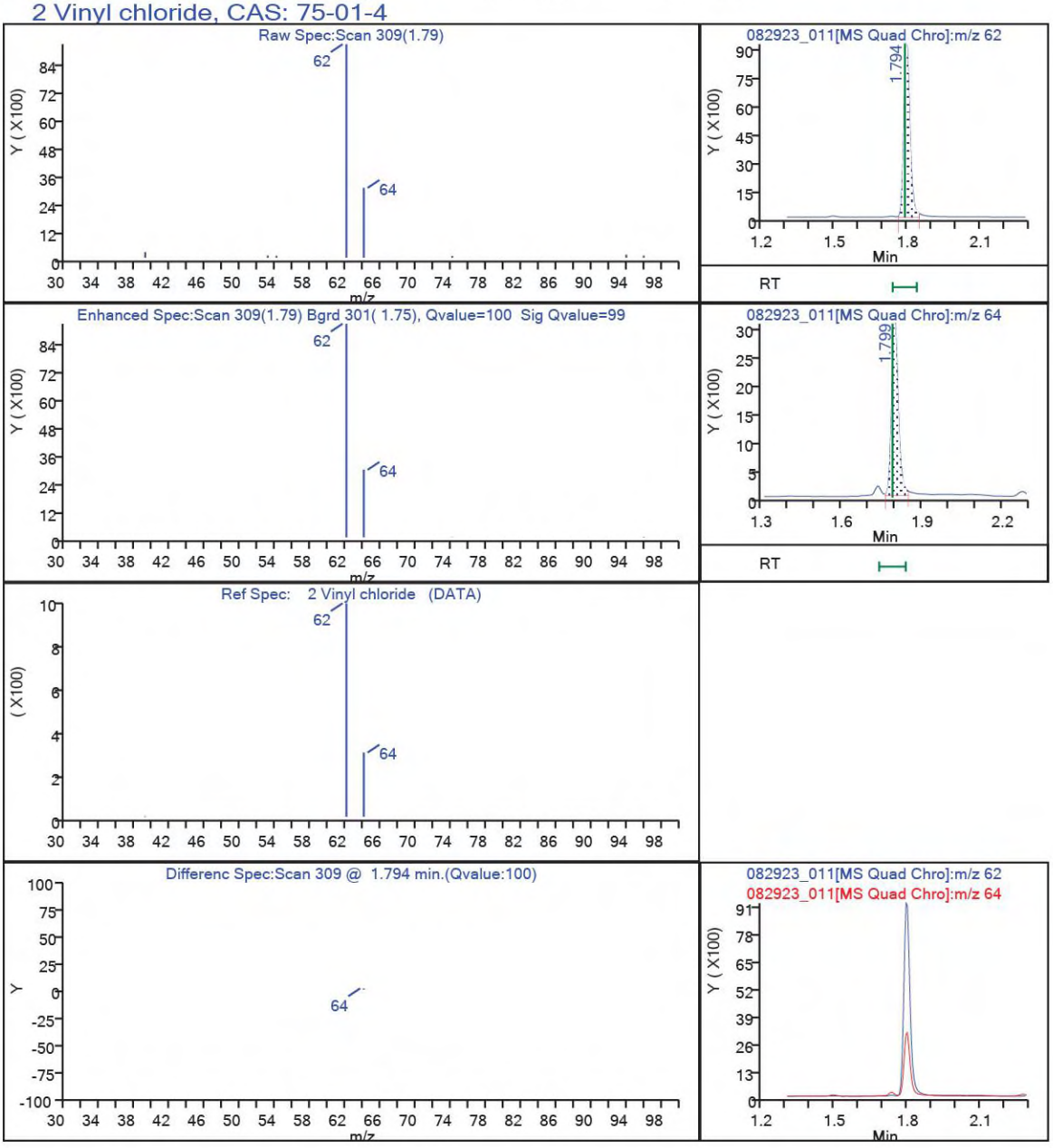
Report Date: 31-Aug-2023 12:38:46 Chrom Revision: 2.3 21-Aug-2023 17:14:06

Eurofins Seattle

Data File: \\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\082923_011.D

Injection Date:	30-Aug-2023 15:48:51	Instrument ID:	TAC048
Lims ID:	580-130928-A-4	Lab Sample ID:	580-130928-4
Client ID:	DUP-2023		
Operator ID:	itr	ALS Bottle#:	0 Worklist Smp#: 11
Purge Vol:	10.000 mL	Dil. Factor:	1.0000
Method:	8260_SIMAK_WATER	Limit Group:	8260C SIM QSM 5.0
Column:	624-SIL-MS (0.25 mm)	Detector	MS SCAN

2 Vinyl chloride, CAS: 75-01-4



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Seattle | Job No.: 580-130928-1

SDG No.:

Client Sample ID: EBlank-2023 | Lab Sample ID: 580-130928-5

Matrix: Water | Lab File ID: 082923_009.D

Analysis Method: 8260D SIM | Date Collected: 08/24/2023 14:30

Sample wt/vol: 10(mL) | Date Analyzed: 08/30/2023 14:56

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: 624SIL-MS ID: 0.25(mm)

Purge Volume: 10.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 436188 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	DL
75-01-4	Vinyl chloride	0.050	U	0.10	0.014

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	96		80-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	96		65-123
460-00-4	4-Bromofluorobenzene (Surr)	97		80-120
1868-53-7	Dibromofluoromethane (Surr)	100		80-120

Report Date: 31-Aug-2023 12:37:30 Chrom Revision: 2.3 21-Aug-2023 17:14:06

Eurofins Seattle
Target Compound Quantitation Report

Data File:	\\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\082923_009.D				
Lims ID:	580-130928-A-5				
Client ID:	EBlank-2023				
Sample Type:	Client				
Inject. Date:	30-Aug-2023 14:56:19	ALS Bottle#:	0	Worklist Smp#:	9
Purge Vol:	10.000 mL	Dil. Factor:	1.0000		
Sample Info:	580-130928-A-5				
Operator ID:	itr	Instrument ID:	TAC048		
Method:	\\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\8260_SIMAK_WATER.m				
Limit Group:	8260C SIM QSM 5.0				
Last Update:	31-Aug-2023 12:37:22	Calib Date:	23-Jul-2023 22:02:46		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_011.D				
Column 1 :	624-SIL-MS (0.25 mm)		Det: MS SCAN		
Process Host:	CTX1640				
First Level Reviewer: PHC3		Date:	31-Aug-2023 12:37:30		

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/L	Flags
$ 9 Dibromofluoromethane (Surr)	113	7.289	7.284	0.005	100	167037	9.98	
$ 10 1,2-Dichloroethane-d4 (Surr)	65	7.773	7.767	0.006	100	116302	9.62	
* 13 Fluorobenzene (IS)	96	8.221	8.215	0.006	100	790358	10.0	
$ 18 Toluene-d8 (Surr)	98	10.009	10.004	0.005	99	691815	9.60	
* 25 Chlorobenzene-d5	117	11.366	11.360	0.006	97	492885	10.0	
$ 28 4-Bromofluorobenzene (Surr)	174	12.385	12.385	0.000	87	177060	9.75	
* 30 1,4-Dichlorobenzene-d4	152	13.339	13.339	0.000	99	240049	10.0	

QC Flag Legend
Processing Flags

Reagents:
5X SUR/IS_00031 Amount Added: 2.00 Units: uL Run Reagent

Report Date: 31-Aug-2023 12:37:30
Chrom Revision: 2.3 21-Aug-2023 17:14:06
Eurofins Seattle
Data File: \\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\082923_009.D
Injection Date: 30-Aug-2023 14:56:19
Instrument ID: TAC048
Operator ID: itr
Lims ID: 580-130928-A-5
Lab Sample ID: 580-130928-5
Worklist Smp#: 9
Client ID: EBlank-2023
Purge Vol: 10.000 mL
Dil. Factor: 1.0000
ALS Bottle#: 0
Method: 8260_SIMAK_WATER
Limit Group: 8260C SIM QSM 5.0
Column: 624-SIL-MS (0.25 mm)
082923_009[MS Quad Chro]:Total
Y (X10000)
Min
9/8/2023 4:01 PM
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Report Date: 31-Aug-2023 12:37:30 Chrom Revision: 2.3 21-Aug-2023 17:14:06

Eurofins Seattle
Recovery Report

Data File:	\\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\082923_009.D				
Lims ID:	580-130928-A-5				
Client ID:	EBlank-2023				
Sample Type:	Client				
Inject. Date:	30-Aug-2023 14:56:19	ALS Bottle#:	0	Worklist Smp#:	9
Purge Vol:	10.000 mL	Dil. Factor:	1.0000		
Sample Info:	580-130928-A-5				
Operator ID:	itr	Instrument ID:	TAC048		
Method:	\\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\8260_SIMAK_WATER.m				
Limit Group:	8260C SIM QSM 5.0				
Last Update:	31-Aug-2023 12:37:22	Calib Date:	23-Jul-2023 22:02:46		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_011.D				
Column 1 :	624-SIL-MS (0.25 mm)		Det: MS SCAN		
Process Host:	CTX1640				

First Level Reviewer: PHC3 Date: 31-Aug-2023 12:37:30

Compound	Amount Added	Amount Recovered	% Rec.
$ 9 Dibromofluoromethane (Surr)	10.0	9.98	99.76
$ 10 1,2-Dichloroethane-d4 (Surr)	10.0	9.62	96.19
$ 18 Toluene-d8 (Surr)	10.0	9.60	96.01
$ 28 4-Bromofluorobenzene (Surr)	10.0	9.75	97.47

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Seattle | Job No.: 580-130928-1

SDG No.:

Client Sample ID: Trip Blank-20230824 | Lab Sample ID: 580-130928-6

Matrix: Water | Lab File ID: 082923_008.D

Analysis Method: 8260D SIM | Date Collected: 08/24/2023 00:01

Sample wt/vol: 10(mL) | Date Analyzed: 08/30/2023 14:29

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: 624SIL-MS ID: 0.25(mm)

Purge Volume: 10.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 436188 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	DL
75-01-4	Vinyl chloride	0.050	U M	0.10	0.014

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	100		80-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	88		65-123
460-00-4	4-Bromofluorobenzene (Surr)	98		80-120
1868-53-7	Dibromofluoromethane (Surr)	104		80-120

Report Date: 31-Aug-2023 12:37:23 Chrom Revision: 2.3 21-Aug-2023 17:14:06

Eurofins Seattle
Target Compound Quantitation Report

Data File:	\\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\082923_008.D				
Lims ID:	580-130928-A-6				
Client ID:	Trip Blank-20230824				
Sample Type:	Client				
Inject. Date:	30-Aug-2023 14:29:54	ALS Bottle#:	0	Worklist Smp#:	8
Purge Vol:	10.000 mL	Dil. Factor:	1.0000		
Sample Info:	580-130928-A-6				
Operator ID:	itr	Instrument ID:	TAC048		
Method:	\\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\8260_SIMAK_WATER.m				
Limit Group:	8260C SIM QSM 5.0				
Last Update:	31-Aug-2023 12:37:22	Calib Date:	23-Jul-2023 22:02:46		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_011.D				
Column 1 :	624-SIL-MS (0.25 mm)		Det: MS SCAN		
Process Host:	CTX1640				
First Level Reviewer: PHC3		Date:	31-Aug-2023 12:37:22		

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/L	Flags
$ 9 Dibromofluoromethane (Surr)	113	7.289	7.284	0.005	100	120180	10.4	
$ 10 1,2-Dichloroethane-d4 (Surr)	65	7.772	7.767	0.005	100	73659	8.79	
* 13 Fluorobenzene (IS)	96	8.220	8.215	0.005	100	547801	10.0	
$ 18 Toluene-d8 (Surr)	98	10.009	10.004	0.005	99	450600	10.0	
* 25 Chlorobenzene-d5	117	11.365	11.360	0.005	97	307624	10.0	
$ 28 4-Bromofluorobenzene (Surr)	174	12.385	12.385	0.000	87	110554	9.75	
* 30 1,4-Dichlorobenzene-d4	152	13.339	13.339	0.000	99	155324	10.0	

QC Flag Legend
Processing Flags

Reagents:
5X SUR/IS_00031 Amount Added: 2.00 Units: uL Run Reagent

Report Date: 31-Aug-2023 12:37:23
Chrom Revision: 2.3 21-Aug-2023 17:14:06
Eurofins Seattle
Data File: \\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\082923_008.D
Injection Date: 30-Aug-2023 14:29:54
Instrument ID: TAC048
Operator ID: itr
Lims ID: 580-130928-A-6
Lab Sample ID: 580-130928-6
Worklist Smp#: 8
Client ID: Trip Blank-20230824
Purge Vol: 10.000 mL
Dil. Factor: 1.0000
ALS Bottle#: 0
Method: 8260_SIMAK_WATER
Limit Group: 8260C SIM QSM 5.0
Column: 624-SIL-MS (0.25 mm)
082923_008[MS Quad Chro]:Total
Y (X10000)
Min
9/8/2023 4:01 PM
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Report Date: 31-Aug-2023 12:37:23 Chrom Revision: 2.3 21-Aug-2023 17:14:06

Eurofins Seattle
Recovery Report

Data File:	\\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\082923_008.D				
Lims ID:	580-130928-A-6				
Client ID:	Trip Blank-20230824				
Sample Type:	Client				
Inject. Date:	30-Aug-2023 14:29:54	ALS Bottle#:	0	Worklist Smp#:	8
Purge Vol:	10.000 mL	Dil. Factor:	1.0000		
Sample Info:	580-130928-A-6				
Operator ID:	itr	Instrument ID:	TAC048		
Method:	\\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\8260_SIMAK_WATER.m				
Limit Group:	8260C SIM QSM 5.0				
Last Update:	31-Aug-2023 12:37:22	Calib Date:	23-Jul-2023 22:02:46		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_011.D				
Column 1 :	624-SIL-MS (0.25 mm)		Det: MS SCAN		
Process Host:	CTX1640				

First Level Reviewer: PHC3 Date: 31-Aug-2023 12:37:22

Compound	Amount Added	Amount Recovered	% Rec.
$ 9 Dibromofluoromethane (Surr)	10.0	10.4	103.56
$ 10 1,2-Dichloroethane-d4 (Surr)	10.0	8.79	87.90
$ 18 Toluene-d8 (Surr)	10.0	10.0	100.20
$ 28 4-Bromofluorobenzene (Surr)	10.0	9.75	97.51

Report Date: 31-Aug-2023 12:37:23 Chrom Revision: 2.3 21-Aug-2023 17:14:06

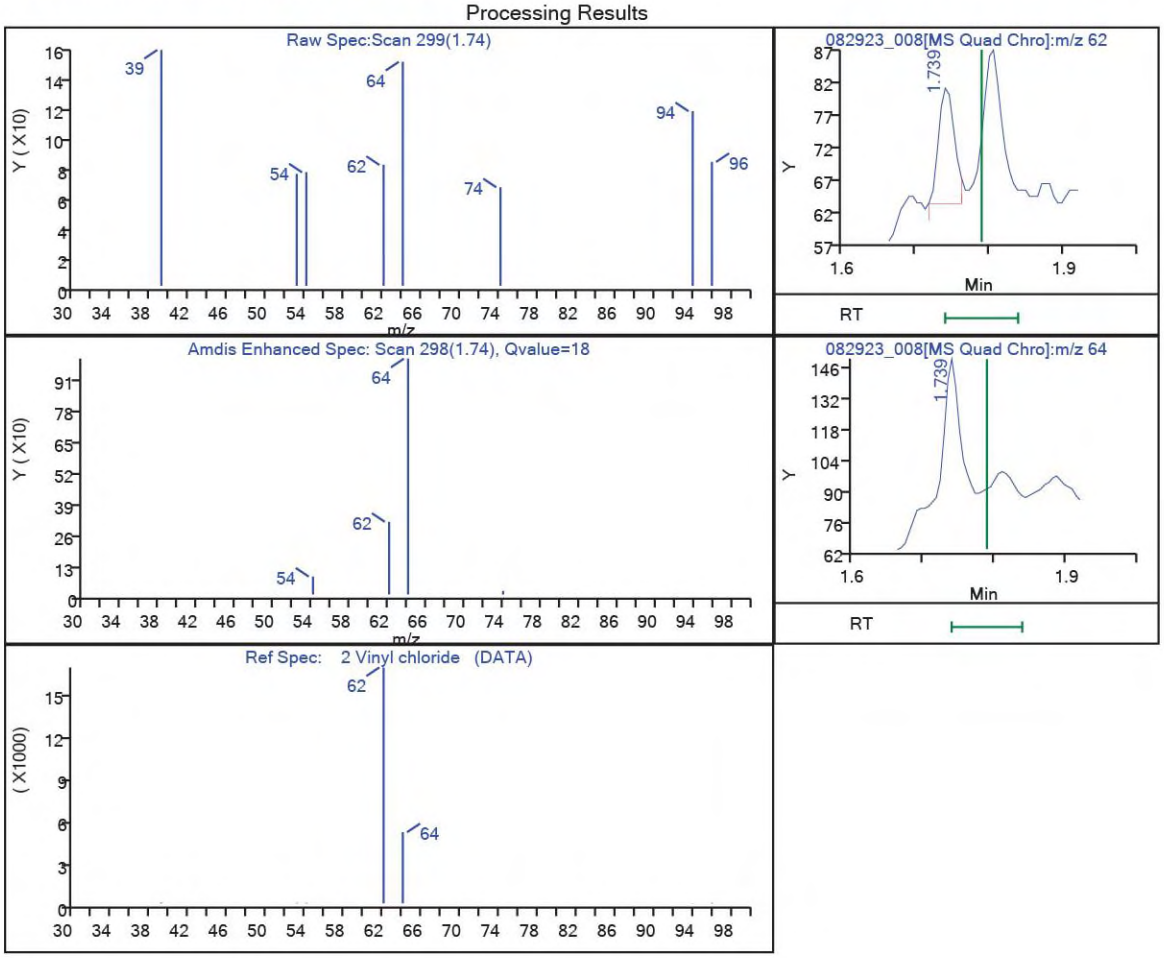
User Disabled Compound Report

Eurofins Seattle

Data File:	\\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\082923_008.D				
Injection Date:	30-Aug-2023 14:29:54	Instrument ID:	TAC048		
Lims ID:	580-130928-A-6	Lab Sample ID:	580-130928-6		
Client ID:	Trip Blank-20230824				
Operator ID:	itr	ALS Bottle#:	0	Worklist Smp#:	8
Purge Vol:	10.000 mL	Dil. Factor:	1.0000		
Method:	8260_SIMAK_WATER	Limit Group:	8260C SIM QSM 5.0		
Column:	624-SIL-MS (0.25 mm)	Detector	MS SCAN		

2 Vinyl chloride, CAS: 75-01-4

Processing Results



RT	Mass	Response	Amount
1.74	62.00	27	-0.009979
1.74	64.00	220	

Reviewer: PHC3, 31-Aug-2023 12:37:20 -07:00:00 (UTC)

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Seattle Job No.: 580-130928-1 Analy Batch No.: 432388

SDG No.:

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/23/2023 18:34 Calibration End Date: 07/23/2023 22:02 Calibration ID: 36149

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 580-432388/3	072323_003.D
Level 2	IC 580-432388/4	072323_004.D
Level 3	IC 580-432388/5	072323_005.D
Level 4	IC 580-432388/6	072323_006.D
Level 5	IC 580-432388/7	072323_007.D
Level 6	ICIS 580-432388/8	072323_008.D
Level 7	IC 580-432388/9	072323_009.D
Level 8	IC 580-432388/10	072323_010.D
Level 9	IC 580-432388/11	072323_011.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Vinyl chloride	0.5342 0.3292	0.3620 0.2976	0.3016 0.3569	0.3865 0.3087	0.3316	Lin1	0.0037	0.3221			0.1000	12.0		20.0	0.9950		0.9900
1,1-Dichloroethene	+++++ 0.2756	0.3482 0.2390	0.2647 0.2959	0.3117 0.2804	0.2783	Ave		0.2867			0.1000	11.4		15.0			
cis-1,2-Dichloroethene	+++++ 0.3051	0.3624 0.2851	0.3170 0.3067	0.3197 0.3016	0.3119	Ave		0.3137			0.1000	7.1		15.0			
Benzene	+++++ 1.0493	1.1827 1.0075	1.0734 1.0440	1.0406 1.0677	1.0479	Ave		1.0641			0.5000	4.9		15.0			
1,2-Dichloroethane	+++++ 0.1844	+++++ 0.1851	0.2285 0.1822	0.1860 0.1849	0.1893	Ave		0.1915			0.1000	8.6		15.0			
Trichloroethene	+++++ 0.2909	0.3424 0.2781	0.3100 0.2856	0.2902 0.2962	0.2849	Ave		0.2973			0.2000	6.9		15.0			
Tetrachloroethene	+++++ 0.3595	0.4032 0.3371	0.3741 0.3640	0.3840 0.3767	0.3654	Ave		0.3705			0.2000	5.2		15.0			
Ethylene Dibromide	0.1746 0.1450	0.1546 0.1482	0.1506 0.1454	0.1408 0.1482	0.1426	Ave		0.1500			0.1000	6.7		15.0			
Naphthalene	+++++ 0.9700	1.1709 1.0035	1.0513 1.2246	1.1012 1.1354	0.9240	Ave		1.0726				9.7		15.0			
Dibromofluoromethane (Surr)	0.2184 0.2084	0.2140 0.2062	0.2090 0.2136	0.2167 0.2085	0.2120	Ave		0.2118				2.0		15.0			
1,2-Dichloroethane-d4 (Surr)	0.1554 0.1513	0.1585 0.1509	0.1547 0.1508	0.1513 0.1510	0.1529	Ave		0.1530				1.8		15.0			
Toluene-d8 (Surr)	1.4404 1.4467	1.4379 1.4534	1.4492 1.4826	1.4774 1.5085	1.4612	Ave		1.4619				1.6		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Seattle Job No.: 580-130928-1 Analy Batch No.: 432388

SDG No.:

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/23/2023 18:34 Calibration End Date: 07/23/2023 22:02 Calibration ID: 36149

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
4-Bromofluorobenzene (Surr)	0.3809 0.3752	0.3727 0.3642	0.3702 0.3529	0.3757 0.3510	0.3744	Ave		0.3686				2.8		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Seattle Job No.: 580-130928-1 Analy Batch No.: 432388

SDG No.:

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/23/2023 18:34 Calibration End Date: 07/23/2023 22:02 Calibration ID: 36149

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 580-432388/3	072323_003.D
Level 2	IC 580-432388/4	072323_004.D
Level 3	IC 580-432388/5	072323_005.D
Level 4	IC 580-432388/6	072323_006.D
Level 5	IC 580-432388/7	072323_007.D
Level 6	ICIS 580-432388/8	072323_008.D
Level 7	IC 580-432388/9	072323_009.D
Level 8	IC 580-432388/10	072323_010.D
Level 9	IC 580-432388/11	072323_011.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Vinyl chloride	FB	Lin1	1130	2320	4039	21370	43385	0.0200	0.0500	0.100	0.500	1.00
			232348	448304	1097425	2235669		5.00	10.0	25.0	50.0	
1,1-Dichloroethene	FB	Ave	+++++	2231	3545	17232	36410	+++++	0.0500	0.100	0.500	1.00
			194486	360048	909914	2030876		5.00	10.0	25.0	50.0	
cis-1,2-Dichloroethene	FB	Ave	+++++	2322	4245	17677	40805	+++++	0.0500	0.100	0.500	1.00
			215333	429351	943105	2184129		5.00	10.0	25.0	50.0	
Benzene	FB	Ave	+++++	7579	14375	57531	137109	+++++	0.0500	0.100	0.500	1.00
			740634	1517459	3210511	7732121		5.00	10.0	25.0	50.0	
1,2-Dichloroethane	FB	Ave	+++++	+++++	3060	10281	24773	+++++	+++++	0.100	0.500	1.00
			130168	278756	560139	1338915		5.00	10.0	25.0	50.0	
Trichloroethene	FB	Ave	+++++	2194	4152	16047	37274	+++++	0.0500	0.100	0.500	1.00
			205347	418876	878231	2144774		5.00	10.0	25.0	50.0	
Tetrachloroethene	CBNZ d5	Ave	+++++	1505	2922	11425	27334	+++++	0.0500	0.100	0.500	1.00
			153202	310292	651772	1597444		5.00	10.0	25.0	50.0	
Ethylene Dibromide	CBNZ d5	Ave	206	577	1176	4189	10671	0.0200	0.0500	0.100	0.500	1.00
			61774	136412	260305	628690		5.00	10.0	25.0	50.0	
Naphthalene	DCBd 4	Ave	+++++	2275	4181	17705	36022	+++++	0.0500	0.100	0.500	1.00
			208402	441920	1022092	2202511		5.00	10.0	25.0	50.0	
Dibromofluoromethane (Surr)	FB	Ave	230955	274286	279849	239575	277346	10.0	10.0	10.0	10.0	10.0
			294161	310541	262719	302027		10.0	10.0	10.0	10.0	
1,2-Dichloroethane-d4 (Surr)	FB	Ave	164393	203185	207109	167283	200001	10.0	10.0	10.0	10.0	10.0
			213599	227350	185526	218674		10.0	10.0	10.0	10.0	

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Seattle Job No.: 580-130928-1 Analy Batch No.: 432388

SDG No.:

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/23/2023 18:34 Calibration End Date: 07/23/2023 22:02 Calibration ID: 36149

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Toluene-d8 (Surr)	CBNZ d5	Ave	849878	1073471	1131835	879075	1093063	10.0	10.0	10.0	10.0	10.0
			1233031	1337677	1062040	1279475		10.0	10.0	10.0	10.0	
4-Bromofluorobenzene (Surr)	CBNZ d5	Ave	224751	278222	289110	223531	280068	10.0	10.0	10.0	10.0	10.0
			319753	335223	252807	297732		10.0	10.0	10.0	10.0	

Curve Type Legend
Ave = Average ISTD
Lin1 = Linear 1/conc ISTD

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Seattle Job No.: 580-130928-1 Analy Batch No.: 432388

SDG No.:

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/23/2023 18:34 Calibration End Date: 07/23/2023 22:02 Calibration ID: 36149

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 580-432388/3	072323_003.D
Level 2	IC 580-432388/4	072323_004.D
Level 3	IC 580-432388/5	072323_005.D
Level 4	IC 580-432388/6	072323_006.D
Level 5	IC 580-432388/7	072323_007.D
Level 6	ICIS 580-432388/8	072323_008.D
Level 7	IC 580-432388/9	072323_009.D
Level 8	IC 580-432388/10	072323_010.D
Level 9	IC 580-432388/11	072323_011.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4	LVL 5	LVL 6
Vinyl chloride	8.3						50					
1,1-Dichloroethene	+++++	21.4						50				
cis-1,2-Dichloroethene	+++++	15.5						50				
Benzene	+++++	11.1						50				
1,2-Dichloroethane	+++++	+++++	19.3						50			
Trichloroethene	+++++	15.2						50				
Tetrachloroethene	+++++	8.8						50				
Ethylene Dibromide	16.4						50					
Naphthalene	+++++	9.2						50				
Dibromofluoromethane (Surr)	3.1						50					
1,2-Dichloroethane-d4 (Surr)	1.6						50					
Toluene-d8 (Surr)	-1.5						50					
4-Bromofluorobenzene (Surr)	3.3						50					

Report Date: 25-Jul-2023 11:17:20 Chrom Revision: 2.3 24-Jul-2023 18:08:00

Eurofins Seattle
Target Compound Quantitation Report

Data File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_003.D
Lims ID: IC 0.02
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 23-Jul-2023 18:34:50 ALS Bottle#: 0 Worklist Smp#: 3
Purge Vol: 10.000 mL Dil. Factor: 1.0000
Sample Info: 0.02
Operator ID: AJ Instrument ID: TAC048
Sublist: chrom-8260_SIMAK_WATER*sub3

Method: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\8260_SIMAK_WATER.m
Limit Group: 8260C SIM QSM 5.0
Last Update: 25-Jul-2023 11:17:19 Calib Date: 23-Jul-2023 22:02:46
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_011.D

Column 1 : 624-SIL-MS (0.25 mm) Det: MS SCAN
Process Host: CTX1617

First Level Reviewer: PHC3 Date: 24-Jul-2023 10:11:44

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
2 Vinyl chloride	62	1.810	1.810	0.000	100	1130	0.0200	0.0217	M
1 Butadiene	54	1.849	1.849	0.000	97	858	0.0200	0.0271	M
3 Bromomethane	94	2.174	2.174	0.000	93	980	0.0200	0.0364	M
4 1,1-Dichloroethene	96	3.263	3.263	0.000	80	1322	0.0200	0.0436	
6 Isopropyl alcohol	45	3.624	3.624	0.000	99	190	0.2000	0.5884	a
7 cis-1,2-Dichloroethene	96	6.434	6.434	0.000	86	989	0.0200	0.0298	M
8 Chloroform	83	7.057	7.057	0.000	100	1685	0.0200	0.0339	
$ 9 Dibromofluoromethane (Surr)	113	7.311	7.311	0.000	100	230955	10.0	10.3	
$ 10 1,2-Dichloroethane-d4 (Surr)	65	7.789	7.789	0.000	100	164393	10.0	10.2	
11 Benzene	78	7.795	7.795	0.000	100	3151	0.0200	0.0280	M
12 1,2-Dichloroethane	62	7.898	7.898	0.000	100	1051	0.0200	0.0519	
* 13 Fluorobenzene (IS)	96	8.237	8.237	0.000	100	1057726	10.0	10.0	
14 Trichloroethene	132	8.688	8.688	0.000	97	856	0.0200	0.0272	
15 Dibromomethane	174	9.083	9.083	0.000	91	281	0.0200	0.0288	
16 Dichlorobromomethane	83	9.305	9.305	0.000	98	522	0.0200	0.0216	
17 cis-1,3-Dichloropropene	75	9.768	9.768	0.000	93	546	0.0200	0.0229	
$ 18 Toluene-d8 (Surr)	98	10.020	10.020	0.000	99	849878	10.0	9.85	
19 trans-1,3-Dichloropropene	75	10.337	10.337	0.000	66	515	0.0200	0.0326	
20 1,1,2-Trichloroethane	97	10.521	10.521	0.000	75	418	0.0200	0.0430	
21 Tetrachloroethene	164	10.575	10.575	0.000	81	575	0.0200	0.0263	M
22 2-Hexanone	58	10.733	10.733	0.000	95	181	0.1000	0.1077	M
23 Chlorodibromomethane	129	10.861	10.861	0.000	88	225	0.0200	0.0205	a
24 Ethylene Dibromide	107	10.955	10.955	0.000	99	206	0.0200	0.0233	a
* 25 Chlorobenzene-d5	117	11.377	11.377	0.000	97	590043	10.0	10.0	
27 Bromoform	173	12.107	12.107	0.000	97	158	0.0200	0.0297	
$ 28 4-Bromofluorobenzene (Surr)	174	12.396	12.396	0.000	89	224751	10.0	10.3	
29 1,1,2,2-Tetrachloroethane	83	12.507	12.507	0.000	88	237	0.0200	0.0223	Ma
* 30 1,4-Dichlorobenzene-d4	152	13.350	13.350	0.000	99	324102	10.0	10.0	
31 1,4-Dichlorobenzene	146	13.367	13.367	0.000	72	1490	0.0200	0.0290	a
32 Hexachlorobutadiene	225	15.037	15.037	0.000	95	663	0.0200	0.0343	
33 Naphthalene	128	15.139	15.139	0.000	98	1124	0.0200	0.0323	M

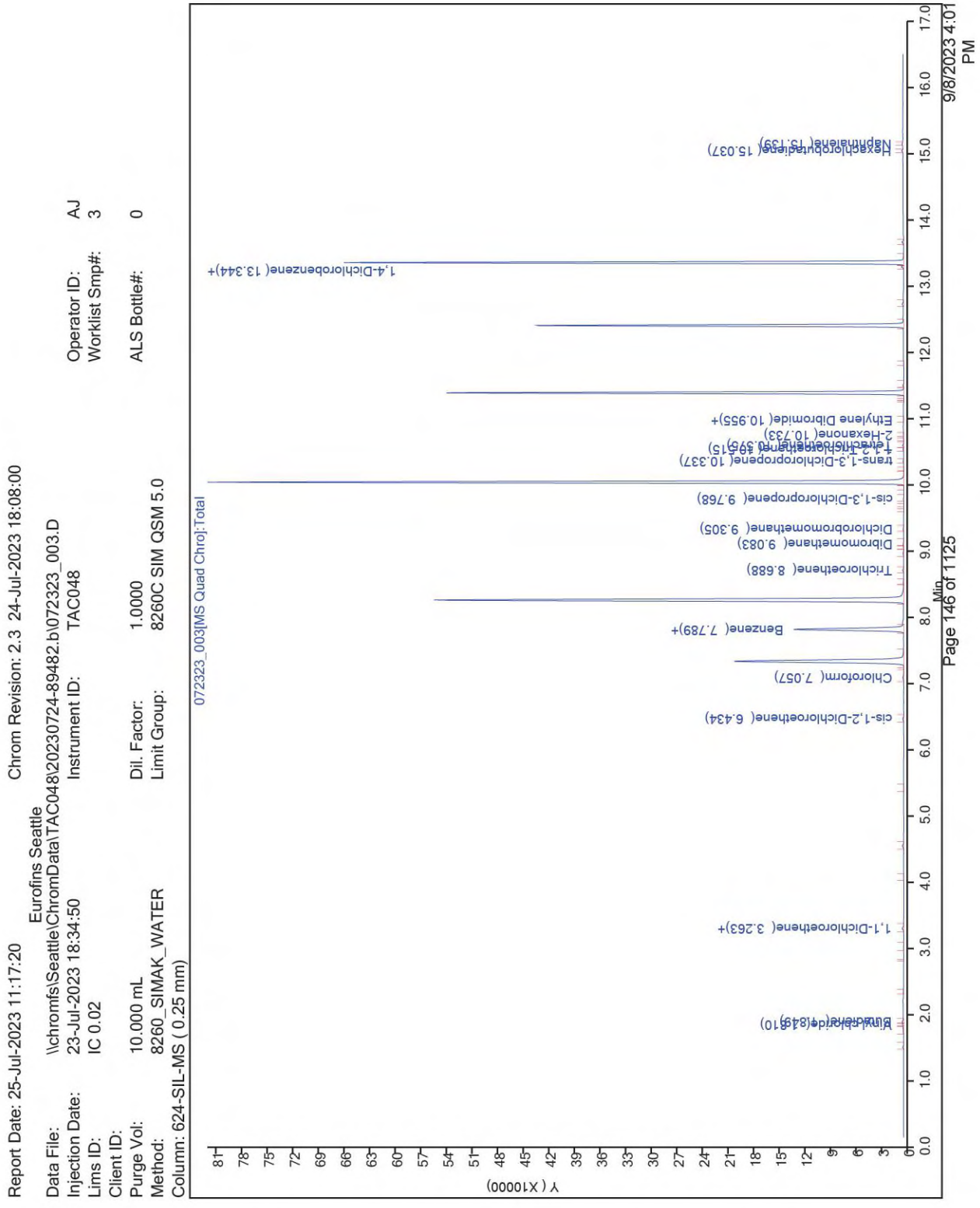
Report Date: 25-Jul-2023 11:17:20 Chrom Revision: 2.3 24-Jul-2023 18:08:00

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

VOASTDGASweek_00145	Amount Added:	0.02	Units: uL	
VOAMasterMix_00104	Amount Added:	0.02	Units: uL	
5X SUR/IS_00028	Amount Added:	2.00	Units: uL	Run Reagent


Report Date: 25-Jul-2023 11:17:20
Chrom Revision: 2.3 24-Jul-2023 18:08:00
Eurofins Seattle
Data File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_003.D
Injection Date: 23-Jul-2023 18:34:50
Instrument ID: TAC048
Operator ID: AJ
Lims ID: IC 0.02
Worklist Smp#: 3
Client ID:
Purge Vol: 10.000 mL
Dil. Factor: 1.0000
ALS Bottle#: 0
Method: 8260_SIMAK_WATER
Limit Group: 8260C SIM QSM 5.0
Column: 624-SIL-MS (0.25 mm)
072323_003[MS Quad Chro]:Total
Y (X10000)
Min
1,1-Dichloroethene(3.263)+
Benzene(7.789)+
cis-1,2-Dichloroethene(6.434)
Chloroform(7.057)
Trichloroethene(8.688)
Dibromomethane(9.083)
Dichlorobromomethane(9.305)
cis-1,3-Dichloropropene(9.768)
trans-1,3-Dichloropropene(10.337)
2-Hexanone(10.733)
Ethylene Dibromide(10.955)+
1,4-Dichlorobenzene(13.344)+
Hexachlorobutadiene(15.037)
Page 146 of 1125
9/8/2023 4:01 PM

Report Date: 25-Jul-2023 11:17:20 Chrom Revision: 2.3 24-Jul-2023 18:08:00

Manual Integration/User Assign Peak Report

Eurofins Seattle

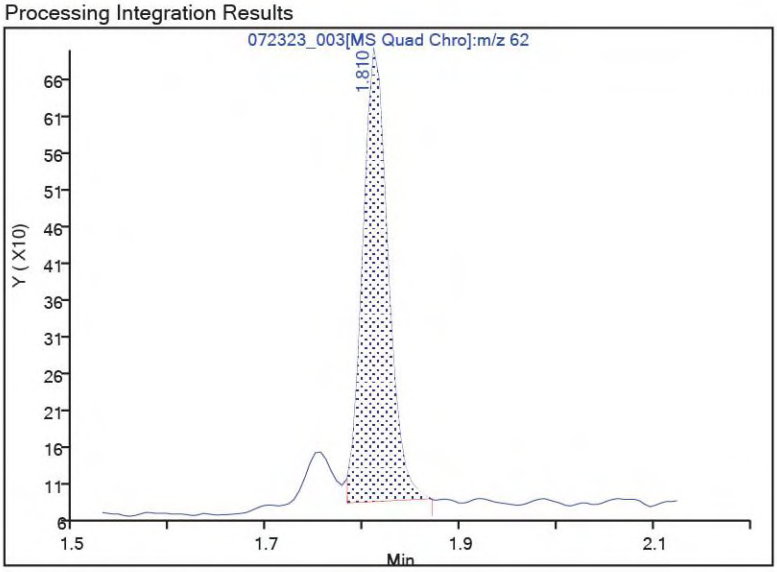
Data File:	\\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_003.D				
Injection Date:	23-Jul-2023 18:34:50	Instrument ID:	TAC048		
Lims ID:	IC 0.02				
Client ID:					
Operator ID:	AJ	ALS Bottle#:	0	Worklist Smp#:	3
Purge Vol:	10.000 mL	Dil. Factor:	1.0000		
Method:	8260_SIMAK_WATER	Limit Group:	8260C SIM QSM 5.0		
Column:	624-SIL-MS (0.25 mm)	Detector	MS SCAN		

2 Vinyl chloride, CAS: 75-01-4

Signal: 1

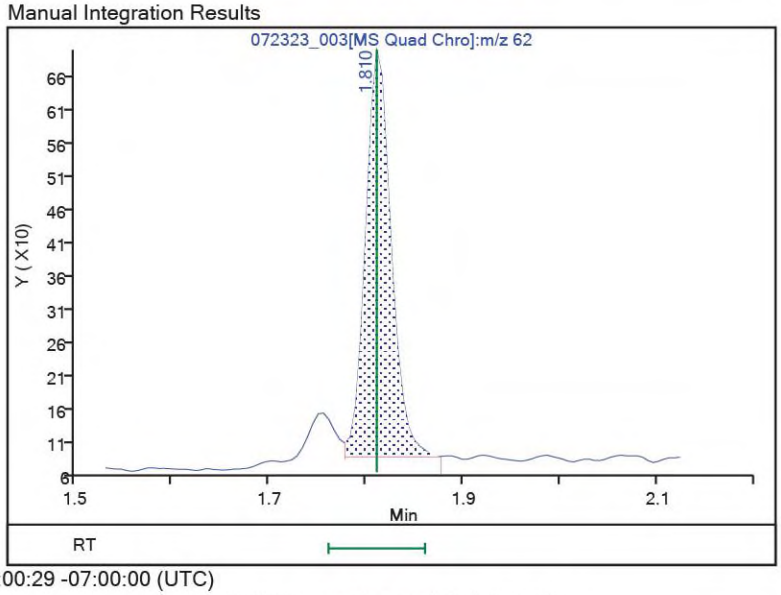
Processing Integration Results

RT: 1.81
Area: 1125
Amount: 0.021596
Amount Units: ug/L



Manual Integration Results

RT: 1.81
Area: 1130
Amount: 0.021654
Amount Units: ug/L



Reviewer: PHC3, 24-Jul-2023 10:00:29 -07:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Report Date: 25-Jul-2023 11:17:20 Chrom Revision: 2.3 24-Jul-2023 18:08:00

Manual Integration/User Assign Peak Report

Eurofins Seattle

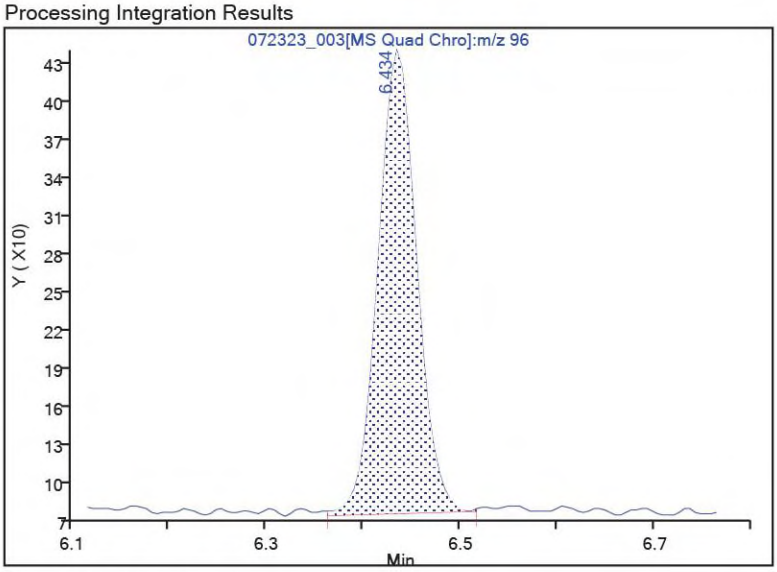
Data File:	\\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_003.D				
Injection Date:	23-Jul-2023 18:34:50	Instrument ID:	TAC048		
Lims ID:	IC 0.02				
Client ID:					
Operator ID:	AJ	ALS Bottle#:	0	Worklist Smp#:	3
Purge Vol:	10.000 mL	Dil. Factor:	1.0000		
Method:	8260_SIMAK_WATER	Limit Group:	8260C SIM QSM 5.0		
Column:	624-SIL-MS (0.25 mm)	Detector	MS SCAN		

7 cis-1,2-Dichloroethene, CAS: 156-59-2

Signal: 1

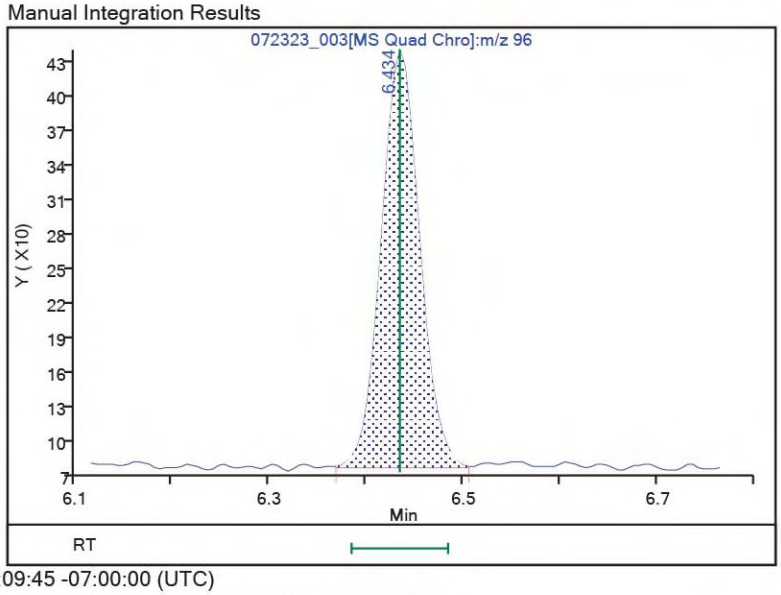
Processing Integration Results

RT: 6.43
Area: 996
Amount: 0.020295
Amount Units: ug/L



Manual Integration Results

RT: 6.43
Area: 989
Amount: 0.029809
Amount Units: ug/L



Reviewer: PHC3, 24-Jul-2023 10:09:45 -07:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Report Date: 25-Jul-2023 11:17:20 Chrom Revision: 2.3 24-Jul-2023 18:08:00

Manual Integration/User Assign Peak Report

Eurofins Seattle

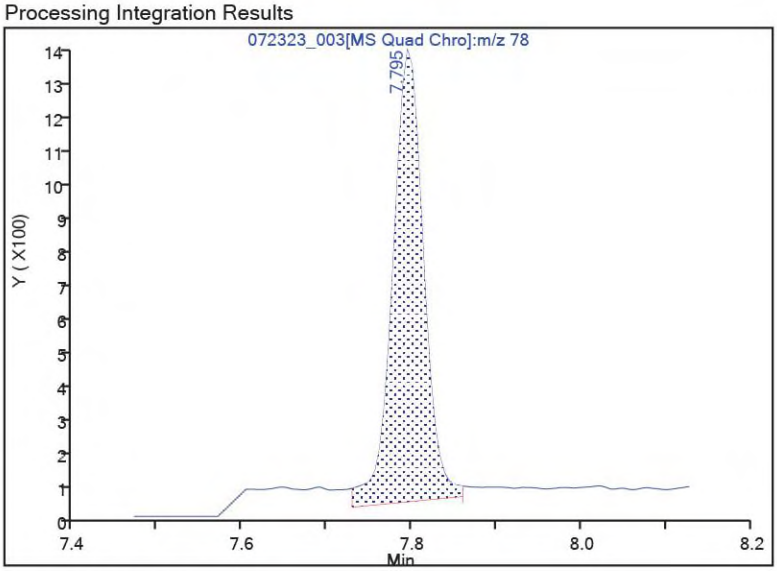
Data File:	\\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_003.D				
Injection Date:	23-Jul-2023 18:34:50	Instrument ID:	TAC048		
Lims ID:	IC 0.02				
Client ID:					
Operator ID:	AJ	ALS Bottle#:	0	Worklist Smp#:	3
Purge Vol:	10.000 mL	Dil. Factor:	1.0000		
Method:	8260_SIMAK_WATER	Limit Group:	8260C SIM QSM 5.0		
Column:	624-SIL-MS (0.25 mm)	Detector	MS SCAN		

11 Benzene, CAS: 71-43-2

Signal: 1

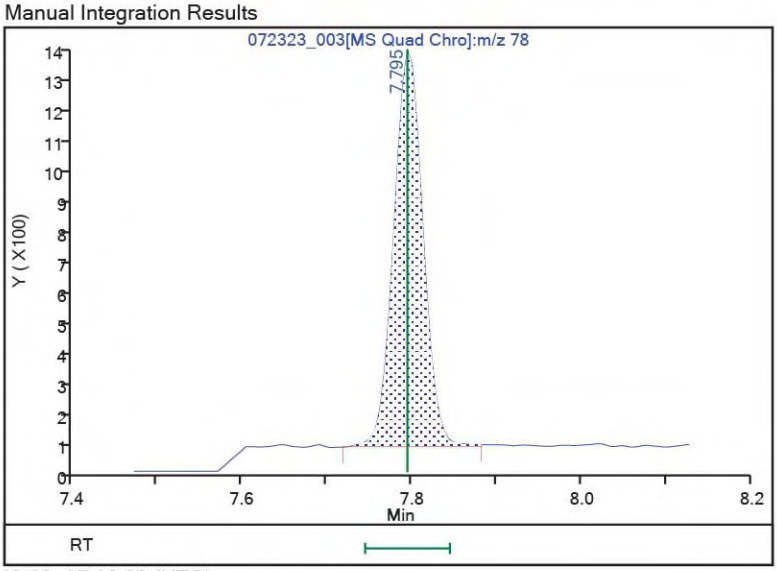
Processing Integration Results

RT: 7.79
Area: 3421
Amount: 0.020723
Amount Units: ug/L



Manual Integration Results

RT: 7.79
Area: 3151
Amount: 0.027995
Amount Units: ug/L



Reviewer: PHC3, 24-Jul-2023 10:10:00 -07:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Report Date: 25-Jul-2023 11:17:20 Chrom Revision: 2.3 24-Jul-2023 18:08:00

Manual Integration/User Assign Peak Report

Eurofins Seattle

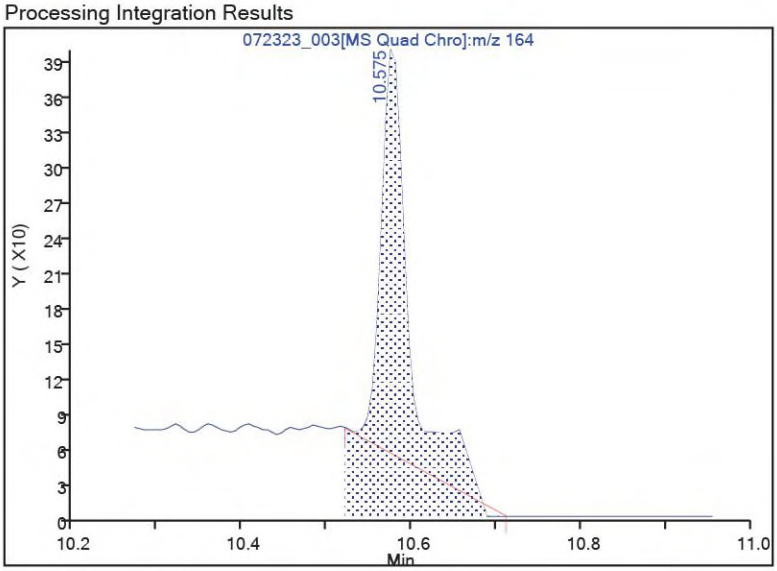
Data File:	\\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_003.D				
Injection Date:	23-Jul-2023 18:34:50	Instrument ID:	TAC048		
Lims ID:	IC 0.02				
Client ID:					
Operator ID:	AJ	ALS Bottle#:	0	Worklist Smp#:	3
Purge Vol:	10.000 mL	Dil. Factor:	1.0000		
Method:	8260_SIMAK_WATER	Limit Group:	8260C SIM QSM 5.0		
Column:	624-SIL-MS (0.25 mm)	Detector	MS SCAN		

21 Tetrachloroethene, CAS: 127-18-4

Signal: 1

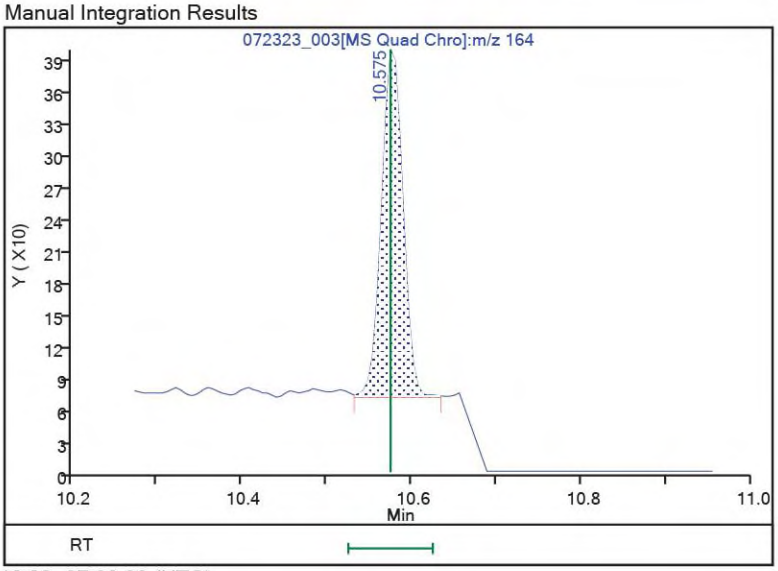
Processing Integration Results

RT: 10.57
Area: 1211
Amount: 0.046292
Amount Units: ug/L



Manual Integration Results

RT: 10.57
Area: 575
Amount: 0.026303
Amount Units: ug/L



Reviewer: PHC3, 24-Jul-2023 10:10:38 -07:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Report Date: 25-Jul-2023 11:17:20 Chrom Revision: 2.3 24-Jul-2023 18:08:00

Manual Integration/User Assign Peak Report

Eurofins Seattle

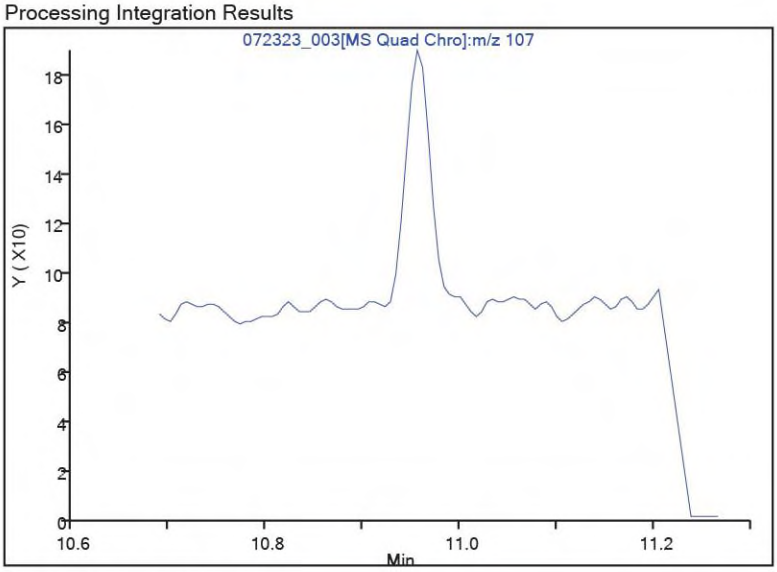
Data File:	\\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_003.D				
Injection Date:	23-Jul-2023 18:34:50	Instrument ID:	TAC048		
Lims ID:	IC 0.02				
Client ID:					
Operator ID:	AJ	ALS Bottle#:	0	Worklist Smp#:	3
Purge Vol:	10.000 mL	Dil. Factor:	1.0000		
Method:	8260_SIMAK_WATER	Limit Group:	8260C SIM QSM 5.0		
Column:	624-SIL-MS (0.25 mm)	Detector	MS SCAN		

24 Ethylene Dibromide, CAS: 106-93-4

Signal: 1

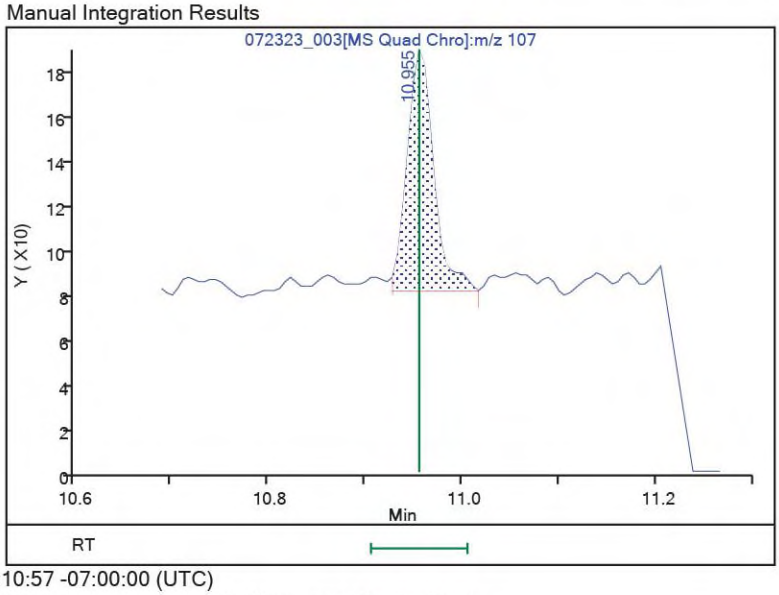
Processing Integration Results

Not Detected
Expected RT: 10.96



Manual Integration Results

RT: 10.96
Area: 206
Amount: 0.023276
Amount Units: ug/L



Reviewer: PHC3, 24-Jul-2023 10:10:57 -07:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Report Date: 25-Jul-2023 11:17:20 Chrom Revision: 2.3 24-Jul-2023 18:08:00
Manual Integration/User Assign Peak Report

Eurofins Seattle

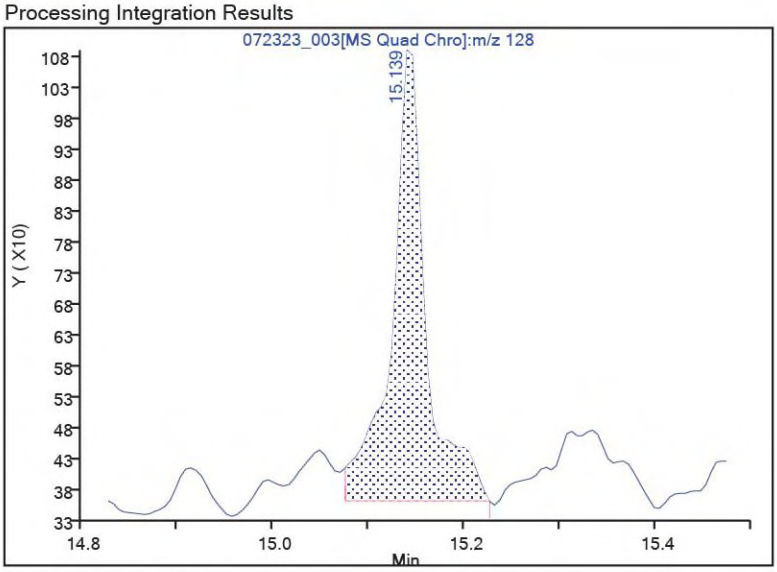
Data File:	\\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_003.D				
Injection Date:	23-Jul-2023 18:34:50	Instrument ID:	TAC048		
Lims ID:	IC 0.02				
Client ID:					
Operator ID:	AJ	ALS Bottle#:	0	Worklist Smp#:	3
Purge Vol:	10.000 mL	Dil. Factor:	1.0000		
Method:	8260_SIMAK_WATER	Limit Group:	8260C SIM QSM 5.0		
Column:	624-SIL-MS (0.25 mm)	Detector	MS SCAN		

33 Naphthalene, CAS: 91-20-3

Signal: 1

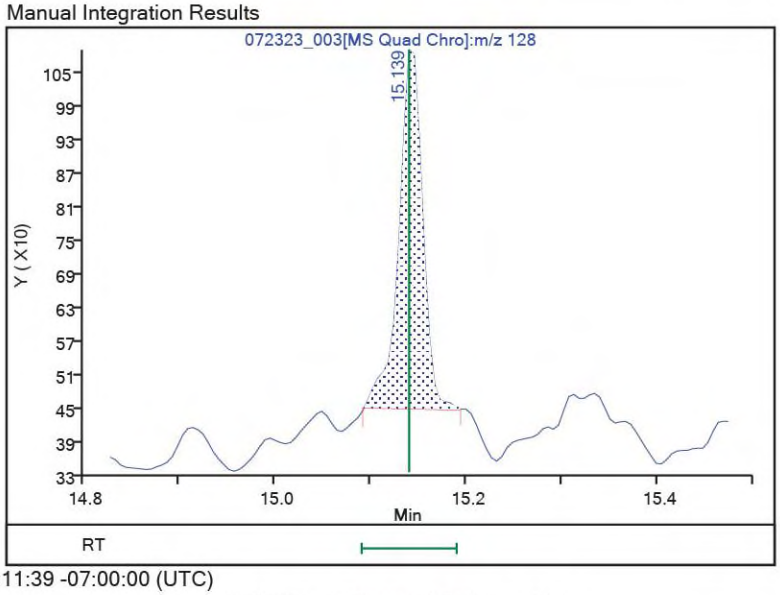
Processing Integration Results

RT: 15.14
Area: 1838
Amount: 0.043706
Amount Units: ug/L



Manual Integration Results

RT: 15.14
Area: 1124
Amount: 0.032333
Amount Units: ug/L



Reviewer: PHC3, 24-Jul-2023 10:11:39 -07:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Report Date: 25-Jul-2023 11:17:23 Chrom Revision: 2.3 24-Jul-2023 18:08:00

Eurofins Seattle
Target Compound Quantitation Report

Data File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_004.D
Lims ID: IC 0.05
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 23-Jul-2023 19:00:43 ALS Bottle#: 0 Worklist Smp#: 4
Purge Vol: 10.000 mL Dil. Factor: 1.0000
Sample Info: 0.05
Operator ID: AJ Instrument ID: TAC048
Sublist: chrom-8260_SIMAK_WATER*sub3

Method: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\8260_SIMAK_WATER.m
Limit Group: 8260C SIM QSM 5.0
Last Update: 25-Jul-2023 11:17:23 Calib Date: 23-Jul-2023 22:02:46
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_011.D

Column 1 : 624-SIL-MS (0.25 mm) Det: MS SCAN
Process Host: CTX1617

First Level Reviewer: PHC3 Date: 24-Jul-2023 09:58:33

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
	2 Vinyl chloride	62	1.810	1.810	0.000	100	2320	0.0500	0.0447	M
	1 Butadiene	54	1.849	1.849	0.000	95	2061	0.0500	0.0538	M
	3 Bromomethane	94	2.168	2.168	0.000	97	1821	0.0500	0.0558	
	4 1,1-Dichloroethene	96	3.263	3.263	0.000	80	2231	0.0500	0.0607	
	6 Isopropyl alcohol	45	3.618	3.618	0.000	99	334	0.5000	0.8537	a
	7 cis-1,2-Dichloroethene	96	6.434	6.434	0.000	84	2322	0.0500	0.0578	
	8 Chloroform	83	7.057	7.057	0.000	99	3541	0.0500	0.0588	
$	9 Dibromofluoromethane (Surr)	113	7.306	7.306	0.000	100	274286	10.0	10.1	
$	10 1,2-Dichloroethane-d4 (Surr)	65	7.789	7.789	0.000	100	203185	10.0	10.4	
	11 Benzene	78	7.794	7.794	0.000	100	7579	0.0500	0.0556	
	12 1,2-Dichloroethane	62	7.898	7.898	0.000	99	2001	0.0500	0.0815	
*	13 Fluorobenzene (IS)	96	8.237	8.237	0.000	100	1281628	10.0	10.0	
	14 Trichloroethene	132	8.688	8.688	0.000	99	2194	0.0500	0.0576	
	15 Dibromomethane	174	9.083	9.083	0.000	89	645	0.0500	0.0545	
	16 Dichlorobromomethane	83	9.305	9.305	0.000	100	1468	0.0500	0.0501	
	17 cis-1,3-Dichloropropene	75	9.762	9.762	0.000	95	1552	0.0500	0.0515	
$	18 Toluene-d8 (Surr)	98	10.020	10.020	0.000	99	1073471	10.0	9.84	
	19 trans-1,3-Dichloropropene	75	10.336	10.336	0.000	68	1171	0.0500	0.0586	
	20 1,1,2-Trichloroethane	97	10.515	10.515	0.000	78	804	0.0500	0.0653	
	21 Tetrachloroethene	164	10.575	10.575	0.000	81	1505	0.0500	0.0544	M
	22 2-Hexanone	58	10.733	10.733	0.000	97	515	0.2500	0.2423	M
	23 Chlorodibromomethane	129	10.861	10.861	0.000	91	686	0.0500	0.0494	a
	24 Ethylene Dibromide	107	10.955	10.955	0.000	94	577	0.0500	0.0515	a
*	25 Chlorobenzene-d5	117	11.377	11.377	0.000	97	746551	10.0	10.0	
	26 1,1,1,2-Tetrachloroethane	131	11.481	11.481	0.000	99	1396	0.0500	0.0524	a
	27 Bromoform	173	12.107	12.107	0.000	98	366	0.0500	0.0543	
$	28 4-Bromofluorobenzene (Surr)	174	12.396	12.396	0.000	89	278222	10.0	10.1	
	29 1,1,2,2-Tetrachloroethane	83	12.507	12.507	0.000	90	615	0.0500	0.0482	a
*	30 1,4-Dichlorobenzene-d4	152	13.344	13.344	0.000	99	388583	10.0	10.0	
	31 1,4-Dichlorobenzene	146	13.366	13.366	0.000	74	3477	0.0500	0.0565	a
	32 Hexachlorobutadiene	225	15.037	15.037	0.000	92	1339	0.0500	0.0577	

Report Date: 25-Jul-2023 11:17:23 Chrom Revision: 2.3 24-Jul-2023 18:08:00
Data File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_004.D

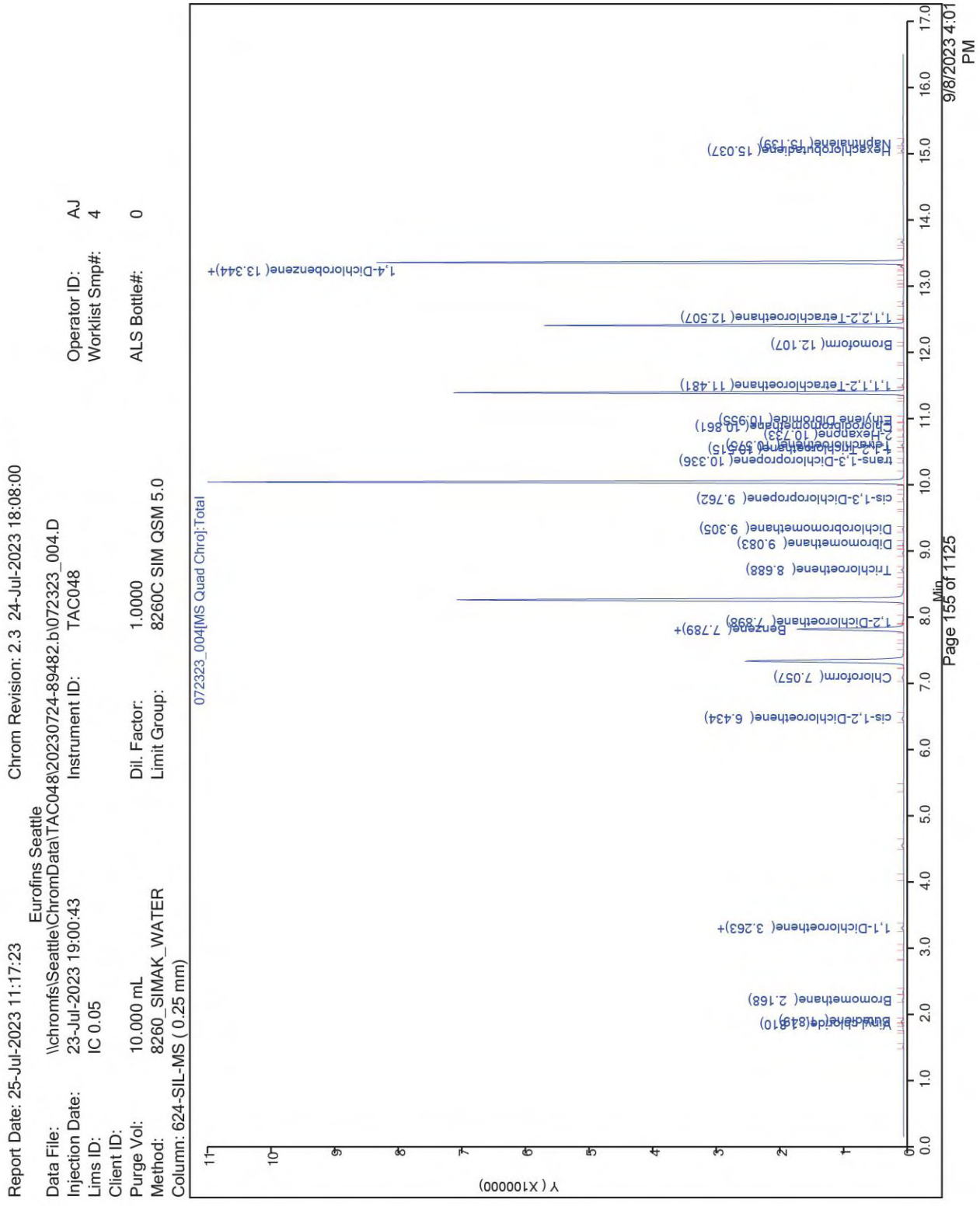
Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
33 Naphthalene	128	15.145	15.145	0.000	98	2275	0.0500	0.0546	M

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

VOASTDGASweek_00145	Amount Added:	0.05	Units: uL	
VOAMasterMix_00104	Amount Added:	0.05	Units: uL	
5X SUR/IS_00028	Amount Added:	2.00	Units: uL	Run Reagent


Report Date: 25-Jul-2023 11:17:23
Chrom Revision: 2.3 24-Jul-2023 18:08:00
Eurofins Seattle
Data File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_004.D
Injection Date: 23-Jul-2023 19:00:43
Instrument ID: TAC048
Operator ID: AJ
Lims ID: IC 0.05
Worklist Smp#: 4
Client ID:
Purge Vol: 10.000 mL
Dil. Factor: 1.0000
ALS Bottle#: 0
Method: 8260_SIMAK_WATER
Limit Group: 8260C SIM QSM 5.0
Column: 624-SIL-MS (0.25 mm)
072323_004[MS Quad Chro]:Total
Vinyl chloride(2.810)
Bromomethane(2.168)
1,1-Dichloroethene(3.263)+
cis-1,2-Dichloroethene(6.434)
Chloroform(7.057)
Benzene(7.789)+
1,2-Dichloroethane(7.998)
Trichloroethene(8.688)
Dibromomethane(9.083)
Dichlorobromomethane(9.305)
cis-1,3-Dichloropropene(9.762)
trans-1,3-Dichloropropene(10.336)
1,1,2-Trichloroethane(10.515)
Tetrachloroethene(10.579)
2-Hexanone(10.733)
Chlorodibromomethane(10.861)
Ethylene Dibromide(10.955)
1,1,1,2-Tetrachloroethane(11.481)
Bromoform(12.107)
1,1,2,2-Tetrachloroethane(12.507)
1,4-Dichlorobenzene(13.344)+
Hexachlorobutadiene(15.037)
Naphthalene(15.159)
Y (X100000)
Min
9/8/2023 4:01 PM
Page 155 of 1125

Report Date: 25-Jul-2023 11:17:23 Chrom Revision: 2.3 24-Jul-2023 18:08:00
Manual Integration/User Assign Peak Report

Eurofins Seattle

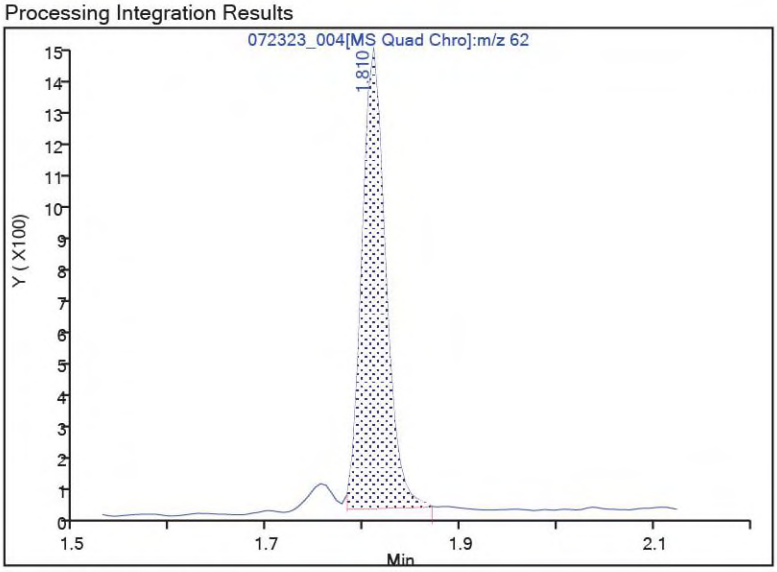
Data File:	\\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_004.D				
Injection Date:	23-Jul-2023 19:00:43	Instrument ID:	TAC048		
Lims ID:	IC 0.05				
Client ID:					
Operator ID:	AJ	ALS Bottle#:	0	Worklist Smp#:	4
Purge Vol:	10.000 mL	Dil. Factor:	1.0000		
Method:	8260_SIMAK_WATER	Limit Group:	8260C SIM QSM 5.0		
Column:	624-SIL-MS (0.25 mm)	Detector	MS SCAN		

2 Vinyl chloride, CAS: 75-01-4

Signal: 1

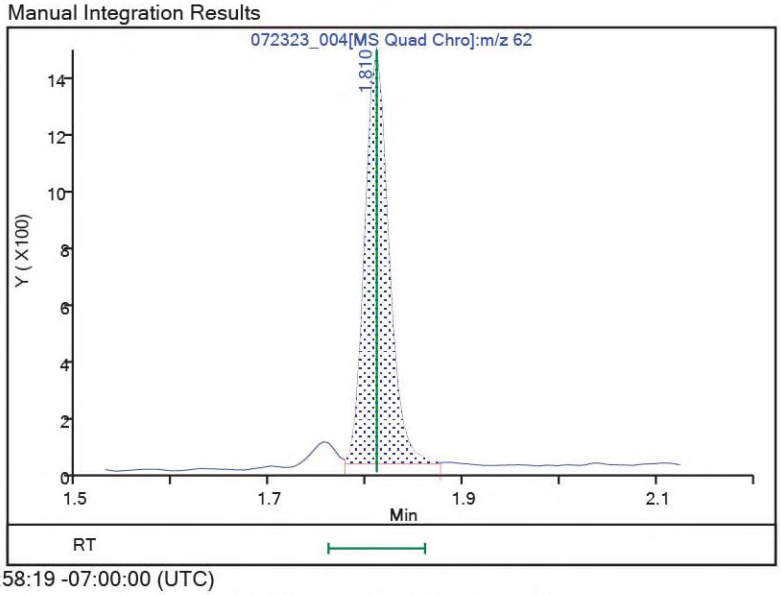
Processing Integration Results

RT: 1.81
Area: 2339
Amount: 0.045121
Amount Units: ug/L



Manual Integration Results

RT: 1.81
Area: 2320
Amount: 0.044683
Amount Units: ug/L



Reviewer: PHC3, 24-Jul-2023 09:58:19 -07:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Report Date: 25-Jul-2023 11:17:23 Chrom Revision: 2.3 24-Jul-2023 18:08:00

Manual Integration/User Assign Peak Report

Eurofins Seattle

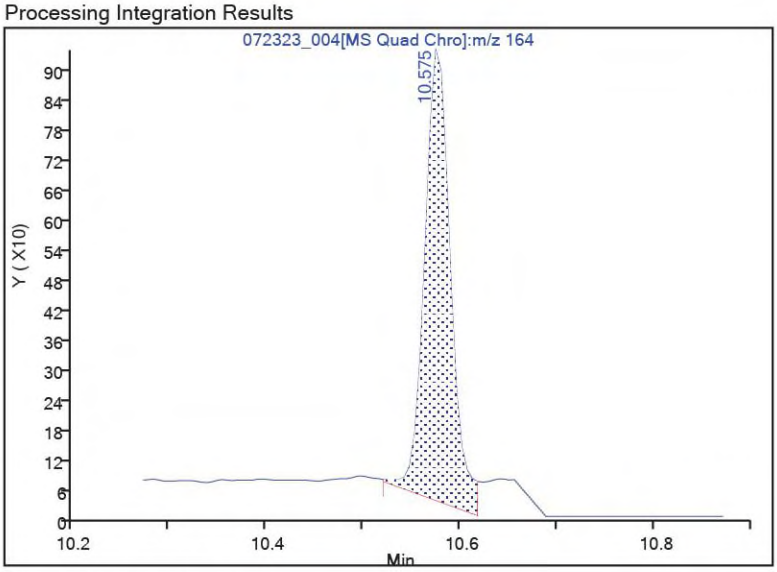
Data File:	\\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_004.D				
Injection Date:	23-Jul-2023 19:00:43	Instrument ID:	TAC048		
Lims ID:	IC 0.05				
Client ID:					
Operator ID:	AJ	ALS Bottle#:	0	Worklist Smp#:	4
Purge Vol:	10.000 mL	Dil. Factor:	1.0000		
Method:	8260_SIMAK_WATER	Limit Group:	8260C SIM QSM 5.0		
Column:	624-SIL-MS (0.25 mm)	Detector	MS SCAN		

21 Tetrachloroethene, CAS: 127-18-4

Signal: 1

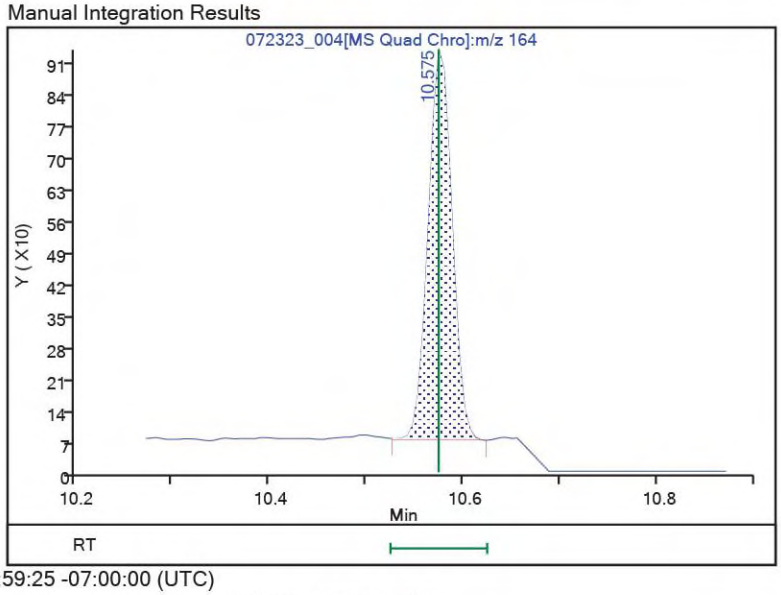
Processing Integration Results

RT: 10.57
Area: 1710
Amount: 0.050962
Amount Units: ug/L



Manual Integration Results

RT: 10.57
Area: 1505
Amount: 0.054412
Amount Units: ug/L



Reviewer: PHC3, 24-Jul-2023 09:59:25 -07:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Report Date: 25-Jul-2023 11:17:23 Chrom Revision: 2.3 24-Jul-2023 18:08:00

Manual Integration/User Assign Peak Report

Eurofins Seattle

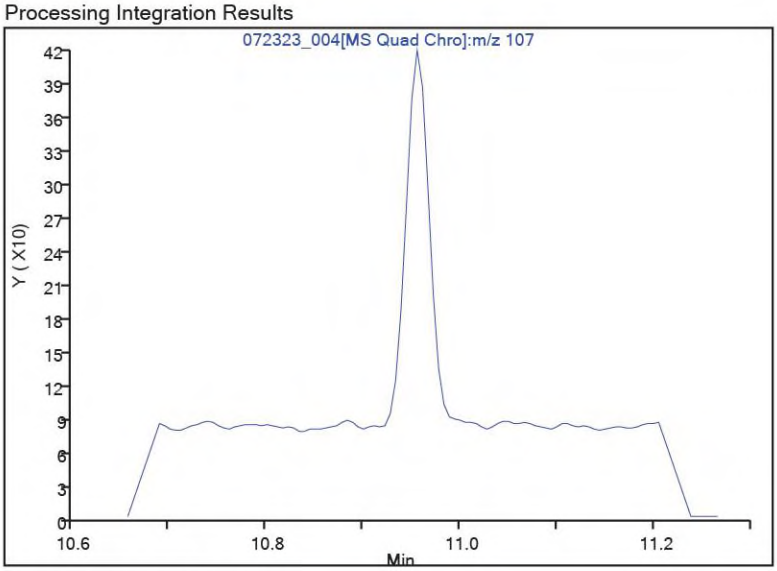
Data File:	\\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_004.D				
Injection Date:	23-Jul-2023 19:00:43	Instrument ID:	TAC048		
Lims ID:	IC 0.05				
Client ID:					
Operator ID:	AJ	ALS Bottle#:	0	Worklist Smp#:	4
Purge Vol:	10.000 mL	Dil. Factor:	1.0000		
Method:	8260_SIMAK_WATER	Limit Group:	8260C SIM QSM 5.0		
Column:	624-SIL-MS (0.25 mm)	Detector	MS SCAN		

24 Ethylene Dibromide, CAS: 106-93-4

Signal: 1

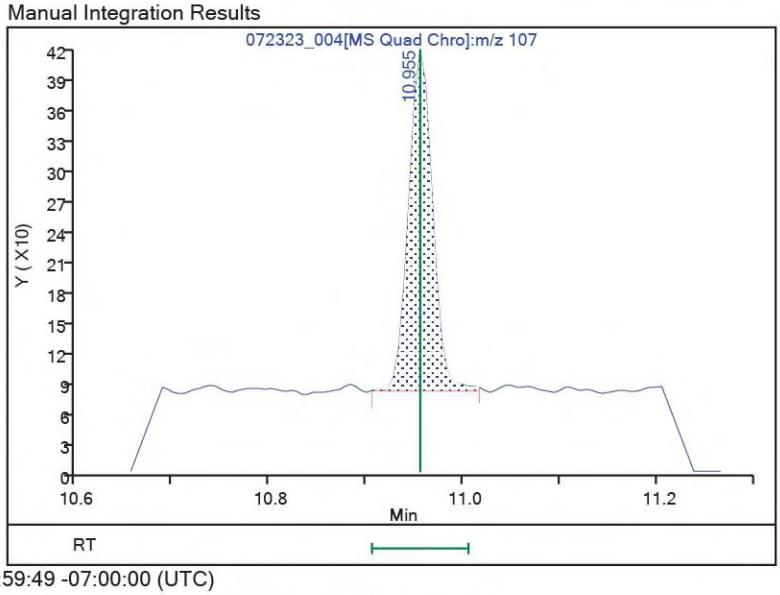
Not Detected
Expected RT: 10.96

Processing Integration Results



Manual Integration Results

RT: 10.96
Area: 577
Amount: 0.051529
Amount Units: ug/L



Reviewer: PHC3, 24-Jul-2023 09:59:49 -07:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Report Date: 25-Jul-2023 11:17:23 Chrom Revision: 2.3 24-Jul-2023 18:08:00

Manual Integration/User Assign Peak Report

Eurofins Seattle

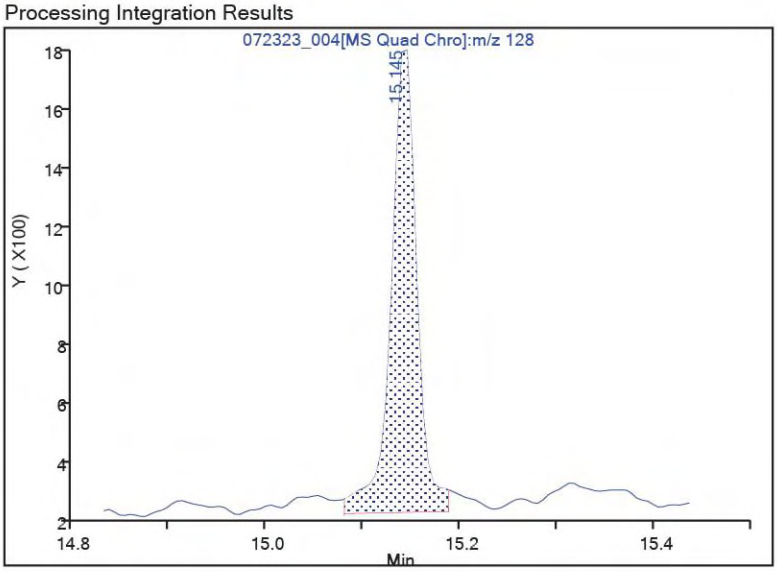
Data File:	\\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_004.D				
Injection Date:	23-Jul-2023 19:00:43	Instrument ID:	TAC048		
Lims ID:	IC 0.05				
Client ID:					
Operator ID:	AJ	ALS Bottle#:	0	Worklist Smp#:	4
Purge Vol:	10.000 mL	Dil. Factor:	1.0000		
Method:	8260_SIMAK_WATER	Limit Group:	8260C SIM QSM 5.0		
Column:	624-SIL-MS (0.25 mm)	Detector	MS SCAN		

33 Naphthalene, CAS: 91-20-3

Signal: 1

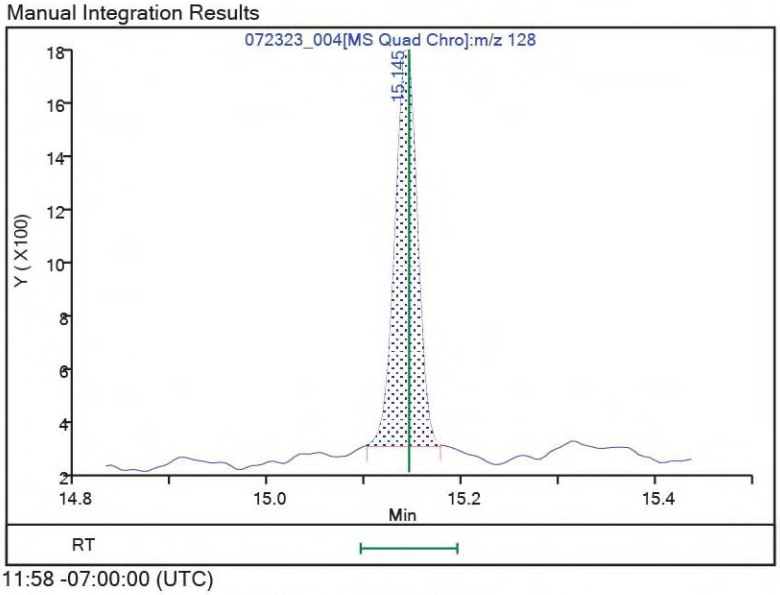
Processing Integration Results

RT: 15.14
Area: 2783
Amount: 0.056601
Amount Units: ug/L



Manual Integration Results

RT: 15.14
Area: 2275
Amount: 0.054583
Amount Units: ug/L



Reviewer: PHC3, 24-Jul-2023 10:11:58 -07:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Report Date: 25-Jul-2023 11:17:26 Chrom Revision: 2.3 24-Jul-2023 18:08:00

Eurofins Seattle
Target Compound Quantitation Report

Data File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_005.D
Lims ID: IC 0.1
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 23-Jul-2023 19:26:49 ALS Bottle#: 0 Worklist Smp#: 5
Purge Vol: 10.000 mL Dil. Factor: 1.0000
Sample Info: 0.1
Operator ID: AJ Instrument ID: TAC048
Sublist: chrom-8260_SIMAK_WATER*sub3

Method: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\8260_SIMAK_WATER.m
Limit Group: 8260C SIM QSM 5.0
Last Update: 25-Jul-2023 11:17:26 Calib Date: 23-Jul-2023 22:02:46
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_011.D

Column 1 : 624-SIL-MS (0.25 mm) Det: MS SCAN
Process Host: CTX1617

First Level Reviewer: PHC3 Date: 24-Jul-2023 09:57:47

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
2 Vinyl chloride	62	1.799	1.799	0.000	100	4039	0.1000	0.0821	M
1 Butadiene	54	1.838	1.838	0.000	96	3520	0.1000	0.0880	M
3 Bromomethane	94	2.157	2.157	0.000	98	3551	0.1000	0.1042	
4 1,1-Dichloroethene	96	3.252	3.252	0.000	79	3545	0.1000	0.0923	
6 Isopropyl alcohol	45	3.607	3.607	0.000	100	431	1.00	1.05	a
7 cis-1,2-Dichloroethene	96	6.429	6.429	0.000	86	4245	0.1000	0.1011	
8 Chloroform	83	7.046	7.046	0.000	99	6330	0.1000	0.1006	
$ 9 Dibromofluoromethane (Surr)	113	7.300	7.300	0.000	100	279849	10.0	9.86	
$ 10 1,2-Dichloroethane-d4 (Surr)	65	7.784	7.784	0.000	100	207109	10.0	10.1	
11 Benzene	78	7.789	7.789	0.000	100	14375	0.1000	0.1009	
12 1,2-Dichloroethane	62	7.893	7.893	0.000	99	3060	0.1000	0.1193	
* 13 Fluorobenzene (IS)	96	8.231	8.231	0.000	100	1339200	10.0	10.0	
14 Trichloroethene	132	8.683	8.683	0.000	98	4152	0.1000	0.1043	
15 Dibromomethane	174	9.078	9.078	0.000	91	1328	0.1000	0.1074	
16 Dichlorobromomethane	83	9.300	9.300	0.000	100	3047	0.1000	0.0995	
17 cis-1,3-Dichloropropene	75	9.763	9.763	0.000	95	2977	0.1000	0.0944	
$ 18 Toluene-d8 (Surr)	98	10.020	10.020	0.000	99	1131835	10.0	9.91	
19 trans-1,3-Dichloropropene	75	10.337	10.337	0.000	65	2124	0.1000	0.1015	
20 1,1,2-Trichloroethane	97	10.515	10.515	0.000	78	1250	0.1000	0.0971	
21 Tetrachloroethene	164	10.575	10.575	0.000	80	2922	0.1000	0.1010	M
22 2-Hexanone	58	10.727	10.727	0.000	94	1100	0.5000	0.4946	M
23 Chlorodibromomethane	129	10.861	10.861	0.000	89	1363	0.1000	0.0939	M
24 Ethylene Dibromide	107	10.955	10.955	0.000	95	1176	0.1000	0.1004	a
* 25 Chlorobenzene-d5	117	11.371	11.371	0.000	98	781020	10.0	10.0	
26 1,1,1,2-Tetrachloroethane	131	11.481	11.481	0.000	99	2554	0.1000	0.0917	
27 Bromoform	173	12.107	12.107	0.000	98	686	0.1000	0.0973	
$ 28 4-Bromofluorobenzene (Surr)	174	12.390	12.390	0.000	88	289110	10.0	10.0	
29 1,1,2,2-Tetrachloroethane	83	12.507	12.507	0.000	91	1333	0.1000	0.1021	
* 30 1,4-Dichlorobenzene-d4	152	13.344	13.344	0.000	99	397681	10.0	10.0	
31 1,4-Dichlorobenzene	146	13.367	13.367	0.000	76	6664	0.1000	0.1058	a
32 Hexachlorobutadiene	225	15.037	15.037	0.000	93	2458	0.1000	0.1035	

Report Date: 25-Jul-2023 11:17:26 Chrom Revision: 2.3 24-Jul-2023 18:08:00
Data File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_005.D

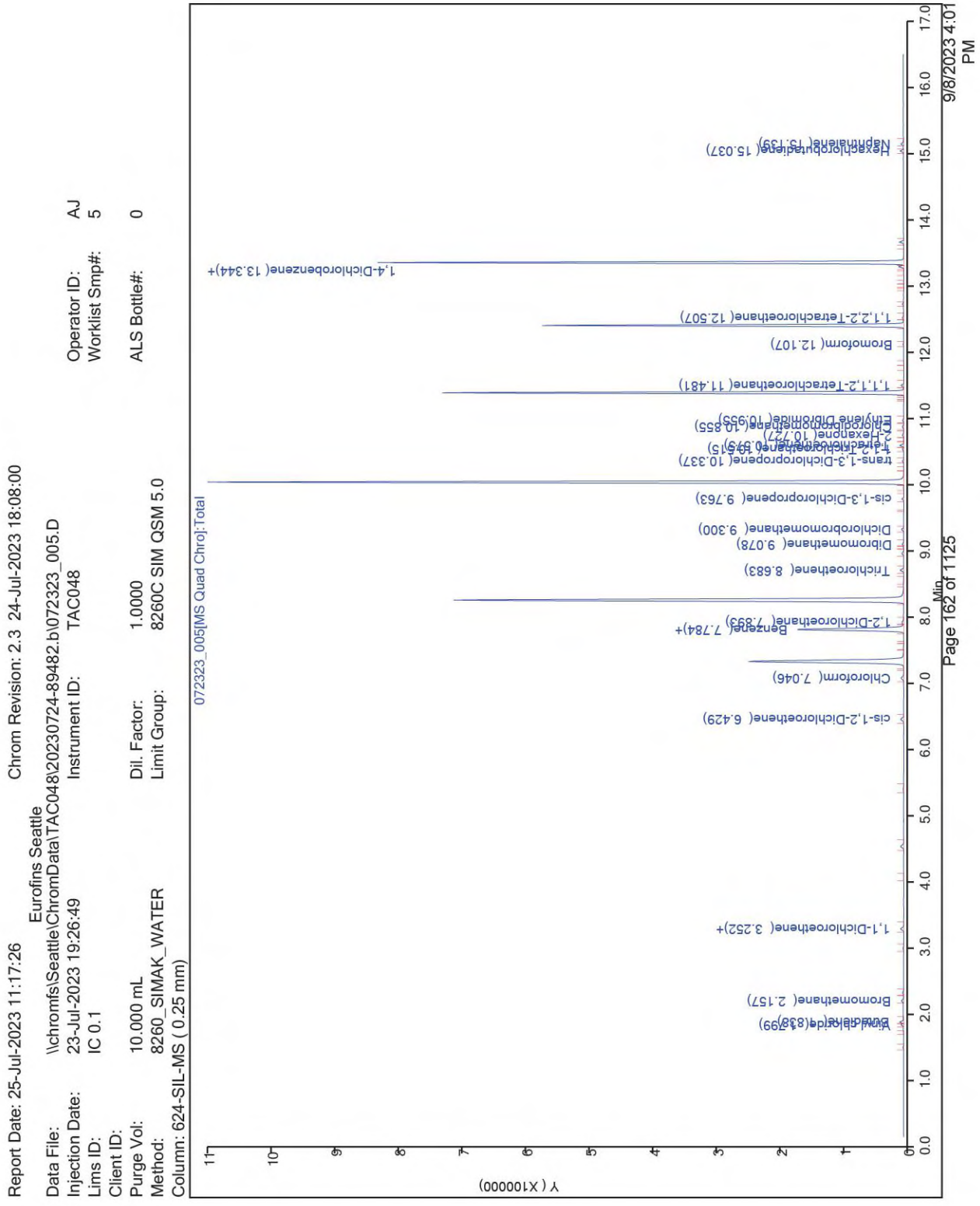
Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
33 Naphthalene	128	15.139	15.139	0.000	98	4181	0.1000	0.0980	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

VOASTDGASweek_00145	Amount Added:	0.10	Units: uL	
VOAMasterMix_00104	Amount Added:	0.10	Units: uL	
5X SUR/IS_00028	Amount Added:	2.00	Units: uL	Run Reagent


Report Date: 25-Jul-2023 11:17:26
Chrom Revision: 2.3 24-Jul-2023 18:08:00
Eurofins Seattle
Data File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_005.D
Injection Date: 23-Jul-2023 19:26:49
Instrument ID: TAC048
Lims ID: IC 0.1
Client ID:
Purge Vol: 10.000 mL
Dil. Factor: 1.0000
Method: 8260_SIMAK_WATER
Limit Group: 8260C SIM QSM 5.0
Column: 624-SIL-MS (0.25 mm)
Operator ID: AJ
Worklist Smp#: 5
ALS Bottle#: 0
072323_005[MS Quad Chro]:Total
Vinyl chloride(1.799)
Bromomethane(2.157)
1,1-Dichloroethene(3.252)+
cis-1,2-Dichloroethene(6.429)
Chloroform(7.046)
Benzene(7.784)+
1,2-Dichloroethane(7.893)
Trichloroethene(8.683)
Dibromomethane(9.078)
Dichloromethane(9.300)
cis-1,3-Dichloropropene(9.763)
trans-1,3-Dichloropropene(10.337)
2-Hexanone(10.727)
Chlorodibromomethane(10.855)
Ethylene Dibromide(10.955)
1,1,1,2-Tetrachloroethane(11.481)
Bromoform(12.107)
1,1,2,2-Tetrachloroethane(12.507)
1,4-Dichlorobenzene(13.344)+
Hexachlorobutadiene(15.037)
Naphthalene(15.159)
Y (X100000)
Min
9/8/2023 4:01 PM
Page 162 of 1125

Report Date: 25-Jul-2023 11:17:26 Chrom Revision: 2.3 24-Jul-2023 18:08:00

Manual Integration/User Assign Peak Report

Eurofins Seattle

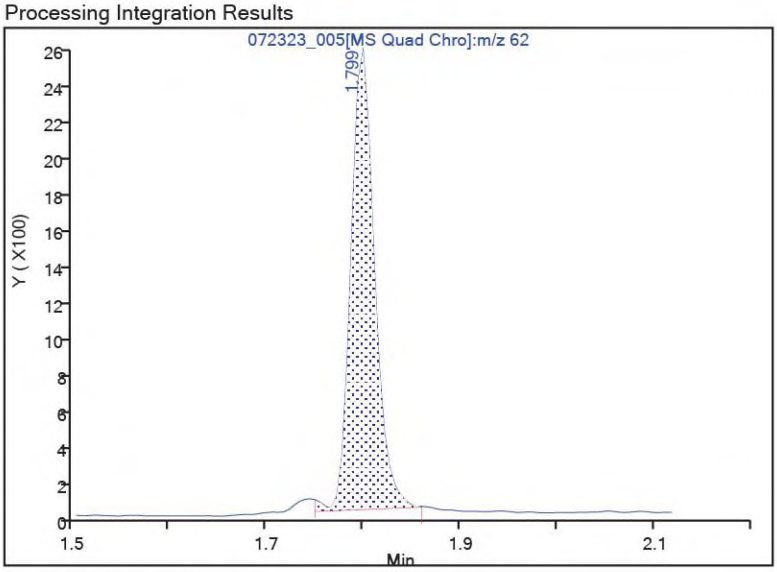
Data File:	\\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_005.D				
Injection Date:	23-Jul-2023 19:26:49	Instrument ID:	TAC048		
Lims ID:	IC 0.1				
Client ID:					
Operator ID:	AJ	ALS Bottle#:	0	Worklist Smp#:	5
Purge Vol:	10.000 mL	Dil. Factor:	1.0000		
Method:	8260_SIMAK_WATER	Limit Group:	8260C SIM QSM 5.0		
Column:	624-SIL-MS (0.25 mm)	Detector	MS SCAN		

2 Vinyl chloride, CAS: 75-01-4

Signal: 1

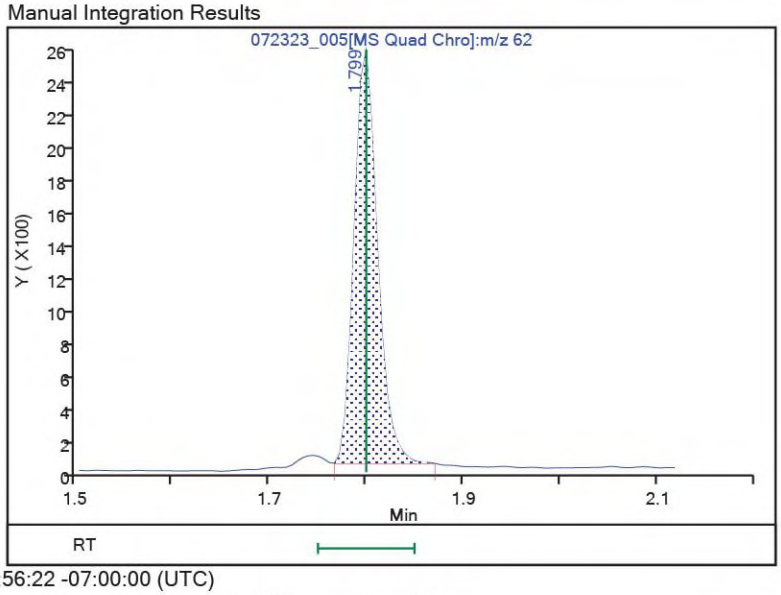
Processing Integration Results

RT: 1.80
Area: 4118
Amount: 0.083703
Amount Units: ug/L



Manual Integration Results

RT: 1.80
Area: 4039
Amount: 0.082113
Amount Units: ug/L



Reviewer: PHC3, 24-Jul-2023 09:56:22 -07:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Report Date: 25-Jul-2023 11:17:26 Chrom Revision: 2.3 24-Jul-2023 18:08:00

Manual Integration/User Assign Peak Report

Eurofins Seattle

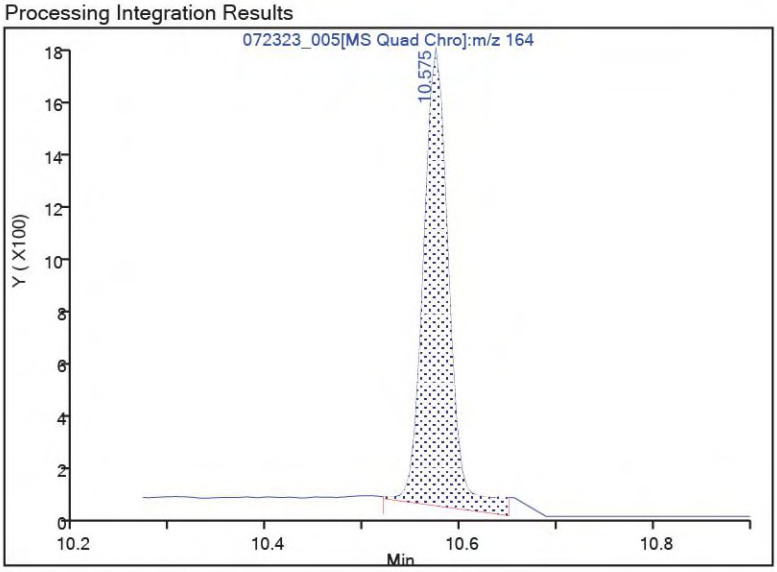
Data File:	\\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_005.D				
Injection Date:	23-Jul-2023 19:26:49	Instrument ID:	TAC048		
Lims ID:	IC 0.1				
Client ID:					
Operator ID:	AJ	ALS Bottle#:	0	Worklist Smp#:	5
Purge Vol:	10.000 mL	Dil. Factor:	1.0000		
Method:	8260_SIMAK_WATER	Limit Group:	8260C SIM QSM 5.0		
Column:	624-SIL-MS (0.25 mm)	Detector	MS SCAN		

21 Tetrachloroethene, CAS: 127-18-4

Signal: 1

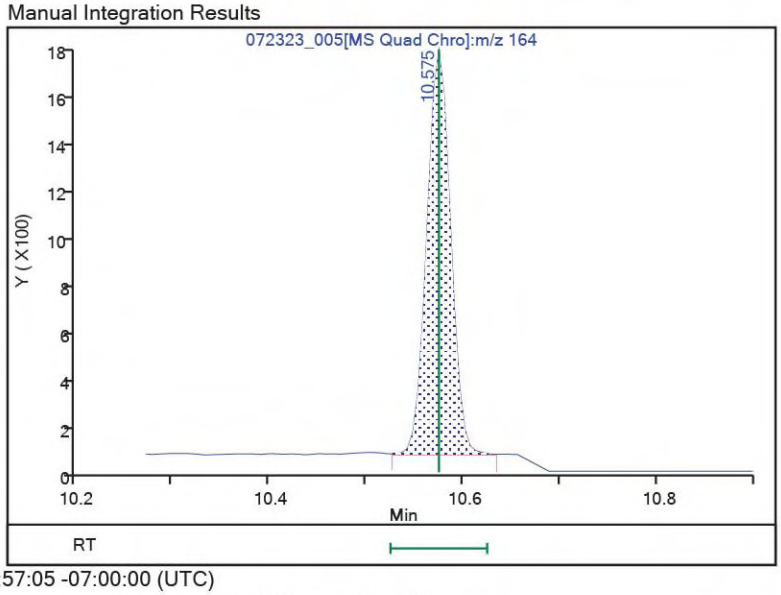
Processing Integration Results

RT: 10.57
Area: 3205
Amount: 0.090491
Amount Units: ug/L



Manual Integration Results

RT: 10.57
Area: 2922
Amount: 0.100979
Amount Units: ug/L



Reviewer: PHC3, 24-Jul-2023 09:57:05 -07:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Report Date: 25-Jul-2023 11:17:26 Chrom Revision: 2.3 24-Jul-2023 18:08:00

Manual Integration/User Assign Peak Report

Eurofins Seattle

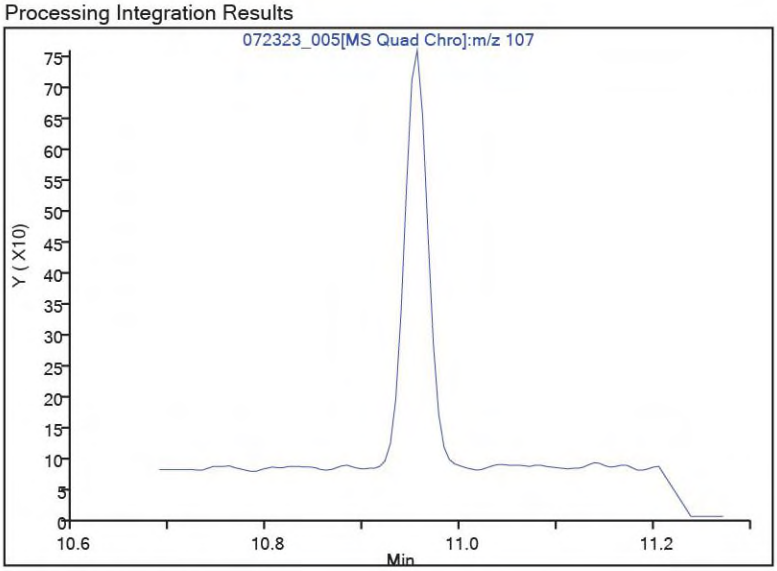
Data File:	\\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_005.D				
Injection Date:	23-Jul-2023 19:26:49	Instrument ID:	TAC048		
Lims ID:	IC 0.1				
Client ID:					
Operator ID:	AJ	ALS Bottle#:	0	Worklist Smp#:	5
Purge Vol:	10.000 mL	Dil. Factor:	1.0000		
Method:	8260_SIMAK_WATER	Limit Group:	8260C SIM QSM 5.0		
Column:	624-SIL-MS (0.25 mm)	Detector	MS SCAN		

24 Ethylene Dibromide, CAS: 106-93-4

Signal: 1

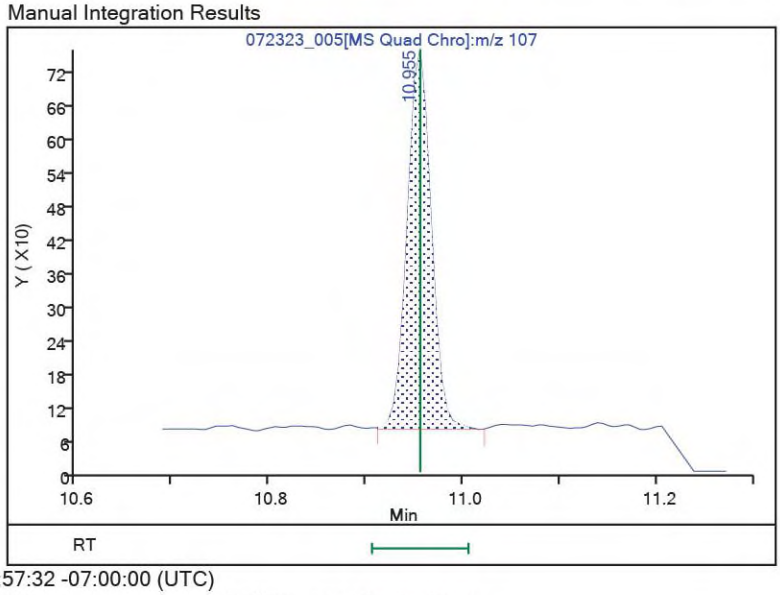
Not Detected
Expected RT: 10.96

Processing Integration Results



Manual Integration Results

RT: 10.96
Area: 1176
Amount: 0.100387
Amount Units: ug/L



Reviewer: PHC3, 24-Jul-2023 09:57:32 -07:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Report Date: 25-Jul-2023 11:17:29 Chrom Revision: 2.3 24-Jul-2023 18:08:00

Eurofins Seattle
Target Compound Quantitation Report

Data File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_006.D
Lims ID: IC 0.5
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 23-Jul-2023 19:52:56 ALS Bottle#: 0 Worklist Smp#: 6
Purge Vol: 10.000 mL Dil. Factor: 1.0000
Sample Info: 0.5
Operator ID: AJ Instrument ID: TAC048
Sublist: chrom-8260_SIMAK_WATER*sub3

Method: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\8260_SIMAK_WATER.m
Limit Group: 8260C SIM QSM 5.0
Last Update: 25-Jul-2023 11:17:28 Calib Date: 23-Jul-2023 22:02:46
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_011.D

Column 1 : 624-SIL-MS (0.25 mm) Det: MS SCAN
Process Host: CTX1617

First Level Reviewer: PHC3 Date: 24-Jul-2023 09:53:46

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
2 Vinyl chloride	62	1.805	1.805	0.000	100	21370	0.5000	0.5884	
1 Butadiene	54	1.843	1.843	0.000	97	18662	0.5000	0.5649	
3 Bromomethane	94	2.168	2.168	0.000	100	16592	0.5000	0.5897	
4 1,1-Dichloroethene	96	3.252	3.252	0.000	80	17232	0.5000	0.5435	
6 Isopropyl alcohol	45	3.613	3.613	0.000	100	1583	5.00	4.69	a
7 cis-1,2-Dichloroethene	96	6.429	6.429	0.000	85	17677	0.5000	0.5097	
8 Chloroform	83	7.052	7.052	0.000	99	26302	0.5000	0.5065	
$ 9 Dibromofluoromethane (Surr)	113	7.305	7.305	0.000	100	239575	10.0	10.2	
$ 10 1,2-Dichloroethane-d4 (Surr)	65	7.783	7.783	0.000	100	167283	10.0	9.89	
11 Benzene	78	7.789	7.789	0.000	100	57531	0.5000	0.4889	
12 1,2-Dichloroethane	62	7.898	7.898	0.000	100	10281	0.5000	0.4856	
* 13 Fluorobenzene (IS)	96	8.231	8.231	0.000	100	1105759	10.0	10.0	
14 Trichloroethene	132	8.688	8.688	0.000	99	16047	0.5000	0.4881	
15 Dibromomethane	174	9.078	9.078	0.000	93	4964	0.5000	0.4863	
16 Dichlorobromomethane	83	9.300	9.300	0.000	100	11595	0.5000	0.4587	
17 cis-1,3-Dichloropropene	75	9.762	9.762	0.000	95	10695	0.5000	0.4449	
$ 18 Toluene-d8 (Surr)	98	10.020	10.020	0.000	99	879075	10.0	10.1	
19 trans-1,3-Dichloropropene	75	10.336	10.336	0.000	66	6901	0.5000	0.4330	
20 1,1,2-Trichloroethane	97	10.515	10.515	0.000	78	4607	0.5000	0.4696	
21 Tetrachloroethene	164	10.574	10.574	0.000	80	11425	0.5000	0.5182	M
22 2-Hexanone	58	10.727	10.727	0.000	96	3964	2.50	2.34	M
23 Chlorodibromomethane	129	10.861	10.861	0.000	90	5129	0.5000	0.4638	
24 Ethylene Dibromide	107	10.955	10.955	0.000	96	4189	0.5000	0.4694	
* 25 Chlorobenzene-d5	117	11.371	11.371	0.000	98	595027	10.0	10.0	
26 1,1,1,2-Tetrachloroethane	131	11.481	11.481	0.000	98	11024	0.5000	0.5194	
27 Bromoform	173	12.107	12.107	0.000	98	2519	0.5000	0.4688	
$ 28 4-Bromofluorobenzene (Surr)	174	12.390	12.390	0.000	88	223531	10.0	10.2	
29 1,1,2,2-Tetrachloroethane	83	12.507	12.507	0.000	91	4971	0.5000	0.4709	
* 30 1,4-Dichlorobenzene-d4	152	13.344	13.344	0.000	99	321562	10.0	10.0	
31 1,4-Dichlorobenzene	146	13.366	13.366	0.000	76	25243	0.5000	0.4958	a
32 Hexachlorobutadiene	225	15.036	15.036	0.000	93	10128	0.5000	0.5276	

Report Date: 25-Jul-2023 11:17:29 Chrom Revision: 2.3 24-Jul-2023 18:08:00
Data File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_006.D

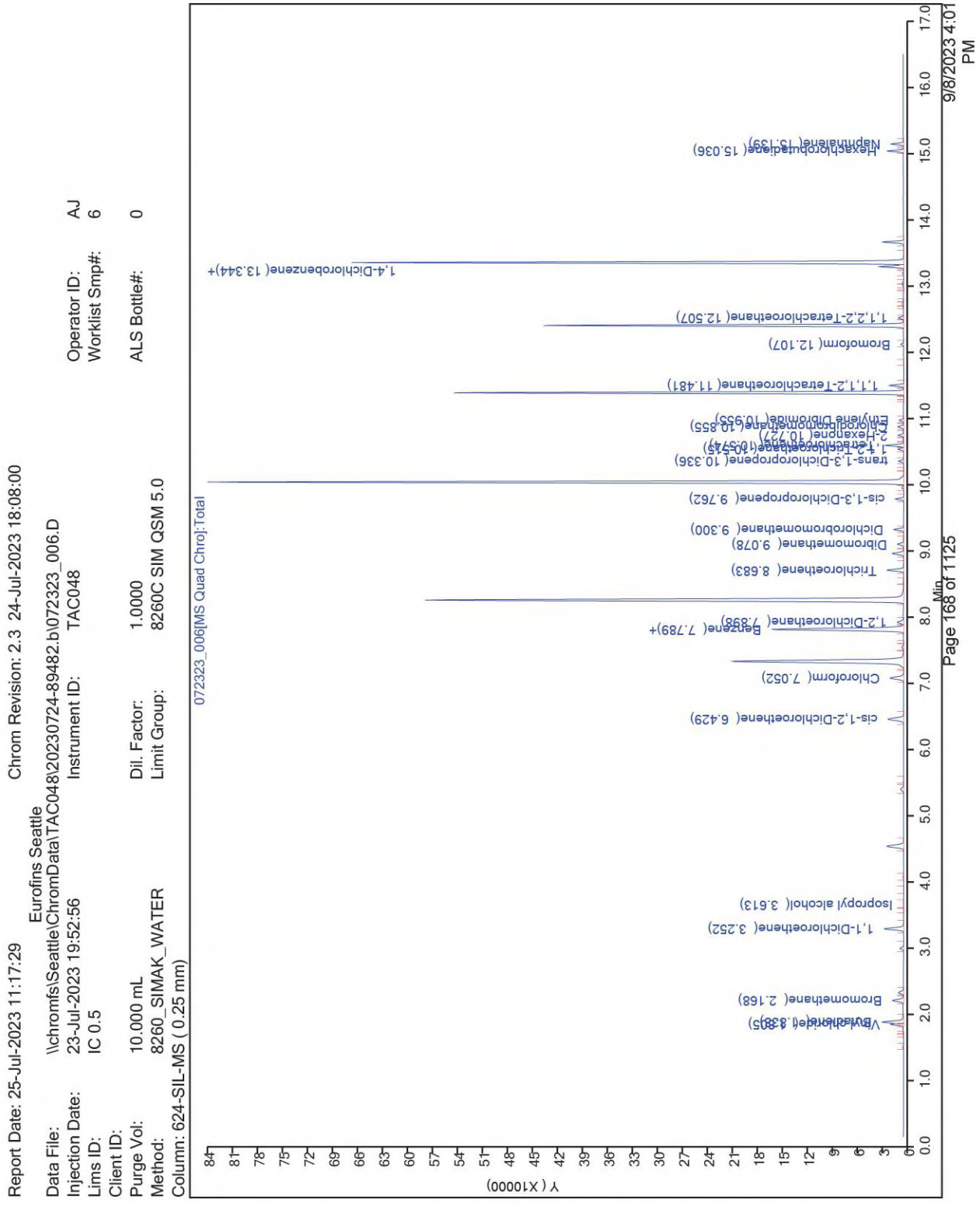
Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
33 Naphthalene	128	15.139	15.139	0.000	98	17705	0.5000	0.5133	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

VOASTDGASweek_00145	Amount Added: 0.50	Units: uL	
VOAMasterMix_00104	Amount Added: 0.50	Units: uL	
5X SUR/IS_00028	Amount Added: 2.00	Units: uL	Run Reagent


Report Date: 25-Jul-2023 11:17:29
Chrom Revision: 2.3 24-Jul-2023 18:08:00
Eurofins Seattle
Data File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_006.D
Injection Date: 23-Jul-2023 19:52:56
Instrument ID: TAC048
Lims ID: IC 0.5
Client ID:
Purge Vol: 10.000 mL
Dil. Factor: 1.0000
Method: 8260_SIMAK_WATER
Limit Group: 8260C SIM QSM 5.0
Column: 624-SIL-MS (0.25 mm)
Operator ID: AJ
Worklist Smp#: 6
ALS Bottle#: 0
072323_006[MS Quad Chro]:Total
Y (X10000)
Min
Hexachlorobutadiene(15.036)
Naphthalene(15.139)
1,4-Dichlorobenzene(13.344)+
1,1,2,2-Tetrachloroethane(12.507)
Bromoform(12.107)
1,1,1,2-Tetrachloroethane(11.481)
Ethylene Dibromide(10.955)
trans-1,3-Dichloropropene(10.336)
cis-1,3-Dichloropropene(9.762)
Dibromomethane(9.078)
Dichlorobromomethane(9.300)
Trichloroethene(8.683)
1,2-Dichloroethane(7.898)
Benzene(7.789)+
Chloroform(7.052)
cis-1,2-Dichloroethene(6.429)
1,1-Dichloroethene(3.252)
Isopropyl alcohol(3.613)
Bromomethane(2.168)
Vinyl chloride(1.835)
Page 168 of 1125
9/8/2023 4:01 PM

Report Date: 25-Jul-2023 11:17:29 Chrom Revision: 2.3 24-Jul-2023 18:08:00

Manual Integration/User Assign Peak Report

Eurofins Seattle

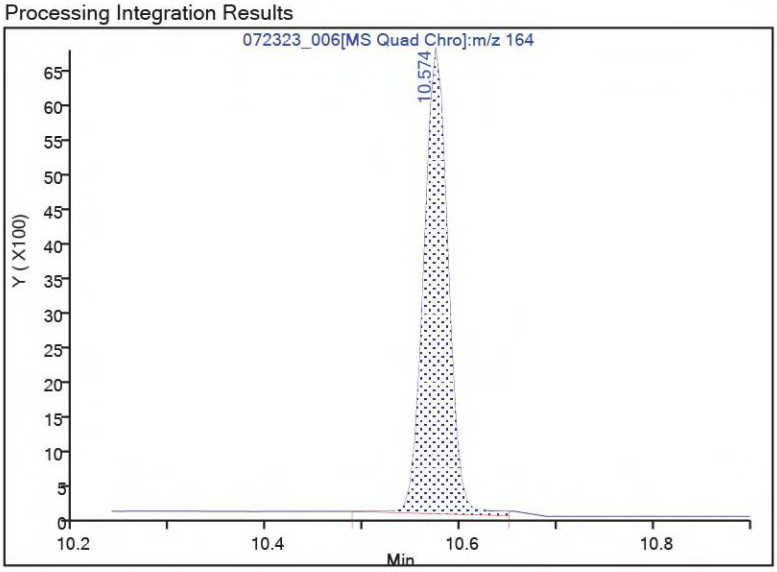
Data File:	\\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_006.D				
Injection Date:	23-Jul-2023 19:52:56	Instrument ID:	TAC048		
Lims ID:	IC 0.5				
Client ID:					
Operator ID:	AJ	ALS Bottle#:	0	Worklist Smp#:	6
Purge Vol:	10.000 mL	Dil. Factor:	1.0000		
Method:	8260_SIMAK_WATER	Limit Group:	8260C SIM QSM 5.0		
Column:	624-SIL-MS (0.25 mm)	Detector	MS SCAN		

21 Tetrachloroethene, CAS: 127-18-4

Signal: 1

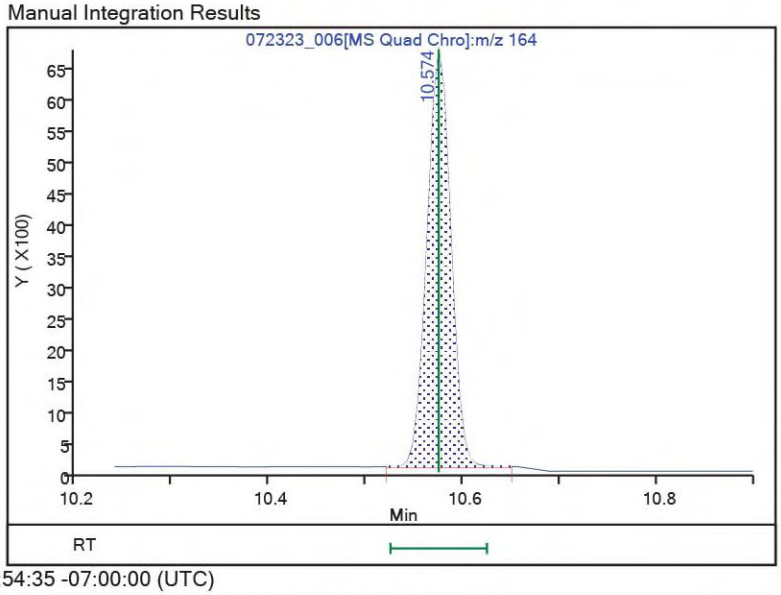
Processing Integration Results

RT: 10.57
Area: 11778
Amount: 0.435226
Amount Units: ug/L



Manual Integration Results

RT: 10.57
Area: 11425
Amount: 0.518243
Amount Units: ug/L



Reviewer: PHC3, 24-Jul-2023 09:54:35 -07:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Report Date: 25-Jul-2023 11:17:31 Chrom Revision: 2.3 24-Jul-2023 18:08:00

Eurofins Seattle
Target Compound Quantitation Report

Data File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_007.D
Lims ID: IC 1.0
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 23-Jul-2023 20:18:49 ALS Bottle#: 0 Worklist Smp#: 7
Purge Vol: 10.000 mL Dil. Factor: 1.0000
Sample Info: 1
Operator ID: AJ Instrument ID: TAC048
Sublist: chrom-8260_SIMAK_WATER*sub3

Method: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\8260_SIMAK_WATER.m
Limit Group: 8260C SIM QSM 5.0
Last Update: 25-Jul-2023 11:17:31 Calib Date: 23-Jul-2023 22:02:46
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_011.D

Column 1 : 624-SIL-MS (0.25 mm) Det: MS SCAN
Process Host: CTX1617

First Level Reviewer: PHC3 Date: 24-Jul-2023 09:53:03

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
2 Vinyl chloride	62	1.799	1.799	0.000	100	43385	1.00	1.02	
1 Butadiene	54	1.843	1.843	0.000	97	37546	1.00	0.9604	
3 Bromomethane	94	2.162	2.162	0.000	100	32702	1.00	0.9822	
4 1,1-Dichloroethene	96	3.251	3.251	0.000	80	36410	1.00	0.9706	
6 Isopropyl alcohol	45	3.607	3.607	0.000	100	3649	10.0	9.14	
7 cis-1,2-Dichloroethene	96	6.428	6.428	0.000	85	40805	1.00	0.99	
8 Chloroform	83	7.046	7.046	0.000	100	61048	1.00	0.99	
$ 9 Dibromofluoromethane (Surr)	113	7.305	7.305	0.000	100	277346	10.0	10.0	
$ 10 1,2-Dichloroethane-d4 (Surr)	65	7.783	7.783	0.000	100	200001	10.0	10.0	
11 Benzene	78	7.789	7.789	0.000	100	137109	1.00	0.9848	
12 1,2-Dichloroethane	62	7.892	7.892	0.000	100	24773	1.00	0.9888	
* 13 Fluorobenzene (IS)	96	8.231	8.231	0.000	100	1308392	10.0	10.0	
14 Trichloroethene	132	8.688	8.688	0.000	99	37274	1.00	0.9583	
15 Dibromomethane	174	9.078	9.078	0.000	92	11896	1.00	0.9850	
16 Dichlorobromomethane	83	9.299	9.299	0.000	100	28257	1.00	0.9447	
17 cis-1,3-Dichloropropene	75	9.762	9.762	0.000	95	27701	1.00	0.9167	
$ 18 Toluene-d8 (Surr)	98	10.020	10.020	0.000	99	1093063	10.0	10.0	
19 trans-1,3-Dichloropropene	75	10.336	10.336	0.000	65	18242	1.00	0.9104	
20 1,1,2-Trichloroethane	97	10.515	10.515	0.000	78	11752	1.00	0.9528	
21 Tetrachloroethene	164	10.574	10.574	0.000	80	27334	1.00	0.9862	
22 2-Hexanone	58	10.727	10.727	0.000	98	10490	5.00	4.92	M
23 Chlorodibromomethane	129	10.861	10.861	0.000	91	13140	1.00	0.9452	
24 Ethylene Dibromide	107	10.955	10.955	0.000	95	10671	1.00	0.9510	
* 25 Chlorobenzene-d5	117	11.371	11.371	0.000	97	748068	10.0	10.0	
26 1,1,1,2-Tetrachloroethane	131	11.481	11.481	0.000	99	25505	1.00	0.9559	
27 Bromoform	173	12.107	12.107	0.000	98	6141	1.00	0.9091	
$ 28 4-Bromofluorobenzene (Surr)	174	12.390	12.390	0.000	89	280068	10.0	10.2	
29 1,1,2,2-Tetrachloroethane	83	12.507	12.507	0.000	91	12100	1.00	0.9456	
* 30 1,4-Dichlorobenzene-d4	152	13.344	13.344	0.000	99	389841	10.0	10.0	
31 1,4-Dichlorobenzene	146	13.366	13.366	0.000	79	59753	1.00	0.9680	a
32 Hexachlorobutadiene	225	15.036	15.036	0.000	93	22112	1.00	0.9502	

Report Date: 25-Jul-2023 11:17:31 Chrom Revision: 2.3 24-Jul-2023 18:08:00
Data File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_007.D

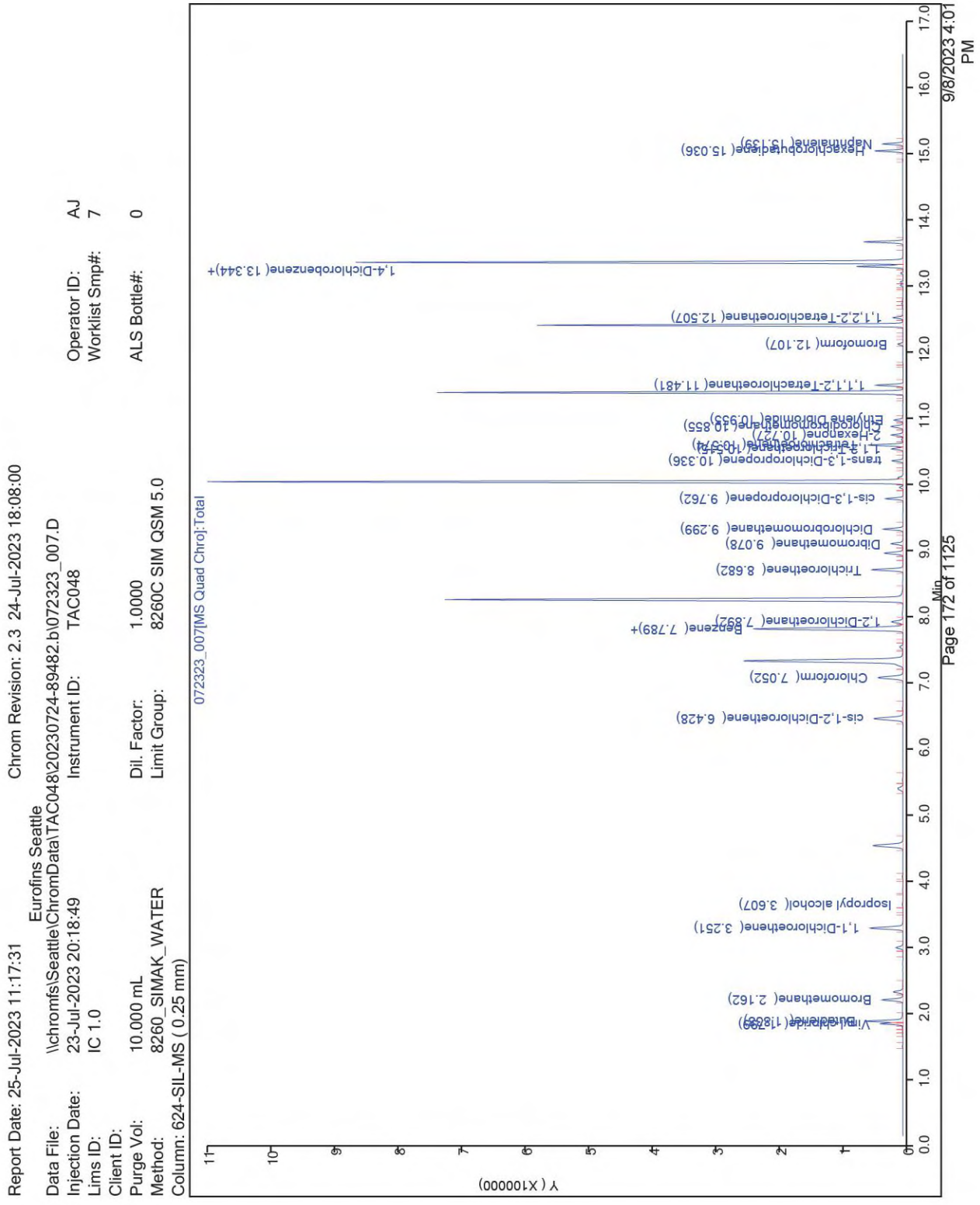
Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
33 Naphthalene	128	15.139	15.139	0.000	98	36022	1.00	0.8615	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

VOASTDGASweek_00145	Amount Added:	1.00	Units: uL	
VOAMasterMix_00104	Amount Added:	1.00	Units: uL	
5X SUR/IS_00028	Amount Added:	2.00	Units: uL	Run Reagent


Report Date: 25-Jul-2023 11:17:31
Chrom Revision: 2.3 24-Jul-2023 18:08:00
Eurofins Seattle
Data File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_007.D
Injection Date: 23-Jul-2023 20:18:49
Instrument ID: TAC048
Operator ID: AJ
Lims ID: IC 1.0
Worklist Smp#: 7
Client ID:
Purge Vol: 10.000 mL
Dil. Factor: 1.0000
ALS Bottle#: 0
Method: 8260_SIMAK_WATER
Limit Group: 8260C SIM QSM 5.0
Column: 624-SIL-MS (0.25 mm)
072323_007[MS Quad Chro]:Total
Y (X100000)
Min
9/8/2023 4:01 PM
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Vinyl chloride(1.829)
Butadiene(1.829)
Bromomethane(2.162)
1,1-Dichloroethene(3.251)
Isopropyl alcohol(3.607)
cis-1,2-Dichloroethene(6.428)
Chloroform(7.052)
Benzene(7.789)+
1,2-Dichloroethane(7.892)
Trichloroethene(8.682)
Dibromomethane(9.078)
Dichlorobromomethane(9.299)
cis-1,3-Dichloropropene(9.762)
trans-1,3-Dichloropropene(10.336)
1,1,2-Trichloroethane(10.545)
2-Hexanone(10.727)
Dibromochloromethane(10.855)
Ethylene Dibromide(10.955)
1,1,1,2-Tetrachloroethane(11.481)
Bromoform(12.107)
1,1,2,2-Tetrachloroethane(12.507)
1,4-Dichlorobenzene(13.344)+
Naphthalene(13.739)
Hexachlorobutadiene(15.036)

Report Date: 25-Jul-2023 11:17:17 Chrom Revision: 2.3 24-Jul-2023 18:08:00

Eurofins Seattle
Target Compound Quantitation Report

Data File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_008.D
Lims ID: ICIS 5.0
Client ID:
Sample Type: ICIS Calib Level: 6
Inject. Date: 23-Jul-2023 20:44:44 ALS Bottle#: 0 Worklist Smp#: 8
Purge Vol: 10.000 mL Dil. Factor: 1.0000
Sample Info: 5
Operator ID: AJ Instrument ID: TAC048
Sublist: chrom-8260_SIMAK_WATER*sub3

Method: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\8260_SIMAK_WATER.m
Limit Group: 8260C SIM QSM 5.0
Last Update: 25-Jul-2023 11:17:17 Calib Date: 23-Jul-2023 22:02:46
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_011.D

Column 1 : 624-SIL-MS (0.25 mm) Det: MS SCAN
Process Host: CTX1617

First Level Reviewer: PHC3 Date: 24-Jul-2023 10:33:18

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
2 Vinyl chloride	62	1.794	1.794	0.000	100	232348	5.00	5.10	
1 Butadiene	54	1.838	1.838	0.000	97	209009	5.00	4.96	
3 Bromomethane	94	2.157	2.157	0.000	100	168041	5.00	4.68	
4 1,1-Dichloroethene	96	3.246	3.246	0.000	83	194486	5.00	4.81	
6 Isopropyl alcohol	45	3.596	3.596	0.000	100	19999	50.0	46.4	
7 cis-1,2-Dichloroethene	96	6.423	6.423	0.000	85	215333	5.00	4.86	
8 Chloroform	83	7.046	7.046	0.000	100	322532	5.00	4.86	
$ 9 Dibromofluoromethane (Surr)	113	7.300	7.300	0.000	100	294161	10.0	9.84	
$ 10 1,2-Dichloroethane-d4 (Surr)	65	7.784	7.784	0.000	100	213599	10.0	9.89	
11 Benzene	78	7.789	7.789	0.000	100	740634	5.00	4.93	
12 1,2-Dichloroethane	62	7.893	7.893	0.000	99	130168	5.00	4.82	
* 13 Fluorobenzene (IS)	96	8.231	8.231	0.000	100	1411610	10.0	10.0	
14 Trichloroethene	132	8.683	8.683	0.000	99	205347	5.00	4.89	
15 Dibromomethane	174	9.078	9.078	0.000	92	62661	5.00	4.81	
16 Dichlorobromomethane	83	9.300	9.300	0.000	99	158881	5.00	4.92	
17 cis-1,3-Dichloropropene	75	9.762	9.762	0.000	95	165015	5.00	4.79	
$ 18 Toluene-d8 (Surr)	98	10.015	10.015	0.000	99	1233031	10.0	9.90	
19 trans-1,3-Dichloropropene	75	10.331	10.331	0.000	65	110243	5.00	4.83	
20 1,1,2-Trichloroethane	97	10.515	10.515	0.000	77	67371	5.00	4.79	
21 Tetrachloroethene	164	10.575	10.575	0.000	80	153202	5.00	4.85	
22 2-Hexanone	58	10.727	10.727	0.000	98	63449	25.0	26.1	
23 Chlorodibromomethane	129	10.861	10.861	0.000	90	78897	5.00	4.98	
24 Ethylene Dibromide	107	10.955	10.955	0.000	96	61774	5.00	4.83	
* 25 Chlorobenzene-d5	117	11.371	11.371	0.000	97	852325	10.0	10.0	
26 1,1,1,2-Tetrachloroethane	131	11.481	11.481	0.000	99	146350	5.00	4.81	
27 Bromoform	173	12.107	12.107	0.000	98	37857	5.00	4.92	
$ 28 4-Bromofluorobenzene (Surr)	174	12.390	12.390	0.000	89	319753	10.0	10.2	
29 1,1,2,2-Tetrachloroethane	83	12.507	12.507	0.000	92	69405	5.00	4.92	
* 30 1,4-Dichlorobenzene-d4	152	13.344	13.344	0.000	98	429698	10.0	10.0	
31 1,4-Dichlorobenzene	146	13.361	13.361	0.000	82	335620	5.00	4.93	
32 Hexachlorobutadiene	225	15.031	15.031	0.000	92	119316	5.00	4.65	

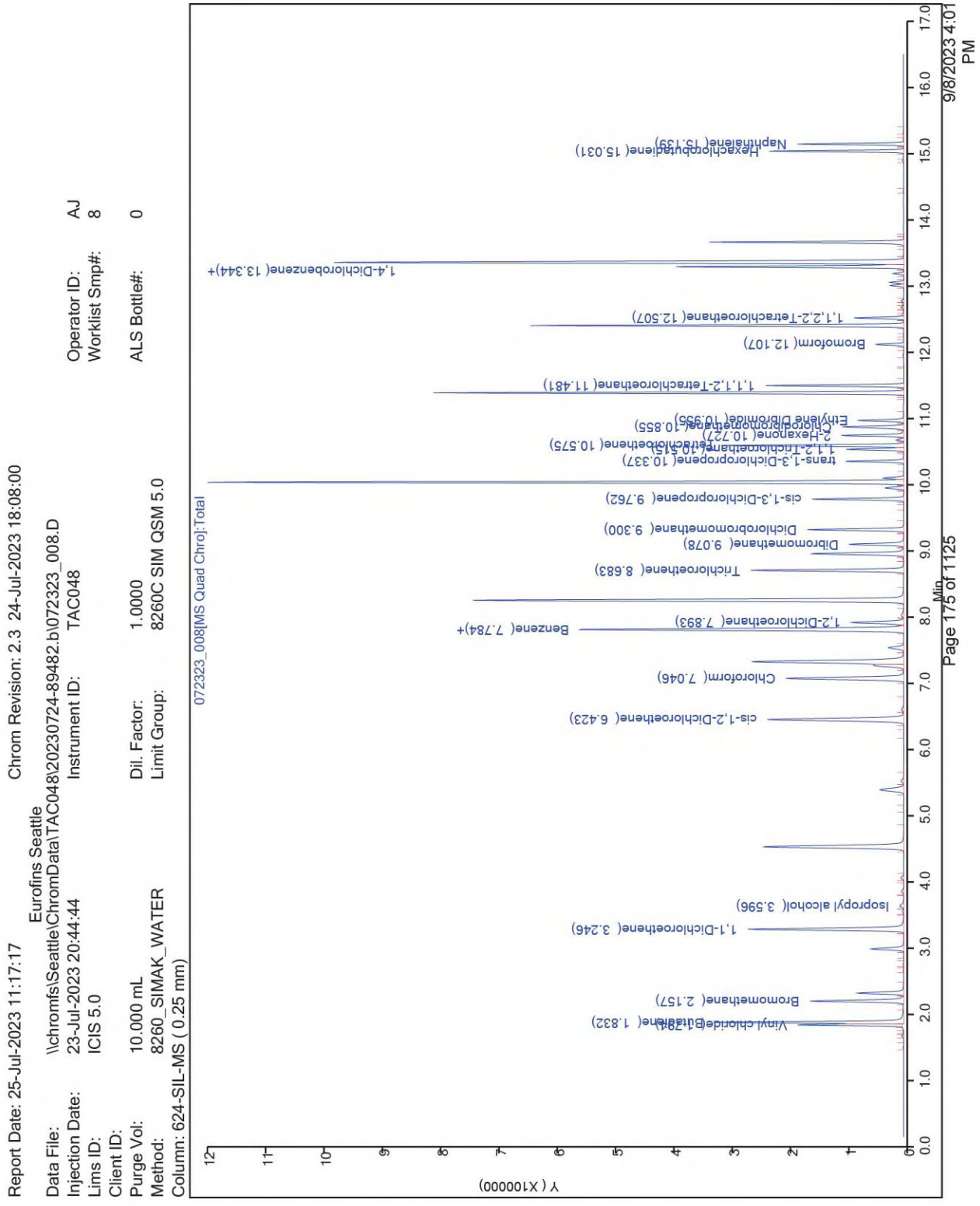
Report Date: 25-Jul-2023 11:17:17 Chrom Revision: 2.3 24-Jul-2023 18:08:00
Data File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_008.D

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
33 Naphthalene	128	15.139	15.139	0.000	98	208402	5.00	4.52	

QC Flag Legend
Processing Flags

Reagents:

VOASTDGASweek_00145	Amount Added:	5.00	Units: uL	
VOAMasterMix_00104	Amount Added:	5.00	Units: uL	
5X SUR/IS_00028	Amount Added:	2.00	Units: uL	Run Reagent


Report Date: 25-Jul-2023 11:17:17
Chrom Revision: 2.3 24-Jul-2023 18:08:00
Eurofins Seattle
Data File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_008.D
Injection Date: 23-Jul-2023 20:44:44
Instrument ID: TAC048
Operator ID: AJ
Lims ID: ICIS 5.0
Worklist Smp#: 8
Client ID:
Purge Vol: 10.000 mL
Dil. Factor: 1.0000
ALS Bottle#: 0
Method: 8260_SIMAK_WATER
Limit Group: 8260C SIM QSM 5.0
Column: 624-SIL-MS (0.25 mm)
072323_008[MS Quad Chro]:Total
Vinyl chloride(1.789)
Butadiene(1.832)
Bromomethane(2.157)
1,1-Dichloroethene(3.246)
Isopropyl alcohol(3.596)
cis-1,2-Dichloroethene(6.423)
Chloroform(7.046)
Benzene(7.784)+
1,2-Dichloroethane(7.893)
Trichloroethene(8.683)
Dibromomethane(9.078)
Dichlorobromomethane(9.300)
cis-1,3-Dichloropropene(9.762)
trans-1,3-Dichloropropene(10.337)
1,1,2-Trichloroethane(10.515)
Tetrachloroethene(10.575)
2-Hexanone(10.727)
Chlorodibromomethane(10.855)
Ethylene Dibromide(10.955)
1,1,1,2-Tetrachloroethane(11.481)
Bromoform(12.107)
1,1,2,2-Tetrachloroethane(12.507)
1,4-Dichlorobenzene(13.344)+
Hexachlorobutadiene(15.031)
Naphthalene(15.139)
Y (X100000)
Min
9/8/2023 4:01 PM
Page 175 of 1125

Report Date: 25-Jul-2023 11:17:33 Chrom Revision: 2.3 24-Jul-2023 18:08:00

Eurofins Seattle
Target Compound Quantitation Report

Data File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_009.D
Lims ID: IC 10.0
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 23-Jul-2023 21:10:50 ALS Bottle#: 0 Worklist Smp#: 9
Purge Vol: 10.000 mL Dil. Factor: 1.0000
Sample Info: 10
Operator ID: AJ Instrument ID: TAC048
Sublist: chrom-8260_SIMAK_WATER*sub3

Method: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\8260_SIMAK_WATER.m
Limit Group: 8260C SIM QSM 5.0
Last Update: 25-Jul-2023 11:17:33 Calib Date: 23-Jul-2023 22:02:46
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_011.D

Column 1 : 624-SIL-MS (0.25 mm) Det: MS SCAN
Process Host: CTX1617

First Level Reviewer: PHC3 Date: 24-Jul-2023 09:51:49

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
2 Vinyl chloride	62	1.805	1.805	0.000	100	448304	10.0	9.23	
1 Butadiene	54	1.843	1.843	0.000	97	396059	10.0	8.80	
3 Bromomethane	94	2.162	2.162	0.000	100	322037	10.0	8.40	
4 1,1-Dichloroethene	96	3.251	3.251	0.000	83	360048	10.0	8.34	
6 Isopropyl alcohol	45	3.602	3.602	0.000	100	45149	100.0	98.2	
7 cis-1,2-Dichloroethene	96	6.428	6.428	0.000	86	429351	10.0	9.09	
8 Chloroform	83	7.046	7.046	0.000	100	649783	10.0	9.19	
$ 9 Dibromofluoromethane (Surr)	113	7.300	7.300	0.000	100	310541	10.0	9.73	
$ 10 1,2-Dichloroethane-d4 (Surr)	65	7.783	7.783	0.000	100	227350	10.0	9.87	
11 Benzene	78	7.789	7.789	0.000	100	1517459	10.0	9.47	
12 1,2-Dichloroethane	62	7.893	7.893	0.000	99	278756	10.0	9.67	
* 13 Fluorobenzene (IS)	96	8.231	8.231	0.000	100	1506218	10.0	10.0	
14 Trichloroethene	132	8.683	8.683	0.000	99	418876	10.0	9.35	
15 Dibromomethane	174	9.078	9.078	0.000	92	134886	10.0	9.70	
16 Dichlorobromomethane	83	9.300	9.300	0.000	99	345516	10.0	10.0	
17 cis-1,3-Dichloropropene	75	9.762	9.762	0.000	95	373528	10.0	10.0	
$ 18 Toluene-d8 (Surr)	98	10.015	10.015	0.000	99	1337677	10.0	9.94	
19 trans-1,3-Dichloropropene	75	10.336	10.336	0.000	70	251985	10.0	10.2	
20 1,1,2-Trichloroethane	97	10.515	10.515	0.000	77	145911	10.0	9.62	
21 Tetrachloroethene	164	10.574	10.574	0.000	80	310292	10.0	9.10	
22 2-Hexanone	58	10.727	10.727	0.000	96	140166	50.0	53.5	
23 Chlorodibromomethane	129	10.861	10.861	0.000	90	172713	10.0	10.1	
24 Ethylene Dibromide	107	10.955	10.955	0.000	96	136412	10.0	9.88	
* 25 Chlorobenzene-d5	117	11.371	11.371	0.000	97	920387	10.0	10.0	
26 1,1,1,2-Tetrachloroethane	131	11.481	11.481	0.000	99	302314	10.0	9.21	
27 Bromoform	173	12.107	12.107	0.000	98	82601	10.0	9.94	
$ 28 4-Bromofluorobenzene (Surr)	174	12.390	12.390	0.000	88	335223	10.0	9.88	
29 1,1,2,2-Tetrachloroethane	83	12.507	12.507	0.000	92	142735	10.0	9.87	
* 30 1,4-Dichlorobenzene-d4	152	13.344	13.344	0.000	98	440399	10.0	10.0	
31 1,4-Dichlorobenzene	146	13.361	13.361	0.000	81	662057	10.0	9.49	
32 Hexachlorobutadiene	225	15.031	15.031	0.000	92	231562	10.0	8.81	

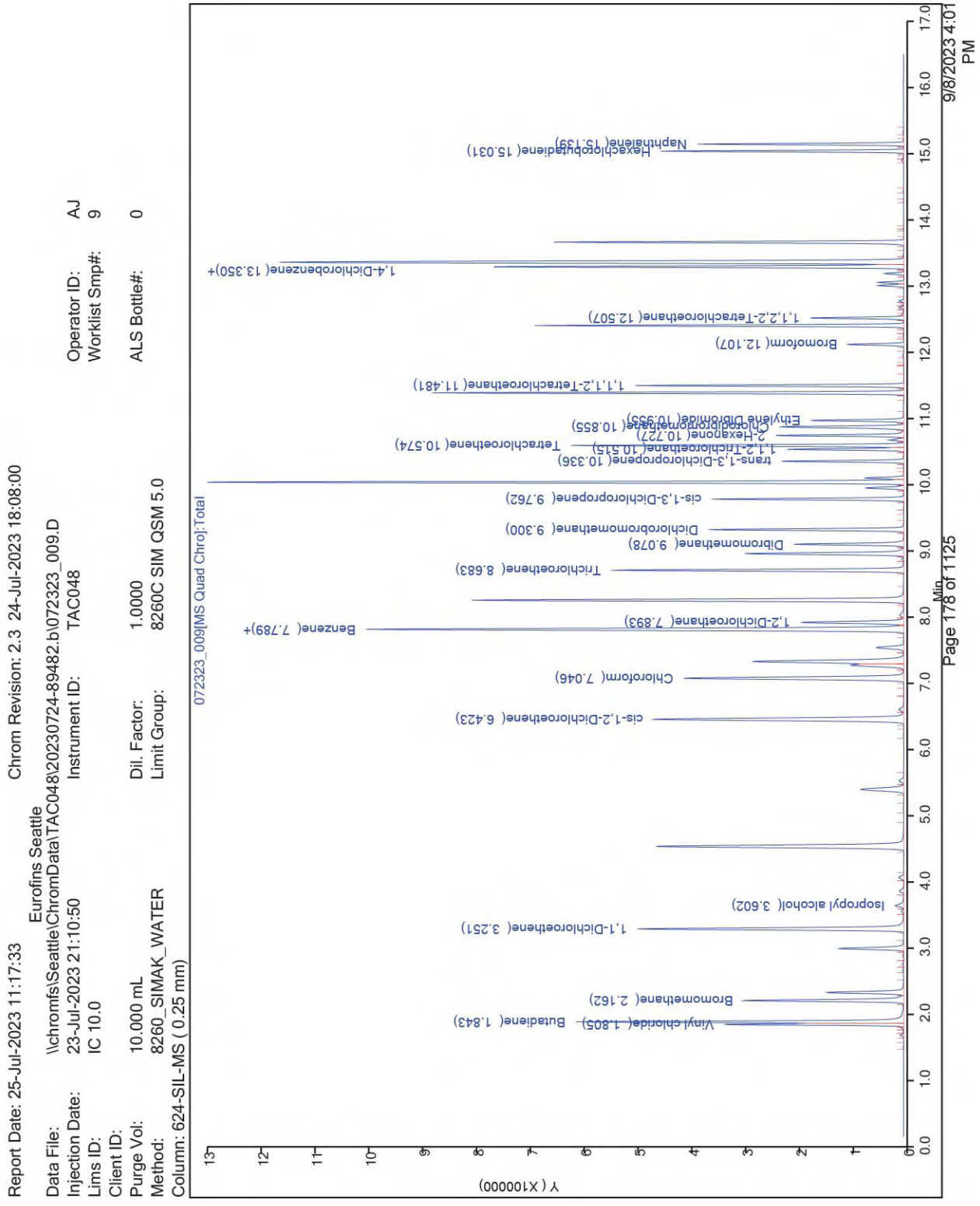
Report Date: 25-Jul-2023 11:17:33 Chrom Revision: 2.3 24-Jul-2023 18:08:00
Data File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_009.D

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
33 Naphthalene	128	15.139	15.139	0.000	98	441920	10.0	9.36	

QC Flag Legend
Processing Flags

Reagents:

VOASTDGASweek_00145	Amount Added: 10.00	Units: uL	
VOAMasterMix_00104	Amount Added: 10.00	Units: uL	
5X SUR/IS_00028	Amount Added: 2.00	Units: uL	Run Reagent


Report Date: 25-Jul-2023 11:17:33
Chrom Revision: 2.3 24-Jul-2023 18:08:00
Eurofins Seattle
Data File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_009.D
Injection Date: 23-Jul-2023 21:10:50
Instrument ID: TAC048
Lims ID: IC 10.0
Client ID:
Purge Vol: 10.000 mL
Dil. Factor: 1.0000
Method: 8260_SIMAK_WATER
Limit Group: 8260C SIM QSM 5.0
Column: 624-SIL-MS (0.25 mm)
Operator ID: AJ
Worklist Smp#: 9
ALS Bottle#: 0
072323_009[MS Quad Chro]:Total
Vinyl chloride(1.805)
Butadiene(1.843)
Bromomethane(2.162)
1,1-Dichloroethene(3.251)
Isopropyl alcohol(3.602)
cis-1,2-Dichloroethene(6.423)
Chloroform(7.046)
Benzene(7.789)+
1,2-Dichloroethane(7.893)
Trichloroethene(8.683)
Dibromomethane(9.078)
Dichlorobromomethane(9.300)
cis-1,3-Dichloropropene(9.762)
trans-1,3-Dichloropropene(10.336)
1,1,2-Trichloroethane(10.515)
Tetrachloroethene(10.574)
2-Hexanone(10.727)
Chlorodibromomethane(10.855)
Ethylene Dibromide(10.955)
1,1,1,2-Tetrachloroethane(11.481)
Bromoform(12.107)
1,1,2,2-Tetrachloroethane(12.507)
1,4-Dichlorobenzene(13.350)+
Hexachlorobutadiene(15.031)
Naphthalene(15.139)
Y (X100000)
Min
9/8/2023 4:01 PM
Page 178 of 1125

Report Date: 25-Jul-2023 11:17:36 Chrom Revision: 2.3 24-Jul-2023 18:08:00

Eurofins Seattle
Target Compound Quantitation Report

Data File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_010.D
Lims ID: IC 25.0
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 23-Jul-2023 21:36:51 ALS Bottle#: 0 Worklist Smp#: 10
Purge Vol: 10.000 mL Dil. Factor: 1.0000
Sample Info: 25
Operator ID: AJ Instrument ID: TAC048
Sublist: chrom-8260_SIMAK_WATER*sub3

Method: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\8260_SIMAK_WATER.m
Limit Group: 8260C SIM QSM 5.0
Last Update: 25-Jul-2023 11:17:35 Calib Date: 23-Jul-2023 22:02:46
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_011.D

Column 1 : 624-SIL-MS (0.25 mm) Det: MS SCAN
Process Host: CTX1617

First Level Reviewer: PHC3 Date: 24-Jul-2023 09:52:06

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
2 Vinyl chloride	62	1.799	1.799	0.000	100	1097425	25.0	27.7	
1 Butadiene	54	1.838	1.838	0.000	97	1015079	25.0	27.6	
3 Bromomethane	94	2.163	2.163	0.000	100	801317	25.0	25.6	
4 1,1-Dichloroethene	96	3.246	3.246	0.000	79	909914	25.0	25.8	
6 Isopropyl alcohol	45	3.596	3.596	0.000	100	104697	250.0	278.8	
7 cis-1,2-Dichloroethene	96	6.423	6.423	0.000	86	943105	25.0	24.4	
8 Chloroform	83	7.047	7.047	0.000	100	1393242	25.0	24.1	
$ 9 Dibromofluoromethane (Surr)	113	7.300	7.300	0.000	100	262719	10.0	10.1	
$ 10 1,2-Dichloroethane-d4 (Surr)	65	7.784	7.784	0.000	100	185526	10.0	9.86	
11 Benzene	78	7.789	7.789	0.000	100	3210511	25.0	24.5	
12 1,2-Dichloroethane	62	7.893	7.893	0.000	99	560139	25.0	23.8	
* 13 Fluorobenzene (IS)	96	8.226	8.226	0.000	100	1230041	10.0	10.0	
14 Trichloroethene	132	8.683	8.683	0.000	99	878231	25.0	24.0	
15 Dibromomethane	174	9.078	9.078	0.000	92	275119	25.0	24.2	
16 Dichlorobromomethane	83	9.300	9.300	0.000	99	712060	25.0	25.3	
17 cis-1,3-Dichloropropene	75	9.757	9.757	0.000	96	731320	25.0	25.3	
$ 18 Toluene-d8 (Surr)	98	10.015	10.015	0.000	99	1062040	10.0	10.1	
19 trans-1,3-Dichloropropene	75	10.331	10.331	0.000	67	475136	25.0	24.8	
20 1,1,2-Trichloroethane	97	10.515	10.515	0.000	77	279144	25.0	23.6	
21 Tetrachloroethene	164	10.569	10.569	0.000	80	651772	25.0	24.6	
22 2-Hexanone	58	10.722	10.722	0.000	97	243067	125.0	119.2	
23 Chlorodibromomethane	129	10.855	10.855	0.000	90	350791	25.0	26.4	
24 Ethylene Dibromide	107	10.950	10.950	0.000	96	260305	25.0	24.2	
* 25 Chlorobenzene-d5	117	11.371	11.371	0.000	97	716320	10.0	10.0	
26 1,1,1,2-Tetrachloroethane	131	11.482	11.482	0.000	99	698425	25.0	27.3	
27 Bromoform	173	12.102	12.102	0.000	98	167699	25.0	25.9	
$ 28 4-Bromofluorobenzene (Surr)	174	12.391	12.391	0.000	89	252807	10.0	9.58	
29 1,1,2,2-Tetrachloroethane	83	12.502	12.502	0.000	92	283297	25.0	25.8	
* 30 1,4-Dichlorobenzene-d4	152	13.345	13.345	0.000	96	333864	10.0	10.0	
31 1,4-Dichlorobenzene	146	13.361	13.361	0.000	81	1251812	25.0	23.7	
32 Hexachlorobutadiene	225	15.031	15.031	0.000	92	504381	25.0	25.3	

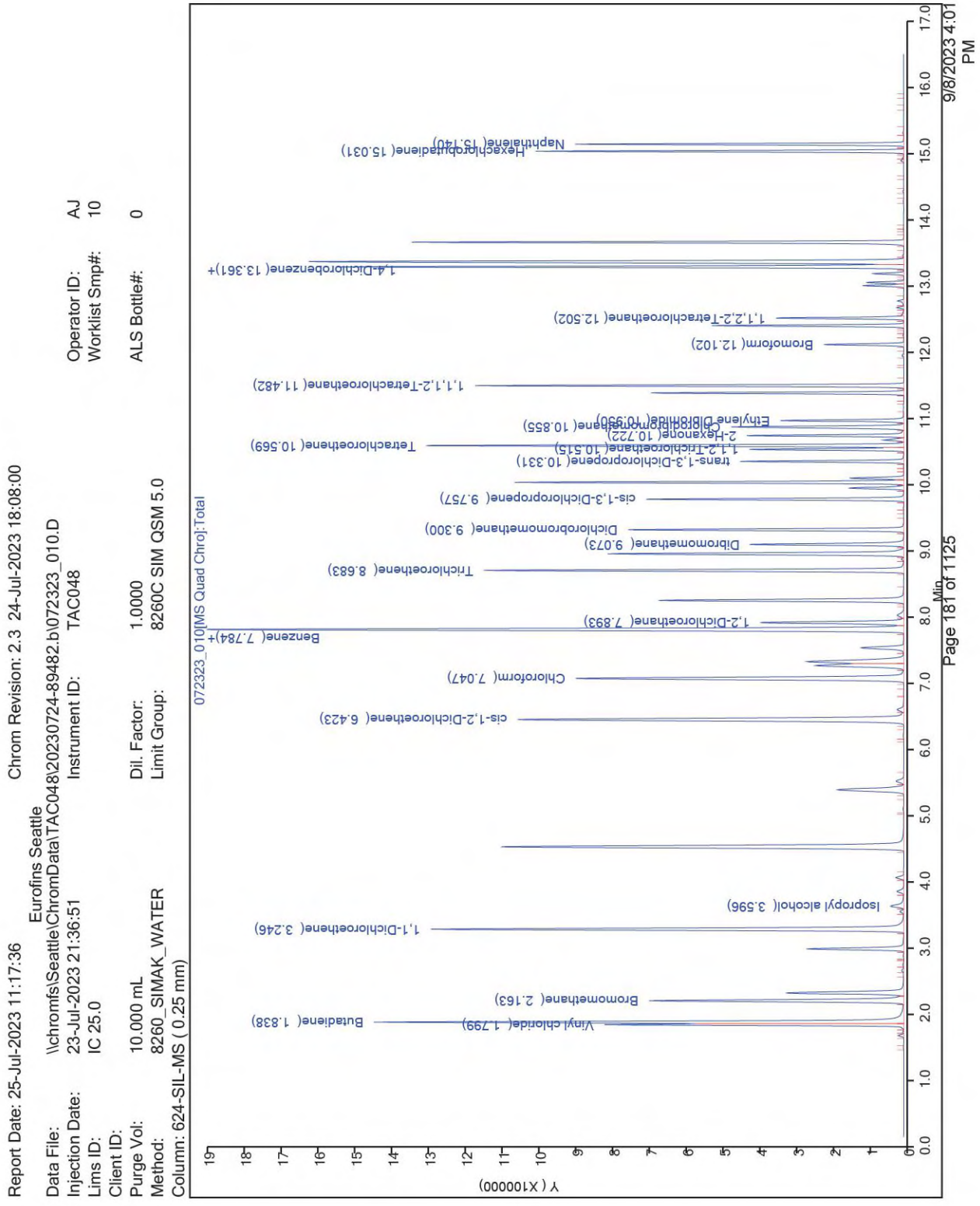
Report Date: 25-Jul-2023 11:17:36 Chrom Revision: 2.3 24-Jul-2023 18:08:00
Data File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_010.D

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
33 Naphthalene	128	15.140	15.140	0.000	98	1022092	25.0	28.5	

QC Flag Legend
Processing Flags

Reagents:

VOASTDGASweek_00145	Amount Added: 25.00	Units: uL	
VOAMasterMix_00104	Amount Added: 25.00	Units: uL	
5X SUR/IS_00028	Amount Added: 2.00	Units: uL	Run Reagent


Report Date: 25-Jul-2023 11:17:36
Chrom Revision: 2.3 24-Jul-2023 18:08:00
Eurofins Seattle
Data File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_010.D
Injection Date: 23-Jul-2023 21:36:51
Instrument ID: TAC048
Lims ID: IC 25.0
Client ID:
Purge Vol: 10.000 mL
Dil. Factor: 1.0000
Method: 8260_SIMAK_WATER
Limit Group: 8260C SIM QSM 5.0
Column: 624-SIL-MS (0.25 mm)
Operator ID: AJ
Worklist Smp#: 10
ALS Bottle#: 0
072323_010 MS Quad Chro]:Total
Y (X100000)
Min
9/8/2023 4:01 PM
Page 181 of 1125
Butadiene(1.838)
Vinyl chloride(1.799)
Bromomethane(2.163)
1,1-Dichloroethene(3.246)
Isopropyl alcohol(3.596)
cis-1,2-Dichloroethene(6.423)
Chloroform(7.047)
Benzene(7.784)+
1,2-Dichloroethane(7.893)
Trichloroethene(8.683)
Dibromomethane(9.073)
Dichlorobromomethane(9.300)
cis-1,3-Dichloropropene(9.757)
trans-1,3-Dichloropropene(10.331)
1,1,2-Trichloroethane(10.515)
2-Hexanone(10.722)
Chlorodibromomethane(10.855)
Ethylene Dibromide(10.950)
Tetrachloroethene(10.569)
1,1,1,2-Tetrachloroethane(11.482)
Bromoform(12.102)
1,1,2,2-Tetrachloroethane(12.502)
1,4-Dichlorobenzene(13.361)+
Hexachlorobutadiene(15.031)
Naphthalene(15.140)

Report Date: 25-Jul-2023 11:17:39 Chrom Revision: 2.3 24-Jul-2023 18:08:00

Eurofins Seattle
Target Compound Quantitation Report

Data File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_011.D
Lims ID: IC 50.0
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 23-Jul-2023 22:02:46 ALS Bottle#: 0 Worklist Smp#: 11
Purge Vol: 10.000 mL Dil. Factor: 1.0000
Sample Info: 50
Operator ID: AJ Instrument ID: TAC048
Sublist: chrom-8260_SIMAK_WATER*sub3

Method: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\8260_SIMAK_WATER.m
Limit Group: 8260C SIM QSM 5.0
Last Update: 25-Jul-2023 11:17:38 Calib Date: 23-Jul-2023 22:02:46
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_011.D

Column 1 : 624-SIL-MS (0.25 mm) Det: MS SCAN
Process Host: CTX1617

First Level Reviewer: PHC3 Date: 24-Jul-2023 09:52:25

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
2 Vinyl chloride	62	1.805	1.805	0.000	100	2235669	50.0	47.9	
1 Butadiene	54	1.849	1.849	0.000	97	2115481	50.0	48.9	
3 Bromomethane	94	2.168	2.168	0.000	100	1621198	50.0	44.0	
4 1,1-Dichloroethene	96	3.257	3.257	0.000	79	2030876	50.0	48.9	
6 Isopropyl alcohol	45	3.602	3.602	0.000	100	236256	500.0	534.4	
7 cis-1,2-Dichloroethene	96	6.428	6.428	0.000	85	2184129	50.0	48.1	
8 Chloroform	83	7.052	7.052	0.000	100	3246437	50.0	47.7	
$ 9 Dibromofluoromethane (Surr)	113	7.305	7.305	0.000	100	302027	10.0	9.84	
$ 10 1,2-Dichloroethane-d4 (Surr)	65	7.783	7.783	0.000	100	218674	10.0	9.87	
11 Benzene	78	7.789	7.789	0.000	100	7732121	50.0	50.2	
12 1,2-Dichloroethane	62	7.893	7.893	0.000	99	1338915	50.0	48.3	
* 13 Fluorobenzene (IS)	96	8.231	8.231	0.000	100	1448341	10.0	10.0	
14 Trichloroethene	132	8.683	8.683	0.000	99	2144774	50.0	49.8	
15 Dibromomethane	174	9.078	9.078	0.000	92	652656	50.0	48.8	
16 Dichlorobromomethane	83	9.300	9.300	0.000	99	1754476	50.0	53.0	
17 cis-1,3-Dichloropropene	75	9.762	9.762	0.000	96	1886183	50.0	55.1	
$ 18 Toluene-d8 (Surr)	98	10.015	10.015	0.000	99	1279475	10.0	10.3	
19 trans-1,3-Dichloropropene	75	10.331	10.331	0.000	67	1202557	50.0	52.9	
20 1,1,2-Trichloroethane	97	10.515	10.515	0.000	77	674864	50.0	48.3	
21 Tetrachloroethene	164	10.574	10.574	0.000	80	1597444	50.0	50.8	
22 2-Hexanone	58	10.727	10.727	0.000	95	588316	250.0	243.6	
23 Chlorodibromomethane	129	10.855	10.855	0.000	90	877513	50.0	55.7	
24 Ethylene Dibromide	107	10.950	10.950	0.000	96	628690	50.0	49.4	
* 25 Chlorobenzene-d5	117	11.371	11.371	0.000	97	848173	10.0	10.0	
26 1,1,1,2-Tetrachloroethane	131	11.481	11.481	0.000	99	1607235	50.0	53.1	
27 Bromoform	173	12.101	12.101	0.000	99	413531	50.0	54.0	
$ 28 4-Bromofluorobenzene (Surr)	174	12.390	12.390	0.000	88	297732	10.0	9.52	
29 1,1,2,2-Tetrachloroethane	83	12.501	12.501	0.000	92	641747	50.0	50.4	
* 30 1,4-Dichlorobenzene-d4	152	13.344	13.344	0.000	92	387968	10.0	10.0	a
31 1,4-Dichlorobenzene	146	13.361	13.361	0.000	80	2976635	50.0	48.5	
32 Hexachlorobutadiene	225	15.031	15.031	0.000	92	1136325	50.0	49.1	

Report Date: 25-Jul-2023 11:17:39 Chrom Revision: 2.3 24-Jul-2023 18:08:00
Data File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_011.D

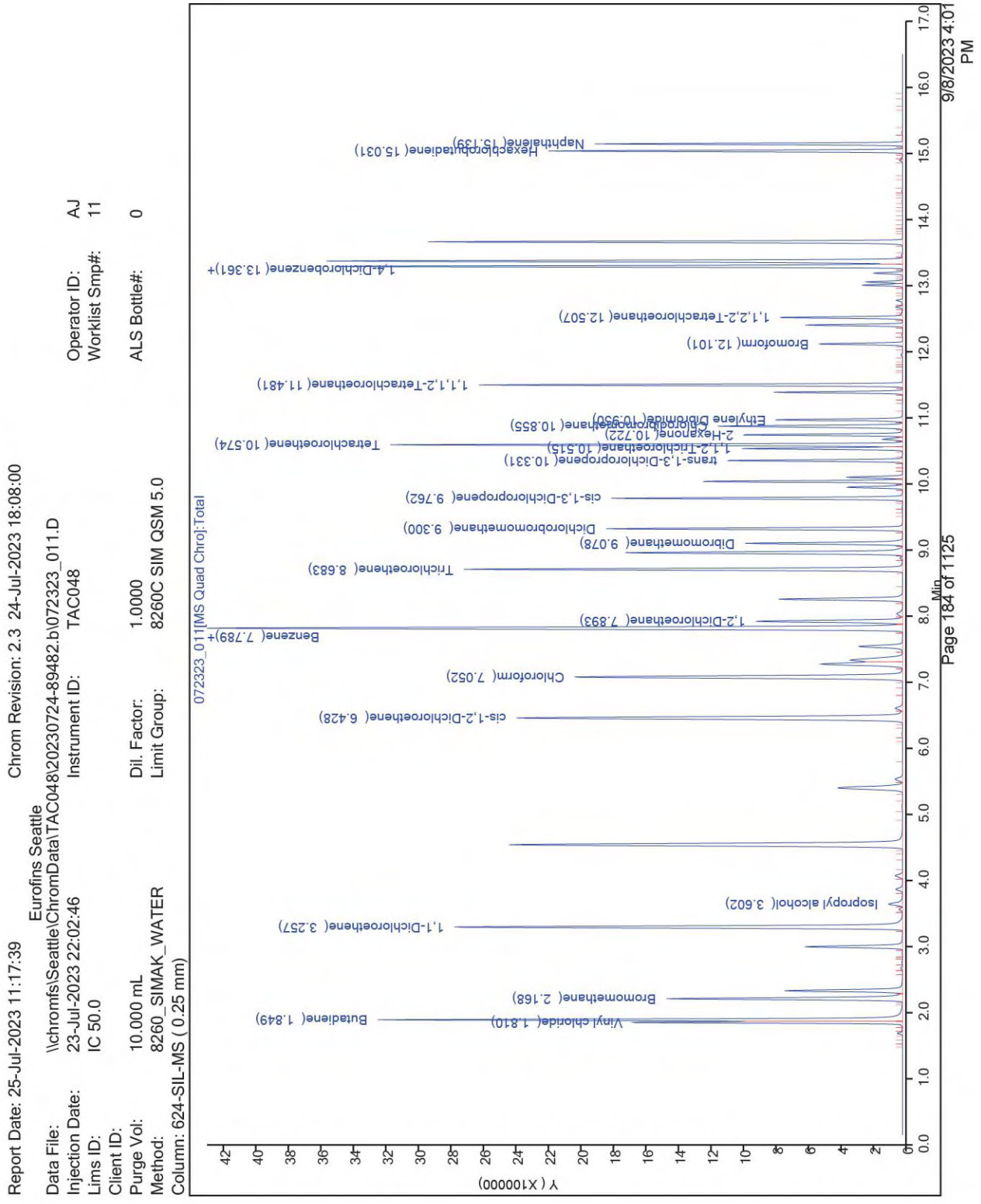
Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
33 Naphthalene	128	15.139	15.139	0.000	98	2202511	50.0	52.9	

QC Flag Legend

Processing Flags
Review Flags
a - User Assigned ID

Reagents:

VOAMasterMix_00104	Amount Added: 50.00	Units: uL	
VOASTDGASweek_00145	Amount Added: 50.00	Units: uL	
5X SUR/IS_00028	Amount Added: 2.00	Units: uL	Run Reagent


Report Date: 25-Jul-2023 11:17:39
Chrom Revision: 2.3 24-Jul-2023 18:08:00
Eurofins Seattle
Data File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_011.D
Injection Date: 23-Jul-2023 22:02:46
Instrument ID: TAC048
Lims ID: IC 50.0
Client ID:
Purge Vol: 10.000 mL
Dil. Factor: 1.0000
Method: 8260_SIMAK_WATER
Limit Group: 8260C SIM QSM 5.0
Column: 624-SIL-MS (0.25 mm)
Operator ID: AJ
Worklist Smp#: 11
ALS Bottle#: 0
072323_011[MS Quad Chro]:Total
Vinyl chloride(1.810)
Butadiene(1.849)
Bromomethane(2.168)
1,1-Dichloroethene(3.257)
Isopropyl alcohol(3.602)
cis-1,2-Dichloroethene(6.428)
Chloroform(7.052)
Benzene(7.789)+
1,2-Dichloroethane(7.893)
Trichloroethene(8.683)
Dibromomethane(9.078)
Dichlorobromomethane(9.300)
cis-1,3-Dichloropropene(9.762)
trans-1,3-Dichloropropene(10.331)
1,1,2-Trichloroethane(10.515)
2-Hexanone(10.722)
Chlorodibromomethane(10.855)
Ethylene Dibromide(10.950)
Tetrachloroethene(10.574)
1,1,1,2-Tetrachloroethane(11.481)
Bromoform(12.101)
1,1,2,2-Tetrachloroethane(12.507)
1,4-Dichlorobenzene(13.361)+
Hexachlorobutadiene(15.031)
Naphthalene(15.139)
Y (X100000)
Min
9/8/2023 4:01 PM

Report Date: 25-Jul-2023 11:17:39 Chrom Revision: 2.3 24-Jul-2023 18:08:00

Manual Integration/User Assign Peak Report

Eurofins Seattle

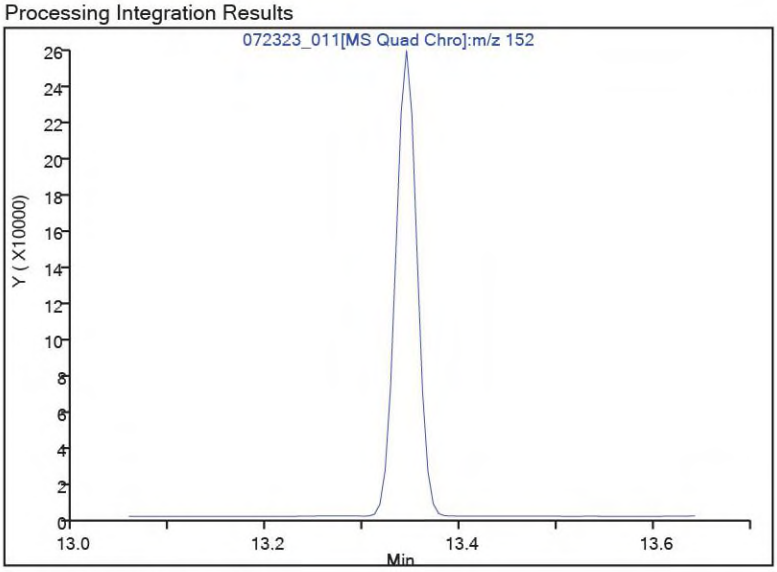
Data File:	\\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_011.D				
Injection Date:	23-Jul-2023 22:02:46	Instrument ID:	TAC048		
Lims ID:	IC 50.0				
Client ID:					
Operator ID:	AJ	ALS Bottle#:	0	Worklist Smp#:	11
Purge Vol:	10.000 mL	Dil. Factor:	1.0000		
Method:	8260_SIMAK_WATER	Limit Group:	8260C SIM QSM 5.0		
Column:	624-SIL-MS (0.25 mm)	Detector	MS SCAN		

* 30 1,4-Dichlorobenzene-d4, CAS: 3855-82-1

Signal: 1

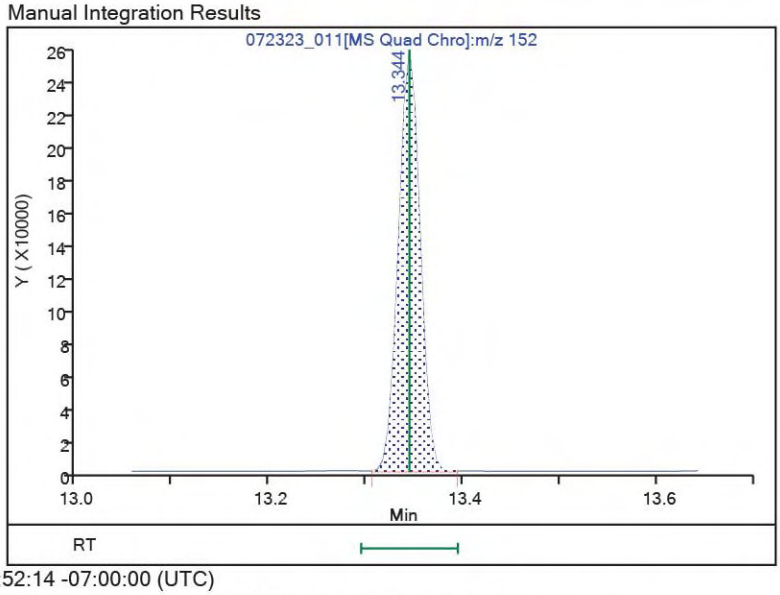
Processing Integration Results

Not Detected
Expected RT: 13.34



Manual Integration Results

RT: 13.34
Area: 387968
Amount: 10.000000
Amount Units: ug/L



Reviewer: PHC3, 24-Jul-2023 09:52:14 -07:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Calibration **/ Vinyl chloride**

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

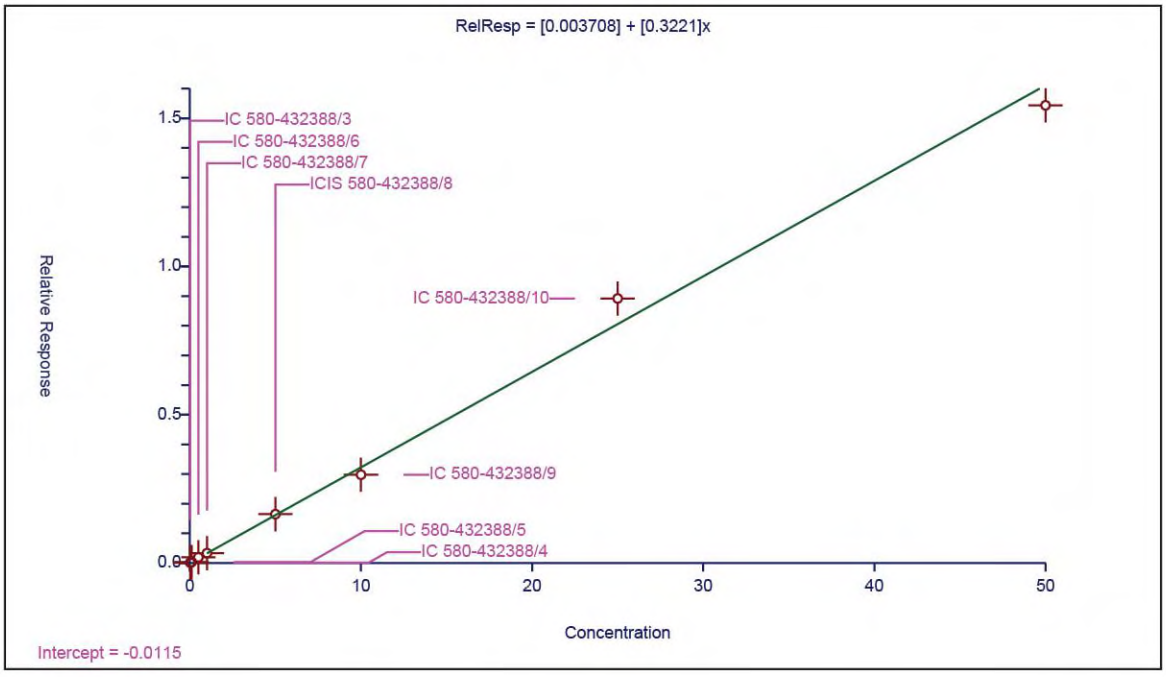
Curve Coefficients

Intercept:	0.003708
Slope:	0.3221

Error Coefficients

Standard Error:	961000
Relative Standard Error:	12.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 580-432388/3	0.02	0.010683	10.0	1057726.0	0.534165	Y
2	IC 580-432388/4	0.05	0.018102	10.0	1281628.0	0.36204	Y
3	IC 580-432388/5	0.1	0.03016	10.0	1339200.0	0.301598	Y
4	IC 580-432388/6	0.5	0.193261	10.0	1105759.0	0.386522	Y
5	IC 580-432388/7	1.0	0.33159	10.0	1308392.0	0.33159	Y
6	ICIS 580-432388/8	5.0	1.645979	10.0	1411610.0	0.329196	Y
7	IC 580-432388/9	10.0	2.976355	10.0	1506218.0	0.297636	Y
8	IC 580-432388/10	25.0	8.921857	10.0	1230041.0	0.356874	Y
9	IC 580-432388/11	50.0	15.436068	10.0	1448341.0	0.308721	Y



Calibration **/ 1,1-Dichloroethene**

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

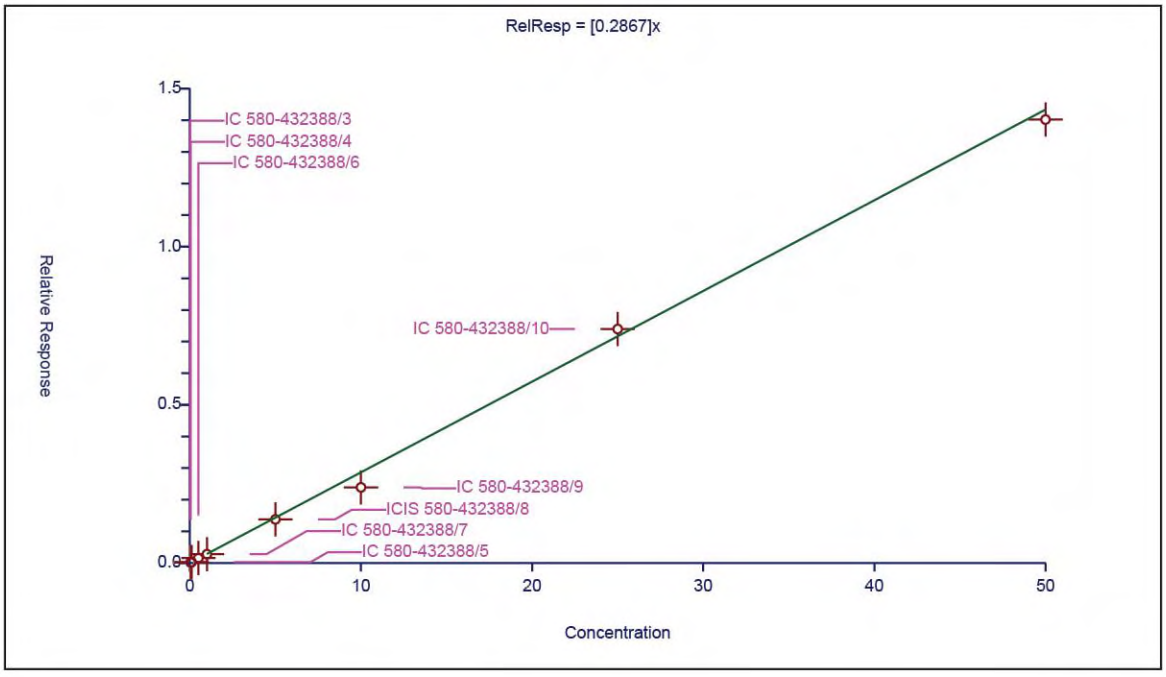
Curve Coefficients

Intercept:	0
Slope:	0.2867

Error Coefficients

Standard Error:	855000
Relative Standard Error:	11.4
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.983

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 580-432388/3	0.02	0.012499	10.0	1057726.0	0.624926	N
2	IC 580-432388/4	0.05	0.017408	10.0	1281628.0	0.348151	Y
3	IC 580-432388/5	0.1	0.026471	10.0	1339200.0	0.26471	Y
4	IC 580-432388/6	0.5	0.155839	10.0	1105759.0	0.311677	Y
5	IC 580-432388/7	1.0	0.278281	10.0	1308392.0	0.278281	Y
6	ICIS 580-432388/8	5.0	1.37776	10.0	1411610.0	0.275552	Y
7	IC 580-432388/9	10.0	2.390411	10.0	1506218.0	0.239041	Y
8	IC 580-432388/10	25.0	7.397428	10.0	1230041.0	0.295897	Y
9	IC 580-432388/11	50.0	14.022085	10.0	1448341.0	0.280442	Y



Calibration **/ cis-1,2-Dichloroethene**

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

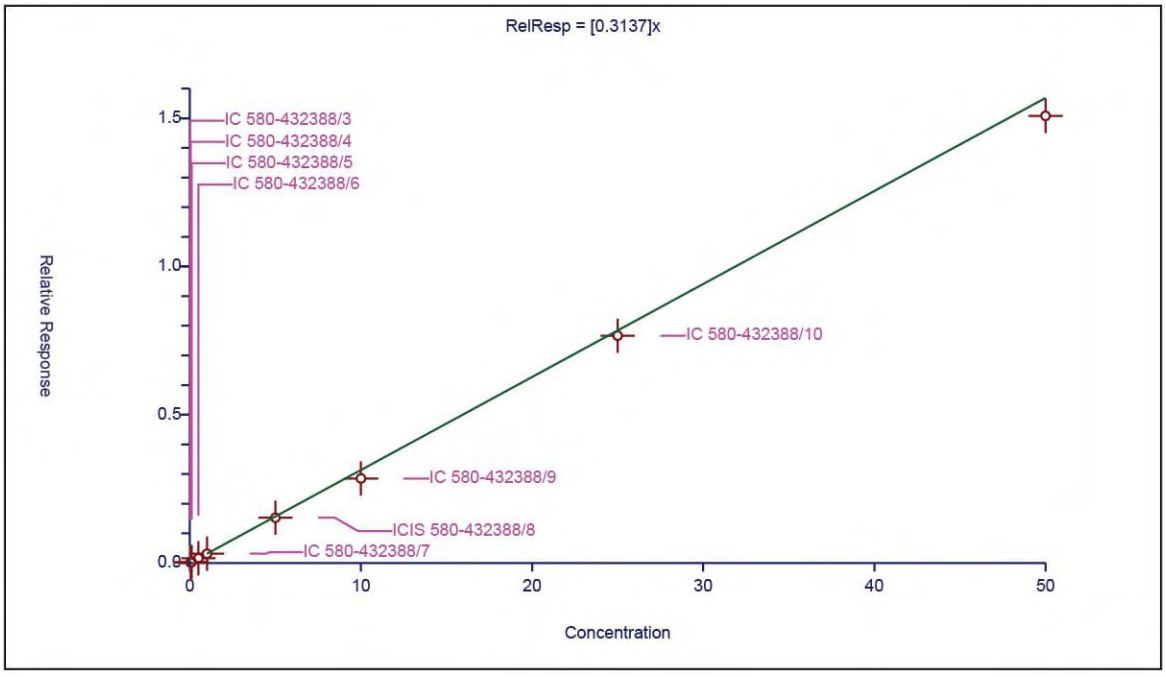
Curve Coefficients

Intercept:	0
Slope:	0.3137

Error Coefficients

Standard Error:	917000
Relative Standard Error:	7.1
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 580-432388/3	0.02	0.00935	10.0	1057726.0	0.467512	N
2	IC 580-432388/4	0.05	0.018118	10.0	1281628.0	0.362352	Y
3	IC 580-432388/5	0.1	0.031698	10.0	1339200.0	0.31698	Y
4	IC 580-432388/6	0.5	0.159863	10.0	1105759.0	0.319726	Y
5	IC 580-432388/7	1.0	0.311871	10.0	1308392.0	0.311871	Y
6	ICIS 580-432388/8	5.0	1.525443	10.0	1411610.0	0.305089	Y
7	IC 580-432388/9	10.0	2.850524	10.0	1506218.0	0.285052	Y
8	IC 580-432388/10	25.0	7.667265	10.0	1230041.0	0.306691	Y
9	IC 580-432388/11	50.0	15.080212	10.0	1448341.0	0.301604	Y



Calibration **/ Dibromofluoromethane (Surr)**

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

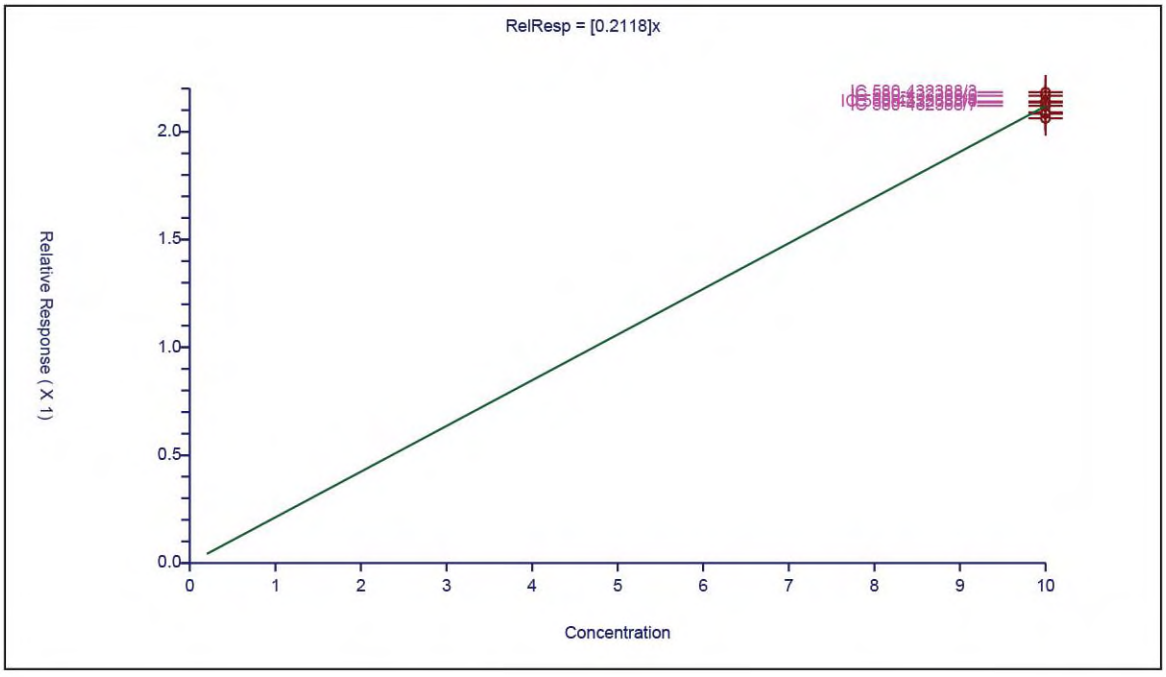
Curve Coefficients

Intercept:	0
Slope:	0.2118

Error Coefficients

Standard Error:	292000
Relative Standard Error:	2.0
Correlation Coefficient:	NA
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 580-432388/3	10.0	2.183505	10.0	1057726.0	0.21835	Y
2	IC 580-432388/4	10.0	2.140137	10.0	1281628.0	0.214014	Y
3	IC 580-432388/5	10.0	2.089673	10.0	1339200.0	0.208967	Y
4	IC 580-432388/6	10.0	2.166611	10.0	1105759.0	0.216661	Y
5	IC 580-432388/7	10.0	2.119747	10.0	1308392.0	0.211975	Y
6	ICIS 580-432388/8	10.0	2.083869	10.0	1411610.0	0.208387	Y
7	IC 580-432388/9	10.0	2.061727	10.0	1506218.0	0.206173	Y
8	IC 580-432388/10	10.0	2.135856	10.0	1230041.0	0.213586	Y
9	IC 580-432388/11	10.0	2.085331	10.0	1448341.0	0.208533	Y



Calibration **/ 1,2-Dichloroethane-d4 (Surr)**

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

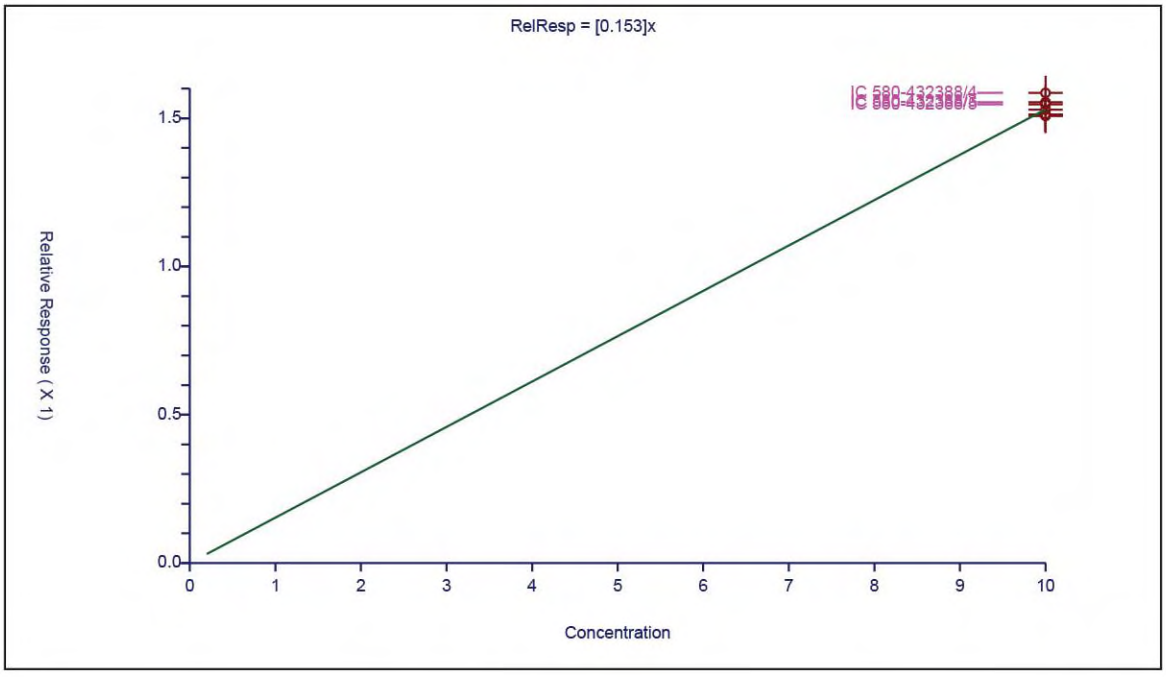
Curve Coefficients

Intercept:	0
Slope:	0.153

Error Coefficients

Standard Error:	212000
Relative Standard Error:	1.8
Correlation Coefficient:	NA
Coefficient of Determination (Adjusted):	0.000000000000000111

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 580-432388/3	10.0	1.554212	10.0	1057726.0	0.155421	Y
2	IC 580-432388/4	10.0	1.585366	10.0	1281628.0	0.158537	Y
3	IC 580-432388/5	10.0	1.546513	10.0	1339200.0	0.154651	Y
4	IC 580-432388/6	10.0	1.512834	10.0	1105759.0	0.151283	Y
5	IC 580-432388/7	10.0	1.528602	10.0	1308392.0	0.15286	Y
6	ICIS 580-432388/8	10.0	1.513159	10.0	1411610.0	0.151316	Y
7	IC 580-432388/9	10.0	1.50941	10.0	1506218.0	0.150941	Y
8	IC 580-432388/10	10.0	1.508291	10.0	1230041.0	0.150829	Y
9	IC 580-432388/11	10.0	1.509824	10.0	1448341.0	0.150982	Y



Calibration **/ Benzene**

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

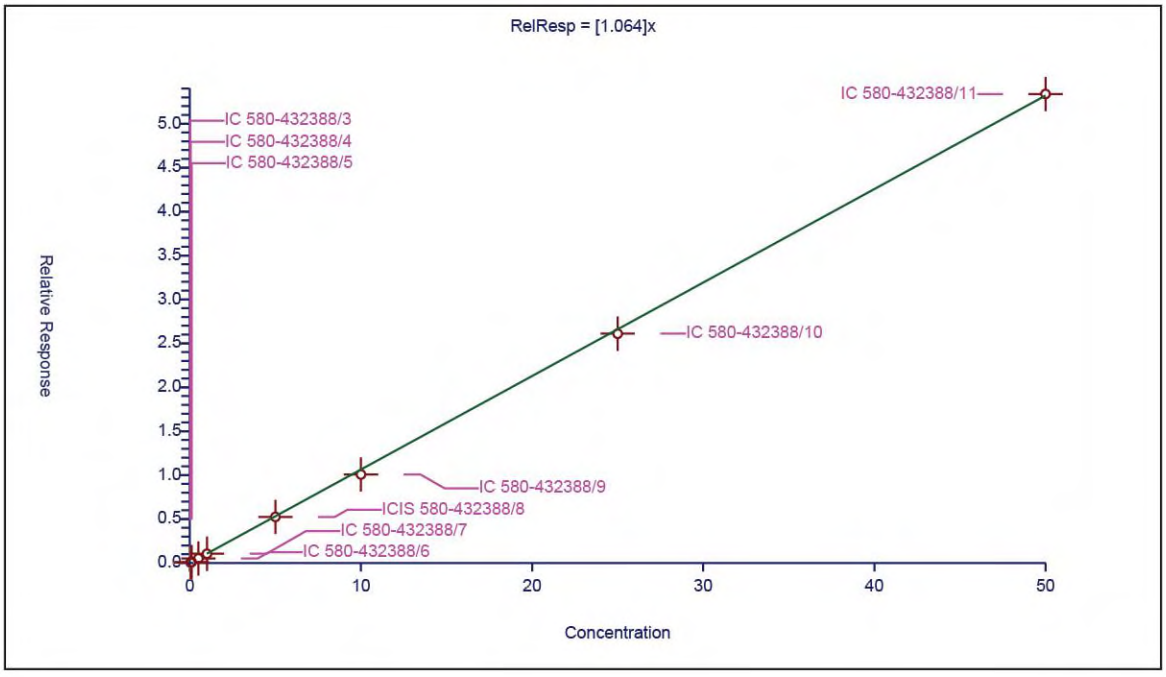
Curve Coefficients

Intercept:	0
Slope:	1.064

Error Coefficients

Standard Error:	3230000
Relative Standard Error:	4.9
Correlation Coefficient:	0.993
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 580-432388/3	0.02	0.02979	10.0	1057726.0	1.489516	N
2	IC 580-432388/4	0.05	0.059136	10.0	1281628.0	1.182714	Y
3	IC 580-432388/5	0.1	0.10734	10.0	1339200.0	1.073402	Y
4	IC 580-432388/6	0.5	0.520285	10.0	1105759.0	1.04057	Y
5	IC 580-432388/7	1.0	1.04792	10.0	1308392.0	1.04792	Y
6	ICIS 580-432388/8	5.0	5.246732	10.0	1411610.0	1.049346	Y
7	IC 580-432388/9	10.0	10.074631	10.0	1506218.0	1.007463	Y
8	IC 580-432388/10	25.0	26.100845	10.0	1230041.0	1.044034	Y
9	IC 580-432388/11	50.0	53.386053	10.0	1448341.0	1.067721	Y



Calibration **/ 1,2-Dichloroethane**

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

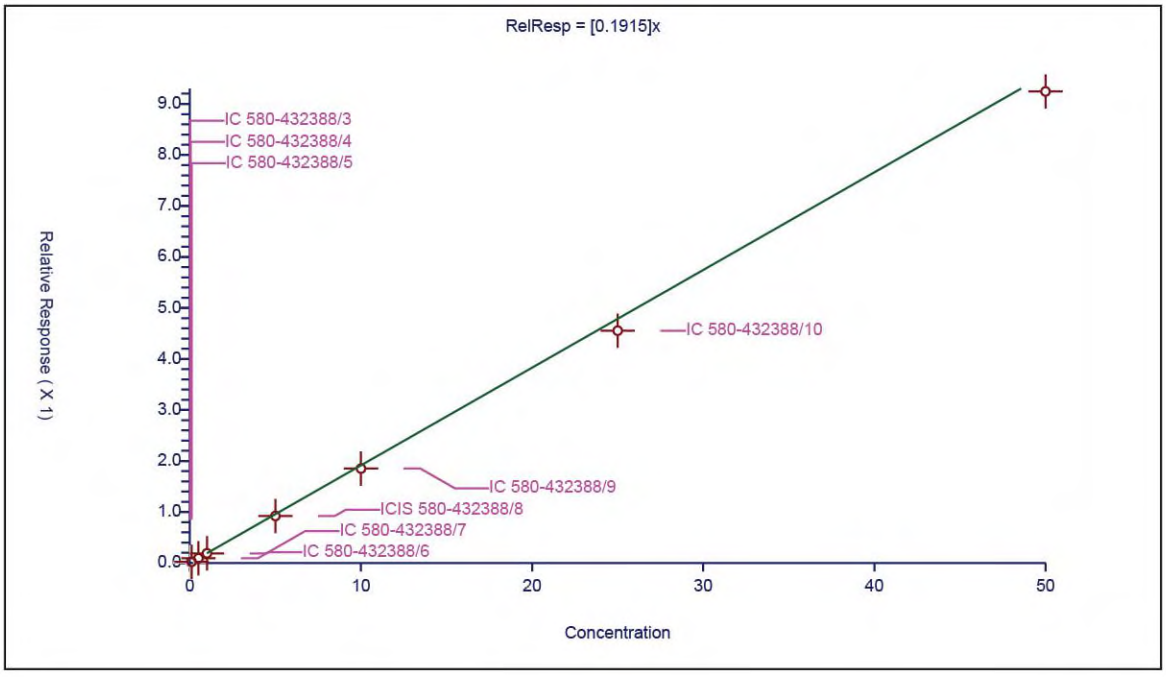
Curve Coefficients

Intercept:	0
Slope:	0.1915

Error Coefficients

Standard Error:	606000
Relative Standard Error:	8.6
Correlation Coefficient:	0.993
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 580-432388/3	0.02	0.009936	10.0	1057726.0	0.496821	N
2	IC 580-432388/4	0.05	0.015613	10.0	1281628.0	0.312259	N
3	IC 580-432388/5	0.1	0.022849	10.0	1339200.0	0.228495	Y
4	IC 580-432388/6	0.5	0.092977	10.0	1105759.0	0.185954	Y
5	IC 580-432388/7	1.0	0.189339	10.0	1308392.0	0.189339	Y
6	ICIS 580-432388/8	5.0	0.922124	10.0	1411610.0	0.184425	Y
7	IC 580-432388/9	10.0	1.850702	10.0	1506218.0	0.18507	Y
8	IC 580-432388/10	25.0	4.553824	10.0	1230041.0	0.182153	Y
9	IC 580-432388/11	50.0	9.244474	10.0	1448341.0	0.184889	Y



Calibration **/ Trichloroethene**

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

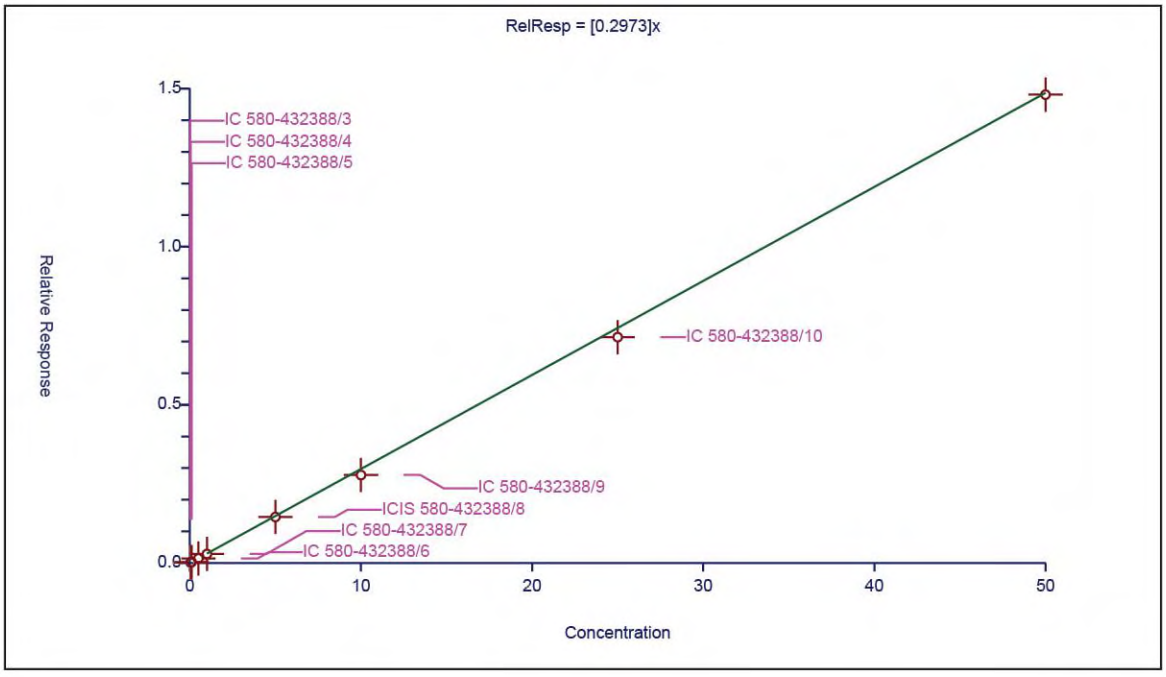
Curve Coefficients

Intercept:	0
Slope:	0.2973

Error Coefficients

Standard Error:	894000
Relative Standard Error:	6.9
Correlation Coefficient:	0.993
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 580-432388/3	0.02	0.008093	10.0	1057726.0	0.404642	N
2	IC 580-432388/4	0.05	0.017119	10.0	1281628.0	0.342377	Y
3	IC 580-432388/5	0.1	0.031004	10.0	1339200.0	0.310036	Y
4	IC 580-432388/6	0.5	0.145122	10.0	1105759.0	0.290244	Y
5	IC 580-432388/7	1.0	0.284884	10.0	1308392.0	0.284884	Y
6	ICIS 580-432388/8	5.0	1.454701	10.0	1411610.0	0.29094	Y
7	IC 580-432388/9	10.0	2.780979	10.0	1506218.0	0.278098	Y
8	IC 580-432388/10	25.0	7.139851	10.0	1230041.0	0.285594	Y
9	IC 580-432388/11	50.0	14.808488	10.0	1448341.0	0.29617	Y



Calibration **/ Toluene-d8 (Surr)**

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

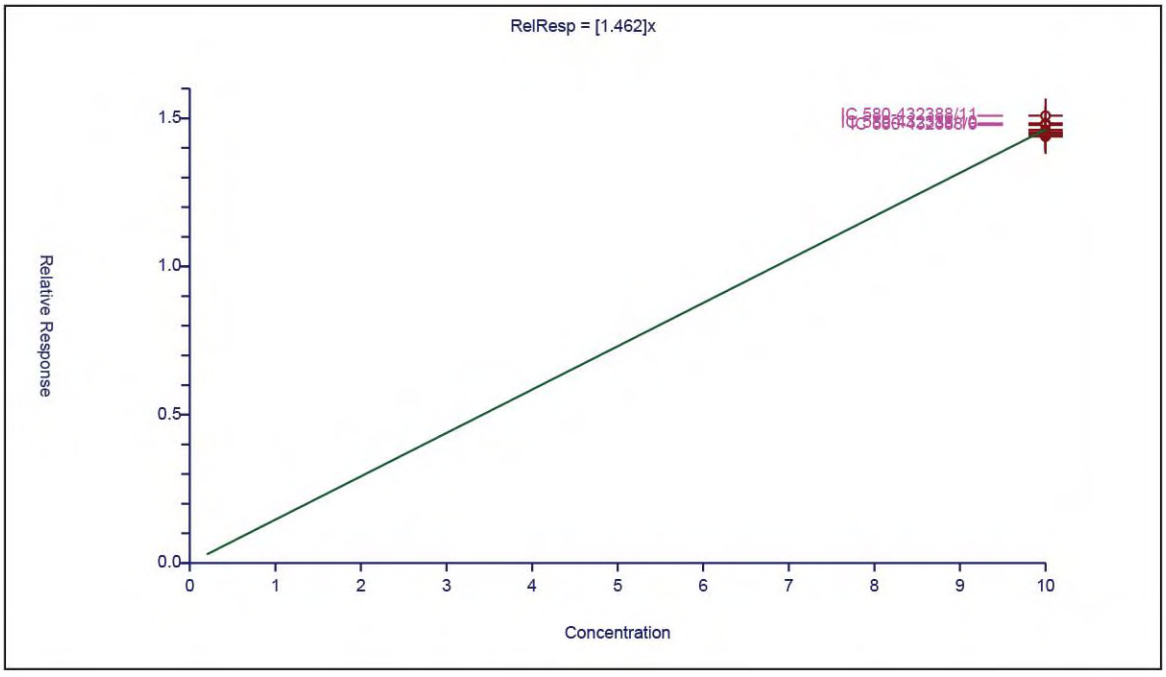
Curve Coefficients

Intercept:	0
Slope:	1.462

Error Coefficients

Standard Error:	1180000
Relative Standard Error:	1.6
Correlation Coefficient:	NA
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 580-432388/3	10.0	14.403662	10.0	590043.0	1.440366	Y
2	IC 580-432388/4	10.0	14.379071	10.0	746551.0	1.437907	Y
3	IC 580-432388/5	10.0	14.491754	10.0	781020.0	1.449175	Y
4	IC 580-432388/6	10.0	14.773699	10.0	595027.0	1.47737	Y
5	IC 580-432388/7	10.0	14.611813	10.0	748068.0	1.461181	Y
6	ICIS 580-432388/8	10.0	14.466676	10.0	852325.0	1.446668	Y
7	IC 580-432388/9	10.0	14.533854	10.0	920387.0	1.453385	Y
8	IC 580-432388/10	10.0	14.826335	10.0	716320.0	1.482633	Y
9	IC 580-432388/11	10.0	15.085071	10.0	848173.0	1.508507	Y



Calibration **/ Tetrachloroethene**

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

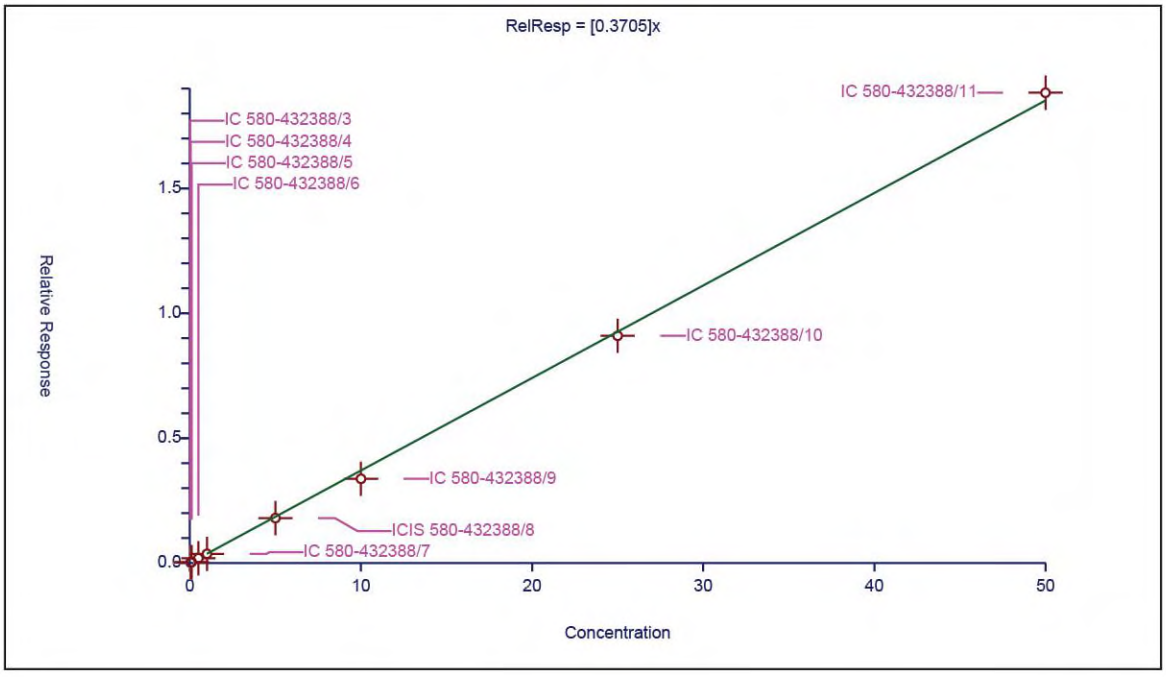
Curve Coefficients

Intercept:	0
Slope:	0.3705

Error Coefficients

Standard Error:	665000
Relative Standard Error:	5.2
Correlation Coefficient:	0.992
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 580-432388/3	0.02	0.009745	10.0	590043.0	0.487253	N
2	IC 580-432388/4	0.05	0.020159	10.0	746551.0	0.403187	Y
3	IC 580-432388/5	0.1	0.037413	10.0	781020.0	0.374126	Y
4	IC 580-432388/6	0.5	0.192008	10.0	595027.0	0.384016	Y
5	IC 580-432388/7	1.0	0.365395	10.0	748068.0	0.365395	Y
6	ICIS 580-432388/8	5.0	1.79746	10.0	852325.0	0.359492	Y
7	IC 580-432388/9	10.0	3.371321	10.0	920387.0	0.337132	Y
8	IC 580-432388/10	25.0	9.098894	10.0	716320.0	0.363956	Y
9	IC 580-432388/11	50.0	18.833941	10.0	848173.0	0.376679	Y



Calibration **/ Ethylene Dibromide**

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

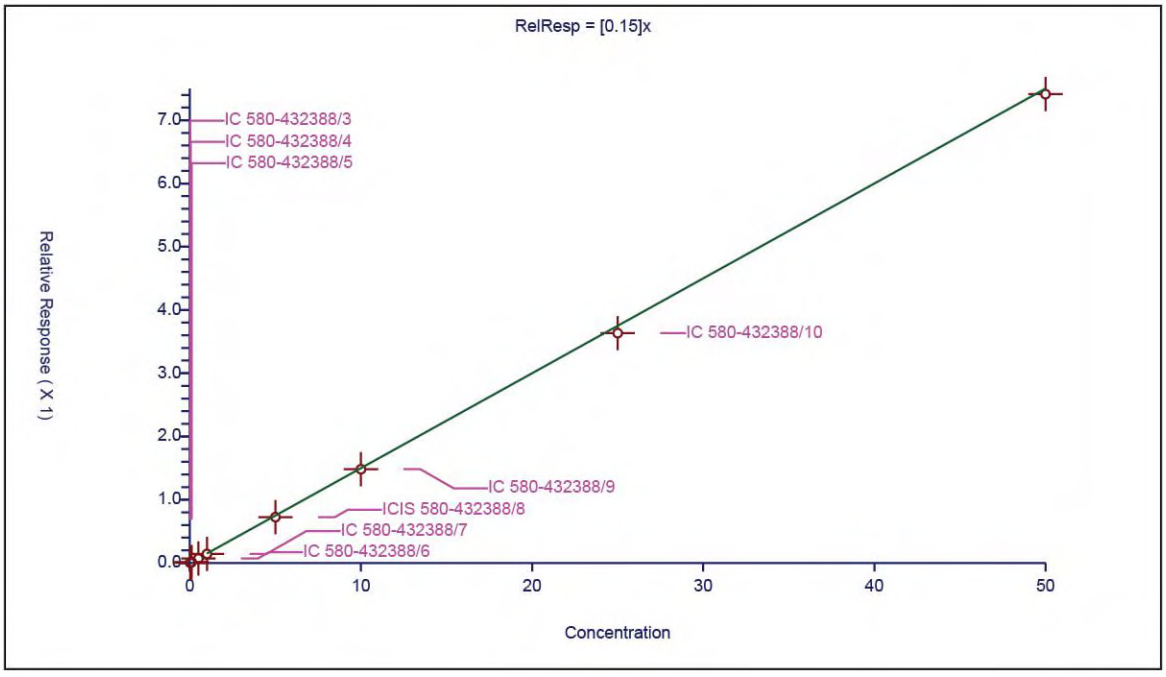
Curve Coefficients

Intercept:	0
Slope:	0.15

Error Coefficients

Standard Error:	246000
Relative Standard Error:	6.7
Correlation Coefficient:	0.993
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 580-432388/3	0.02	0.003491	10.0	590043.0	0.174564	Y
2	IC 580-432388/4	0.05	0.007729	10.0	746551.0	0.154578	Y
3	IC 580-432388/5	0.1	0.015057	10.0	781020.0	0.150572	Y
4	IC 580-432388/6	0.5	0.0704	10.0	595027.0	0.1408	Y
5	IC 580-432388/7	1.0	0.142647	10.0	748068.0	0.142647	Y
6	ICIS 580-432388/8	5.0	0.72477	10.0	852325.0	0.144954	Y
7	IC 580-432388/9	10.0	1.482116	10.0	920387.0	0.148212	Y
8	IC 580-432388/10	25.0	3.633921	10.0	716320.0	0.145357	Y
9	IC 580-432388/11	50.0	7.412285	10.0	848173.0	0.148246	Y



Calibration **/ 4-Bromofluorobenzene (Surr)**

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

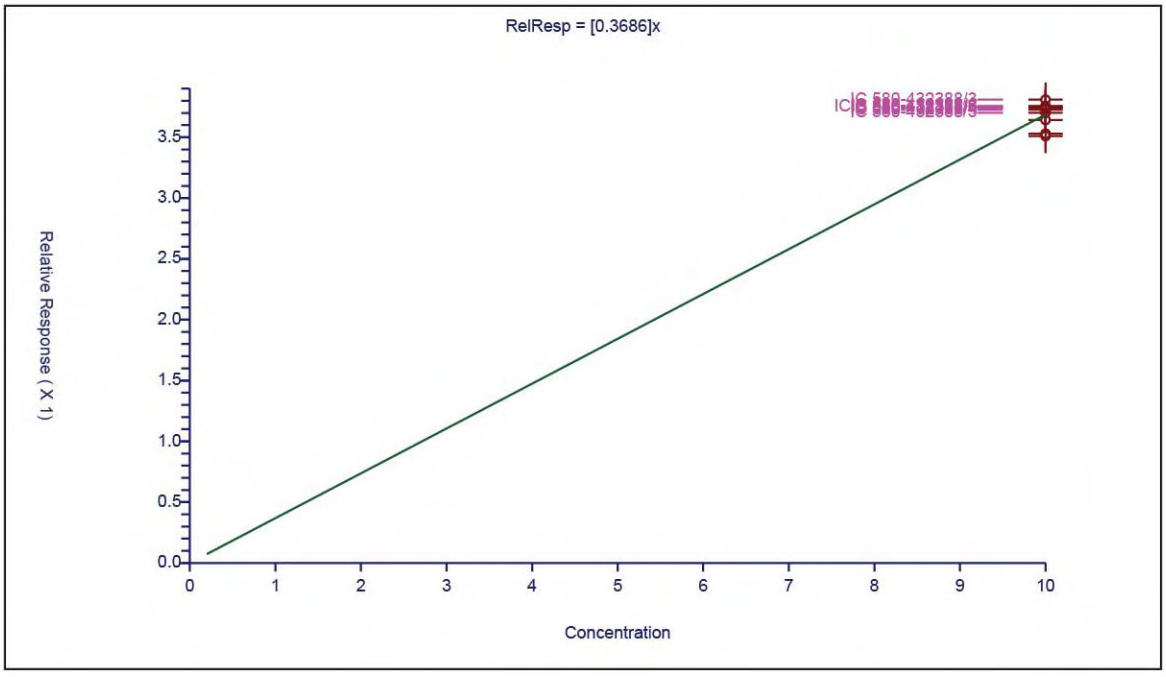
Curve Coefficients

Intercept:	0
Slope:	0.3686

Error Coefficients

Standard Error:	297000
Relative Standard Error:	2.8
Correlation Coefficient:	0.00000000000000000000
Coefficient of Determination (Adjusted):	0.000000000000000111

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 580-432388/3	10.0	3.809061	10.0	590043.0	0.380906	Y
2	IC 580-432388/4	10.0	3.726765	10.0	746551.0	0.372676	Y
3	IC 580-432388/5	10.0	3.701698	10.0	781020.0	0.37017	Y
4	IC 580-432388/6	10.0	3.756653	10.0	595027.0	0.375665	Y
5	IC 580-432388/7	10.0	3.743884	10.0	748068.0	0.374388	Y
6	ICIS 580-432388/8	10.0	3.751538	10.0	852325.0	0.375154	Y
7	IC 580-432388/9	10.0	3.642196	10.0	920387.0	0.36422	Y
8	IC 580-432388/10	10.0	3.529247	10.0	716320.0	0.352925	Y
9	IC 580-432388/11	10.0	3.510274	10.0	848173.0	0.351027	Y



Calibration **/ Naphthalene**

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

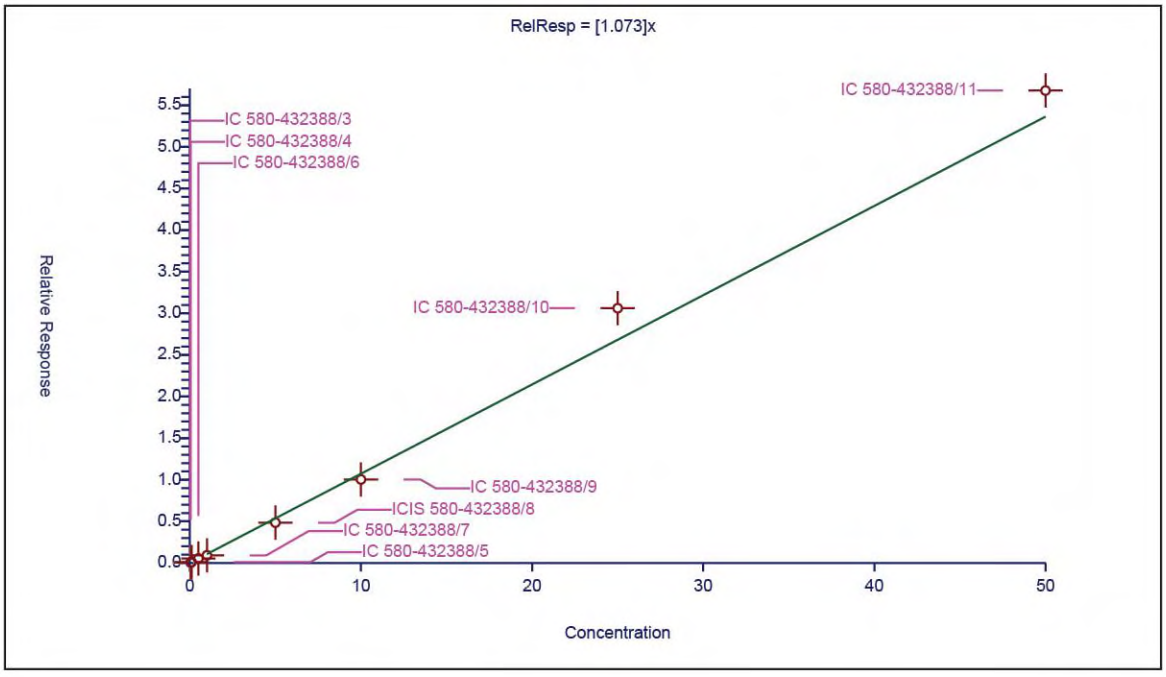
Curve Coefficients

Intercept:	0
Slope:	1.073

Error Coefficients

Standard Error:	936000
Relative Standard Error:	9.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 580-432388/3	0.02	0.03468	10.0	324102.0	1.734022	N
2	IC 580-432388/4	0.05	0.058546	10.0	388583.0	1.170921	Y
3	IC 580-432388/5	0.1	0.105135	10.0	397681.0	1.051345	Y
4	IC 580-432388/6	0.5	0.550594	10.0	321562.0	1.101187	Y
5	IC 580-432388/7	1.0	0.924018	10.0	389841.0	0.924018	Y
6	ICIS 580-432388/8	5.0	4.849964	10.0	429698.0	0.969993	Y
7	IC 580-432388/9	10.0	10.034537	10.0	440399.0	1.003454	Y
8	IC 580-432388/10	25.0	30.614022	10.0	333864.0	1.224561	Y
9	IC 580-432388/11	50.0	56.77043	10.0	387968.0	1.135409	Y



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Seattle Job No.: 580-130928-1
SDG No.:
Lab Sample ID: ICV 580-432388/13 Calibration Date: 07/23/2023 22:54
Instrument ID: TAC048 Calib Start Date: 07/23/2023 18:34
GC Column: 624SIL-MS ID: 0.25(mm) Calib End Date: 07/23/2023 22:02
Lab File ID: 072323_013.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Vinyl chloride	Lin1		0.3445	0.1000	5.34	5.00	6.7	20.0
1,1-Dichloroethene	Ave	0.2867	0.3058	0.1000	5.33	5.00	6.6	20.0
cis-1,2-Dichloroethene	Ave	0.3137	0.3158	0.1000	5.03	5.00	0.7	20.0
Benzene	Ave	1.064	1.066	0.5000	5.01	5.00	0.2	20.0
1,2-Dichloroethane	Ave	0.1915	0.1835	0.1000	4.79	5.00	-4.2	20.0
Trichloroethene	Ave	0.2973	0.2941	0.2000	4.95	5.00	-1.1	20.0
Tetrachloroethene	Ave	0.3705	0.3789	0.2000	5.11	5.00	2.3	20.0
Ethylene Dibromide	Ave	0.1500	0.1460	0.1000	4.87	5.00	-2.7	20.0
Naphthalene	Ave	1.073	1.046		4.88	5.00	-2.4	20.0
1,2,4-Trimethylbenzene	None					5.00		20.0
1,3,5-Trimethylbenzene	None					5.00		20.0
Ethylbenzene	None					5.00		20.0
Isopropylbenzene	None					5.00		20.0
Methyl tert-butyl ether	None					5.00		20.0
m-Xylene & p-Xylene	None					5.00		20.0
n-Butylbenzene	None					5.00		20.0
o-Xylene	None					5.00		20.0
sec-Butylbenzene	None					5.00		20.0
tert-Butylbenzene	None					5.00		20.0
Toluene	None					5.00		20.0
trans-1,2-Dichloroethene	None					5.00		20.0
Dibromofluoromethane (Surr)	Ave	0.2118	0.2139		10.1	10.0	0.9	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.1530	0.1475		9.64	10.0	-3.6	20.0
Toluene-d8 (Surr)	Ave	1.462	1.474		10.1	10.0	0.9	20.0
4-Bromofluorobenzene (Surr)	Ave	0.3686	0.3735		10.1	10.0	1.3	20.0

Report Date: 24-Jul-2023 12:31:13 Chrom Revision: 2.3 19-Jul-2023 18:28:48

Eurofins Seattle
Target Compound Quantitation Report

Data File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_013.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 23-Jul-2023 22:54:27 ALS Bottle#: 0 Worklist Smp#: 13
Purge Vol: 10.000 mL Dil. Factor: 1.0000
Sample Info: ICV
Operator ID: AJ Instrument ID: TAC048
Sublist:

Method: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\8260_SIMAK_WATER.m
Limit Group: 8260C SIM QSM 5.0
Last Update: 24-Jul-2023 12:30:56 Calib Date: 23-Jul-2023 22:02:46
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_011.D

Column 1 : 624-SIL-MS (0.25 mm) Det: MS SCAN
Process Host: CTX1614

First Level Reviewer: PHC3 Date: 24-Jul-2023 12:31:13

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
2 Vinyl chloride	62	1.799	1.805	-0.006	100	219862	5.00	5.34	
1 Butadiene	54	1.838	1.849	-0.011	97	181042	5.00	4.75	
3 Bromomethane	94	2.157	2.168	-0.011	100	165593	5.00	5.10	
4 1,1-Dichloroethene	96	3.246	3.257	-0.011	79	195129	5.00	5.33	
6 Isopropyl alcohol	45	3.596	3.602	-0.006	100	19105	50.0	49.0	
7 cis-1,2-Dichloroethene	96	6.423	6.428	-0.005	85	201556	5.00	5.03	
8 Chloroform	83	7.041	7.052	-0.011	100	300270	5.00	5.01	
$ 9 Dibromofluoromethane (Surr)	113	7.300	7.302	-0.002	100	272953	10.0	10.1	
$ 10 1,2-Dichloroethane-d4 (Surr)	65	7.778	7.787	-0.009	100	188317	10.0	9.64	
11 Benzene	78	7.784	7.789	-0.005	100	680439	5.00	5.01	
12 1,2-Dichloroethane	62	7.887	7.893	-0.006	99	117088	5.00	4.79	
* 13 Fluorobenzene (IS)	96	8.226	8.230	-0.004	100	1276332	10.0	10.0	
14 Trichloroethene	132	8.683	8.683	0.000	99	187653	5.00	4.95	
15 Dibromomethane	174	9.078	9.078	0.000	92	57925	5.00	4.92	
16 Dichlorobromomethane	83	9.294	9.300	-0.006	99	146302	5.00	5.01	
17 cis-1,3-Dichloropropene	75	9.757	9.762	-0.005	96	140384	5.00	4.77	
$ 18 Toluene-d8 (Surr)	98	10.015	10.018	-0.003	99	1073144	10.0	10.1	
19 trans-1,3-Dichloropropene	75	10.331	10.331	0.000	65	94993	5.00	4.87	
20 1,1,2-Trichloroethane	97	10.515	10.515	0.000	77	57842	5.00	4.82	
21 Tetrachloroethene	164	10.569	10.574	-0.005	80	137879	5.00	5.11	
22 2-Hexanone	58	10.722	10.727	-0.005	92	51944	25.0	25.1	
23 Chlorodibromomethane	129	10.855	10.855	0.000	91	69897	5.00	5.17	
24 Ethylene Dibromide	107	10.950	10.950	0.000	95	53123	5.00	4.87	
* 25 Chlorobenzene-d5	117	11.371	11.376	-0.005	97	727863	10.0	10.0	
26 1,1,1,2-Tetrachloroethane	131	11.481	11.481	0.000	100	138823	5.00	5.35	
27 Bromoform	173	12.101	12.101	0.000	98	33878	5.00	5.15	
$ 28 4-Bromofluorobenzene (Surr)	174	12.390	12.394	-0.004	88	271876	10.0	10.1	
29 1,1,2,2-Tetrachloroethane	83	12.502	12.501	0.001	92	59460	5.00	4.93	
* 30 1,4-Dichlorobenzene-d4	152	13.344	13.347	-0.003	99	367357	10.0	10.0	
31 1,4-Dichlorobenzene	146	13.361	13.361	0.000	81	288567	5.00	4.96	
32 Hexachlorobutadiene	225	15.031	15.031	0.000	92	120642	5.00	5.50	

Report Date: 24-Jul-2023 12:31:13 Chrom Revision: 2.3 19-Jul-2023 18:28:48
Data File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_013.D

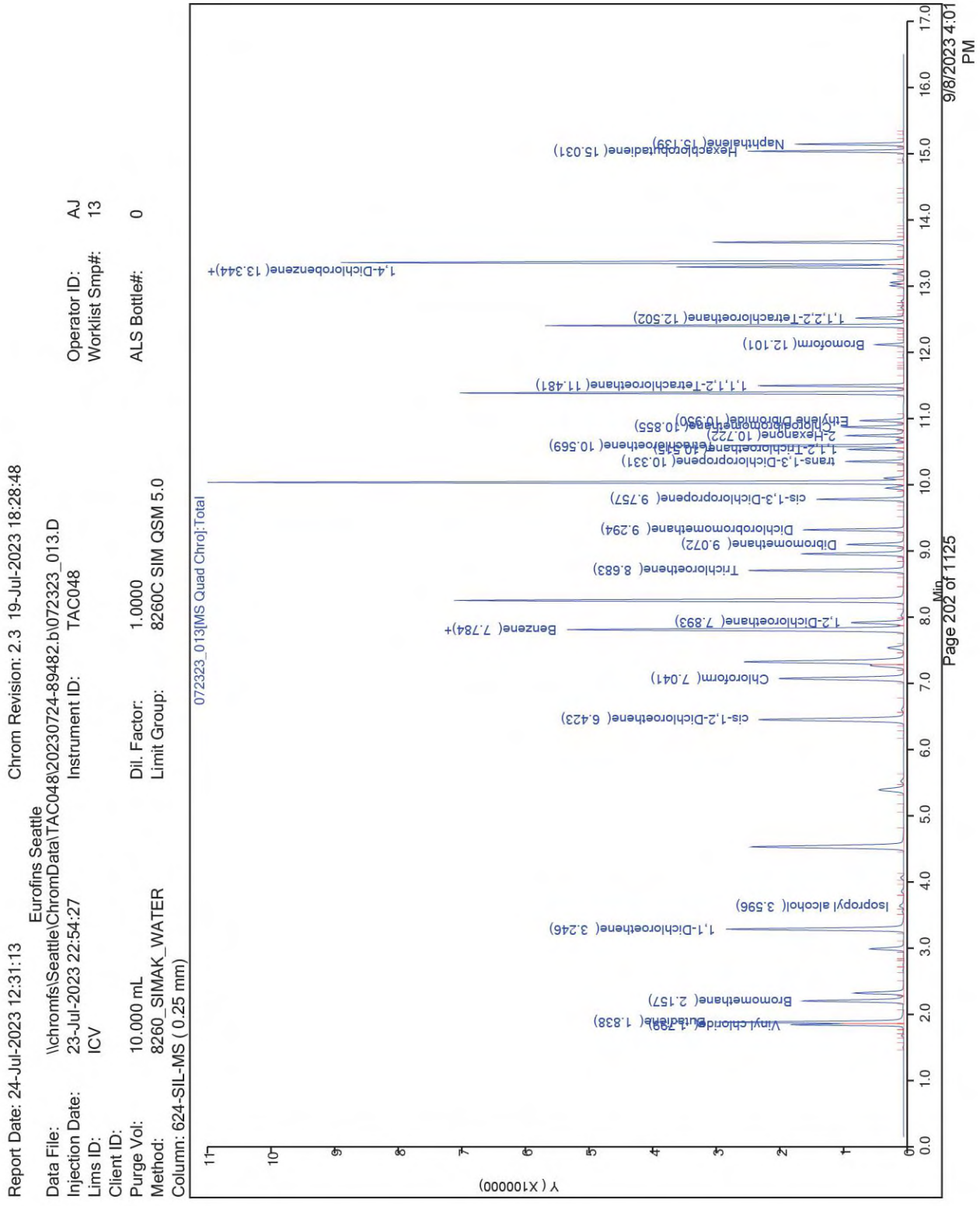
Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
33 Naphthalene	128	15.139	15.139	0.000	98	192196	5.00	4.88	
$ 49 BFB									

QC Flag Legend

Processing Flags

Reagents:

VOAMasterSEC_00082	Amount Added:	5.00	Units: uL	
5X SUR/IS_00028	Amount Added:	2.00	Units: uL	Run Reagent


Report Date: 24-Jul-2023 12:31:13
Chrom Revision: 2.3 19-Jul-2023 18:28:48
Eurofins Seattle
Data File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_013.D
Injection Date: 23-Jul-2023 22:54:27
Instrument ID: TAC048
Lims ID: ICV
Client ID:
Purge Vol: 10.000 mL
Dil. Factor: 1.0000
Method: 8260_SIMAK_WATER
Limit Group: 8260C SIM QSM 5.0
Column: 624-SIL-MS (0.25 mm)
Operator ID: AJ
Worklist Smp#: 13
ALS Bottle#: 0
072323_013|MS Quad Chro|:Total
Vinyl chloride(1.739)
Butadiene(1.838)
Bromomethane(2.157)
1,1-Dichloroethene(3.246)
Isopropyl alcohol(3.596)
cis-1,2-Dichloroethene(6.423)
Chloroform(7.041)
Benzene(7.784)+
1,2-Dichloroethane(7.893)
Trichloroethene(8.683)
Dibromomethane(9.072)
Dichloromethane(9.294)
cis-1,3-Dichloropropene(9.757)
trans-1,3-Dichloropropene(10.331)
1,1,2-Trichloroethane(10.451)
Tetrachloroethene(10.569)
2-Hexanone(10.722)
Chlorodibromomethane(10.855)
Ethylene Dibromide(10.950)
1,1,1,2-Tetrachloroethane(11.481)
Bromoform(12.101)
1,1,2,2-Tetrachloroethane(12.502)
1,4-Dichlorobenzene(13.344)+
Hexachlorobutadiene(15.031)
Naphthalene(15.139)
Y (X100000)
Min
9/8/2023 4:01 PM
Page 202 of 1125

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Seattle Job No.: 580-130928-1
SDG No.:
Lab Sample ID: CCVIS 580-436188/3 Calibration Date: 08/30/2023 11:49
Instrument ID: TAC048 Calib Start Date: 07/23/2023 18:34
GC Column: 624SIL-MS ID: 0.25(mm) Calib End Date: 07/23/2023 22:02
Lab File ID: 082923_003.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Vinyl chloride	Lin1		0.3525	0.1000	2.72	2.50	9.0	20.0
1,1-Dichloroethene	Ave	0.2867	0.3106	0.1000	2.71	2.50	8.3	20.0
cis-1,2-Dichloroethene	Ave	0.3137	0.3284	0.1000	2.62	2.50	4.7	20.0
Benzene	Ave	1.064	1.097	0.5000	2.58	2.50	3.1	20.0
1,2-Dichloroethane	Ave	0.1915	0.1817	0.1000	2.37	2.50	-5.1	20.0
Trichloroethene	Ave	0.2973	0.2914	0.2000	2.45	2.50	-2.0	20.0
Tetrachloroethene	Ave	0.3705	0.3794	0.2000	2.56	2.50	2.4	20.0
Ethylene Dibromide	Ave	0.1500	0.1495	0.1000	2.49	2.50	-0.3	20.0
Naphthalene	Ave	1.073	1.059		2.47	2.50	-1.2	20.0
Dibromofluoromethane (Surr)	Ave	0.2118	0.2241		10.6	10.0	5.8	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.1530	0.1475		9.64	10.0	-3.6	20.0
Toluene-d8 (Surr)	Ave	1.462	1.449		9.91	10.0	-0.9	20.0
4-Bromofluorobenzene (Surr)	Ave	0.3686	0.3777		10.2	10.0	2.5	20.0

Report Date: 31-Aug-2023 12:33:16 Chrom Revision: 2.3 21-Aug-2023 17:14:06

Eurofins Seattle
Target Compound Quantitation Report

Data File: \\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\082923_003.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 30-Aug-2023 11:49:45 ALS Bottle#: 0 Worklist Smp#: 3
Purge Vol: 10.000 mL Dil. Factor: 1.0000
Sample Info: ccv
Operator ID: itr Instrument ID: TAC048
Sublist: chrom-8260_SIMAK_WATER*sub6

Method: \\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\8260_SIMAK_WATER.m
Limit Group: 8260C SIM QSM 5.0
Last Update: 31-Aug-2023 12:33:16 Calib Date: 23-Jul-2023 22:02:46
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_011.D

Column 1 : 624-SIL-MS (0.25 mm) Det: MS SCAN
Process Host: CTX1640

First Level Reviewer: PHC3 Date: 31-Aug-2023 12:33:16

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
	2 Vinyl chloride	62	1.789	1.789	0.000	100	55371	2.50	2.72	
	1 Butadiene	54	1.827	1.827	0.000	98	49759	2.50	2.65	
	3 Bromomethane	94	2.152	2.152	0.000	100	44186	2.50	2.76	
	4 1,1-Dichloroethene	96	3.235	3.235	0.000	79	48782	2.50	2.71	
	6 Isopropyl alcohol	45	3.585	3.585	0.000	100	4351	25.0	22.7	
	7 cis-1,2-Dichloroethene	96	6.407	6.407	0.000	86	51583	2.50	2.62	
	8 Chloroform	83	7.030	7.030	0.000	99	75711	2.50	2.57	
$	9 Dibromofluoromethane (Surr)	113	7.284	7.284	0.000	100	140774	10.0	10.6	
$	10 1,2-Dichloroethane-d4 (Surr)	65	7.767	7.767	0.000	100	92665	10.0	9.64	
	11 Benzene	78	7.773	7.773	0.000	100	172305	2.50	2.58	
	12 1,2-Dichloroethane	62	7.877	7.877	0.000	100	28532	2.50	2.37	
*	13 Fluorobenzene (IS)	96	8.215	8.215	0.000	100	628274	10.0	10.0	
	14 Trichloroethene	132	8.672	8.672	0.000	98	45766	2.50	2.45	
	15 Dibromomethane	174	9.067	9.067	0.000	91	14291	2.50	2.46	
	16 Dichlorobromomethane	83	9.289	9.289	0.000	99	35475	2.50	2.47	
	17 cis-1,3-Dichloropropene	75	9.752	9.752	0.000	96	34090	2.50	2.43	
$	18 Toluene-d8 (Surr)	98	10.004	10.004	0.000	99	503993	10.0	9.91	
	19 trans-1,3-Dichloropropene	75	10.326	10.326	0.000	65	22021	2.50	2.36	
	20 1,1,2-Trichloroethane	97	10.504	10.504	0.000	77	14212	2.50	2.48	
	21 Tetrachloroethene	164	10.564	10.564	0.000	80	32984	2.50	2.56	
	22 2-Hexanone	58	10.716	10.716	0.000	97	14681	12.5	14.8	
	23 Chlorodibromomethane	129	10.850	10.850	0.000	90	16757	2.50	2.59	
	24 Ethylene Dibromide	107	10.944	10.944	0.000	96	12999	2.50	2.49	
*	25 Chlorobenzene-d5	117	11.360	11.360	0.000	98	347788	10.0	10.0	
	26 1,1,1,2-Tetrachloroethane	131	11.470	11.470	0.000	98	34178	2.50	2.76	
	27 Bromoform	173	12.096	12.096	0.000	99	8297	2.50	2.64	
$	28 4-Bromofluorobenzene (Surr)	174	12.385	12.385	0.000	88	131355	10.0	10.2	
	29 1,1,2,2-Tetrachloroethane	83	12.496	12.496	0.000	92	16352	2.50	2.70	
*	30 1,4-Dichlorobenzene-d4	152	13.339	13.339	0.000	99	184405	10.0	10.0	
	31 1,4-Dichlorobenzene	146	13.356	13.356	0.000	82	71867	2.50	2.46	
	32 Hexachlorobutadiene	225	15.026	15.026	0.000	92	28066	2.50	2.55	

Report Date: 31-Aug-2023 12:33:16 Chrom Revision: 2.3 21-Aug-2023 17:14:06
Data File: \\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\082923_003.D

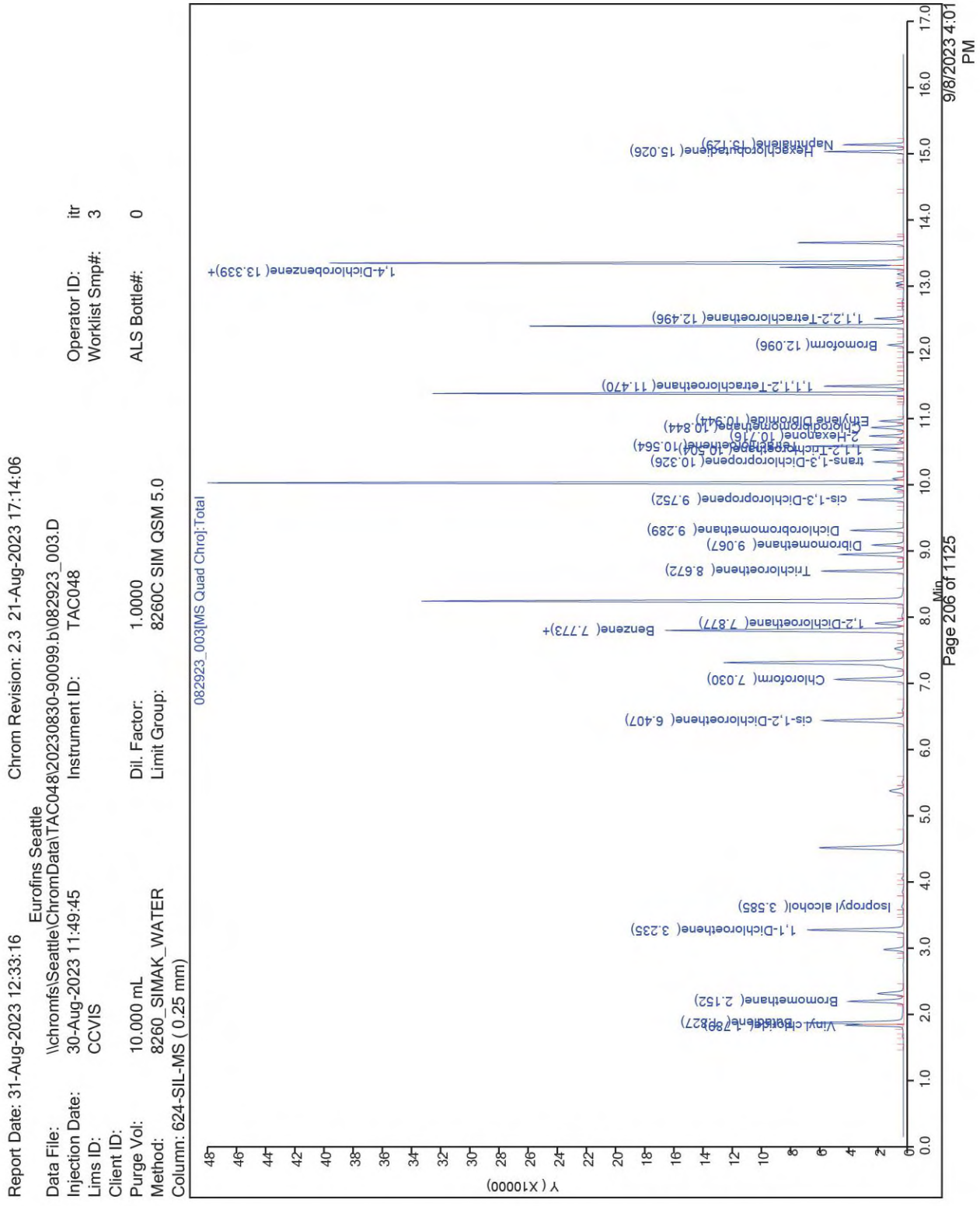
Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
33 Naphthalene	128	15.129	15.129	0.000	98	48833	2.50	2.47	
$ 49 BFB									

QC Flag Legend

Processing Flags

Reagents:

VOASTDGASweek_00146	Amount Added: 2.50	Units: uL	
VOAMasterMix_00105	Amount Added: 2.50	Units: uL	
5X SUR/IS_00031	Amount Added: 2.00	Units: uL	Run Reagent


Report Date: 31-Aug-2023 12:33:16
Chrom Revision: 2.3 21-Aug-2023 17:14:06
Eurofins Seattle
Data File: \\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\082923_003.D
Injection Date: 30-Aug-2023 11:49:45
Instrument ID: TAC048
Lims ID: CCVIS
Client ID:
Purge Vol: 10.000 mL
Dil. Factor: 1.0000
Method: 8260_SIMAK_WATER
Limit Group: 8260C SIM QSM 5.0
Column: 624-SIL-MS (0.25 mm)
Operator ID: itr
Worklist Smp#: 3
ALS Bottle#: 0
082923_003[MS Quad Chro]:Total
Y (X10000)
Min
9/8/2023 4:01 PM
Vinyl chloride(1.827)
Bromomethane(2.152)
1,1-Dichloroethene(3.235)
Isopropyl alcohol(3.585)
cis-1,2-Dichloroethene(6.407)
Chloroform(7.030)
Benzene(7.773)+
1,2-Dichloroethane(7.877)
Trichloroethene(8.672)
Dibromomethane(9.067)
Dichlorobromomethane(9.289)
cis-1,3-Dichloropropene(9.752)
trans-1,3-Dichloropropene(10.326)
1,1,2-Trichloroethane(10.504)
Tetrachloroethene(10.564)
2-Hexanone(10.716)
Chlorodibromomethane(10.844)
Ethylene Dibromide(10.944)
1,1,1,2-Tetrachloroethane(11.470)
Bromoform(12.096)
1,1,2,2-Tetrachloroethane(12.496)
1,4-Dichlorobenzene(13.339)+
Hexachlorobutadiene(15.026)
Naphthalene(15.129)
Page 206 of 1125

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Seattle Job No.: 580-130928-1
SDG No.:
Lab Sample ID: CCVC 580-436188/14 Calibration Date: 08/30/2023 17:07
Instrument ID: TAC048 Calib Start Date: 07/23/2023 18:34
GC Column: 624SIL-MS ID: 0.25(mm) Calib End Date: 07/23/2023 22:02
Lab File ID: 082923_014.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Vinyl chloride	Lin1		0.3522	0.1000	2.72	2.50	8.9	50.0
1,1-Dichloroethene	Ave	0.2867	0.3154	0.1000	2.75	2.50	10.0	50.0
cis-1,2-Dichloroethene	Ave	0.3137	0.3165	0.1000	2.52	2.50	0.9	50.0
Benzene	Ave	1.064	1.080	0.5000	2.54	2.50	1.5	50.0
1,2-Dichloroethane	Ave	0.1915	0.1655	0.1000	2.16	2.50	-13.6	50.0
Trichloroethene	Ave	0.2973	0.2932	0.2000	2.47	2.50	-1.4	50.0
Tetrachloroethene	Ave	0.3705	0.4048	0.2000	2.73	2.50	9.3	50.0
Ethylene Dibromide	Ave	0.1500	0.1396	0.1000	2.33	2.50	-6.9	50.0
Naphthalene	Ave	1.073	1.124		2.62	2.50	4.8	50.0
Dibromofluoromethane (Surr)	Ave	0.2118	0.2164		10.2	10.0	2.1	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.1530	0.1339		8.75	10.0	-12.5	50.0
Toluene-d8 (Surr)	Ave	1.462	1.534		10.5	10.0	4.9	50.0
4-Bromofluorobenzene (Surr)	Ave	0.3686	0.3575		9.70	10.0	-3.0	50.0

Report Date: 31-Aug-2023 12:39:34 Chrom Revision: 2.3 21-Aug-2023 17:14:06

Eurofins Seattle
Target Compound Quantitation Report

Data File: \\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\082923_014.D
Lims ID: ccvc
Client ID:
Sample Type: CCVC
Inject. Date: 30-Aug-2023 17:07:35 ALS Bottle#: 0 Worklist Smp#: 14
Purge Vol: 10.000 mL Dil. Factor: 1.0000
Sample Info: ccvc
Operator ID: itr Instrument ID: TAC048
Sublist: chrom-8260_SIMAK_WATER*sub6

Method: \\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\8260_SIMAK_WATER.m
Limit Group: 8260C SIM QSM 5.0
Last Update: 31-Aug-2023 12:39:33 Calib Date: 23-Jul-2023 22:02:46
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_011.D

Column 1 : 624-SIL-MS (0.25 mm) Det: MS SCAN
Process Host: CTX1640

First Level Reviewer: PHC3 Date: 31-Aug-2023 12:39:33

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
2 Vinyl chloride	62	1.794	1.789	0.006	100	52093	2.50	2.72	
1 Butadiene	54	1.832	1.827	0.005	97	47261	2.50	2.67	
3 Bromomethane	94	2.151	2.152	-0.001	100	42674	2.50	2.83	
4 1,1-Dichloroethene	96	3.240	3.235	0.005	79	46650	2.50	2.75	
6 Isopropyl alcohol	45	3.590	3.585	0.005	100	3685	25.0	20.4	
7 cis-1,2-Dichloroethene	96	6.412	6.407	0.005	86	46813	2.50	2.52	
8 Chloroform	83	7.035	7.030	0.005	100	67921	2.50	2.44	
$ 9 Dibromofluoromethane (Surr)	113	7.289	7.284	0.005	100	128004	10.0	10.2	
$ 10 1,2-Dichloroethane-d4 (Surr)	65	7.772	7.767	0.005	100	79207	10.0	8.75	
11 Benzene	78	7.778	7.773	0.005	100	159789	2.50	2.54	
12 1,2-Dichloroethane	62	7.882	7.877	0.005	99	24473	2.50	2.16	
* 13 Fluorobenzene (IS)	96	8.220	8.215	0.005	100	591608	10.0	10.0	
14 Trichloroethene	132	8.677	8.672	0.005	98	43360	2.50	2.47	
15 Dibromomethane	174	9.072	9.067	0.005	92	12597	2.50	2.31	
16 Dichlorobromomethane	83	9.294	9.289	0.005	99	30818	2.50	2.28	
17 cis-1,3-Dichloropropene	75	9.757	9.752	0.005	95	29239	2.50	2.33	
$ 18 Toluene-d8 (Surr)	98	10.009	10.004	0.005	99	477102	10.0	10.5	
19 trans-1,3-Dichloropropene	75	10.331	10.326	0.005	65	18057	2.50	2.17	
20 1,1,2-Trichloroethane	97	10.509	10.504	0.005	76	12261	2.50	2.39	
21 Tetrachloroethene	164	10.569	10.564	0.005	80	31485	2.50	2.73	
22 2-Hexanone	58	10.722	10.716	0.006	97	11001	12.5	12.4	
23 Chlorodibromomethane	129	10.855	10.850	0.005	91	13866	2.50	2.40	
24 Ethylene Dibromide	107	10.950	10.944	0.006	96	10860	2.50	2.33	
* 25 Chlorobenzene-d5	117	11.365	11.360	0.005	98	311118	10.0	10.0	
26 1,1,1,2-Tetrachloroethane	131	11.476	11.470	0.006	98	30262	2.50	2.73	
27 Bromoform	173	12.101	12.096	0.005	98	6460	2.50	2.30	
$ 28 4-Bromofluorobenzene (Surr)	174	12.385	12.385	0.000	86	111216	10.0	9.70	
29 1,1,2,2-Tetrachloroethane	83	12.501	12.496	0.005	92	13331	2.50	2.60	
* 30 1,4-Dichlorobenzene-d4	152	13.339	13.339	0.000	99	156157	10.0	10.0	
31 1,4-Dichlorobenzene	146	13.361	13.356	0.005	82	61318	2.50	2.48	
32 Hexachlorobutadiene	225	15.031	15.026	0.005	92	27994	2.50	3.00	

Report Date: 31-Aug-2023 12:39:34 Chrom Revision: 2.3 21-Aug-2023 17:14:06
Data File: \\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\082923_014.D

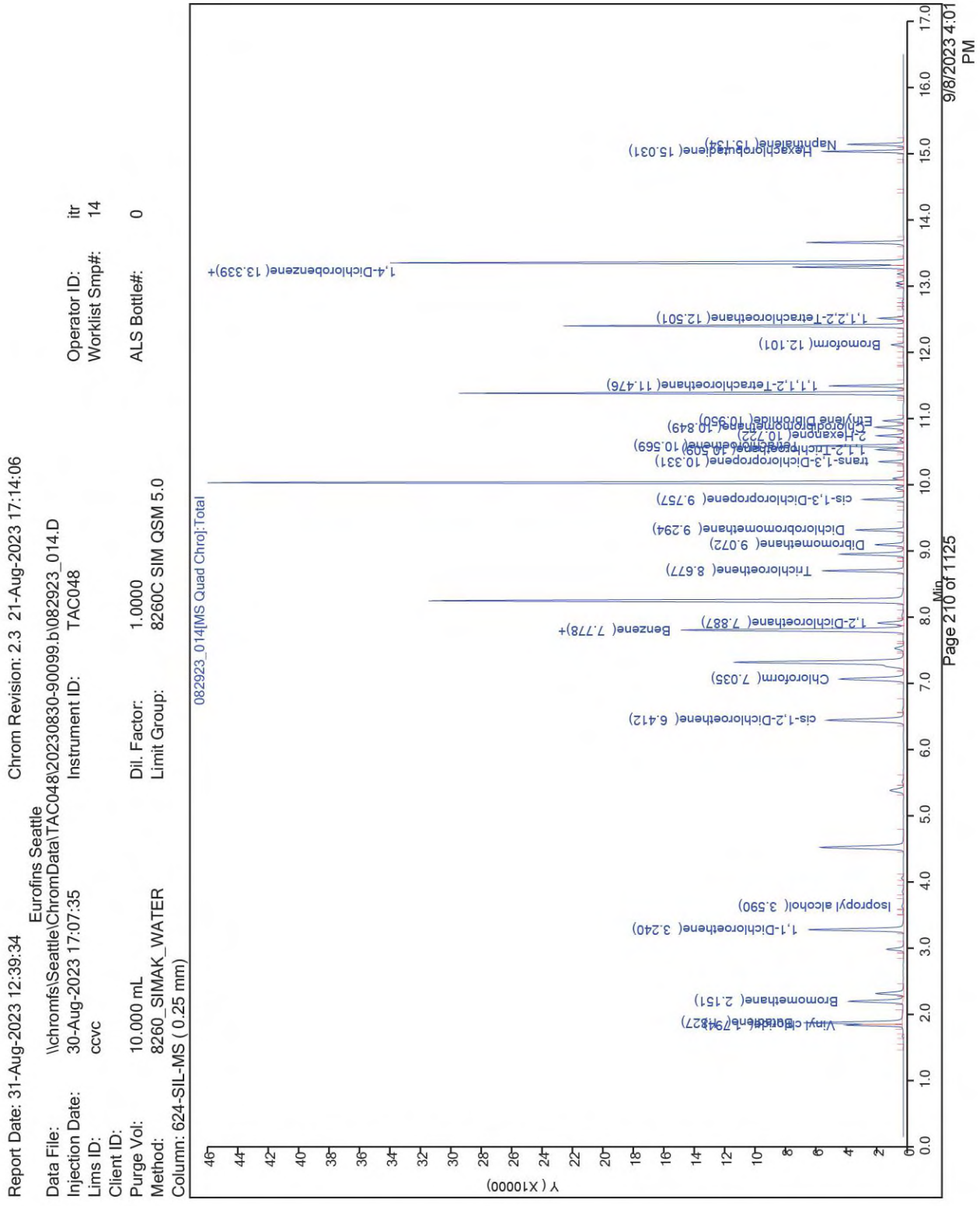
Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
33 Naphthalene	128	15.134	15.129	0.005	98	43866	2.50	2.62	
$ 49 BFB									

QC Flag Legend

Processing Flags

Reagents:

VOASTDGASweek_00146	Amount Added: 2.50	Units: uL	
VOAMasterMix_00105	Amount Added: 2.50	Units: uL	
5X SUR/IS_00031	Amount Added: 2.00	Units: uL	Run Reagent


Report Date: 31-Aug-2023 12:39:34
Chrom Revision: 2.3 21-Aug-2023 17:14:06
Eurofins Seattle
Data File: \\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\082923_014.D
Injection Date: 30-Aug-2023 17:07:35
Instrument ID: TAC048
Operator ID: itr
Lims ID: ccvc
Worklist Smp#: 14
Client ID:
Purge Vol: 10.000 mL
Dil. Factor: 1.0000
ALS Bottle#: 0
Method: 8260_SIMAK_WATER
Limit Group: 8260C SIM QSM 5.0
Column: 624-SIL-MS (0.25 mm)
082923_014[MS Quad Chro]:Total
Vinyl chloride(1.827)
Bromomethane(2.151)
1,1-Dichloroethene(3.240)
Isopropyl alcohol(3.590)
cis-1,2-Dichloroethene(6.412)
Chloroform(7.035)
Benzene(7.778)+
1,2-Dichloroethane(7.887)
Trichloroethene(8.677)
Dibromomethane(9.072)
Dichlorobromomethane(9.294)
cis-1,3-Dichloropropene(9.757)
trans-1,3-Dichloropropene(10.331)
1,1,2-Trichloroethane(10.509)
Tetrachloroethene(10.569)
2-Hexanone(10.722)
Chlorodibromomethane(10.849)
Ethylene Dibromide(10.950)
1,1,1,2-Tetrachloroethane(11.476)
Bromoform(12.101)
1,1,2,2-Tetrachloroethane(12.501)
1,4-Dichlorobenzene(13.339)+
Hexachlorobutadiene(15.031)
Naphthalene(15.134)
Y (X10000)
Min
9/8/2023 4:01 PM
Page 210 of 1125

Report Date: 24-Jul-2023 12:30:56 Chrom Revision: 2.3 19-Jul-2023 18:28:48

Eurofins Seattle
Target Compound Quantitation Report

Data File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_002.D
Lims ID: BFB TUNE
Client ID:
Sample Type: BFB
Inject. Date: 23-Jul-2023 18:08:38 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 10.0 mL Dil. Factor: 1.0000
Sample Info: BFB
Operator ID: AJ Instrument ID: TAC048

Method: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\8260_SIMAK_WATER.m
Limit Group: 8260C SIM QSM 5.0
Last Update: 24-Jul-2023 12:30:56 Calib Date: 23-Jul-2023 22:02:46
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_011.D

Column 1 : 624-SIL-MS (0.25 mm) Det: MS SCAN
Process Host: CTX1614

First Level Reviewer: PHC3 Date: 24-Jul-2023 12:30:56

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
$ 9 Dibromofluoromethane (Surr)	113	7.302	7.302	0.000	100	58300	10.0	10.7	
$ 10 1,2-Dichloroethane-d4 (Surr)	65	7.787	7.787	0.000	97	39304	10.0	9.95	
* 13 Fluorobenzene (IS)	96	8.230	8.230	0.000	100	258320	10.0	10.0	s
$ 18 Toluene-d8 (Surr)	98	10.018	10.018	0.000	99	224255	10.0	10.0	
* 25 Chlorobenzene-d5	117	11.376	11.376	0.000	99	153329	10.0	10.0	s
$ 28 4-Bromofluorobenzene (Surr)	174	12.394	12.394	0.000	95	58747	10.0	10.4	
* 30 1,4-Dichlorobenzene-d4	152	13.347	13.347	0.000	99	77700	10.0	10.0	s
$ 49 BFB									

QC Flag Legend

Processing Flags
s - Failed ISTD Recovery Test

Reagents:

5X SUR/IS_00028 Amount Added: 2.00 Units: uL Run Reagent

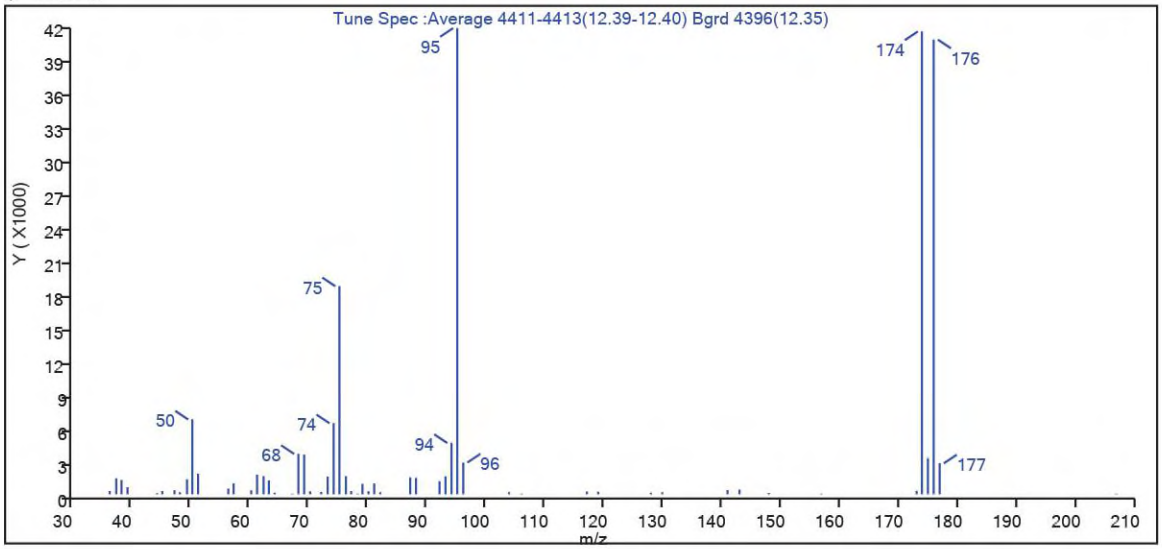
Report Date: 24-Jul-2023 12:30:56 Chrom Revision: 2.3 19-Jul-2023 18:28:48

MS Tune Report

Eurofins Seattle

Data File:	\\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_002.D				
Injection Date:	23-Jul-2023 18:08:38	Instrument ID:	TAC048		
Lims ID:	BFB TUNE				
Client ID:					
Operator ID:	AJ	ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	10.0 mL	Dil. Factor:	1.0000		
Method:	8260_SIMAK_WATER	Limit Group:	8260C SIM QSM 5.0		
Tune Method:	BFB Method 8260D				

$ 49 BFB

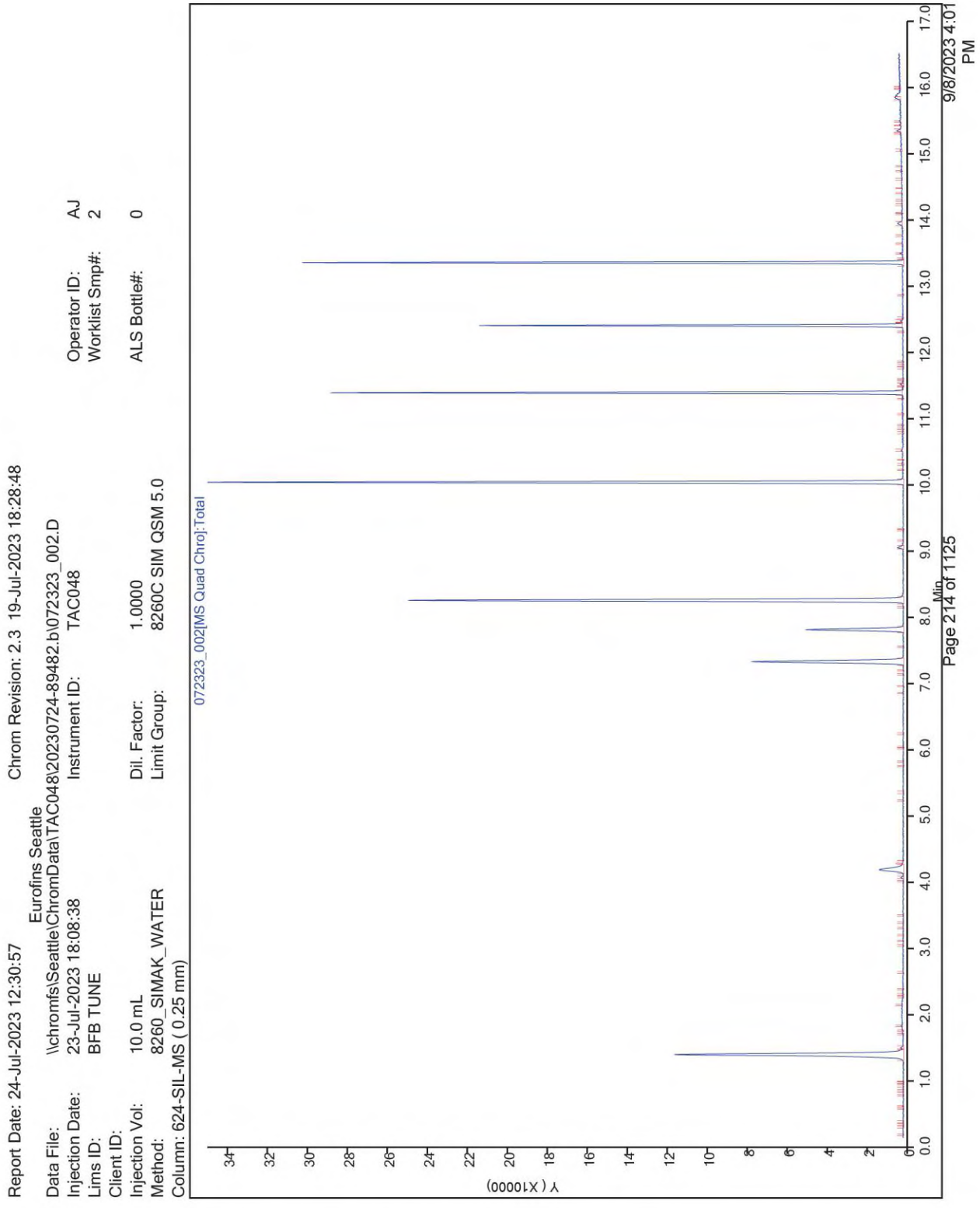


m/z	Ion Abundance Criteria	% Relative Abundance
95	50 to 200% of m/z 174	100.0 (100.7)
96	5 to 9% of m/z 95	6.8
173	<2% of m/z 174	0.8 (0.8)
174	50 to 200% of m/z 95	99.3
175	5 to 9% of m/z 174	7.7 (7.8)
176	95 to 105% of m/z 174	97.5 (98.2)
177	5 to 10% of m/z 176	6.7 (6.8)

Report Date: 24-Jul-2023 12:30:57 Chrom Revision: 2.3 19-Jul-2023 18:28:48

Data File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_002.D\8260_SIMAK_WATER.rslt\spect
Injection Date: 23-Jul-2023 18:08:38
Spectrum: Tune Spec :Average 4411-4413(12.39-12.40) Bgrd 4396(12.35)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 56

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	287	61.00	1751	78.00	51	117.00	247
37.00	1423	62.00	1620	79.00	927	119.00	217
38.00	1265	63.00	1228	80.00	274	128.00	145
39.00	626	64.00	129	81.00	979	130.00	177
44.00	100	67.00	53	82.00	186	141.00	372
45.00	282	68.00	3612	87.00	1498	143.00	413
47.00	357	69.00	3554	88.00	1460	148.00	124
48.00	182	70.00	259	92.00	1166	157.00	59
49.00	1331	72.00	195	93.00	1584	173.00	314
50.00	6690	73.00	1581	94.00	4588	174.00	41336
51.00	1825	74.00	6353	95.00	41640	175.00	3220
56.00	496	75.00	18592	96.00	2844	176.00	40608
57.00	966	76.00	1617	104.00	175	177.00	2772
60.00	349	77.00	287	106.00	50	207.00	51


Report Date: 24-Jul-2023 12:30:57
Chrom Revision: 2.3 19-Jul-2023 18:28:48
Eurofins Seattle
Data File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_002.D
Injection Date: 23-Jul-2023 18:08:38
Instrument ID: TAC048
Operator ID: AJ
Lims ID: BFB TUNE
Worklist Smp#: 2
Client ID:
Injection Vol: 10.0 mL
Dil. Factor: 1.0000
ALS Bottle#: 0
Method: 8260_SIMAK_WATER
Limit Group: 8260C SIM QSM 5.0
Column: 624-SIL-MS (0.25 mm)
072323_002[MS Quad Chro]:Total
Y (X10000)
Min
9/8/2023 4:01 PM

Report Date: 31-Aug-2023 12:31:55 Chrom Revision: 2.3 21-Aug-2023 17:14:06

Eurofins Seattle
Target Compound Quantitation Report

Data File: \\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\082923_002.D
Lims ID: BFB TUNE
Client ID:
Sample Type: BFB
Inject. Date: 30-Aug-2023 11:23:11 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 10.0 mL Dil. Factor: 1.0000
Sample Info: BFB
Operator ID: itr Instrument ID: TAC048

Method: \\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\8260_SIMAK_WATER.m
Limit Group: 8260C SIM QSM 5.0
Last Update: 31-Aug-2023 12:31:55 Calib Date: 23-Jul-2023 22:02:46
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_011.D

Column 1 : 624-SIL-MS (0.25 mm) Det: MS SCAN
Process Host: CTX1640

First Level Reviewer: PHC3 Date: 31-Aug-2023 12:31:55

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
$ 9 Dibromofluoromethane (Surr)	113	7.285	7.285	0.000	100	34395	10.0	11.0	
$ 10 1,2-Dichloroethane-d4 (Surr)	65	7.770	7.770	0.000	95	22179	10.0	9.78	
* 13 Fluorobenzene (IS)	96	8.217	8.217	0.000	100	148235	10.0	10.0	s
$ 18 Toluene-d8 (Surr)	98	10.007	10.007	0.000	100	131425	10.0	9.86	
* 25 Chlorobenzene-d5	117	11.365	11.365	0.000	98	91147	10.0	10.0	s
$ 28 4-Bromofluorobenzene (Surr)	174	12.383	12.383	0.000	94	34819	10.0	10.4	
* 30 1,4-Dichlorobenzene-d4	152	13.337	13.337	0.000	99	45994	10.0	10.0	s
$ 49 BFB									

QC Flag Legend

Processing Flags
s - Failed ISTD Recovery Test

Reagents:

5X SUR/IS_00031 Amount Added: 2.00 Units: uL Run Reagent

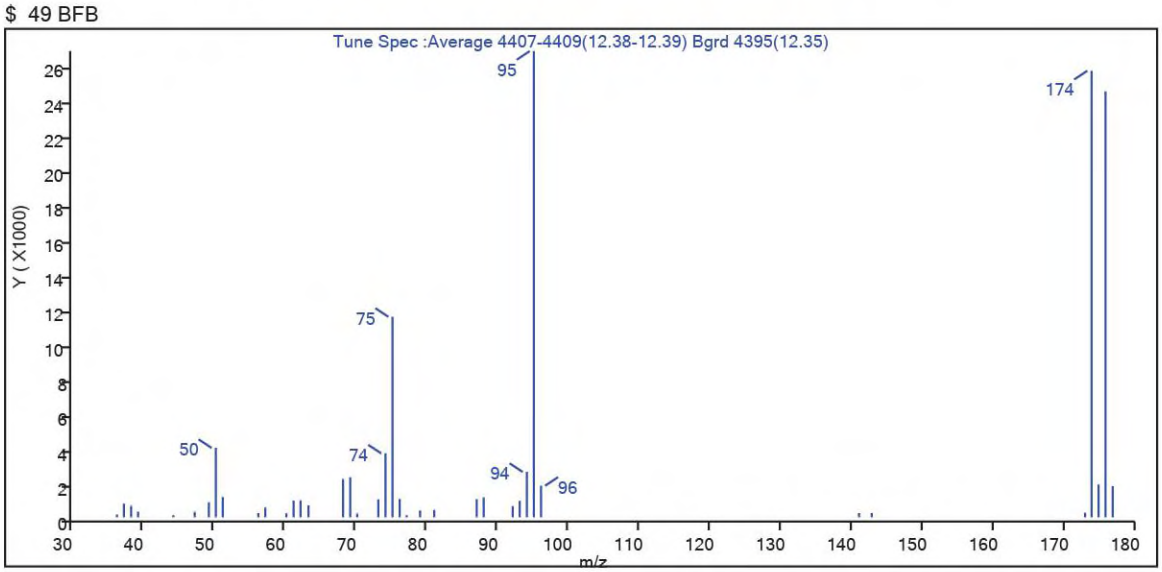
Report Date: 31-Aug-2023 12:31:55 Chrom Revision: 2.3 21-Aug-2023 17:14:06

MS Tune Report

Eurofins Seattle

Data File:	\\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\082923_002.D				
Injection Date:	30-Aug-2023 11:23:11	Instrument ID:	TAC048		
Lims ID:	BFB TUNE				
Client ID:					
Operator ID:	itr	ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	10.0 mL	Dil. Factor:	1.0000		
Method:	8260_SIMAK_WATER	Limit Group:	8260C SIM QSM 5.0		
Tune Method:	BFB Method 8260D				

$ 49 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	50 to 200% of m/z 174	100.0 (104.4)
96	5 to 9% of m/z 95	6.8
173	<2% of m/z 174	1.0 (1.0)
174	50 to 200% of m/z 95	95.8
175	5 to 9% of m/z 174	7.0 (7.3)
176	95 to 105% of m/z 174	91.3 (95.3)
177	5 to 10% of m/z 176	6.6 (7.3)

Report Date: 31-Aug-2023 12:31:55 Chrom Revision: 2.3 21-Aug-2023 17:14:06

Data File: \\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\082923_002.D\8260_SIMAK_WATER.rslt\spect
Injection Date: 30-Aug-2023 11:23:11
Spectrum: Tune Spec :Average 4407-4409(12.38-12.39) Bgrd 4395(12.35)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 39

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	156	57.00	544	75.00	11195	95.00	26024
37.00	750	60.00	213	76.00	1020	96.00	1766
38.00	638	61.00	934	77.00	107	141.00	228
39.00	308	62.00	941	79.00	380	143.00	236
44.00	111	63.00	666	81.00	407	173.00	252
47.00	299	68.00	2130	87.00	1009	174.00	24928
49.00	833	69.00	2228	88.00	1098	175.00	1830
50.00	3873	70.00	207	92.00	620	176.00	23768
51.00	1135	73.00	998	93.00	920	177.00	1730
56.00	237	74.00	3566	94.00	2537		

Report Date: 31-Aug-2023 12:31:55
Chrom Revision: 2.3 21-Aug-2023 17:14:06
Eurofins Seattle
Data File: \\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\082923_002.D
Injection Date: 30-Aug-2023 11:23:11
Instrument ID: TAC048
Operator ID: itr
Lims ID: BFB TUNE
Worklist Smp#: 2
Client ID:
Injection Vol: 10.0 mL
Dil. Factor: 1.0000
ALS Bottle#: 0
Method: 8260_SIMAK_WATER
Limit Group: 8260C SIM QSM 5.0
Column: 624-SIL-MS (0.25 mm)
082923_002[MS Quad Chro]:Total
Y (X10000)
Min
9/8/2023 4:01 PM

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Seattle | Job No.: 580-130928-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 580-436188/7

Matrix: Water | Lab File ID: 082923_007.D

Analysis Method: 8260D SIM | Date Collected:

Sample wt/vol: 10(mL) | Date Analyzed: 08/30/2023 13:35

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: 624SIL-MS ID: 0.25(mm)

Purge Volume: 10.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 436188 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	DL
75-01-4	Vinyl chloride	0.050	U	0.10	0.014

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	97		80-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		65-123
460-00-4	4-Bromofluorobenzene (Surr)	98		80-120
1868-53-7	Dibromofluoromethane (Surr)	104		80-120

Report Date: 31-Aug-2023 12:36:38 Chrom Revision: 2.3 21-Aug-2023 17:14:06

Eurofins Seattle
Target Compound Quantitation Report

Data File: \\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\082923_007.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 30-Aug-2023 13:35:03 ALS Bottle#: 0 Worklist Smp#: 7
Purge Vol: 10.000 mL Dil. Factor: 1.0000
Sample Info: mb
Operator ID: itr Instrument ID: TAC048

Method: \\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\8260_SIMAK_WATER.m
Limit Group: 8260C SIM QSM 5.0
Last Update: 31-Aug-2023 12:36:38 Calib Date: 23-Jul-2023 22:02:46
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_011.D

Column 1 : 624-SIL-MS (0.25 mm) Det: MS SCAN
Process Host: CTX1640

First Level Reviewer: PHC3 Date: 31-Aug-2023 12:36:38

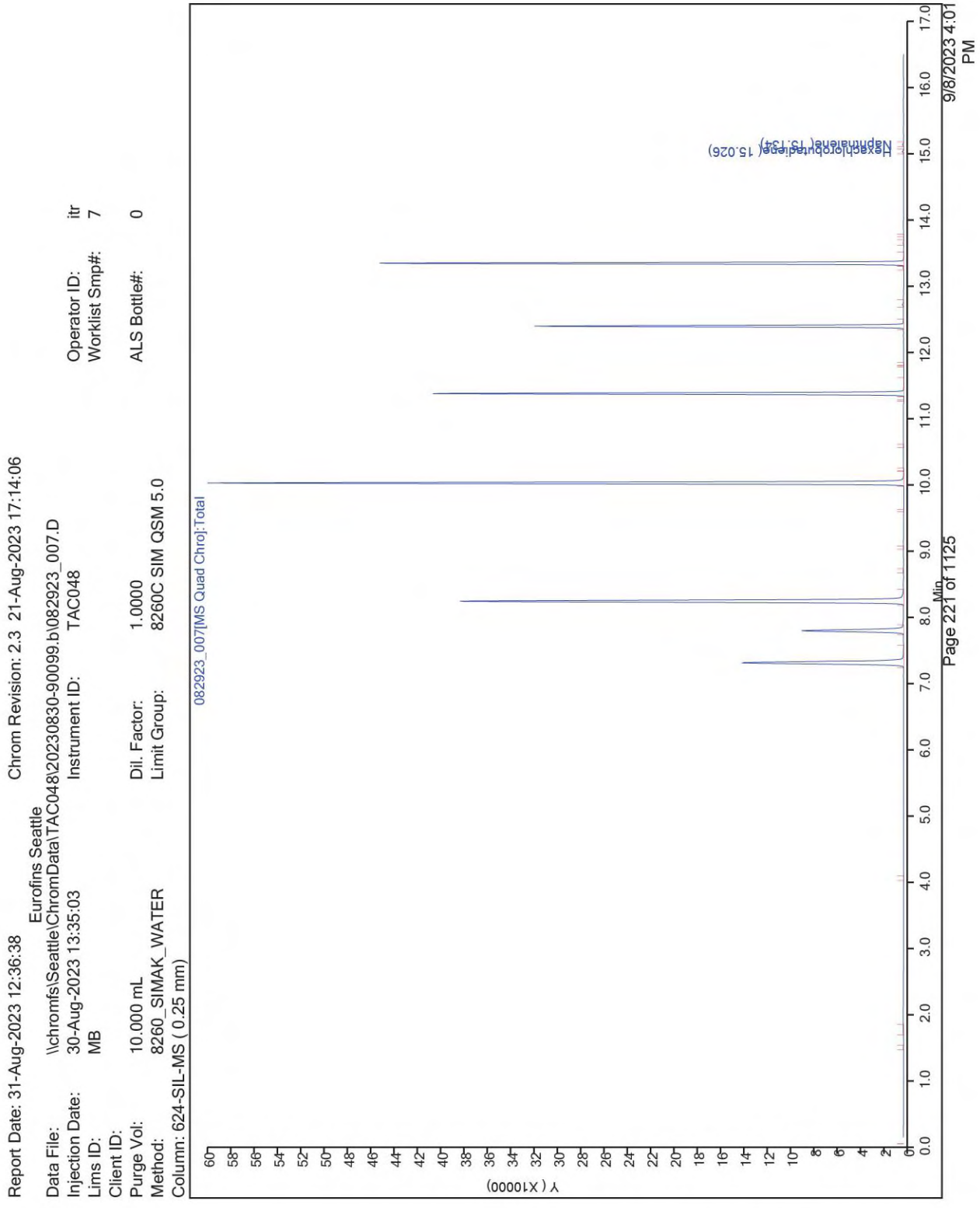
Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
8 Chloroform	83	7.030	7.030	0.000	89	56		0.001627	7Ma
$ 9 Dibromofluoromethane (Surr)	113	7.289	7.284	0.005	100	160796	10.0	10.4	
$ 10 1,2-Dichloroethane-d4 (Surr)	65	7.773	7.767	0.006	100	109676	10.0	9.78	
12 1,2-Dichloroethane	62	7.882	7.877	0.005	99	259		0.0185	a
* 13 Fluorobenzene (IS)	96	8.220	8.215	0.005	100	732855	10.0	10.0	
$ 18 Toluene-d8 (Surr)	98	10.009	10.004	0.005	99	620054	10.0	9.69	
21 Tetrachloroethene	164	10.564	10.564	0.000	80	79		0.004873	7M
22 2-Hexanone	58	10.722	10.716	0.006	95	89		0.0714	M
* 25 Chlorobenzene-d5	117	11.366	11.360	0.006	97	437537	10.0	10.0	
$ 28 4-Bromofluorobenzene (Surr)	174	12.385	12.385	0.000	88	158782	10.0	9.85	
* 30 1,4-Dichlorobenzene-d4	152	13.339	13.339	0.000	99	219188	10.0	10.0	
32 Hexachlorobutadiene	225	15.026	15.026	0.000	91	515		0.0394	
33 Naphthalene	128	15.134	15.129	0.005	98	977		0.0416	
$ 49 BFB									

QC Flag Legend

Processing Flags
7 - Failed Limit of Detection
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

5X SUR/IS_00031 Amount Added: 2.00 Units: uL Run Reagent


Report Date: 31-Aug-2023 12:36:38
Chrom Revision: 2.3 21-Aug-2023 17:14:06
Eurofins Seattle
Data File: \\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\082923_007.D
Injection Date: 30-Aug-2023 13:35:03
Instrument ID: TAC048
Operator ID: itr
Lims ID: MB
Worklist Smp#: 7
Client ID:
Purge Vol: 10.000 mL
Dil. Factor: 1.0000
ALS Bottle#: 0
Method: 8260_SIMAK_WATER
Limit Group: 8260C SIM QSM 5.0
Column: 624-SIL-MS (0.25 mm)
082923_007[MS Quad Chro]:Total
Hexachlorobutadiene(15.026)
Naphthalene(15.134)
Y (X10000)
Min
9/8/2023 4:01 PM
Page 221 of 1125

Report Date: 31-Aug-2023 12:36:38 Chrom Revision: 2.3 21-Aug-2023 17:14:06

Eurofins Seattle
Recovery Report

Data File: \\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\082923_007.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 30-Aug-2023 13:35:03 ALS Bottle#: 0 Worklist Smp#: 7
Purge Vol: 10.000 mL Dil. Factor: 1.0000
Sample Info: mb
Operator ID: itr Instrument ID: TAC048

Method: \\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\8260_SIMAK_WATER.m
Limit Group: 8260C SIM QSM 5.0
Last Update: 31-Aug-2023 12:36:38 Calib Date: 23-Jul-2023 22:02:46
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_011.D

Column 1 : 624-SIL-MS (0.25 mm) Det: MS SCAN
Process Host: CTX1640

First Level Reviewer: PHC3 Date: 31-Aug-2023 12:36:38

Compound	Amount Added	Amount Recovered	% Rec.
$ 9 Dibromofluoromethane (Surr)	10.0	10.4	103.57
$ 10 1,2-Dichloroethane-d4 (Surr)	10.0	9.78	97.83
$ 18 Toluene-d8 (Surr)	10.0	9.69	96.94
$ 28 4-Bromofluorobenzene (Surr)	10.0	9.85	98.46

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Seattle | Job No.: 580-130928-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 580-436188/4

Matrix: Water | Lab File ID: 082923_004.D

Analysis Method: 8260D SIM | Date Collected:

Sample wt/vol: 10(mL) | Date Analyzed: 08/30/2023 12:16

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: 624SIL-MS ID: 0.25(mm)

Purge Volume: 10.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 436188 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	DL
75-01-4	Vinyl chloride	2.10		0.10	0.014

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	97		80-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	96		65-123
460-00-4	4-Bromofluorobenzene (Surr)	101		80-120
1868-53-7	Dibromofluoromethane (Surr)	100		80-120

Report Date: 31-Aug-2023 12:33:32 Chrom Revision: 2.3 21-Aug-2023 17:14:06

Eurofins Seattle
Target Compound Quantitation Report

Data File: \\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\082923_004.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 30-Aug-2023 12:16:09 ALS Bottle#: 0 Worklist Smp#: 4
Purge Vol: 10.000 mL Dil. Factor: 1.0000
Sample Info: lcs
Operator ID: itr Instrument ID: TAC048

Method: \\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\8260_SIMAK_WATER.m
Limit Group: 8260C SIM QSM 5.0
Last Update: 31-Aug-2023 12:33:16 Calib Date: 23-Jul-2023 22:02:46
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_011.D

Column 1 : 624-SIL-MS (0.25 mm) Det: MS SCAN
Process Host: CTX1640

First Level Reviewer: PHC3 Date: 31-Aug-2023 12:33:32

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
2 Vinyl chloride	62	1.794	1.789	0.006	100	54657	2.50	2.10	
1 Butadiene	54	1.838	1.827	0.011	97	48728	2.50	2.03	
3 Bromomethane	94	2.157	2.152	0.005	100	45365	2.50	2.22	
4 1,1-Dichloroethene	96	3.241	3.235	0.006	79	52248	2.50	2.27	
6 Isopropyl alcohol	45	3.591	3.585	0.006	100	5070	25.0	20.7	
7 cis-1,2-Dichloroethene	96	6.412	6.407	0.005	86	61000	2.50	2.42	
8 Chloroform	83	7.036	7.030	0.006	100	91095	2.50	2.42	
$ 9 Dibromofluoromethane (Surr)	113	7.289	7.284	0.005	100	170881	10.0	10.0	
$ 10 1,2-Dichloroethane-d4 (Surr)	65	7.773	7.767	0.006	100	117855	10.0	9.60	
11 Benzene	78	7.778	7.773	0.005	100	218135	2.50	2.55	
12 1,2-Dichloroethane	62	7.882	7.877	0.005	99	36650	2.50	2.38	
* 13 Fluorobenzene (IS)	96	8.221	8.215	0.006	100	802746	10.0	10.0	
14 Trichloroethene	132	8.672	8.672	0.000	98	59092	2.50	2.48	
15 Dibromomethane	174	9.067	9.067	0.000	91	18501	2.50	2.50	
16 Dichlorobromomethane	83	9.289	9.289	0.000	99	47025	2.50	2.56	
17 cis-1,3-Dichloropropene	75	9.752	9.752	0.000	95	50095	2.50	2.49	
$ 18 Toluene-d8 (Surr)	98	10.009	10.004	0.005	99	703665	10.0	9.68	
19 trans-1,3-Dichloropropene	75	10.326	10.326	0.000	65	33144	2.50	2.49	
20 1,1,2-Trichloroethane	97	10.504	10.504	0.000	77	20905	2.50	2.55	
21 Tetrachloroethene	164	10.564	10.564	0.000	80	44623	2.50	2.42	
22 2-Hexanone	58	10.717	10.716	0.000	98	22141	12.5	15.6	
23 Chlorodibromomethane	129	10.850	10.850	0.000	90	23668	2.50	2.56	
24 Ethylene Dibromide	107	10.944	10.944	0.000	96	18756	2.50	2.51	
* 25 Chlorobenzene-d5	117	11.360	11.360	0.000	98	497260	10.0	10.0	
26 1,1,1,2-Tetrachloroethane	131	11.471	11.470	0.001	98	41244	2.50	2.33	
27 Bromoform	173	12.096	12.096	0.000	98	11317	2.50	2.52	
$ 28 4-Bromofluorobenzene (Surr)	174	12.385	12.385	0.000	88	185506	10.0	10.1	
29 1,1,2,2-Tetrachloroethane	83	12.496	12.496	0.000	92	20879	2.50	2.59	
* 30 1,4-Dichlorobenzene-d4	152	13.339	13.339	0.000	99	245436	10.0	10.0	
31 1,4-Dichlorobenzene	146	13.356	13.356	0.000	82	96164	2.50	2.47	
32 Hexachlorobutadiene	225	15.026	15.026	0.000	91	34210	2.50	2.33	
33 Naphthalene	128	15.129	15.129	0.000	98	51433	2.50	1.95	

Report Date: 31-Aug-2023 12:33:32 Chrom Revision: 2.3 21-Aug-2023 17:14:06
Data File: \\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\082923_004.D

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags

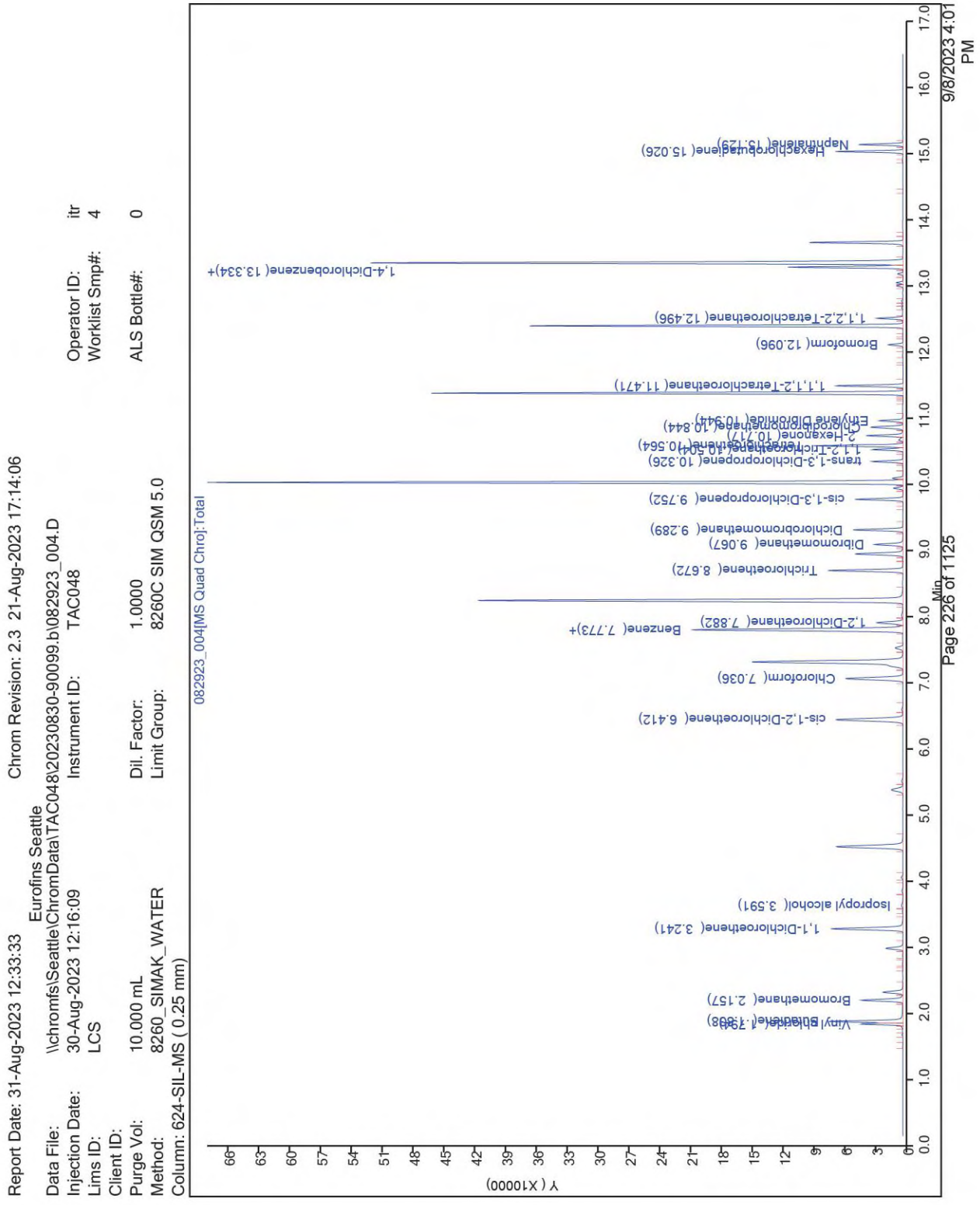
$ 49 BFB

QC Flag Legend

Processing Flags

Reagents:

VOASTDGASweek_00146	Amount Added:	2.50	Units: uL	
VOAMasterMix_00105	Amount Added:	2.50	Units: uL	
5X SUR/IS_00031	Amount Added:	2.00	Units: uL	Run Reagent


Report Date: 31-Aug-2023 12:33:33
Chrom Revision: 2.3 21-Aug-2023 17:14:06
Eurofins Seattle
Data File: \\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\082923_004.D
Injection Date: 30-Aug-2023 12:16:09
Instrument ID: TAC048
Operator ID: itr
Lims ID: LCS
Worklist Smp#: 4
Client ID:
Purge Vol: 10.000 mL
Dil. Factor: 1.0000
ALS Bottle#: 0
Method: 8260_SIMAK_WATER
Limit Group: 8260C SIM QSM 5.0
Column: 624-SIL-MS (0.25 mm)
082923_004[MS Quad Chro]:Total
Y (X10000)
Min
9/8/2023 4:01 PM
Page 226 of 1125
Vinyl chloride(1.798)
Bromomethane(2.157)
1,1-Dichloroethene(3.241)
Isopropyl alcohol(3.591)
cis-1,2-Dichloroethene(6.412)
Chloroform(7.036)
Benzene(7.773)+
1,2-Dichloroethane(7.882)
Trichloroethene(8.672)
Dibromomethane(9.067)
Dichlorobromomethane(9.289)
cis-1,3-Dichloropropene(9.752)
trans-1,3-Dichloropropene(10.326)
1,1,2-Trichloroethane(10.504)
Tetrachloroethene(10.564)
2-Hexanone(10.717)
Chlorodibromomethane(10.844)
Ethylene Dibromide(10.944)
1,1,1,2-Tetrachloroethane(11.471)
Bromoform(12.096)
1,1,2,2-Tetrachloroethane(12.496)
1,4-Dichlorobenzene(13.334)+
Hexachlorobutadiene(15.026)
Naphthalene(15.129)

Report Date: 31-Aug-2023 12:33:32 Chrom Revision: 2.3 21-Aug-2023 17:14:06

Eurofins Seattle
Recovery Report

Data File:	\\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\082923_004.D				
Lims ID:	LCS				
Client ID:					
Sample Type:	LCS				
Inject. Date:	30-Aug-2023 12:16:09	ALS Bottle#:	0	Worklist Smp#:	4
Purge Vol:	10.000 mL	Dil. Factor:	1.0000		
Sample Info:	lcs				
Operator ID:	itr	Instrument ID:	TAC048		
Method:	\\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\8260_SIMAK_WATER.m				
Limit Group:	8260C SIM QSM 5.0				
Last Update:	31-Aug-2023 12:33:16	Calib Date:	23-Jul-2023 22:02:46		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_011.D				
Column 1 :	624-SIL-MS (0.25 mm)		Det: MS SCAN		
Process Host:	CTX1640				

First Level Reviewer: PHC3 Date: 31-Aug-2023 12:33:32

Compound	Amount Added	Amount Recovered	% Rec.
$ 9 Dibromofluoromethane (Surr)	10.0	10.0	100.48
$ 10 1,2-Dichloroethane-d4 (Surr)	10.0	9.60	95.97
$ 18 Toluene-d8 (Surr)	10.0	9.68	96.80
$ 28 4-Bromofluorobenzene (Surr)	10.0	10.1	101.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Seattle | Job No.: 580-130928-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 580-436188/5

Matrix: Water | Lab File ID: 082923_005.D

Analysis Method: 8260D SIM | Date Collected:

Sample wt/vol: 10(mL) | Date Analyzed: 08/30/2023 12:42

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: 624SIL-MS ID: 0.25(mm)

Purge Volume: 10.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 436188 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	DL
75-01-4	Vinyl chloride	2.14		0.10	0.014

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	99		80-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	94		65-123
460-00-4	4-Bromofluorobenzene (Surr)	100		80-120
1868-53-7	Dibromofluoromethane (Surr)	101		80-120

Report Date: 31-Aug-2023 12:33:49 Chrom Revision: 2.3 21-Aug-2023 17:14:06

Eurofins Seattle
Target Compound Quantitation Report

Data File: \\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\082923_005.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 30-Aug-2023 12:42:32 ALS Bottle#: 0 Worklist Smp#: 5
Purge Vol: 10.000 mL Dil. Factor: 1.0000
Sample Info: lcsd
Operator ID: itr Instrument ID: TAC048

Method: \\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\8260_SIMAK_WATER.m
Limit Group: 8260C SIM QSM 5.0
Last Update: 31-Aug-2023 12:33:16 Calib Date: 23-Jul-2023 22:02:46
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_011.D

Column 1 : 624-SIL-MS (0.25 mm) Det: MS SCAN
Process Host: CTX1640

First Level Reviewer: PHC3 Date: 31-Aug-2023 12:33:49

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
	2 Vinyl chloride	62	1.788	1.789	0.000	100	53109	2.50	2.14	
	1 Butadiene	54	1.827	1.827	0.000	98	47652	2.50	2.08	
	3 Bromomethane	94	2.146	2.152	-0.006	100	43388	2.50	2.22	
	4 1,1-Dichloroethene	96	3.235	3.235	0.000	79	50628	2.50	2.30	
	6 Isopropyl alcohol	45	3.585	3.585	0.000	100	4908	25.0	20.9	
	7 cis-1,2-Dichloroethene	96	6.406	6.407	-0.001	86	58615	2.50	2.43	
	8 Chloroform	83	7.030	7.030	0.000	99	86846	2.50	2.41	
$	9 Dibromofluoromethane (Surr)	113	7.283	7.284	-0.001	100	164601	10.0	10.1	
$	10 1,2-Dichloroethane-d4 (Surr)	65	7.767	7.767	0.000	100	110799	10.0	9.43	
	11 Benzene	78	7.772	7.773	-0.001	100	205082	2.50	2.51	
	12 1,2-Dichloroethane	62	7.882	7.877	0.005	99	34324	2.50	2.33	
*	13 Fluorobenzene (IS)	96	8.215	8.215	0.000	100	767724	10.0	10.0	
	14 Trichloroethene	132	8.672	8.672	0.000	98	55689	2.50	2.44	
	15 Dibromomethane	174	9.067	9.067	0.000	92	17257	2.50	2.44	
	16 Dichlorobromomethane	83	9.289	9.289	0.000	99	43435	2.50	2.47	
	17 cis-1,3-Dichloropropene	75	9.751	9.752	-0.001	95	44889	2.50	2.44	
$	18 Toluene-d8 (Surr)	98	10.009	10.004	0.005	99	660684	10.0	9.91	
	19 trans-1,3-Dichloropropene	75	10.325	10.326	-0.001	65	29337	2.50	2.40	
	20 1,1,2-Trichloroethane	97	10.509	10.504	0.005	77	18723	2.50	2.49	
	21 Tetrachloroethene	164	10.563	10.564	-0.001	80	41211	2.50	2.44	
	22 2-Hexanone	58	10.716	10.716	0.000	92	19763	12.5	15.2	
	23 Chlorodibromomethane	129	10.849	10.850	-0.001	90	21228	2.50	2.51	
	24 Ethylene Dibromide	107	10.944	10.944	0.000	96	16904	2.50	2.47	
*	25 Chlorobenzene-d5	117	11.365	11.360	0.005	97	455887	10.0	10.0	
	26 1,1,1,2-Tetrachloroethane	131	11.476	11.470	0.006	100	38624	2.50	2.38	
	27 Bromoform	173	12.096	12.096	0.000	98	10134	2.50	2.46	
$	28 4-Bromofluorobenzene (Surr)	174	12.385	12.385	0.000	88	167335	10.0	9.96	
	29 1,1,2,2-Tetrachloroethane	83	12.496	12.496	0.000	91	19002	2.50	2.58	
*	30 1,4-Dichlorobenzene-d4	152	13.339	13.339	0.000	99	224666	10.0	10.0	
	31 1,4-Dichlorobenzene	146	13.355	13.356	-0.001	81	87478	2.50	2.46	
	32 Hexachlorobutadiene	225	15.025	15.026	-0.001	92	31647	2.50	2.36	
	33 Naphthalene	128	15.134	15.129	0.005	98	50417	2.50	2.09	

Report Date: 31-Aug-2023 12:33:49 Chrom Revision: 2.3 21-Aug-2023 17:14:06
Data File: \\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\082923_005.D

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags

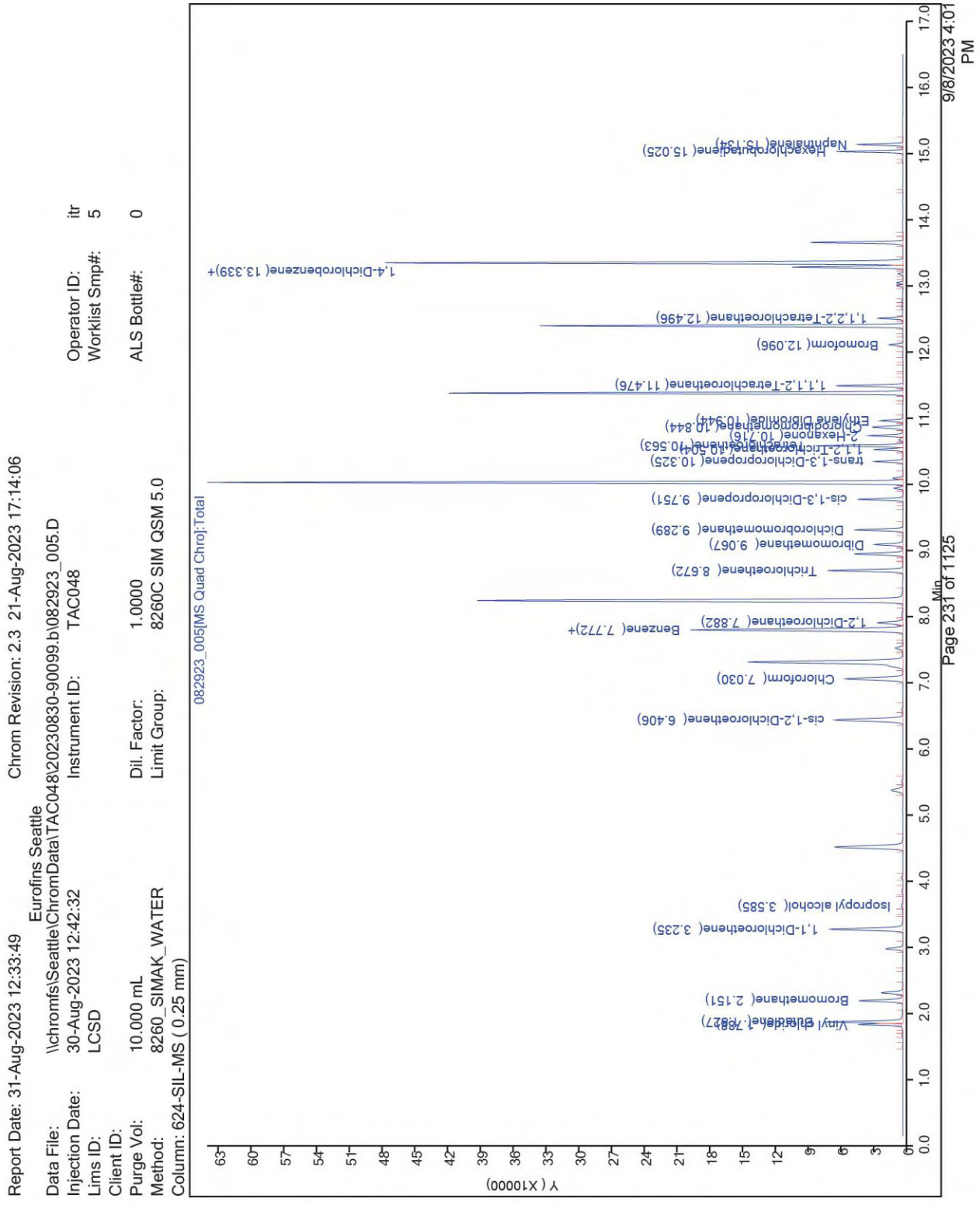
$ 49 BFB

QC Flag Legend

Processing Flags

Reagents:

VOASTDGASweek_00146	Amount Added:	2.50	Units: uL	
VOAMasterMix_00105	Amount Added:	2.50	Units: uL	
5X SUR/IS_00031	Amount Added:	2.00	Units: uL	Run Reagent


Report Date: 31-Aug-2023 12:33:49
Chrom Revision: 2.3 21-Aug-2023 17:14:06
Eurofins Seattle
Data File: \\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\082923_005.D
Injection Date: 30-Aug-2023 12:42:32
Instrument ID: TAC048
Operator ID: itr
Lims ID: LCSD
Worklist Smp#: 5
Client ID:
Purge Vol: 10.000 mL
Dil. Factor: 1.0000
ALS Bottle#: 0
Method: 8260_SIMAK_WATER
Limit Group: 8260C SIM QSM 5.0
Column: 624-SIL-MS (0.25 mm)
082923_005[MS Quad Chro]:Total
Vinyl chloride(1.782)
Bromomethane(2.151)
1,1-Dichloroethene(3.235)
Isopropyl alcohol(3.585)
cis-1,2-Dichloroethene(6.406)
Chloroform(7.030)
Benzene(7.772)+
1,2-Dichloroethane(7.882)
Trichloroethene(8.672)
Dibromomethane(9.067)
Dichlorobromomethane(9.289)
cis-1,3-Dichloropropene(9.751)
trans-1,3-Dichloropropene(10.325)
1,1,2-Trichloroethane(10.504)
Tetrachloroethene(10.563)
2-Hexanone(10.716)
Chlorodibromomethane(10.844)
Ethylene Dibromide(10.944)
1,1,1,2-Tetrachloroethane(11.476)
Bromoform(12.096)
1,1,2,2-Tetrachloroethane(12.496)
1,4-Dichlorobenzene(13.339)+
Hexachlorobutadiene(15.025)
Naphthalene(15.134)
Y (X10000)
Min
9/8/2023 4:01 PM

Report Date: 31-Aug-2023 12:33:49 Chrom Revision: 2.3 21-Aug-2023 17:14:06

Eurofins Seattle
Recovery Report

Data File:	\\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\082923_005.D				
Lims ID:	LCSD				
Client ID:					
Sample Type:	LCSD				
Inject. Date:	30-Aug-2023 12:42:32	ALS Bottle#:	0	Worklist Smp#:	5
Purge Vol:	10.000 mL	Dil. Factor:	1.0000		
Sample Info:	lcsd				
Operator ID:	itr	Instrument ID:	TAC048		
Method:	\\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\8260_SIMAK_WATER.m				
Limit Group:	8260C SIM QSM 5.0				
Last Update:	31-Aug-2023 12:33:16	Calib Date:	23-Jul-2023 22:02:46		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_011.D				
Column 1 :	624-SIL-MS (0.25 mm)		Det: MS SCAN		
Process Host:	CTX1640				

First Level Reviewer: PHC3 Date: 31-Aug-2023 12:33:49

Compound	Amount Added	Amount Recovered	% Rec.
$ 9 Dibromofluoromethane (Surr)	10.0	10.1	101.20
$ 10 1,2-Dichloroethane-d4 (Surr)	10.0	9.43	94.34
$ 18 Toluene-d8 (Surr)	10.0	9.91	99.13
$ 28 4-Bromofluorobenzene (Surr)	10.0	9.96	99.59

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Seattle | Job No.: 580-130928-1

SDG No.:

Client Sample ID: N3-12-2023 MS | Lab Sample ID: 580-130928-3 MS

Matrix: Water | Lab File ID: 082923_012.D

Analysis Method: 8260D SIM | Date Collected: 08/24/2023 13:40

Sample wt/vol: 10(mL) | Date Analyzed: 08/30/2023 16:15

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: 624SIL-MS ID: 0.25(mm)

Purge Volume: 10.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 436188 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	DL
75-01-4	Vinyl chloride	6.20		0.10	0.014

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	100		80-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	94		65-123
460-00-4	4-Bromofluorobenzene (Surr)	99		80-120
1868-53-7	Dibromofluoromethane (Surr)	102		80-120

Report Date: 08-Sep-2023 15:43:21 Chrom Revision: 2.3 21-Aug-2023 17:14:06

Eurofins Seattle
Target Compound Quantitation Report

Data File: \\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\082923_012.D
Lims ID: 580-130928-A-3 MS
Client ID: N3-12-2023
Sample Type: MS
Inject. Date: 30-Aug-2023 16:15:02 ALS Bottle#: 0 Worklist Smp#: 12
Purge Vol: 10.000 mL Dil. Factor: 1.0000
Sample Info: 580-130928-A-3 MS
Operator ID: itr Instrument ID: TAC048

Method: \\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\8260_SIMAK_WATER.m
Limit Group: 8260C SIM QSM 5.0
Last Update: 31-Aug-2023 12:39:33 Calib Date: 23-Jul-2023 22:02:46
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_011.D

Column 1 : 624-SIL-MS (0.25 mm) Det: MS SCAN
Process Host: CTX1606

First Level Reviewer: SZ0X Date: 08-Sep-2023 15:43:21

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
	2 Vinyl chloride	62	1.799	1.789	0.011	100	155228	5.00	6.20	
	1 Butadiene	54	1.838	1.827	0.011	98	128036	5.00	5.53	
	3 Bromomethane	94	2.157	2.152	0.005	100	109026	5.00	5.53	
	4 1,1-Dichloroethene	96	3.246	3.235	0.011	79	124446		5.60	
	6 Isopropyl alcohol	45	3.596	3.585	0.011	100	10451		44.1	
	7 cis-1,2-Dichloroethene	96	6.418	6.407	0.011	85	139531		5.74	
	8 Chloroform	83	7.041	7.030	0.011	99	189572		5.21	
$	9 Dibromofluoromethane (Surr)	113	7.295	7.284	0.011	100	167574	10.0	10.2	
$	10 1,2-Dichloroethane-d4 (Surr)	65	7.778	7.767	0.011	100	111262	10.0	9.38	
	11 Benzene	78	7.784	7.773	0.011	100	466682		5.66	
	12 1,2-Dichloroethane	62	7.887	7.877	0.010	99	73404		4.94	
*	13 Fluorobenzene (IS)	96	8.226	8.215	0.011	100	775446	10.0	10.0	
	14 Trichloroethene	132	8.677	8.672	0.005	97	124656		5.41	
	15 Dibromomethane	174	9.073	9.067	0.006	92	36908		5.16	
	16 Dichlorobromomethane	83	9.295	9.289	0.005	99	93672		5.28	
	17 cis-1,3-Dichloropropene	75	9.757	9.752	0.005	95	95413		5.19	
$	18 Toluene-d8 (Surr)	98	10.009	10.004	0.005	99	667241	10.0	10.0	
	19 trans-1,3-Dichloropropene	75	10.326	10.326	0.000	65	60564		4.97	
	20 1,1,2-Trichloroethane	97	10.510	10.504	0.006	77	39353		5.25	
	21 Tetrachloroethene	164	10.569	10.564	0.005	80	92345		5.48	
	22 2-Hexanone	58	10.722	10.716	0.006	97	34303		26.5	
	23 Chlorodibromomethane	129	10.850	10.850	0.000	90	44883		5.31	
	24 Ethylene Dibromide	107	10.950	10.944	0.006	95	34701		5.08	
*	25 Chlorobenzene-d5	117	11.366	11.360	0.006	97	455040	10.0	10.0	
	26 1,1,1,2-Tetrachloroethane	131	11.476	11.470	0.006	98	85299		5.26	
	27 Bromoform	173	12.096	12.096	0.000	99	20760		5.05	
$	28 4-Bromofluorobenzene (Surr)	174	12.385	12.385	0.000	87	165303	10.0	9.86	
	29 1,1,2,2-Tetrachloroethane	83	12.502	12.496	0.006	92	39035		5.41	
*	30 1,4-Dichlorobenzene-d4	152	13.339	13.339	0.000	99	219871	10.0	10.0	
	31 1,4-Dichlorobenzene	146	13.356	13.356	0.000	82	177505		5.10	
	32 Hexachlorobutadiene	225	15.026	15.026	0.000	92	62241		4.74	
	33 Naphthalene	128	15.134	15.129	0.005	98	104599		4.44	

Report Date: 08-Sep-2023 15:43:21 Chrom Revision: 2.3 21-Aug-2023 17:14:06
Data File: \\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\082923_012.D

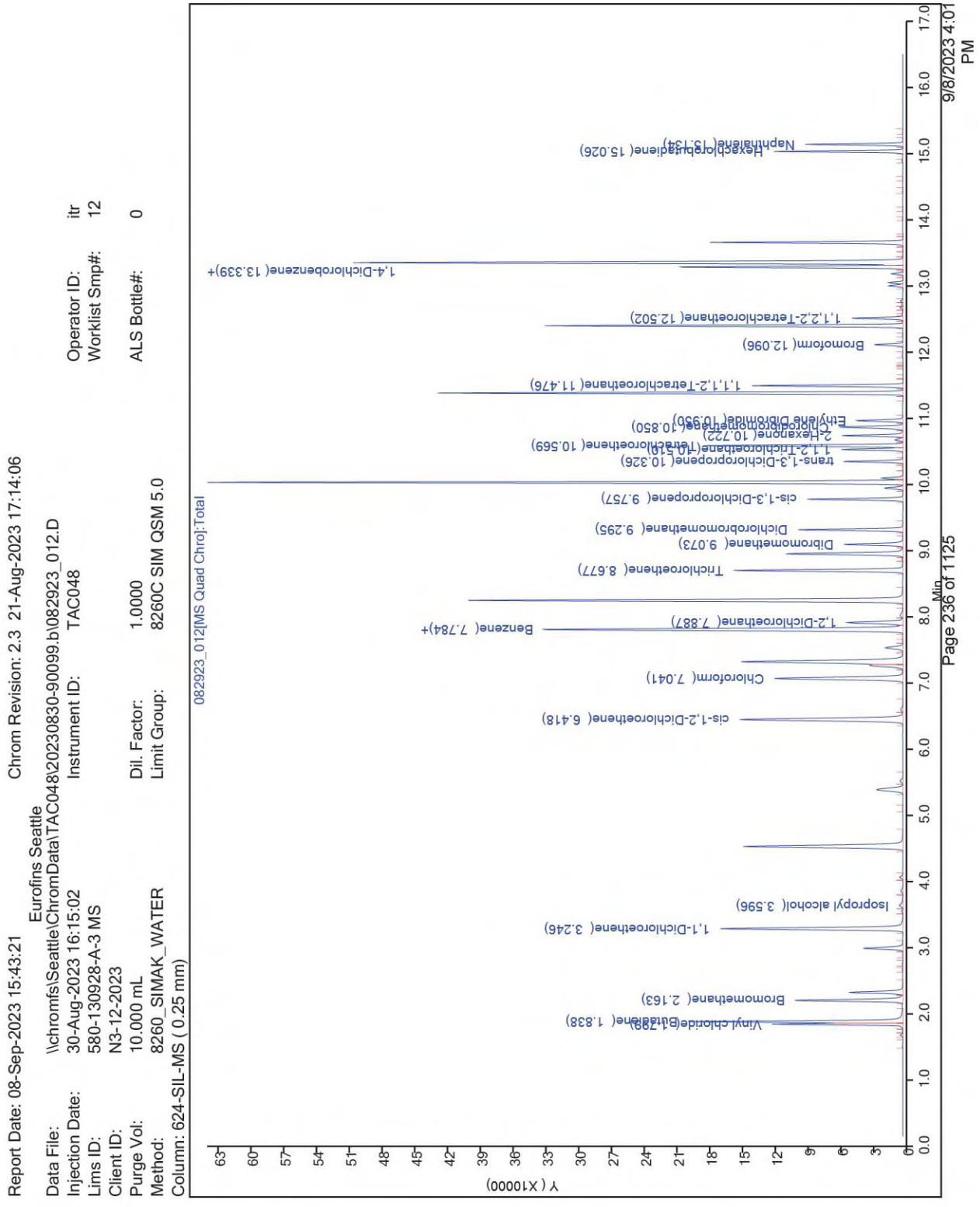
Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags

$ 49 BFB

QC Flag Legend
Processing Flags

Reagents:

5X SUR/IS_00031	Amount Added:	2.00	Units: uL	Run Reagent
VOASTDGASweek_00146	Amount Added:	4.30	Units: uL	


Report Date: 08-Sep-2023 15:43:21
Chrom Revision: 2.3 21-Aug-2023 17:14:06
Eurofins Seattle
Data File: \\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\082923_012.D
Injection Date: 30-Aug-2023 16:15:02
Instrument ID: TAC048
Lims ID: 580-130928-A-3 MS
Client ID: N3-12-2023
Purge Vol: 10.000 mL
Dil. Factor: 1.0000
Method: 8260_SIMAK_WATER
Limit Group: 8260C SIM QSM 5.0
Column: 624-SIL-MS (0.25 mm)
Operator ID: itr
Worklist Smp#: 12
ALS Bottle#: 0
082923_012[MS Quad Chro]:Total
Vinyl chloride(1.838)
Bromomethane(2.163)
1,1-Dichloroethene(3.246)
Isopropyl alcohol(3.596)
cis-1,2-Dichloroethene(6.418)
Chloroform(7.041)
Benzene(7.784)+
1,2-Dichloroethane(7.887)
Trichloroethene(8.677)
Dibromomethane(9.073)
Dichlorobromomethane(9.295)
cis-1,3-Dichloropropene(9.757)
trans-1,3-Dichloropropene(10.326)
1,1,2-Trichloroethane(10.519)
Tetrachloroethene(10.569)
2-Hexanone(10.722)
Chlorodibromomethane(10.850)
Ethylene Dibromide(10.950)
1,1,1,2-Tetrachloroethane(11.476)
Bromoform(12.096)
1,1,2,2-Tetrachloroethane(12.502)
1,4-Dichlorobenzene(13.339)+
Hexachlorobutadiene(15.026)
Naphthalene(15.134)
Y (X10000)
Min
9/8/2023 4:01 PM

Report Date: 08-Sep-2023 15:43:21 Chrom Revision: 2.3 21-Aug-2023 17:14:06

Eurofins Seattle
Recovery Report

Data File:	\\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\082923_012.D				
Lims ID:	580-130928-A-3 MS				
Client ID:	N3-12-2023				
Sample Type:	MS				
Inject. Date:	30-Aug-2023 16:15:02	ALS Bottle#:	0	Worklist Smp#:	12
Purge Vol:	10.000 mL	Dil. Factor:	1.0000		
Sample Info:	580-130928-A-3 MS				
Operator ID:	itr	Instrument ID:	TAC048		
Method:	\\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\8260_SIMAK_WATER.m				
Limit Group:	8260C SIM QSM 5.0				
Last Update:	31-Aug-2023 12:39:33	Calib Date:	23-Jul-2023 22:02:46		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_011.D				
Column 1 :	624-SIL-MS (0.25 mm)		Det: MS SCAN		
Process Host:	CTX1606				

First Level Reviewer: SZ0X Date: 08-Sep-2023 15:43:21

Compound	Amount Added	Amount Recovered	% Rec.
$ 9 Dibromofluoromethane (Surr)	10.0	10.2	102.01
$ 10 1,2-Dichloroethane-d4 (Surr)	10.0	9.38	93.79
$ 18 Toluene-d8 (Surr)	10.0	10.0	100.30
$ 28 4-Bromofluorobenzene (Surr)	10.0	9.86	98.56

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Seattle | Job No.: 580-130928-1

SDG No.:

Client Sample ID: N3-12-2023 MSD | Lab Sample ID: 580-130928-3 MSD

Matrix: Water | Lab File ID: 082923_013.D

Analysis Method: 8260D SIM | Date Collected: 08/24/2023 13:40

Sample wt/vol: 10(mL) | Date Analyzed: 08/30/2023 16:41

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: 624SIL-MS ID: 0.25(mm)

Purge Volume: 10.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 436188 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	DL
75-01-4	Vinyl chloride	6.58		0.10	0.014

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	101		80-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	93		65-123
460-00-4	4-Bromofluorobenzene (Surr)	100		80-120
1868-53-7	Dibromofluoromethane (Surr)	102		80-120

Report Date: 08-Sep-2023 15:43:47 Chrom Revision: 2.3 21-Aug-2023 17:14:06

Eurofins Seattle
Target Compound Quantitation Report

Data File: \\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\082923_013.D
Lims ID: 580-130928-A-3 MSD
Client ID: N3-12-2023
Sample Type: MSD
Inject. Date: 30-Aug-2023 16:41:14 ALS Bottle#: 0 Worklist Smp#: 13
Purge Vol: 10.000 mL Dil. Factor: 1.0000
Sample Info: 580-130928-A-3 MSD
Operator ID: itr Instrument ID: TAC048

Method: \\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\8260_SIMAK_WATER.m
Limit Group: 8260C SIM QSM 5.0
Last Update: 31-Aug-2023 12:39:33 Calib Date: 23-Jul-2023 22:02:46
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_011.D

Column 1 : 624-SIL-MS (0.25 mm) Det: MS SCAN
Process Host: CTX1606

First Level Reviewer: PHC3 Date: 31-Aug-2023 12:39:16

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
2 Vinyl chloride	62	1.794	1.789	0.006	100	157603	5.00	6.58	
1 Butadiene	54	1.838	1.827	0.011	97	130116	5.00	5.87	
3 Bromomethane	94	2.157	2.152	0.005	100	108780	5.00	5.76	
4 1,1-Dichloroethene	96	3.241	3.235	0.006	79	124468		5.85	
6 Isopropyl alcohol	45	3.591	3.585	0.006	100	11037		48.7	
7 cis-1,2-Dichloroethene	96	6.418	6.407	0.011	85	139055		5.97	
8 Chloroform	83	7.035	7.030	0.005	100	187751		5.38	
$ 9 Dibromofluoromethane (Surr)	113	7.289	7.284	0.005	100	159834	10.0	10.2	
$ 10 1,2-Dichloroethane-d4 (Surr)	65	7.778	7.767	0.011	100	105834	10.0	9.32	
11 Benzene	78	7.778	7.773	0.005	100	459482		5.82	
12 1,2-Dichloroethane	62	7.887	7.877	0.010	99	71874		5.06	
* 13 Fluorobenzene (IS)	96	8.221	8.215	0.006	100	742359	10.0	10.0	
14 Trichloroethene	132	8.677	8.672	0.005	98	123569		5.60	
15 Dibromomethane	174	9.073	9.067	0.006	92	36339		5.30	
16 Dichlorobromomethane	83	9.294	9.289	0.005	99	92015		5.42	
17 cis-1,3-Dichloropropene	75	9.757	9.752	0.005	95	92465		5.35	
$ 18 Toluene-d8 (Surr)	98	10.009	10.004	0.005	99	630042	10.0	10.1	
19 trans-1,3-Dichloropropene	75	10.326	10.326	0.000	65	58749		5.13	
20 1,1,2-Trichloroethane	97	10.510	10.504	0.006	76	38179		5.41	
21 Tetrachloroethene	164	10.569	10.564	0.005	80	90870		5.73	
22 2-Hexanone	58	10.722	10.716	0.006	92	33851		27.8	
23 Chlorodibromomethane	129	10.855	10.850	0.005	90	43708		5.50	
24 Ethylene Dibromide	107	10.950	10.944	0.006	96	33755		5.26	
* 25 Chlorobenzene-d5	117	11.366	11.360	0.006	97	427956	10.0	10.0	
26 1,1,1,2-Tetrachloroethane	131	11.476	11.470	0.006	98	84683		5.55	
27 Bromoform	173	12.096	12.096	0.000	99	20473		5.30	
$ 28 4-Bromofluorobenzene (Surr)	174	12.385	12.385	0.000	87	157691	10.0	10.0	
29 1,1,2,2-Tetrachloroethane	83	12.502	12.496	0.006	91	38469		5.52	
* 30 1,4-Dichlorobenzene-d4	152	13.339	13.339	0.000	98	212211	10.0	10.0	
31 1,4-Dichlorobenzene	146	13.356	13.356	0.000	81	176454		5.25	
32 Hexachlorobutadiene	225	15.026	15.026	0.000	92	64308		5.08	
33 Naphthalene	128	15.134	15.129	0.005	98	110880		4.87	

Report Date: 08-Sep-2023 15:43:47 Chrom Revision: 2.3 21-Aug-2023 17:14:06
Data File: \\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\082923_013.D

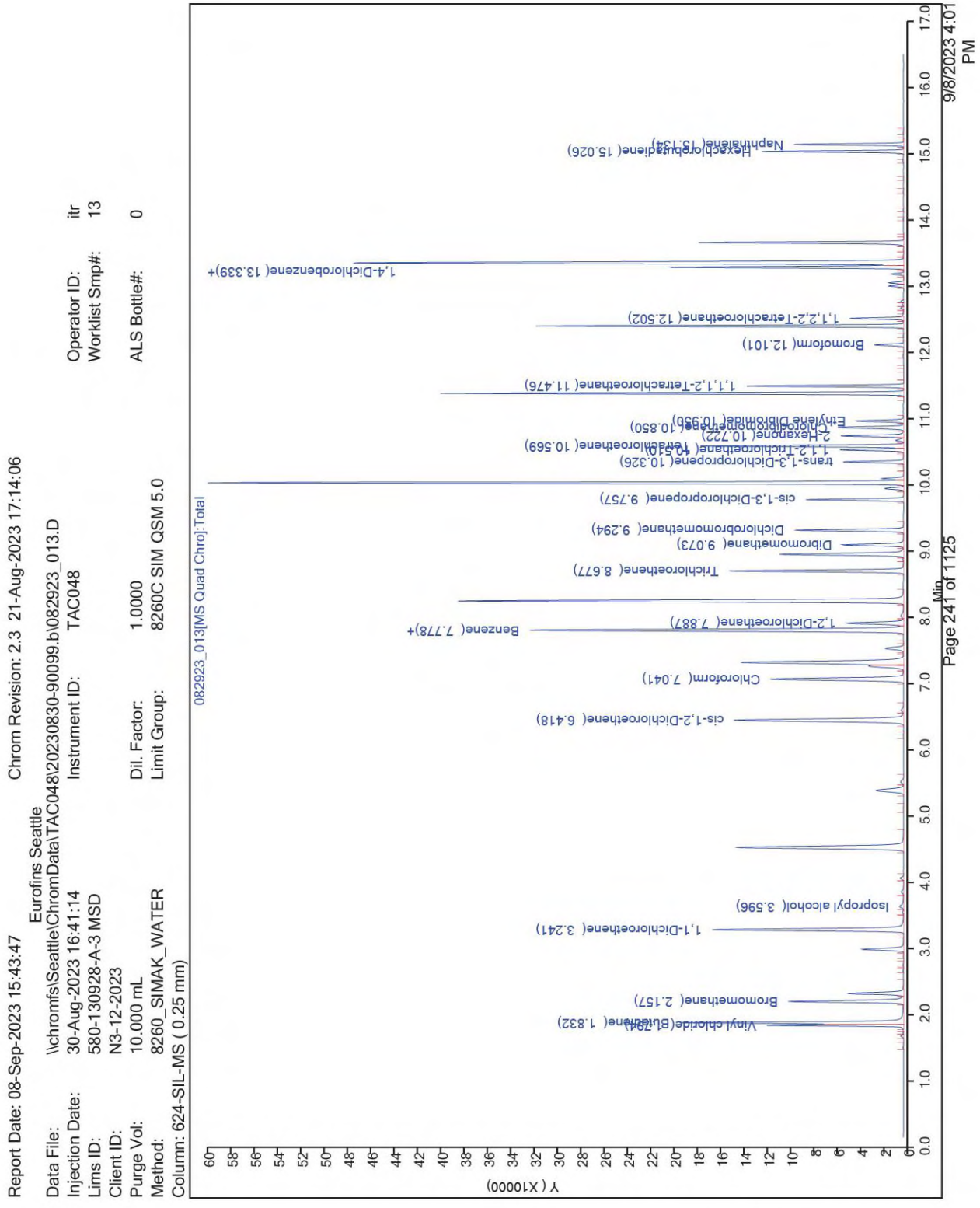
Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags

$ 49 BFB

QC Flag Legend
Processing Flags

Reagents:

5X SUR/IS_00031	Amount Added:	2.00	Units: uL	Run Reagent
VOASTDGASweek_00146	Amount Added:	4.30	Units: uL	


Report Date: 08-Sep-2023 15:43:47
Chrom Revision: 2.3 21-Aug-2023 17:14:06
Eurofins Seattle
Data File: \\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\082923_013.D
Injection Date: 30-Aug-2023 16:41:14
Instrument ID: TAC048
Lims ID: 580-130928-A-3 MSD
Client ID: N3-12-2023
Purge Vol: 10.000 mL
Dil. Factor: 1.0000
Method: 8260_SIMAK_WATER
Limit Group: 8260C SIM QSM 5.0
Column: 624-SIL-MS (0.25 mm)
Operator ID: itr
Worklist Smp#: 13
ALS Bottle#: 0
082923_013|MS Quad Chro|:Total
Vinyl chloride(Butadiene(1.832)
Bromomethane(2.157)
1,1-Dichloroethene(3.241)
Isopropyl alcohol(3.596)
cis-1,2-Dichloroethene(6.418)
Chloroform(7.041)
Benzene(7.778)+
1,2-Dichloroethane(7.887)
Trichloroethene(8.677)
Dibromomethane(9.073)
Dichlorobromomethane(9.294)
cis-1,3-Dichloropropene(9.757)
trans-1,3-Dichloropropene(10.326)
1,1,2-Trichloroethane(10.510)
Tetrachloroethene(10.569)
2-Hexanone(10.722)
Chlorodibromomethane(10.850)
Ethylene Dibromide(10.950)
1,1,1,2-Tetrachloroethane(11.476)
Bromoform(12.101)
1,1,2,2-Tetrachloroethane(12.502)
1,4-Dichlorobenzene(13.339)+
Hexachlorobutadiene(15.026)
Naphthalene(15.134)
Y (X10000)
Min
9/8/2023 4:01 PM
Page 241 of 1125

Report Date: 08-Sep-2023 15:43:47 Chrom Revision: 2.3 21-Aug-2023 17:14:06

Eurofins Seattle
Recovery Report

Data File:	\\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\082923_013.D				
Lims ID:	580-130928-A-3 MSD				
Client ID:	N3-12-2023				
Sample Type:	MSD				
Inject. Date:	30-Aug-2023 16:41:14	ALS Bottle#:	0	Worklist Smp#:	13
Purge Vol:	10.000 mL	Dil. Factor:	1.0000		
Sample Info:	580-130928-A-3 MSD				
Operator ID:	itr	Instrument ID:	TAC048		
Method:	\\chromfs\Seattle\ChromData\TAC048\20230830-90099.b\8260_SIMAK_WATER.m				
Limit Group:	8260C SIM QSM 5.0				
Last Update:	31-Aug-2023 12:39:33	Calib Date:	23-Jul-2023 22:02:46		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Seattle\ChromData\TAC048\20230724-89482.b\072323_011.D				
Column 1 :	624-SIL-MS (0.25 mm)		Det: MS SCAN		
Process Host:	CTX1606				

First Level Reviewer: PHC3 Date: 31-Aug-2023 12:39:16

Compound	Amount Added	Amount Recovered	% Rec.
$ 9 Dibromofluoromethane (Surr)	10.0	10.2	101.63
$ 10 1,2-Dichloroethane-d4 (Surr)	10.0	9.32	93.19
$ 18 Toluene-d8 (Surr)	10.0	10.1	100.70
$ 28 4-Bromofluorobenzene (Surr)	10.0	10.0	99.97

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

Instrument ID: TAC048 Start Date: 07/23/2023 18:08

Analysis Batch Number: 432388 End Date: 07/23/2023 22:54

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 580-432388/2		07/23/2023 18:08	1	072323_002.D	624SIL-MS 0.25(mm)
IC 580-432388/3		07/23/2023 18:34	1	072323_003.D	624SIL-MS 0.25(mm)
IC 580-432388/4		07/23/2023 19:00	1	072323_004.D	624SIL-MS 0.25(mm)
IC 580-432388/5		07/23/2023 19:26	1	072323_005.D	624SIL-MS 0.25(mm)
IC 580-432388/6		07/23/2023 19:52	1	072323_006.D	624SIL-MS 0.25(mm)
IC 580-432388/7		07/23/2023 20:18	1	072323_007.D	624SIL-MS 0.25(mm)
ICIS 580-432388/8		07/23/2023 20:44	1	072323_008.D	624SIL-MS 0.25(mm)
IC 580-432388/9		07/23/2023 21:10	1	072323_009.D	624SIL-MS 0.25(mm)
IC 580-432388/10		07/23/2023 21:36	1	072323_010.D	624SIL-MS 0.25(mm)
IC 580-432388/11		07/23/2023 22:02	1	072323_011.D	624SIL-MS 0.25(mm)
ICV 580-432388/13		07/23/2023 22:54	1	072323_013.D	624SIL-MS 0.25(mm)

8260D SIM

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

Instrument ID: TAC048 Start Date: 08/30/2023 11:23

Analysis Batch Number: 436188 End Date: 08/30/2023 17:07

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 580-436188/2		08/30/2023 11:23	1	082923_002.D	624SIL-MS 0.25(mm)
CCVIS 580-436188/3		08/30/2023 11:49	1	082923_003.D	624SIL-MS 0.25(mm)
LCS 580-436188/4		08/30/2023 12:16	1	082923_004.D	624SIL-MS 0.25(mm)
LCSD 580-436188/5		08/30/2023 12:42	1	082923_005.D	624SIL-MS 0.25(mm)
ZZZZZ		08/30/2023 13:08	1		624SIL-MS 0.25(mm)
MB 580-436188/7		08/30/2023 13:35	1	082923_007.D	624SIL-MS 0.25(mm)
580-130928-6	Trip Blank-20230824	08/30/2023 14:29	1	082923_008.D	624SIL-MS 0.25(mm)
580-130928-5	EBlank-2023	08/30/2023 14:56	1	082923_009.D	624SIL-MS 0.25(mm)
580-130928-3	N3-12-2023	08/30/2023 15:22	1	082923_010.D	624SIL-MS 0.25(mm)
580-130928-4	DUP-2023	08/30/2023 15:48	1	082923_011.D	624SIL-MS 0.25(mm)
580-130928-3 MS	N3-12-2023 MS	08/30/2023 16:15	1	082923_012.D	624SIL-MS 0.25(mm)
580-130928-3 MSD	N3-12-2023 MSD	08/30/2023 16:41	1	082923_013.D	624SIL-MS 0.25(mm)
CCVC 580-436188/14		08/30/2023 17:07	1	082923_014.D	624SIL-MS 0.25(mm)

8260D SIM

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

Batch Number: 432388 Batch Start Date: 07/23/23 18:08 Batch Analyst: Boyle, Alex D

Batch Method: 8260D SIM Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	5X SUR/IS 00028	VOAMasterMix 00104	VOAMasterSEC 00082	VOASTDGASweek 00145
BFB 580-432388/2		8260D SIM		10 mL	10 mL	2 uL			
IC 580-432388/3		8260D SIM		10 mL	10 mL	2 uL	0.02 uL		0.02 uL
IC 580-432388/4		8260D SIM		10 mL	10 mL	2 uL	0.05 uL		0.05 uL
IC 580-432388/5		8260D SIM		10 mL	10 mL	2 uL	0.1 uL		0.1 uL
IC 580-432388/6		8260D SIM		10 mL	10 mL	2 uL	0.5 uL		0.5 uL
IC 580-432388/7		8260D SIM		10 mL	10 mL	2 uL	1 uL		1 uL
ICIS 580-432388/8		8260D SIM		10 mL	10 mL	2 uL	5 uL		5 uL
IC 580-432388/9		8260D SIM		10 mL	10 mL	2 uL	10 uL		10 uL
IC 580-432388/10		8260D SIM		10 mL	10 mL	2 uL	25 uL		25 uL
IC 580-432388/11		8260D SIM		10 mL	10 mL	2 uL	50 uL		50 uL
ICV 580-432388/13		8260D SIM		10 mL	10 mL	2 uL		5 uL	

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

8260D SIM

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

Batch Number: 436188 Batch Start Date: 08/30/23 11:23 Batch Analyst: Rakotz, Ian T

Batch Method: 8260D SIM Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	5X SUR/IS 00031	VOAMasterMix 00105	VOASTDGASweek 00146
BFB 580-436188/2		8260D SIM		10 mL	10 mL		2 uL		
CCVIS 580-436188/3		8260D SIM		10 mL	10 mL		2 uL	2.5 uL	2.5 uL
LCS 580-436188/4		8260D SIM		10 mL	10 mL		2 uL	2.5 uL	2.5 uL
LCSD 580-436188/5		8260D SIM		10 mL	10 mL		2 uL	2.5 uL	2.5 uL
MB 580-436188/7		8260D SIM		10 mL	10 mL		2 uL		
580-130928-A-6	Trip Blank-20230824	8260D SIM	T	10 mL	10 mL	<2 SU	2 uL		
580-130928-A-5	EBlank-2023	8260D SIM	T	10 mL	10 mL	<2 SU	2 uL		
580-130928-B-3	N3-12-2023	8260D SIM	T	10 mL	10 mL	<2 SU	2 uL		
580-130928-A-4	DUP-2023	8260D SIM	T	10 mL	10 mL	<2 SU	2 uL		
580-130928-A-3 MS	N3-12-2023	8260D SIM	T	10 mL	10 mL	<2 SU	2 uL		4.3 uL
580-130928-A-3 MSD	N3-12-2023	8260D SIM	T	10 mL	10 mL	<2 SU	2 uL		4.3 uL
CCVC 580-436188/14		8260D SIM		10 mL	10 mL		2 uL	2.5 uL	2.5 uL

Batch Notes	
pH Indicator ID	215322
Vial Lot Number	0126501H

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

8260D SIM

Page 1 of 1

METALS

COVER PAGE
METALS

Lab Name: Eurofins Seattle Job Number: 580-130928-1

SDG No.:

Project: NASWI FYR

Client Sample ID	Lab Sample ID
3-MW-2-2023	580-130928-1
N2-6C-2023	580-130928-2
N3-12-2023	580-130928-3
DUP-2023	580-130928-4
EBlank-2023	580-130928-5

Comments:

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: 3-MW-2-2023
Lab Sample ID: 580-130928-1
Lab Name: Eurofins Seattle
Job No.: 580-130928-1
SDG ID.:
Matrix: Water
Date Sampled: 08/24/2023 11:02
Reporting Basis: WET
Date Received: 08/25/2023 09:29

CAS No.	Analyte	Result	LOQ	DL	Units	C	Q	DIL	Method
7440-38-2	Arsenic	0.010	0.060	0.0072	mg/L	J		1	6010D
7439-96-5	Manganese	0.038	0.020	0.0017	mg/L			1	6010D

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: 3-MW-2-2023 Lab Sample ID: 580-130928-1

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG ID.:

Matrix: Water Date Sampled: 08/24/2023 11:02

Reporting Basis: WET Date Received: 08/25/2023 09:29

CAS No.	Analyte	Result	LOQ	DL	Units	C	Q	DIL	Method
7440-38-2	Arsenic	0.029	0.060	0.0072	mg/L	U		1	6010D
7439-96-5	Manganese	0.019	0.020	0.0017	mg/L	J		1	6010D

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: N2-6C-2023
Lab Sample ID: 580-130928-2
Lab Name: Eurofins Seattle
Job No.: 580-130928-1
SDG ID.:
Matrix: Water
Date Sampled: 08/24/2023 16:25
Reporting Basis: WET
Date Received: 08/25/2023 09:29

CAS No.	Analyte	Result	LOQ	DL	Units	C	Q	DIL	Method
7440-38-2	Arsenic	0.029	0.060	0.0072	mg/L	U		1	6010D
7439-96-5	Manganese	1.0	0.020	0.0017	mg/L			1	6010D

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: N2-6C-2023
Lab Sample ID: 580-130928-2
Lab Name: Eurofins Seattle
Job No.: 580-130928-1
SDG ID.:
Matrix: Water
Date Sampled: 08/24/2023 16:25
Reporting Basis: WET
Date Received: 08/25/2023 09:29

CAS No.	Analyte	Result	LOQ	DL	Units	C	Q	DIL	Method
7440-38-2	Arsenic	0.029	0.060	0.0072	mg/L	U		1	6010D
7439-96-5	Manganese	0.70	0.020	0.0017	mg/L			1	6010D

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: N3-12-2023
Lab Sample ID: 580-130928-3
Lab Name: Eurofins Seattle
Job No.: 580-130928-1
SDG ID.:
Matrix: Water
Date Sampled: 08/24/2023 13:40
Reporting Basis: WET
Date Received: 08/25/2023 09:29

CAS No.	Analyte	Result	LOQ	DL	Units	C	Q	DIL	Method
7440-38-2	Arsenic	0.041	0.060	0.0072	mg/L	J		1	6010D
7439-96-5	Manganese	1.9	0.020	0.0017	mg/L			1	6010D

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: N3-12-2023 Lab Sample ID: 580-130928-3

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG ID.:

Matrix: Water Date Sampled: 08/24/2023 13:40

Reporting Basis: WET Date Received: 08/25/2023 09:29

CAS No.	Analyte	Result	LOQ	DL	Units	C	Q	DIL	Method
7440-38-2	Arsenic	0.025	0.060	0.0072	mg/L	J		1	6010D
7439-96-5	Manganese	1.7	0.020	0.0017	mg/L			1	6010D

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: DUP-2023 Lab Sample ID: 580-130928-4

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG ID.:

Matrix: Water Date Sampled: 08/24/2023 12:00

Reporting Basis: WET Date Received: 08/25/2023 09:29

CAS No.	Analyte	Result	LOQ	DL	Units	C	Q	DIL	Method
7440-38-2	Arsenic	0.036	0.060	0.0072	mg/L	J		1	6010D
7439-96-5	Manganese	1.8	0.020	0.0017	mg/L			1	6010D

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: DUP-2023
Lab Sample ID: 580-130928-4
Lab Name: Eurofins Seattle
Job No.: 580-130928-1
SDG ID.:
Matrix: Water
Date Sampled: 08/24/2023 12:00
Reporting Basis: WET
Date Received: 08/25/2023 09:29

CAS No.	Analyte	Result	LOQ	DL	Units	C	Q	DIL	Method
7440-38-2	Arsenic	0.021	0.060	0.0072	mg/L	J		1	6010D
7439-96-5	Manganese	1.7	0.020	0.0017	mg/L			1	6010D

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: EBlank-2023
Lab Sample ID: 580-130928-5
Lab Name: Eurofins Seattle
Job No.: 580-130928-1
SDG ID.:
Matrix: Water
Date Sampled: 08/24/2023 14:30
Reporting Basis: WET
Date Received: 08/25/2023 09:29

CAS No.	Analyte	Result	LOQ	DL	Units	C	Q	DIL	Method
7440-38-2	Arsenic	0.029	0.060	0.0072	mg/L	U		1	6010D
7439-96-5	Manganese	0.0017	0.020	0.0017	mg/L	J		1	6010D

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

ICV Source: ICP ICV_00051 Concentration Units: mg/L

CCV Source: ICP-CCV_00035

Analyte	ICV 580-436306/9 08/30/2023 15:53				CCV 580-436306/14 08/30/2023 16:18				CCV 580-436306/27 08/30/2023 17:03			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Arsenic	2.04		2.00	102	5.09		5.00	102	5.02		5.00	100
Manganese	2.06		2.00	103	5.04		5.00	101	5.01		5.00	100

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

ICV Source: ICP ICV_00051 Concentration Units: mg/L

CCV Source: ICP-CCV_00035

Analyte	CCV 580-436306/43 08/30/2023 18:01				CCV 580-436306/52 08/30/2023 18:32				CCV 580-436306/60 08/30/2023 19:00			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Arsenic	4.92		5.00	98	4.90		5.00	98	5.17		5.00	103
Manganese	4.86		5.00	97	4.84		5.00	97	5.12		5.00	102

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

ICV Source: ICP ICV_00051 Concentration Units: mg/L

CCV Source: ICP-CCV_00035

	ICV 580-436328/9 08/30/2023 15:53				CCV 580-436328/14 08/30/2023 16:18				CCV 580-436328/20 08/30/2023 17:03			
Analyte	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Arsenic	2.04		2.00	102	5.09		5.00	102	5.02		5.00	100
Manganese	2.06		2.00	103	5.04		5.00	101	5.01		5.00	100

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

ICV Source: ICP ICV_00051 Concentration Units: mg/L

CCV Source: ICP-CCV_00035

	CCV 580-436328/23 08/30/2023 18:01				CCV 580-436328/32 08/30/2023 18:32							
Analyte	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Arsenic	4.92		5.00	98	4.90		5.00	98				
Manganese	4.86		5.00	97	4.84		5.00	97				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

ICV Source: ICP-RL-Spex_00016 Concentration Units: mg/L

CCV Source: ICP-RL-Spex_00016

Analyte	ICVL 580-436306/11 08/30/2023 16:07				CCVL 580-436306/16 08/30/2023 16:26				CCVL 580-436306/29 08/30/2023 17:11			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Arsenic	0.0629		0.0600	105	0.0628		0.0600	105	0.0635		0.0600	106
Manganese	0.0219		0.0200	110	0.0214		0.0200	107	0.0220		0.0200	110

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

ICV Source: ICP-RL-Spex_00016 Concentration Units: mg/L

CCV Source: ICP-RL-Spex_00016

Analyte	CCVL 580-436306/45 08/30/2023 18:09				CCVL 580-436306/62 08/30/2023 19:08							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Arsenic	0.0605		0.0600	101	0.0638		0.0600	106				
Manganese	0.0201		0.0200	101	0.0227		0.0200	114				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

ICV Source: ICP-RL-Spex_00016 Concentration Units: mg/L

CCV Source: ICP-RL-Spex_00016

Analyte	ICVL 580-436328/11 08/30/2023 16:07				CCVL 580-436328/16 08/30/2023 16:26				CCVL 580-436328/22 08/30/2023 17:11			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Arsenic	0.0629		0.0600	105	0.0628		0.0600	105	0.0635		0.0600	106
Manganese	0.0219		0.0200	110	0.0214		0.0200	107	0.0220		0.0200	110

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

ICV Source: ICP-RL-Spex_00016 Concentration Units: mg/L

CCV Source: ICP-RL-Spex_00016

Analyte	CCVL 580-436328/25 08/30/2023 18:09				CCVL 580-436328/37 08/30/2023 19:08							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Arsenic	0.0605		0.0600	101	0.0638		0.0600	106				
Manganese	0.0201		0.0200	101	0.0227		0.0200	114				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

ICV Source: ICP ICV_00051 Concentration Units: mg/L

CCV Source: ICP-CCV_00035

Analyte	ICV 580-436715/9 09/05/2023 15:23				CCV 580-436715/97 09/05/2023 21:03				CCV 580-436715/109 09/05/2023 21:43			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Arsenic	1.94		2.00	97	4.94		5.00	99	4.86		5.00	97
Manganese	1.95		2.00	98	4.87		5.00	97	4.70		5.00	94

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

ICV Source: ICP ICV_00051 Concentration Units: mg/L

CCV Source: ICP-CCV_00035

	CCV 580-436715/116 09/05/2023 22:08											
Analyte	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Arsenic	5.00		5.00	100								
Manganese	4.79		5.00	96								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

ICV Source: ICP-RL-Spex_00016 Concentration Units: mg/L

CCV Source: ICP-RL-Spex_00016

Analyte	ICVL 580-436715/11 09/05/2023 15:42				CCVL 580-436715/99 09/05/2023 21:11				CCVL 580-436715/118 09/05/2023 22:16			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Arsenic	0.0557	J	0.0600	93	0.0569	J	0.0600	95	0.0580	J	0.0600	97
Manganese	0.0168	J	0.0200	84	0.0191	J	0.0200	96	0.0198	J	0.0200	99

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

Concentration Units: mg/L

Analyte	RL	ICB 580-436306/10 08/30/2023 16:03		CCB 580-436306/15 08/30/2023 16:22		CCB 580-436306/28 08/30/2023 17:08		CCB 580-436306/44 08/30/2023 18:05	
		Found	C	Found	C	Found	C	Found	C
Arsenic	0.060	0.029	U	0.029	U	0.029	U	0.029	U
Manganese	0.020	0.0068	U	0.0068	U	0.0068	U	0.0068	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

Concentration Units: mg/L

Analyte	RL	CCB 580-436306/53 08/30/2023 18:36		CCB 580-436306/61 08/30/2023 19:04					
		Found	C	Found	C	Found	C	Found	C
Arsenic	0.060	0.029	U	0.029	U				
Manganese	0.020	0.0068	U	0.0068	U				

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

Concentration Units: mg/L

Analyte	RL	ICB 580-436328/10 08/30/2023 16:03		CCB 580-436328/15 08/30/2023 16:22		CCB 580-436328/21 08/30/2023 17:08		CCB 580-436328/24 08/30/2023 18:05	
		Found	C	Found	C	Found	C	Found	C
Arsenic	0.060	0.029	U	0.029	U	0.029	U	0.029	U
Manganese	0.020	0.0068	U	0.0068	U	0.0068	U	0.0068	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

Concentration Units: mg/L

Analyte	RL	CCB 580-436328/33 08/30/2023 18:36							
		Found	C	Found	C	Found	C	Found	C
Arsenic	0.060	0.029	U						
Manganese	0.020	0.0068	U						

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

Concentration Units: mg/L

Analyte	RL	ICB 580-436715/10 09/05/2023 15:33		CCB 580-436715/98 09/05/2023 21:07		CCB 580-436715/110 09/05/2023 21:47		CCB 580-436715/117 09/05/2023 22:13	
		Found	C	Found	C	Found	C	Found	C
Arsenic	0.060	0.029	U	0.029	U	0.029	U	0.029	U
Manganese	0.020	0.00180	J	0.0068	U	0.00490	J	0.00230	J

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

Concentration Units: mg/L Lab Sample ID: MB 580-436117/15-A

Instrument Code: TAC047 Batch No.: 436306

CAS No.	Analyte	Concentration	C	Q	Method
7440-38-2	Arsenic	0.029	U		6010D_DOD5
7439-96-5	Manganese	0.0068	U		6010D_DOD5

FORM III-IN

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

Concentration Units: mg/L Lab Sample ID: MB 580-436480/22-A

Instrument Code: TAC047 Batch No.: 436715

CAS No.	Analyte	Concentration	C	Q	Method
7440-38-2	Arsenic	0.029	U		6010D_DOD5
7439-96-5	Manganese	0.0068	U		6010D_DOD5

FORM III-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

Lab Sample ID: ICSA 580-436306/12 Instrument ID: TAC047

Lab File ID: 436053.asc ICS Source: ICP ICSA_00117

Concentration Units: mg/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Arsenic		**0.0048**	
Manganese		**0.0037**	
Aluminum	*500*	*519*	*104*
Antimony		*0.0073*	
Beryllium		*0.0004*	
Bismuth		*0.0457*	
Boron		*0.0001*	
Cadmium		*-0.0008*	
Calcium	*500*	*511*	*102*
Chromium		*-0.0008*	
Cobalt		*-0.0021*	
Copper		*-0.0099*	
Iron	*500*	*492*	*98*
Lead		*0.0020*	
Li		*0.0242*	
Magnesium	*500*	*495*	*99*
Molybdenum		*0.0004*	
Nickel		*0.0031*	
Phosphorus		*-0.0141*	
Potassium		*0.400*	
Selenium		*-0.0102*	
Silicon		*-0.0109*	
Silver		*0.0004*	
Sodium		*-0.0182*	
Strontium		*-0.0057*	
Thallium		*0.0232*	
Tin		*0.0027*	
Titanium		*-0.0021*	
Vanadium		*0.0007*	
Zinc		*-0.0013*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

Lab Sample ID: ICSA 580-436328/12 Instrument ID: TAC047

Lab File ID: 130931.asc ICS Source: ICP ICSA_00117

Concentration Units: mg/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Aluminum	*500*	*519*	*104*
Antimony		*0.0073*	
Arsenic		*0.0048*	
Barium		*0.0064*	
Beryllium		*0.0004*	
Bismuth		*0.0457*	
Boron		*0.0001*	
Cadmium		*-0.0008*	
Calcium	*500*	*511*	*102*
Chromium		*-0.0008*	
Cobalt		*-0.0021*	
Copper		*-0.0099*	
Iron	*500*	*492*	*98*
Lead		*0.0021*	
Li		*0.0242*	
Magnesium	*500*	*495*	*99*
Manganese		*0.0037*	
Molybdenum		*0.0004*	
Nickel		*0.0031*	
Phosphorus		*-0.0141*	
Potassium		*0.400*	
Selenium		*-0.0102*	
Silicon		*-0.0109*	
Silver		*0.0004*	
Sodium		*-0.0182*	
Strontium		*-0.0057*	
Thallium		*0.0232*	
Tin		*0.0027*	
Titanium		*-0.0021*	
Vanadium		*0.0007*	
Zinc		*-0.0013*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

Lab Sample ID: ICSAB 580-436306/13 Instrument ID: TAC047

Lab File ID: 436053.asc ICS Source: ICP ICSAB_00099

Concentration Units: mg/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Arsenic	**1.00**	**0.993**	**99**
Manganese	**1.00**	**0.999**	**100**
Aluminum	*500*	*515*	*103*
Antimony	*1.00*	*1.07*	*107*
Barium	*1.00*	*0.995*	*100*
Beryllium	*0.500*	*0.520*	*104*
Bismuth		*0.0426*	
Boron	*10.0*	*9.84*	*98*
Cadmium	*1.00*	*0.981*	*98*
Calcium	*500*	*514*	*103*
Chromium	*1.00*	*1.02*	*102*
Cobalt	*1.00*	*0.961*	*96*
Copper	*1.00*	*0.993*	*99*
Iron	*500*	*497*	*99*
Lead	*1.00*	*0.972*	*97*
Li		*0.0164*	
Magnesium	*500*	*500*	*100*
Molybdenum	*1.00*	*1.01*	*101*
Nickel	*1.00*	*0.972*	*97*
Phosphorus	*10.0*	*9.78*	*98*
Potassium	*10.0*	*9.89*	*99*
Selenium	*1.00*	*0.983*	*98*
Silicon	*10.0*	*8.98*	*90*
Silver	*1.00*	*0.988*	*99*
Sodium	*10.0*	*9.75*	*97*
Strontium	*1.00*	*1.03*	*103*
Thallium	*1.00*	*0.997*	*100*
Tin	*1.00*	*0.980*	*98*
Titanium	*1.00*	*1.00*	*100*
Vanadium	*1.00*	*1.00*	*100*
Zinc	*1.00*	*0.977*	*98*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

Lab Sample ID: ICSAB 580-436328/13 Instrument ID: TAC047

Lab File ID: 130931.asc ICS Source: ICP ICSAB_00099

Concentration Units: mg/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Aluminum	*500*	*515*	*103*
Antimony	*1.00*	*1.07*	*107*
Arsenic	*1.00*	*0.993*	*99*
Barium	*1.00*	*0.992*	*99*
Beryllium	*0.500*	*0.520*	*104*
Bismuth		*0.0426*	
Boron	*10.0*	*9.84*	*98*
Cadmium	*1.00*	*0.981*	*98*
Calcium	*500*	*514*	*103*
Chromium	*1.00*	*1.02*	*102*
Cobalt	*1.00*	*0.961*	*96*
Copper	*1.00*	*0.993*	*99*
Iron	*500*	*497*	*99*
Lead	*1.00*	*0.972*	*97*
Li		*0.0164*	
Magnesium	*500*	*500*	*100*
Manganese	*1.00*	*0.999*	*100*
Molybdenum	*1.00*	*1.01*	*101*
Nickel	*1.00*	*0.972*	*97*
Phosphorus	*10.0*	*9.78*	*98*
Potassium	*10.0*	*9.89*	*99*
Selenium	*1.00*	*0.983*	*98*
Silicon	*10.0*	*8.98*	*90*
Silver	*1.00*	*0.988*	*99*
Sodium	*10.0*	*9.75*	*97*
Strontium	*1.00*	*1.03*	*103*
Thallium	*1.00*	*0.997*	*100*
Tin	*1.00*	*0.980*	*98*
Titanium	*1.00*	*1.00*	*100*
Vanadium	*1.00*	*1.00*	*100*
Zinc	*1.00*	*0.977*	*98*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

Lab Sample ID: ICSA 580-436715/12 Instrument ID: TAC047

Lab File ID: 436476.asc ICS Source: ICP ICSA_00117

Concentration Units: mg/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Arsenic		**-0.0055**	
Manganese		**0.0001**	
Aluminum	*500*	*492*	*98*
Antimony		*0.0027*	
Barium		*0.0084*	
Beryllium		*-0.0033*	
Bismuth		*0.0431*	
Boron		*-0.0701*	
Cadmium		*0.0004*	
Calcium	*500*	*474*	*95*
Chromium		*-0.0037*	
Cobalt		*-0.0052*	
Copper		*-0.0028*	
Iron	*500*	*483*	*97*
Lead		*-0.0091*	
Li		*0.0169*	
Magnesium	*500*	*490*	*98*
Molybdenum		*-0.0035*	
Nickel		*-0.0004*	
Phosphorus		*-0.0480*	
Potassium		*0.185*	
Selenium		*-0.0144*	
Silicon		*-0.0566*	
Silver		*-0.0053*	
Sodium		*-0.0537*	
Strontium		*-0.0089*	
Tin		*-0.0006*	
Titanium		*0.0057*	
Vanadium		*-0.0059*	
Zinc		*-0.0038*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

Lab Sample ID: ICSAB 580-436715/13 Instrument ID: TAC047

Lab File ID: 436476.asc ICS Source: ICP ICSAB_00099

Concentration Units: mg/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Arsenic	**1.00**	**0.965**	**97**
Manganese	**1.00**	**0.978**	**98**
Aluminum	*500*	*494*	*99*
Antimony	*1.00*	*1.04*	*104*
Barium	*1.00*	*1.00*	*100*
Beryllium	*0.500*	*0.492*	*98*
Bismuth		*0.0391*	
Boron	*10.0*	*9.72*	*97*
Cadmium	*1.00*	*0.937*	*94*
Calcium	*500*	*478*	*96*
Chromium	*1.00*	*0.992*	*99*
Cobalt	*1.00*	*0.919*	*92*
Copper	*1.00*	*1.00*	*100*
Iron	*500*	*492*	*98*
Lead	*1.00*	*0.917*	*92*
Li		*0.0129*	
Magnesium	*500*	*498*	*100*
Molybdenum	*1.00*	*0.991*	*99*
Nickel	*1.00*	*0.935*	*93*
Phosphorus	*10.0*	*9.89*	*99*
Potassium	*10.0*	*10.4*	*104*
Selenium	*1.00*	*0.947*	*95*
Silicon	*10.0*	*9.86*	*99*
Silver	*1.00*	*0.986*	*99*
Sodium	*10.0*	*10.9*	*109*
Strontium	*1.00*	*0.987*	*99*
Thallium	*1.00*	*0.995*	*99*
Tin	*1.00*	*0.934*	*93*
Titanium	*1.00*	*0.947*	*95*
Vanadium	*1.00*	*0.950*	*95*
Zinc	*1.00*	*0.927*	*93*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: N3-12-2023 MS
Lab ID: 580-130928-3 MS
Lab Name: Eurofins Seattle
Job No.: 580-130928-1
SDG No.:
Matrix: Water
Concentration Units: mg/L
% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Arsenic	1.06		0.041	J	1.00	102	87-113		6010D
Manganese	2.84		1.9		1.00	94	90-114		6010D

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - DISSOLVED

Client ID: N3-12-2023 MS
Lab ID: 580-130928-3 MS
Lab Name: Eurofins Seattle
Job No.: 580-130928-1
SDG No.:
Matrix: Water
Concentration Units: mg/L
% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Arsenic	1.03		0.025	J	1.00	100	87-113		6010D
Manganese	2.64		1.7		1.00	96	90-114		6010D

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: N3-12-2023 MSD
Lab ID: 580-130928-3 MSD
Lab Name: Eurofins Seattle
Job No.: 580-130928-1
SDG No.:
Matrix: Water
Concentration Units: mg/L
% Solids:

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Arsenic	1.06		1.00	102	87-113	0	20		6010D
Manganese	2.83		1.00	94	90-114	0	20		6010D

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - DISSOLVED

Client ID: N3-12-2023 MSD
Lab ID: 580-130928-3 MSD
Lab Name: Eurofins Seattle
Job No.: 580-130928-1
SDG No.:
Matrix: Water
Concentration Units: mg/L
% Solids:

Analyte	(SDR) C		Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Arsenic	0.992		1.00	97	87-113	3	20		6010D
Manganese	2.62		1.00	93	90-114	1	20		6010D

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5B-IN
POST DIGESTION SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: N3-12-2023 PDS
Lab ID: 580-130928-3 PDS
Lab Name: Eurofins Seattle
Job No.: 580-130928-1
SDG No.:
Matrix: Water
Concentration Units: mg/L

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Arsenic	1.01		0.041	J	1.00	97	80-120		6010D
Manganese	2.78		1.9		1.00	88	80-120		6010D

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VB - IN

5B-IN
POST DIGESTION SPIKE SAMPLE RECOVERY
METALS - DISSOLVED

Client ID: N3-12-2023 PDS
Lab ID: 580-130928-3 PDS
Lab Name: Eurofins Seattle
Job No.: 580-130928-1
SDG No.:
Matrix: Water
Concentration Units: mg/L

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Arsenic	0.970		0.025	J	1.00	95	80-120		6010D
Manganese	2.53		1.7		1.00	85	80-120		6010D

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VB - IN

6-IN
DUPLICATES
METALS - TOTAL RECOVERABLE

Client ID: N3-12-2023 DU
Lab ID: 580-130928-3 DU
Lab Name: Eurofins Seattle
Job No.: 580-130928-1
SDG No.:
% Solids for Sample:
% Solids for Duplicate:
Matrix: Water
Concentration Units: mg/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Arsenic	0.060	0.041	J	0.0408	J	1		6010D
Manganese	0.020	1.9		1.90		0.3		6010D

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

6-IN
DUPLICATES
METALS - DISSOLVED

Client ID: N3-12-2023 DU
Lab ID: 580-130928-3 DU
Lab Name: Eurofins Seattle
Job No.: 580-130928-1
SDG No.:
% Solids for Sample:
% Solids for Duplicate:
Matrix: Water
Concentration Units: mg/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Arsenic	0.060	0.025	J	0.0232	J	8		6010D
Manganese	0.020	1.7		1.74		3		6010D

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 580-436117/16-A

Lab Name: Eurofins Seattle Job No.: 580-130928-1

Sample Matrix: Water LCS Source: ICP CAL 1_00027

Analyte	Water(mg/L)							
	True	Found	C	%R	Limits		Q	Method
Arsenic	1.00	1.03		103	87	113		6010D
Manganese	1.00	1.02		102	90	114		6010D

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7D-IN
LAB CONTROL SAMPLE DUPLICATE
METALS - TOTAL RECOVERABLE

Lab ID: LCSD 580-436117/17-A

Lab Name: Eurofins Seattle Job No.: 580-130928-1

Sample Matrix: Water LCS Source: ICP CAL 1_00027

Analyte	(SDR)	C	Spike Added	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Arsenic	1.02		1.00	102	87-113	0	20		6010D
Manganese	1.02		1.00	102	90-114	0	20		6010D

SDR = Spike Duplicate Results
Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIID - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 580-436480/23-A

Lab Name: Eurofins Seattle Job No.: 580-130928-1

Sample Matrix: Water LCS Source: ICP CAL 1_00027

Analyte	Water(mg/L)							
	True	Found	C	%R	Limits		Q	Method
Arsenic	1.00	0.970		97	87	113		6010D
Manganese	1.00	0.969		97	90	114		6010D

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7D-IN
LAB CONTROL SAMPLE DUPLICATE
METALS - TOTAL RECOVERABLE

Lab ID: LCSD 580-436480/24-A

Lab Name: Eurofins Seattle Job No.: 580-130928-1

Sample Matrix: Water LCS Source: ICP CAL 1_00027

Analyte	(SDR)	C	Spike Added	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Arsenic	0.977		1.00	98	87-113	1	20		6010D
Manganese	0.962		1.00	96	90-114	1	20		6010D

SDR = Spike Duplicate Results
Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIID - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 580-130928-3
SDG No:
Lab Name: Eurofins Seattle Job No: 580-130928-1
Matrix: Water Concentration Units: mg/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Arsenic	0.041	J	0.0640	J	NC	D	6010D
Manganese	1.9		1.88		0.87	D	6010D

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - DISSOLVED

Lab ID: 580-130928-3
SDG No:
Lab Name: Eurofins Seattle Job No: 580-130928-1
Matrix: Water Concentration Units: mg/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Arsenic	0.025	J	0.14	U	NC		6010D
Manganese	1.7		1.71		1.4	D	6010D

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins Seattle Job Number: 580-130928-1

SDG Number:

Matrix: Water Instrument ID: TAC047

Method: 6010D DL Date: 03/17/2022 14:35

Prep Method: 3005A

Analyte	Wavelength/ Mass	LOQ (mg/L)	DL (mg/L)
Arsenic		0.06	0.0072
Manganese		0.02	0.0017

FORM IX - IN

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins Seattle Job Number: 580-130928-1

SDG Number:

Matrix: Water Instrument ID: TAC047

Method: 6010D XMDL Date: 02/25/2021 08:30

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Arsenic		0.06	0.0072
Manganese		0.02	0.0017

FORM IX - IN

9-IN
DETECTION LIMITS
METALS - DISSOLVED

Lab Name: Eurofins Seattle Job Number: 580-130928-1

SDG Number:

Matrix: Water Instrument ID: TAC047

Method: 6010D DL Date: 03/17/2022 14:35

Prep Method: 3005A

Analyte	Wavelength/ Mass	LOQ (mg/L)	DL (mg/L)
Arsenic		0.06	0.0072
Manganese		0.02	0.0017

FORM IX - IN

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - DISSOLVED

Lab Name: Eurofins Seattle Job Number: 580-130928-1

SDG Number:

Matrix: Water Instrument ID: TAC047

Method: 6010D XMDL Date: 02/25/2021 08:30

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Arsenic		0.06	0.0072
Manganese		0.02	0.0017

FORM IX - IN

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: Eurofins Seattle Job Number: 580-130928-1

SDG No.:

ICP-AES Instrument ID: TAC047 Date: 05/15/2023

Analyte	Wave Length	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe
Aluminum	237.312														0.000286
Aluminum	308.215														
Antimony	206.833		0.000006										0.013445		-0.00006654
Arsenic	189.042												-0.009709		
Barium	233.527		0.00000544										0.000123		
Barium	455.403														
Beryllium	313.042														
Bismuth	223.061											-0.002774	0.001604		
Boron	208.959														
Cadmium	226.502														0.000052
Calcium	315.887														
Calcium	317.933														
Chromium	205.560							0.000933							0
Cobalt	228.616												-0.000182		
Copper	327.396									0.000019					
Gold															
Indium	230.606														
Iron	259.940														
Iron	271.441									-0.000152		0.077878			
Iron	273.074											-0.016205			
Lead	216.999		-0.000145											-0.003398	0.001179
Lead	220.353		0.000222									-0.001721		0.002229	-0.000038
Lithium	670.784														
Magnesium	279.079														
Manganese	257.610														
Molybdenum	202.030														
Nickel	231.604														0.000017
Phosphorus	178.284														
Potassium	766.490														

X-IN

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: Eurofins Seattle Job Number: 580-130928-1

SDG No.:

ICP-AES Instrument ID: TAC047 Date: 05/15/2023

Analyte	Wave Length	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe
Selenium	196.090														
Silicon	251.611														
Silicon	288.158														
Silver	328.069														
Sodium	589.592		0.000169												
Strontium	407.771		0.000034												
Thallium	190.856		-0.000052					-0.001318							-0.0000665 4
Thorium	318.019														
Tin	189.989														
Titanium	334.941												0.000308		
Tungsten	239.709			-0.000491		-0.000589	-0.001034		-0.000354			0.001433	-0.000399		-0.000001
Uranium															
Vanadium	292.402														0.000023
Yttrium	360.073														
Yttrium	377.433														
Zinc	206.200														
Zinc	213.856														0.000047
Zirconium	339.198														

X-IN

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: Eurofins Seattle Job Number: 580-130928-1

SDG No.:

ICP-AES Instrument ID: TAC047 Date: 05/15/2023

Analyte	Wave Length	K	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Se	Si	Sn	Sr
Aluminum	308.215					0.022528									
Aluminum	237.312														
Antimony	206.833					-0.010388									
Arsenic	189.042					0.001434									
Barium	455.403														
Barium	233.527														0.000541
Beryllium	313.042														
Bismuth	223.061														
Boron	208.959					0.025158									
Cadmium	226.502														
Calcium	317.933														
Calcium	315.887														
Chromium	205.560														
Cobalt	228.616							0.000718							
Copper	327.396														
Gold															
Indium	230.606														
Iron	259.940														
Iron	273.074			-0.000300			0.000277								
Iron	271.441														
Lead	220.353												0.000996		
Lead	216.999					0.001410		0.006129			0.000939		-0.000350		
Lithium	670.784						0.000084								
Magnesium	279.079														
Manganese	257.610														
Molybdenum	202.030														
Nickel	231.604														
Phosphorus	178.284														
Potassium	766.490						0.001273								
Selenium	196.090														

X-IN

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: Eurofins Seattle Job Number: 580-130928-1

SDG No.:

ICP-AES Instrument ID: TAC047 Date: 05/15/2023

Analyte	Wave Length	K	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Se	Si	Sn	Sr
Silicon	288.158													0.011136	
Silicon	251.611													0.011269	
Silver	328.069														
Sodium	589.592	0.000495		0.000236											
Strontium	407.771														
Thallium	190.856	-0.000081				0.016018		-0.001394							
Thorium	318.019														
Tin	189.989														
Titanium	334.941														
Tungsten	239.709					0.001683			-0.000131	-0.000272		-0.001086			
Uranium															
Vanadium	292.402					-0.004337									
Yttrium	377.433														
Yttrium	360.073														
Zinc	213.856							0.004315							
Zinc	206.200														
Zirconium	339.198														

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: Eurofins Seattle Job Number: 580-130928-1

SDG No.:

ICP-AES Instrument ID: TAC047 Date: 05/15/2023

Analyte	Wave Length	Th	Ti	Tl	U	V	W	Y	Zn	Zr					
Aluminum	237.312														
Aluminum	308.215					0.063856									
Antimony	206.833														
Arsenic	189.042														
Barium	233.527					-0.003688									
Barium	455.403														
Beryllium	313.042		-0.000581			0.000223									
Bismuth	223.061														
Boron	208.959														
Cadmium	226.502														
Calcium	315.887														
Calcium	317.933														
Chromium	205.560														
Cobalt	228.616		0.002202												
Copper	327.396														
Gold															
Indium	230.606														
Iron	259.940														
Iron	271.441														
Iron	273.074		0.006040			-0.011085									
Lead	216.999					0.000888	0.206910								
Lead	220.353														
Lithium	670.784														
Magnesium	279.079														
Manganese	257.610						8								
Molybdenum	202.030														
Nickel	231.604														
Phosphorus	178.284														
Potassium	766.490														
Selenium	196.090						0.009851								

X-IN

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: Eurofins Seattle Job Number: 580-130928-1

SDG No.:

ICP-AES Instrument ID: TAC047 Date: 05/15/2023

Analyte	Wave Length	Th	Ti	Tl	U	V	W	Y	Zn	Zr					
Silicon	251.611														
Silicon	288.158														
Silver	328.069														
Sodium	589.592														
Strontium	407.771														
Thallium	190.856						0.096672								
Thorium	318.019														
Tin	189.989														
Titanium	334.941														
Tungsten	239.709														
Uranium															
Vanadium	292.402		0.000454												
Yttrium	360.073														
Yttrium	377.433														
Zinc	206.200														
Zinc	213.856														
Zirconium	339.198														

X-IN

11-IN
LINEAR RANGES
METALS

Lab Name: Eurofins Seattle Job No: 580-130928-1

SDG No.:

Instrument ID: TAC047 Date: 12/15/2022 11:18

Analyte	Integ. Time (Sec.)	Concentration (mg/L)	Method
Arsenic		50	6010D
Manganese		50	6010D

FORM XI - IN

12-IN
PREPARATION LOG
METALS

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
580-130928-3	08/29/2023 15:45	436117		50	50
580-130928-3 DU	08/29/2023 15:45	436117		50	50
580-130928-3 MS	08/29/2023 15:45	436117		50	50
580-130928-3 MSD	08/29/2023 15:45	436117		50	50
580-130928-1	08/29/2023 15:45	436117		50	50
580-130928-2	08/29/2023 15:45	436117		50	50
580-130928-4	08/29/2023 15:45	436117		50	50
580-130928-5	08/29/2023 15:45	436117		50	50
MB 580-436117/15-A	08/29/2023 15:45	436117		50	50
LCS 580-436117/16-A	08/29/2023 15:45	436117		50	50
LCSD 580-436117/17-A	08/29/2023 15:45	436117		50	50

FORM XII-IN

12-IN
PREPARATION LOG
METALS

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
580-130928-3	09/01/2023 15:45	436480		50	50
580-130928-3 DU	09/01/2023 15:45	436480		50	50
580-130928-3 MS	09/01/2023 15:45	436480		50	50
580-130928-3 MSD	09/01/2023 15:45	436480		50	50
580-130928-1	09/01/2023 15:45	436480		50	50
580-130928-2	09/01/2023 15:45	436480		50	50
580-130928-4	09/01/2023 15:45	436480		50	50
MB 580-436480/22-A	09/01/2023 15:46	436480		50	50
LCS 580-436480/23-A	09/01/2023 15:46	436480		50	50
LCSD 580-436480/24-A	09/01/2023 15:46	436480		50	50

FORM XII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

Instrument ID: TAC047 Analysis Method: 6010D

Start Date: 08/30/2023 15:18 End Date: 08/30/2023 22:27

Lab Sample Id	D/F	Type	Time	Analytes	
				As	Mn
ICIS 580-436306/1	1		15:18	X	X
ZZZZZZ			15:21		
ZZZZZZ			15:25		
STD1 580-436306/4 IC			15:29	X	X
STD2 580-436306/5 IC			15:32	X	X
STD3 580-436306/6 IC			15:35	X	X
STD4 580-436306/7 IC			15:38	X	X
STD5 580-436306/8 IC			15:41	X	X
ICV 580-436306/9	1		15:53	X	X
ICB 580-436306/10	1		16:03	X	X
ICVL 580-436306/11	1		16:07	X	X
ICSA 580-436306/12	1		16:11	X	X
ICSAB 580-436306/13	1		16:15	X	X
CCV 580-436306/14	1		16:18	X	X
CCB 580-436306/15	1		16:22	X	X
CCVL 580-436306/16	1		16:26	X	X
MB 580-436117/15-A	1	R	16:29	X	X
LCS 580-436117/16-A	1	R	16:33	X	X
LCSD 580-436117/17-A	1	R	16:36	X	X
ZZZZZZ			16:39		
ZZZZZZ			16:43		
ZZZZZZ			16:46		
ZZZZZZ			16:49		
ZZZZZZ			16:52		
ZZZZZZ			16:55		
ZZZZZZ			16:59		
CCV 580-436306/27	1		17:03	X	X
CCB 580-436306/28	1		17:08	X	X
CCVL 580-436306/29	1		17:11	X	X
ZZZZZZ			17:15		
ZZZZZZ			17:18		
ZZZZZZ			17:22		
ZZZZZZ			17:26		
ZZZZZZ			17:30		
CCV 580-436306/35			17:34		
CCB 580-436306/36			17:38		
CCVL 580-436306/37			17:42		
ZZZZZZ			17:46		
ZZZZZZ			17:49		
ZZZZZZ			17:52		
ZZZZZZ			17:55		
ZZZZZZ			17:58		

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

Instrument ID: TAC047 Analysis Method: 6010D

Start Date: 08/30/2023 15:18 End Date: 08/30/2023 22:27

Lab Sample Id	D/F	Type	Time	Analytes	
				As	Mn
CCV 580-436306/43	1		18:01	X	X
CCB 580-436306/44	1		18:05	X	X
CCVL 580-436306/45	1		18:09	X	X
580-130928-3	1	R	18:12	X	X
580-130928-3 DU	1	R	18:16	X	X
580-130928-3 MS	1	R	18:19	X	X
580-130928-3 MSD	1	R	18:22	X	X
580-130928-3 PDS	1	R	18:25	X	X
580-130928-3 SD	5	R	18:28	X	X
CCV 580-436306/52	1		18:32	X	X
CCB 580-436306/53	1		18:36	X	X
580-130928-1	1	R	18:40	X	X
580-130928-2	1	R	18:43	X	X
580-130928-4	1	R	18:46	X	X
580-130928-5	1	R	18:50	X	X
ZZZZZZ			18:53		
ZZZZZZ			18:57		
CCV 580-436306/60	1		19:00	X	X
CCB 580-436306/61	1		19:04	X	X
CCVL 580-436306/62	1		19:08	X	X
ZZZZZZ			19:11		
ZZZZZZ			19:15		
ZZZZZZ			19:18		
ZZZZZZ			19:23		
ZZZZZZ			19:27		
ZZZZZZ			19:31		
ZZZZZZ			19:36		
CCV 580-436306/70			19:39		
CCB 580-436306/71			19:43		
CCVL 580-436306/72			19:47		
ZZZZZZ			19:50		
ZZZZZZ			19:56		
ZZZZZZ			19:59		
ZZZZZZ			20:03		
ZZZZZZ			20:06		
ZZZZZZ			20:10		
ZZZZZZ			20:14		
CCV 580-436306/80			20:17		
CCB 580-436306/81			20:22		
ZZZZZZ			20:25		
ZZZZZZ			20:29		
ZZZZZZ			20:32		

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

Instrument ID: TAC047 Analysis Method: 6010D

Start Date: 08/30/2023 15:18 End Date: 08/30/2023 22:27

Lab Sample Id	D/F	Type	Time	Analytes																												
				As	Mn																											
ZZZZZZ			20:35																													
ZZZZZZ			20:38																													
ZZZZZZ			20:42																													
ZZZZZZ			20:45																													
ZZZZZZ			20:48																													
ZZZZZZ			20:51																													
ZZZZZZ			20:55																													
CCV 580-436306/92			20:58																													
CCB 580-436306/93			21:02																													
ZZZZZZ			21:06																													
ZZZZZZ			21:09																													
ZZZZZZ			21:12																													
ZZZZZZ			21:16																													
ZZZZZZ			21:19																													
ZZZZZZ			21:22																													
ZZZZZZ			21:26																													
ZZZZZZ			21:29																													
ZZZZZZ			21:33																													
ZZZZZZ			21:36																													
CCV 580-436306/104			21:40																													
CCB 580-436306/105			21:44																													
ZZZZZZ			21:48																													
ZZZZZZ			21:51																													
ZZZZZZ			21:55																													
ZZZZZZ			21:58																													
ZZZZZZ			22:02																													
ZZZZZZ			22:05																													
ZZZZZZ			22:09																													
ZZZZZZ			22:12																													
ZZZZZZ			22:16																													
ZZZZZZ			22:19																													
CCV 580-436306/116			22:23																													
CCB 580-436306/117			22:27																													

Prep Types:
R = Total Recoverable

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

Instrument ID: TAC047 Analysis Method: 6010D

Start Date: 08/30/2023 15:18 End Date: 08/30/2023 19:08

Lab Sample Id	D/F	Type	Time	Analytes	
				As	Mn
ICIS 580-436328/1	1		15:18	X	X
ZZZZZZ			15:21		
ZZZZZZ			15:25		
STD1 580-436328/4 IC			15:29	X	X
STD2 580-436328/5 IC			15:32	X	X
STD3 580-436328/6 IC			15:35	X	X
STD4 580-436328/7 IC			15:38	X	X
STD5 580-436328/8 IC			15:41	X	X
ICV 580-436328/9	1		15:53	X	X
ICB 580-436328/10	1		16:03	X	X
ICVL 580-436328/11	1		16:07	X	X
ICSA 580-436328/12	1		16:11	X	X
ICSAB 580-436328/13	1		16:15	X	X
CCV 580-436328/14	1		16:18	X	X
CCB 580-436328/15	1		16:22	X	X
CCVL 580-436328/16	1		16:26	X	X
ZZZZZZ			16:29		
ZZZZZZ			16:33		
ZZZZZZ			16:36		
CCV 580-436328/20	1		17:03	X	X
CCB 580-436328/21	1		17:08	X	X
CCVL 580-436328/22	1		17:11	X	X
CCV 580-436328/23	1		18:01	X	X
CCB 580-436328/24	1		18:05	X	X
CCVL 580-436328/25	1		18:09	X	X
ZZZZZZ			18:12		
ZZZZZZ			18:16		
ZZZZZZ			18:19		
ZZZZZZ			18:22		
ZZZZZZ			18:25		
ZZZZZZ			18:28		
CCV 580-436328/32	1		18:32	X	X
CCB 580-436328/33	1		18:36	X	X
ZZZZZZ			18:53		
CCV 580-436328/35			19:00		
CCB 580-436328/36			19:04		
CCVL 580-436328/37	1		19:08	X	X

Prep Types:
R = Total Recoverable

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

Instrument ID: TAC047 Analysis Method: 6010D

Start Date: 09/05/2023 14:48 End Date: 09/06/2023 00:20

Lab Sample Id	D/F	Type	Time	Analytes	
				As	Mn
ICIS 580-436715/1	1		14:48	X	X
ZZZZZZ			14:51		
ZZZZZZ			14:55		
STD1 580-436715/4 IC			14:58	X	X
STD2 580-436715/5 IC			15:02	X	X
STD3 580-436715/6 IC			15:05	X	X
STD4 580-436715/7 IC			15:08	X	X
STD5 580-436715/8 IC			15:11	X	X
ICV 580-436715/9	1		15:23	X	X
ICB 580-436715/10	1		15:33	X	X
ICVL 580-436715/11	1		15:42	X	X
ICSA 580-436715/12	1		15:46	X	X
ICSAB 580-436715/13	1		15:49	X	X
CCV 580-436715/14			15:53		
CCB 580-436715/15			15:57		
CCVL 580-436715/16			16:01		
ZZZZZZ			16:05		
ZZZZZZ			16:08		
ZZZZZZ			16:11		
ZZZZZZ			16:14		
ZZZZZZ			16:18		
ZZZZZZ			16:21		
ZZZZZZ			16:24		
ZZZZZZ			16:27		
ZZZZZZ			16:30		
CCV 580-436715/26			16:34		
CCB 580-436715/27			16:38		
CCVL 580-436715/28			16:42		
ZZZZZZ			16:45		
ZZZZZZ			16:49		
ZZZZZZ			16:52		
ZZZZZZ			16:55		
ZZZZZZ			16:58		
ZZZZZZ			17:02		
ZZZZZZ			17:05		
ZZZZZZ			17:09		
CCV 580-436715/37			17:12		
CCB 580-436715/38			17:17		
CCVL 580-436715/39			17:20		
ZZZZZZ			17:24		
ZZZZZZ			17:27		
ZZZZZZ			17:31		

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

Instrument ID: TAC047 Analysis Method: 6010D

Start Date: 09/05/2023 14:48 End Date: 09/06/2023 00:20

Lab Sample Id	D/F	Type	Time	Analytes	
				As	Mn
ZZZZZZ			17:34		
CCV 580-436715/44			17:37		
CCB 580-436715/45			17:42		
CCVL 580-436715/46			17:46		
ZZZZZZ			17:49		
ZZZZZZ			17:53		
ZZZZZZ			17:56		
ZZZZZZ			17:59		
ZZZZZZ			18:03		
ZZZZZZ			18:08		
ZZZZZZ			18:13		
ZZZZZZ			18:17		
ZZZZZZ			18:22		
CCV 580-436715/56			18:26		
CCB 580-436715/57			18:30		
ZZZZZZ			18:33		
ZZZZZZ			18:37		
ZZZZZZ			18:40		
ZZZZZZ			18:43		
ZZZZZZ			18:46		
ZZZZZZ			18:51		
ZZZZZZ			18:55		
CCV 580-436715/65			19:00		
CCB 580-436715/66			19:04		
CCVL 580-436715/67			19:08		
CCV 580-436715/68			19:19		
CCB 580-436715/69			19:24		
CCVL 580-436715/70			19:27		
ZZZZZZ			19:31		
ZZZZZZ			19:34		
ZZZZZZ			19:38		
CCV 580-436715/74			19:42		
CCB 580-436715/75			19:46		
CCVL 580-436715/76			19:50		
ZZZZZZ			19:53		
ZZZZZZ			19:57		
ZZZZZZ			20:00		
ZZZZZZ			20:03		
ZZZZZZ			20:06		
ZZZZZZ			20:10		
ZZZZZZ			20:13		
ZZZZZZ			20:16		

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

Instrument ID: TAC047 Analysis Method: 6010D

Start Date: 09/05/2023 14:48 End Date: 09/06/2023 00:20

Lab Sample Id	D/F	Type	Time	Analytes	
				As	Mn
ZZZZZZ			20:19		
CCV 580-436715/86			20:22		
CCB 580-436715/87			20:27		
ZZZZZZ			20:30		
ZZZZZZ			20:34		
ZZZZZZ			20:37		
ZZZZZZ			20:41		
ZZZZZZ			20:44		
ZZZZZZ			20:48		
ZZZZZZ			20:52		
ZZZZZZ			20:55		
ZZZZZZ			20:59		
CCV 580-436715/97	1		21:03	X	X
CCB 580-436715/98	1		21:07	X	X
CCVL 580-436715/99	1		21:11	X	X
MB 580-436480/22-A	1	R	21:14	X	X
LCS 580-436480/23-A	1	R	21:18	X	X
LCSD 580-436480/24-A	1	R	21:21	X	X
580-130928-3	1	D	21:24	X	X
580-130928-3 DU	1	D	21:27	X	X
580-130928-3 MS	1	D	21:31	X	X
580-130928-3 MSD	1	D	21:34	X	X
580-130928-3 PDS	1	D	21:37	X	X
580-130928-3 SD	5	D	21:40	X	X
CCV 580-436715/109	1		21:43	X	X
CCB 580-436715/110	1		21:47	X	X
ZZZZZZ			21:51		
580-130928-1	1	D	21:54	X	X
580-130928-2	1	D	21:58	X	X
580-130928-4	1	D	22:01	X	X
ZZZZZZ			22:05		
CCV 580-436715/116	1		22:08	X	X
CCB 580-436715/117	1		22:13	X	X
CCVL 580-436715/118	1		22:16	X	X
ZZZZZZ			22:20		
ZZZZZZ			22:23		
ZZZZZZ			22:27		
ZZZZZZ			22:30		
ZZZZZZ			22:33		
ZZZZZZ			22:37		
ZZZZZZ			22:40		
ZZZZZZ			22:44		

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

Instrument ID: TAC047 Analysis Method: 6010D

Start Date: 09/05/2023 14:48 End Date: 09/06/2023 00:20

Lab Sample Id	D/F	Type	Time	Analytes																												
				As	Mn																											
ZZZZZZ			22:47																													
ZZZZZZ			22:51																													
CCV 580-436715/129			22:55																													
CCB 580-436715/130			22:59																													
CCVL 580-436715/131			23:02																													
ZZZZZZ			23:06																													
ZZZZZZ			23:11																													
ZZZZZZ			23:15																													
ZZZZZZ			23:18																													
ZZZZZZ			23:22																													
ZZZZZZ			23:27																													
ZZZZZZ			23:31																													
ZZZZZZ			23:36																													
CCV 580-436715/140			23:40																													
CCB 580-436715/141			23:44																													
CCVL 580-436715/142			23:47																													
ZZZZZZ			23:51																													
ZZZZZZ			23:54																													
CCV 580-436715/145			00:12																													
CCB 580-436715/146			00:16																													
CCVL 580-436715/147			00:20																													

Prep Types:
D = Dissolved
R = Total Recoverable

FORM XIII-IN

15-IN
ICP INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.: Analysis Batch No.: 436306

ICP Instrument ID: TAC047 Start Date: 08/30/2023 End Date: 08/30/2023

Lab Sample ID	Time	Internal Standards %RI For:									
		Element In 230.606	Q	Element Y 224.306	Q	Element Y 360.073	Q	Element Y 377.433	Q	Element	Q
ICIS 580-436306/1	15:18										
ICV 580-436306/9	15:53	91		96		98		99			
ICB 580-436306/10	16:03	103		102		99		100			
ICVL 580-436306/11	16:07	101		102		99		100			
ICSA 580-436306/12	16:11	83		90		96		98			
ICSAB 580-436306/13	16:15	82		90		97		99			
CCV 580-436306/14	16:18	87		94		97		98			
CCB 580-436306/15	16:22	102		101		100		101			
CCVL 580-436306/16	16:26	101		102		101		102			
MB 580-436117/15-A	16:29	105		105		103		104			
LCS 580-436117/16-A	16:33	97		102		102		104			
LCSD 580-436117/17-A	16:36	99		104		104		106			
CCV 580-436306/27	17:03	88		96		99		101			
CCB 580-436306/28	17:08	102		103		103		104			
CCVL 580-436306/29	17:11	102		103		103		105			
CCV 580-436306/43	18:01	89		97		100		103			
CCB 580-436306/44	18:05	104		105		104		106			
CCVL 580-436306/45	18:09	105		106		105		108			
580-130928-3	18:12	98		104		105		108			
580-130928-3 DU	18:16	98		103		104		107			
580-130928-3 MS	18:19	96		103		105		108			
580-130928-3 MSD	18:22	96		103		105		108			
580-130928-3 PDS	18:25	96		103		104		106			
580-130928-3 SD	18:28	103		105		106		108			
CCV 580-436306/52	18:32	89		97		100		103			
CCB 580-436306/53	18:36	104		105		103		105			
580-130928-1	18:40	98		103		103		106			
580-130928-2	18:43	101		105		106		109			
580-130928-4	18:46	98		103		105		107			
580-130928-5	18:50	107		107		108		110			
CCV 580-436306/60	19:00	85		93		95		97			
CCB 580-436306/61	19:04	100		101		100		102			
CCVL 580-436306/62	19:08	99		101		99		102			
IS Name on Instrument											

FORM XV - IN

15A-IN
ICP INTERNAL STANDARDS RELATIONS
METALS

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.: Analysis Batch No.: 436306

ICP Instrument ID: TAC047 Start Date: 08/30/2023 End Date: 08/30/2023

Analyte	Wavelength	Internal Standard Used:				
		Element In 230.606	Element Y 224.306	Element Y 360.073	Element Y 377.433	Element
Arsenic	189.042		X			
Manganese	257.610		X			
Aluminum	308.215			X		
Antimony	206.833		X			
Barium	233.527		X			
Beryllium	313.042			X		
Bismuth	223.061		X			
Boron	208.959		X			
Cadmium	226.502	X				
Calcium	315.887		X			
Chromium	205.560		X			
Cobalt	228.616	X				
Copper	327.396		X			
Iron	259.940		X			
Lead	220.353	X				
Li	670.784				X	
Magnesium	279.079		X			
Molybdenum	202.030		X			
Nickel	231.604	X				
Phosphorus	178.284		X			
Potassium	766.490			X		
Selenium	196.090		X			
Silicon	251.611			X		
Silver	328.068			X		
Sodium	589.592			X		
Strontium	407.771				X	
Thallium	190.856	X				
Tin	189.989	X				
Titanium	334.941			X		
Vanadium	292.402			X		
Zinc	206.200	X				
Internal Standard Name on Instrument		In2306	Y_2243	Y_3600	Y_3774	

FORM XV - IN

15-IN
ICP INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.: Analysis Batch No.: 436328

ICP Instrument ID: TAC047 Start Date: 08/30/2023 End Date: 08/30/2023

Lab Sample ID	Time	Internal Standards %RI For:									
		Element In 230.606	Q	Element Y 224.306	Q	Element Y 360.073	Q	Element Y 377.433	Q	Element	Q
ICIS 580-436328/1	15:18										
ICV 580-436328/9	15:53	91		96		98		99			
ICB 580-436328/10	16:03	103		102		99		100			
ICVL 580-436328/11	16:07	101		102		99		100			
ICSA 580-436328/12	16:11	83		90		96		98			
ICSAB 580-436328/13	16:15	82		90		97		99			
CCV 580-436328/14	16:18	87		94		97		98			
CCB 580-436328/15	16:22	102		101		100		101			
CCVL 580-436328/16	16:26	101		102		101		102			
MB 580-436117/15-A	16:29	105		105		103		104			
LCS 580-436117/16-A	16:33	97		102		102		104			
LCSD 580-436117/17-A	16:36	99		104		104		106			
CCV 580-436328/20	17:03	88		96		99		101			
CCB 580-436328/21	17:08	102		103		103		104			
CCVL 580-436328/22	17:11	102		103		103		105			
CCV 580-436328/23	18:01	89		97		100		103			
CCB 580-436328/24	18:05	104		105		104		106			
CCVL 580-436328/25	18:09	105		106		105		108			
580-130928-3	18:12	98		104		105		108			
580-130928-3 DU	18:16	98		103		104		107			
580-130928-3 MS	18:19	96		103		105		108			
580-130928-3 MSD	18:22	96		103		105		108			
580-130928-3 PDS	18:25	96		103		104		106			
580-130928-3 SD	18:28	103		105		106		108			
CCV 580-436328/32	18:32	89		97		100		103			
CCB 580-436328/33	18:36	104		105		103		105			
CCVL 580-436328/37	19:08	99		101		99		102			
IS Name on Instrument											

FORM XV - IN

15A-IN
ICP INTERNAL STANDARDS RELATIONS
METALS

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.: Analysis Batch No.: 436328

ICP Instrument ID: TAC047 Start Date: 08/30/2023 End Date: 08/30/2023

Analyte	Wavelength	Internal Standard Used:				
		Element In 230.606	Element Y 224.306	Element Y 360.073	Element Y 377.433	Element
Arsenic	189.042		X			
Manganese	257.610		X			
Aluminum	308.215			X		
Antimony	206.833		X			
Barium	233.527		X			
Beryllium	313.042			X		
Bismuth	223.061		X			
Boron	208.959		X			
Cadmium	226.502	X				
Calcium	315.887		X			
Chromium	205.560		X			
Cobalt	228.616	X				
Copper	327.396		X			
Iron	259.940		X			
Lead	220.353	X				
Li	670.784				X	
Magnesium	279.079		X			
Molybdenum	202.030		X			
Nickel	231.604	X				
Phosphorus	178.284		X			
Potassium	766.490			X		
Selenium	196.090		X			
Silicon	251.611			X		
Silver	328.068			X		
Sodium	589.592			X		
Strontium	407.771				X	
Thallium	190.856	X				
Tin	189.989	X				
Titanium	334.941			X		
Vanadium	292.402			X		
Zinc	206.200	X				
Internal Standard Name on Instrument		In2306	Y_2243	Y_3600	Y_3774	

FORM XV - IN

15-IN
ICP INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.: Analysis Batch No.: 436715

ICP Instrument ID: TAC047 Start Date: 09/05/2023 End Date: 09/05/2023

Lab Sample ID	Time	Internal Standards %RI For:									
		Element In 230.606	Q	Element Y 224.306	Q	Element Y 360.073	Q	Element Y 377.433	Q	Element	Q
ICIS 580-436715/1	14:48										
ICV 580-436715/9	15:23	92		96		100		101			
ICB 580-436715/10	15:33	101		101		101		104			
ICVL 580-436715/11	15:42	103		103		101		103			
ICSA 580-436715/12	15:46	84		89		94		97			
ICSAB 580-436715/13	15:49	84		89		94		97			
CCV 580-436715/97	21:03	89		97		97		102			
CCB 580-436715/98	21:07	105		106		100		105			
CCVL 580-436715/99	21:11	106		108		103		108			
MB 580-436480/22-A	21:14	107		108		102		107			
LCS 580-436480/23-A	21:18	101		105		102		106			
LCSD	21:21	101		105		101		105			
580-436480/24-A											
580-130928-3	21:24	100		105		102		106			
580-130928-3 DU	21:27	99		104		100		105			
580-130928-3 MS	21:31	96		102		102		107			
580-130928-3 MSD	21:34	97		104		102		106			
580-130928-3 PDS	21:37	98		105		102		106			
580-130928-3 SD	21:40	102		105		101		106			
CCV 580-436715/109	21:43	90		98		90		94			
CCB 580-436715/110	21:47	104		105		97		101			
580-130928-1	21:54	99		104		99		104			
580-130928-2	21:58	102		106		100		105			
580-130928-4	22:01	99		104		99		103			
CCV 580-436715/116	22:08	88		96		92		97			
CCB 580-436715/117	22:13	102		104		95		99			
CCVL 580-436715/118	22:16	103		105		97		101			
IS Name on Instrument											

FORM XV - IN

15A-IN
ICP INTERNAL STANDARDS RELATIONS
METALS

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.: Analysis Batch No.: 436715

ICP Instrument ID: TAC047 Start Date: 09/05/2023 End Date: 09/05/2023

Analyte	Wavelength	Internal Standard Used:				
		Element In 230.606	Element Y 224.306	Element Y 360.073	Element Y 377.433	Element
Arsenic	189.042		X			
Manganese	257.610		X			
Aluminum	308.215			X		
Antimony	206.833		X			
Barium	233.527		X			
Beryllium	313.042			X		
Bismuth	223.061		X			
Boron	208.959		X			
Cadmium	226.502	X				
Calcium	315.887		X			
Chromium	205.560		X			
Cobalt	228.616	X				
Copper	327.396			X		
Iron	259.940			X		
Lead	220.353	X				
Li	670.784				X	
Magnesium	279.079			X		
Molybdenum	202.030		X			
Nickel	231.604	X				
Phosphorus	178.284		X			
Potassium	766.490				X	
Selenium	196.090		X			
Silicon	251.611			X		
Silver	328.068			X		
Sodium	589.592		X			
Strontium	407.771				X	
Thallium	190.856	X				
Tin	189.989	X				
Titanium	334.941			X		
Vanadium	292.402			X		
Zinc	206.200	X				
Internal Standard Name on Instrument		In2306	Y_2243	Y_3600	Y_3774	

FORM XV - IN

METALS BATCH WORKSHEET

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

Batch Number: 436117 Batch Start Date: 08/29/23 15:45 Batch Analyst: Hua, Tammy M

Batch Method: 3005A Batch End Date: 08/29/23 21:55

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ICP CAL 1 00027	ICP CAL 2 00024	MET Spike 3C 00045	
580-130928-E-3	N3-12-2023	3005A, 6010D	R	50 mL	50 mL				
580-130928-E-3 DU	N3-12-2023	3005A, 6010D	R	50 mL	50 mL				
580-130928-E-3 MS	N3-12-2023	3005A, 6010D	R	50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	
580-130928-E-3 MSD	N3-12-2023	3005A, 6010D	R	50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	
580-130928-B-1	3-MW-2-2023	3005A, 6010D	R	50 mL	50 mL				
580-130928-B-2	N2-6C-2023	3005A, 6010D	R	50 mL	50 mL				
580-130928-E-4	DUP-2023	3005A, 6010D	R	50 mL	50 mL				
580-130928-D-5	EBlank-2023	3005A, 6010D	R	50 mL	50 mL				
MB 580-436117/15		3005A, 6010D		50 mL	50 mL				
LCS 580-436117/16		3005A, 6010D		50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	
LCSD 580-436117/17		3005A, 6010D		50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

Batch Number: 436117 Batch Start Date: 08/29/23 15:45 Batch Analyst: Hua, Tammy M

Batch Method: 3005A Batch End Date: 08/29/23 21:55

Batch Notes	
Digestion Tube/Cup ID	3554231
Pipette/Syringe/Dispenser ID	METALS-PREP-2
Analyst ID - Spike Analyst	TH
Analyst ID - Spike Witness Analyst	JL
Sufficient Volume for Batch QC	YES
Hydrochloric Acid ID	3553557
Nitric Acid ID	3545105
Digestion Unit ID	block b
Thermometer ID	m99938
Thermometer Location ID	b6
Temperature - Uncorrected - Start	94.0 Degrees C
Temperature - Corrected - Start	93.8 Degrees C
Digestion Start Time	08/29/2023 17:55
Digestion End Time	08/29/2023 21:55
Temperature - Uncorrected - End	94.0 Degrees C
Temperature - Corrected - End	93.8 Degrees C

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

Batch Number: 436480 Batch Start Date: 09/01/23 15:45 Batch Analyst: Hua, Tammy M

Batch Method: 3005A Batch End Date: 09/01/23 22:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ICP CAL 1 00027	ICP CAL 2 00024	MET Spike 3C 00046	
580-130928-D-3	N3-12-2023	3005A, 6010D	D	50 mL	50 mL				
580-130928-D-3 DU	N3-12-2023	3005A, 6010D	D	50 mL	50 mL				
580-130928-D-3 MS	N3-12-2023	3005A, 6010D	D	50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	
580-130928-D-3 MSD	N3-12-2023	3005A, 6010D	D	50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	
580-130928-A-1	3-MW-2-2023	3005A, 6010D	D	50 mL	50 mL				
580-130928-A-2	N2-6C-2023	3005A, 6010D	D	50 mL	50 mL				
580-130928-D-4	DUP-2023	3005A, 6010D	D	50 mL	50 mL				
MB 580-436480/22		3005A, 6010D		50 mL	50 mL				
LCS 580-436480/23		3005A, 6010D		50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	
LCSD 580-436480/24		3005A, 6010D		50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins Seattle Job No.: 580-130928-1

SDG No.:

Batch Number: 436480 Batch Start Date: 09/01/23 15:45 Batch Analyst: Hua, Tammy M

Batch Method: 3005A Batch End Date: 09/01/23 22:30

Batch Notes	
Digestion Tube/Cup ID	3554232
Pipette/Syringe/Dispenser ID	METALS-PREP-2
Analyst ID - Spike Analyst	TH
Analyst ID - Spike Witness Analyst	DLV
Sufficient Volume for Batch QC	YES
Hydrochloric Acid ID	3553555
Nitric Acid ID	3232858
Digestion Unit ID	block b
Thermometer ID	m99938
Thermometer Location ID	b27
Temperature - Uncorrected - Start	95.0 Degrees C
Temperature - Corrected - Start	94.8 Degrees C
Digestion Start Time	09/01/2023 18:30
Digestion End Time	09/01/2023 22:30
Temperature - Uncorrected - End	95.0 Degrees C
Temperature - Corrected - End	94.8 Degrees C

Basis	Basis Description
D	Dissolved

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

6010D

Sample Name: ICIS 3570190 Acquired: 8/30/2023 15:18:13 Type: Cal
Method: NEW IEC MAY 2023(v61) Mode: IR Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130	Bi2230	Ca3158	Cd2265
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0014	-.0012	.0000	.0018	.0003	.0006	.0000	.0003	-.0020
Stddev	.0002	.0004	.0000	.0000	.0000	.0002	.0000	.0001	.0002
%RSD	15.04	36.18	28.44	1.485	16.60	34.68	15.13	22.74	8.645
#1	.0014	-.0017	.0000	.0019	.0003	.0005	.0000	.0003	-.0020
#2	.0015	-.0008	.0000	.0018	.0003	.0006	.0000	.0002	-.0022
#3	.0011	-.0010	.0001	.0018	.0002	.0009	.0000	.0002	-.0019

Elem	Co2286	Cr2055	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.0001	.0001	-.0003	.0001	-.0025	.0029	.0001	.0001	.0002
Stddev	.0002	.0000	.0001	.0001	.0011	.0002	.0001	.0000	.0000
%RSD	111.7	29.05	30.78	101.4	45.56	7.902	111.2	26.23	4.942
#1	-.0003	.0000	-.0002	-.0000	-.0021	.0026	.0003	.0002	.0002
#2	.0000	.0001	-.0003	.0001	-.0017	.0029	.0000	.0001	.0002
#3	-.0001	.0001	-.0003	.0001	-.0038	.0031	.0001	.0002	.0002

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960	Si2516	Sn1899	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0045	.0014	-.0000	-.0014	.0001	-.0000	.0009	.0002	-.0004
Stddev	.0016	.0002	.0000	.0003	.0001	.0000	.0001	.0002	.0001
%RSD	35.71	12.13	55.71	24.96	99.79	132.4	15.03	71.62	39.38
#1	.0051	.0012	-.0000	-.0017	.0000	.0000	.0008	.0004	-.0003
#2	.0026	.0014	-.0000	-.0014	.0000	-.0000	.0010	.0002	-.0005
#3	.0056	.0016	-.0000	-.0010	.0001	-.0000	.0009	.0001	-.0003

Elem	Ti3349	Tl1908	V_2924	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.0001	.0001	.0004	.0034
Stddev	.0001	.0001	.0003	.0001
%RSD	41.57	45.93	88.64	4.444
#1	-.0001	.0001	.0000	.0032
#2	-.0001	.0001	.0007	.0035
#3	-.0002	.0002	.0005	.0033

Sample Name: ICIS 3570190 Acquired: 8/30/2023 15:18:13 Type: Cal
Method: NEW IEC MAY 2023(v61) Mode: IR Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4367.4	25036.	9966.0	20762.
Stddev	14.0	95.	47.4	116.
%RSD	.32079	.37772	.47549	.56018
#1	4374.1	25075.	9911.7	20639.
#2	4376.8	25105.	9999.2	20870.
#3	4351.3	24928.	9987.0	20778.

Sample Name: STD0.03 3519880 Acquired: 8/30/2023 15:21:49 Type: Cal
Method: NEW IEC MAY 2023(v61) Mode: IR Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Al3082	As1890	B_2089	Ba2335	Be3130	Bi2230	Ca3158	Cd2265	Co2286
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0011	.0002	.0077	.0021	.0230	.0003	.0026	.0208	.0150
Stddev	.0005	.0000	.0000	.0000	.0005	.0000	.0002	.0003	.0003
%RSD	45.51	6.720	.6114	1.056	2.159	6.473	6.224	1.435	2.318
#1	.0016	.0002	.0077	.0021	.0235	.0003	.0025	.0205	.0149
#2	.0006	.0002	.0077	.0021	.0225	.0003	.0025	.0209	.0147
#3	.0012	.0002	.0077	.0021	.0229	.0003	.0028	.0210	.0154

Elem	Cr2055	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0017	-.0001	.0047	.0024	.0056	.0007	.0009	.0009	.0219
Stddev	.0000	.0000	.0001	.0011	.0006	.0001	.0000	.0000	.0005
%RSD	2.323	29.51	3.007	44.96	10.51	12.32	3.515	.6718	2.475
#1	.0016	-.0002	.0048	.0029	.0062	.0008	.0009	.0009	.0223
#2	.0017	-.0001	.0047	.0012	.0056	.0006	.0010	.0008	.0221
#3	.0017	-.0001	.0046	.0031	.0051	.0007	.0009	.0009	.0213

Elem	Ni2316	P_1782	Pb2203	Sb2068	Se1960	Si2516	Sn1899	Sr4077	Ti3349
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0058	.0006	.0004	.0002	.0001	.0033	.0029	.0160	.0019
Stddev	.0002	.0000	.0002	.0000	.0000	.0002	.0001	.0004	.0000
%RSD	3.466	1.486	52.33	5.718	15.00	6.320	3.337	2.791	1.499
#1	.0056	.0006	.0003	.0003	.0001	.0034	.0030	.0165	.0019
#2	.0058	.0006	.0003	.0002	.0001	.0034	.0028	.0160	.0019
#3	.0060	.0006	.0006	.0002	.0001	.0030	.0029	.0156	.0019

Elem	Tl1908	V_2924	Zn2062
Units	Cts/S	Cts/S	Cts/S
Avg	.0004	.0014	.0182
Stddev	.0002	.0003	.0002
%RSD	44.42	21.89	1.108
#1	.0003	.0011	.0181
#2	.0002	.0013	.0182
#3	.0006	.0017	.0185

Sample Name: STD0.03 3519880 Acquired: 8/30/2023 15:21:49 Type: Cal
Method: NEW IEC MAY 2023(v61) Mode: IR Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4416.2	25375.	9974.9	20818.
Stddev	15.6	103.	196.8	394.
%RSD	.35257	.40533	1.9733	1.8911
#1	4416.2	25356.	9757.4	20385.
#2	4431.8	25486.	10026.	20916.
#3	4400.7	25283.	10141.	21154.

Sample Name: STD0.1 3519881 Acquired: 8/30/2023 15:25:34 Type: Cal
Method: NEW IEC MAY 2023(v61) Mode: IR Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130	Bi2230	Ca3158	Cd2265
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0019	.0057	.0005	.0202	.0058	.0692	.0007	.0075	.0683
Stddev	.0001	.0003	.0000	.0001	.0000	.0003	.0000	.0001	.0003
%RSD	7.335	5.361	4.961	.5351	.5196	.4824	3.826	1.757	.3685
#1	.0020	.0054	.0005	.0203	.0058	.0689	.0007	.0074	.0684
#2	.0020	.0056	.0005	.0201	.0058	.0692	.0007	.0075	.0680
#3	.0017	.0060	.0005	.0203	.0058	.0695	.0007	.0076	.0685

Elem	Co2286	Cr2055	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0466	.0050	.0003	.0139	.0102	.0105	.0021	.0027	.0023
Stddev	.0001	.0000	.0002	.0001	.0008	.0003	.0001	.0000	.0000
%RSD	.2729	.6338	65.84	1.061	7.901	3.339	3.256	1.483	.8298
#1	.0467	.0050	.0005	.0138	.0095	.0107	.0021	.0027	.0023
#2	.0466	.0049	.0001	.0138	.0111	.0101	.0021	.0027	.0023
#3	.0464	.0050	.0002	.0140	.0100	.0107	.0020	.0027	.0023

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960	Si2516	Sn1899	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0570	.0156	.0019	.0036	.0005	.0002	.0084	.0080	.0502
Stddev	.0016	.0002	.0000	.0006	.0000	.0000	.0001	.0001	.0002
%RSD	2.833	1.490	1.153	16.48	5.955	6.380	1.175	.9736	.3879
#1	.0559	.0158	.0019	.0037	.0006	.0002	.0084	.0081	.0503
#2	.0564	.0154	.0019	.0030	.0006	.0002	.0085	.0079	.0500
#3	.0589	.0157	.0019	.0041	.0005	.0002	.0083	.0080	.0503

Elem	Ti3349	Tl1908	V_2924	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0058	.0010	.0028	.0504
Stddev	.0002	.0003	.0001	.0001
%RSD	2.738	30.08	4.380	.2455
#1	.0056	.0006	.0028	.0505
#2	.0059	.0011	.0026	.0503
#3	.0059	.0011	.0028	.0505

Sample Name: STD0.1 3519881 Acquired: 8/30/2023 15:25:34 Type: Cal
Method: NEW IEC MAY 2023(v61) Mode: IR Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4376.6	25307.	9912.2	20774.
Stddev	18.9	94.	11.3	42.
%RSD	.43273	.37250	.11447	.20112
#1	4371.6	25272.	9917.5	20821.
#2	4397.6	25414.	9920.0	20761.
#3	4360.7	25235.	9899.2	20740.

Sample Name: STD1 3506908 Acquired: 8/30/2023 15:29:05 Type: Cal
Method: NEW IEC MAY 2023(v61) Mode: IR Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130	Bi2230	Ca3158	Cd2265
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0069	.0657	.0041	.1844	.0537	.6692	.0068	.0715	.6893
Stddev	.0004	.0012	.0001	.0005	.0001	.0082	.0001	.0005	.0013
%RSD	5.321	1.900	1.386	.2818	.1576	1.228	.8126	.7347	.1931
#1	.0065	.0645	.0041	.1842	.0537	.6627	.0068	.0715	.6886
#2	.0070	.0656	.0041	.1841	.0536	.6664	.0067	.0710	.6884
#3	.0072	.0670	.0042	.1850	.0538	.6784	.0069	.0720	.6908

Elem	Co2286	Cr2055	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.4555	.0484	.0068	.1345	.1225	.0796	.0198	.0248	.0213
Stddev	.0011	.0001	.0001	.0009	.0017	.0013	.0000	.0002	.0002
%RSD	.2348	.2769	1.776	.7009	1.375	1.574	.2027	.9993	.8241
#1	.4558	.0484	.0066	.1341	.1218	.0783	.0197	.0249	.0212
#2	.4543	.0482	.0068	.1339	.1213	.0797	.0198	.0245	.0213
#3	.4564	.0485	.0069	.1356	.1245	.0808	.0198	.0249	.0215

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960	Si2516	Sn1899	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.4948	.1413	.0186	.0462	.0045	.0023	.0759	.0788	.4912
Stddev	.0067	.0005	.0000	.0004	.0000	.0000	.0008	.0005	.0046
%RSD	1.350	.3613	.0703	.8178	.4452	1.445	.9965	.5879	.9270
#1	.4890	.1415	.0186	.0460	.0045	.0023	.0753	.0784	.4878
#2	.4933	.1407	.0186	.0461	.0045	.0023	.0756	.0788	.4893
#3	.5021	.1417	.0186	.0467	.0045	.0024	.0767	.0793	.4963

Elem	Ti3349	Tl1908	V_2924	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0557	.0101	.0248	.4834
Stddev	.0006	.0002	.0002	.0011
%RSD	1.0000	1.765	.9993	.2319
#1	.0551	.0099	.0245	.4830
#2	.0557	.0101	.0248	.4826
#3	.0562	.0103	.0250	.4847

Sample Name: STD1 3506908 Acquired: 8/30/2023 15:29:05 Type: Cal
Method: NEW IEC MAY 2023(v61) Mode: IR Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4357.1	25582.	10019.	21109.
Stddev	20.4	111.	78.	139.
%RSD	.46776	.43288	.77686	.65989
#1	4364.4	25627.	10094.	21243.
#2	4372.8	25663.	10026.	21119.
#3	4334.1	25455.	9938.5	20965.

Sample Name: STD2 3528066 Acquired: 8/30/2023 15:32:16 Type: Cal
Method: NEW IEC MAY 2023(v61) Mode: IR Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130	Bi2230	Ca3158	Cd2265
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0118	.1291	.0081	.3657	.1042	1.276	.0132	.1403	1.347
Stddev	.0001	.0013	.0000	.0010	.0004	.009	.0001	.0009	.004
%RSD	1.105	1.035	.3041	.2611	.3549	.6733	.8068	.6344	.3107
#1	.0117	.1304	.0081	.3658	.1041	1.286	.0132	.1402	1.347
#2	.0119	.1292	.0081	.3648	.1038	1.272	.0131	.1395	1.344
#3	.0117	.1278	.0081	.3667	.1046	1.270	.0133	.1412	1.352

Elem	Co2286	Cr2055	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.8882	.0942	.0135	.2647	.2434	.1506	.0388	.0476	.0419
Stddev	.0032	.0003	.0002	.0018	.0016	.0011	.0003	.0004	.0001
%RSD	.3567	.2994	1.401	.6938	.6463	.7248	.6955	.8713	.3219
#1	.8871	.0942	.0133	.2647	.2447	.1519	.0389	.0477	.0418
#2	.8857	.0939	.0136	.2628	.2438	.1499	.0385	.0471	.0418
#3	.8917	.0945	.0135	.2665	.2416	.1500	.0390	.0479	.0420

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960	Si2516	Sn1899	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.9646	.2744	.0366	.0918	.0088	.0047	.1431	.1541	.9404
Stddev	.0058	.0004	.0001	.0003	.0000	.0000	.0010	.0005	.0076
%RSD	.6016	.1455	.3856	.3634	.4237	.8052	.6685	.3196	.8097
#1	.9713	.2744	.0366	.0921	.0088	.0047	.1442	.1539	.9490
#2	.9610	.2740	.0365	.0915	.0088	.0047	.1427	.1538	.9381
#3	.9614	.2748	.0368	.0919	.0089	.0047	.1424	.1547	.9343

Elem	Ti3349	Tl1908	V_2924	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.1063	.0199	.0469	.9615
Stddev	.0005	.0001	.0010	.0033
%RSD	.4646	.3958	2.173	.3459
#1	.1066	.0199	.0478	.9603
#2	.1057	.0199	.0471	.9590
#3	.1065	.0198	.0458	.9653

Sample Name: STD2 3528066 Acquired: 8/30/2023 15:32:16 Type: Cal
Method: NEW IEC MAY 2023(v61) Mode: IR Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4309.9	25513.	10024.	21152.
Stddev	17.1	83.	83.	214.
%RSD	.39739	.32705	.82605	1.0137
#1	4315.2	25533.	9955.6	20975.
#2	4323.8	25584.	10001.	21090.
#3	4290.8	25421.	10116.	21390.

Sample Name: STD3 3565025 Acquired: 8/30/2023 15:35:24 Type: Cal
Method: NEW IEC MAY 2023(v61) Mode: IR Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130	Bi2230	Ca3158	Cd2265
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.1144	1.302	.0859	3.679	1.058	13.08	.1331	1.459	14.53
Stddev	.0005	.004	.0002	.007	.002	.03	.0002	.005	.01
%RSD	.4801	.2686	.1808	.1899	.1582	.2453	.1569	.3237	.0489
#1	.1150	1.306	.0859	3.677	1.057	13.10	.1331	1.455	14.52
#2	.1139	1.302	.0857	3.674	1.056	13.04	.1329	1.457	14.54
#3	.1143	1.299	.0860	3.687	1.059	13.10	.1333	1.464	14.53

Elem	Co2286	Cr2055	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	9.567	.9638	.1480	2.760	2.504	1.539	.4070	.5047	.4340
Stddev	.008	.0015	.0004	.009	.006	.000	.0011	.0012	.0013
%RSD	.0793	.1523	.3023	.3082	.2571	.0137	.2657	.2376	.3062
#1	9.558	.9629	.1475	2.751	2.511	1.539	.4060	.5033	.4332
#2	9.569	.9630	.1480	2.759	2.503	1.538	.4068	.5050	.4332
#3	9.572	.9655	.1484	2.768	2.498	1.539	.4081	.5056	.4355

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960	Si2516	Sn1899	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	9.509	2.899	.3738	.9791	.0926	.0498	1.481	1.653	9.689
Stddev	.019	.001	.0001	.0007	.0002	.0001	.004	.001	.011
%RSD	.1967	.0243	.0339	.0670	.2363	.1691	.2557	.0566	.1091
#1	9.531	2.898	.3738	.9784	.0925	.0498	1.477	1.652	9.700
#2	9.501	2.899	.3740	.9792	.0925	.0497	1.481	1.654	9.689
#3	9.496	2.899	.3737	.9797	.0929	.0499	1.484	1.652	9.678

Elem	Ti3349	Tl1908	V_2924	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.099	.2086	.4845	10.03
Stddev	.002	.0008	.0004	.01
%RSD	.1445	.3709	.0867	.0798
#1	1.101	.2077	.4849	10.03
#2	1.098	.2092	.4841	10.04
#3	1.099	.2089	.4845	10.02

Sample Name: STD3 3565025 Acquired: 8/30/2023 15:35:24 Type: Cal
Method: NEW IEC MAY 2023(v61) Mode: IR Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3722.1	23285.	9583.0	20284.
Stddev	1.9	22.	26.0	57.
%RSD	.05158	.09457	.27150	.27967
#1	3723.9	23291.	9553.0	20219.
#2	3720.1	23304.	9597.0	20314.
#3	3722.2	23261.	9599.1	20320.

Sample Name: STD4 3401016 Acquired: 8/30/2023 15:38:19 Type: Cal
Method: NEW IEC MAY 2023(v61) Mode: IR Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130	Bi2230	Ca3158	Cd2265
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.2152	2.429	.1681	7.260	2.040	23.66	.2700	2.833	28.21
Stddev	.0012	.017	.0006	.020	.005	.19	.0009	.018	.09
%RSD	.5616	.7060	.3669	.2815	.2459	.7950	.3469	.6173	.3024
#1	.2143	2.419	.1678	7.250	2.038	23.59	.2695	2.826	28.19
#2	.2148	2.420	.1677	7.247	2.037	23.52	.2695	2.820	28.14
#3	.2166	2.449	.1688	7.284	2.046	23.87	.2711	2.853	28.31

Elem	Co2286	Cr2055	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	18.80	1.869	.2944	5.362	4.512	2.958	.7961	.9825	.8479
Stddev	.06	.004	.0016	.037	.029	.025	.0051	.0061	.0022
%RSD	.3427	.2409	.5487	.6832	.6497	.8395	.6449	.6247	.2600
#1	18.77	1.866	.2935	5.348	4.546	2.942	.7948	.9799	.8467
#2	18.75	1.866	.2934	5.335	4.497	2.945	.7917	.9780	.8465
#3	18.87	1.874	.2963	5.404	4.494	2.987	.8018	.9895	.8504

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960	Si2516	Sn1899	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	17.26	5.666	.7123	1.908	.1825	.0967	2.750	3.217	17.89
Stddev	.04	.020	.0035	.006	.0006	.0002	.021	.010	.12
%RSD	.2302	.3462	.4918	.3124	.3517	.2470	.7543	.3071	.6573
#1	17.29	5.655	.7091	1.907	.1822	.0966	2.736	3.214	17.92
#2	17.22	5.654	.7117	1.902	.1820	.0964	2.739	3.208	17.77
#3	17.28	5.688	.7161	1.914	.1832	.0969	2.774	3.227	18.00

Elem	Ti3349	Tl1908	V_2924	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2.036	.4044	.8969	19.68
Stddev	.016	.0017	.0074	.06
%RSD	.7773	.4323	.8273	.2998
#1	2.028	.4035	.8939	19.66
#2	2.025	.4033	.8914	19.63
#3	2.054	.4064	.9053	19.74

Sample Name: STD4 3401016 Acquired: 8/30/2023 15:38:19 Type: Cal
Method: NEW IEC MAY 2023(v61) Mode: IR Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3555.9	22799.	9905.9	20998.
Stddev	15.4	96.	49.4	123.
%RSD	.43252	.41898	.49847	.58675
#1	3562.3	22848.	9940.5	21079.
#2	3567.0	22859.	9927.8	21059.
#3	3538.3	22688.	9849.3	20856.

Sample Name: STD5 3563555 Acquired: 8/30/2023 15:41:30 Type: Cal
Method: NEW IEC MAY 2023(v61) Mode: IR Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Al3082	As1890	Be3130	Ca3158	Cd2265	Co2286	Cr2055	Cu3273	Fe2599
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4.867	.3259	46.07	5.532	53.20	36.07	3.519	.5919	10.35
Stddev	.119	.0007	1.51	.035	.10	.08	.007	.0047	.07
%RSD	2.436	.2239	3.280	.6389	.1961	.2112	.1927	.7871	.6802
#1	4.730	.3254	44.34	5.496	53.13	36.02	3.515	.5882	10.29
#2	4.939	.3256	46.72	5.567	53.14	36.03	3.514	.5971	10.43
#3	4.931	.3267	47.15	5.533	53.32	36.16	3.526	.5904	10.34

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7.745	5.989	1.564	1.922	1.610	30.21	10.86	3.650	.3557
Stddev	.066	.152	.009	.013	.004	.29	.03	.008	.0011
%RSD	.8550	2.541	.5919	.6984	.2167	.9556	.2411	.2197	.3185
#1	7.672	5.814	1.555	1.909	1.608	29.88	10.84	3.646	.3548
#2	7.802	6.080	1.574	1.936	1.607	30.30	10.85	3.645	.3552
#3	7.760	6.074	1.563	1.919	1.614	30.44	10.89	3.659	.3570

Elem	Se1960	Sn1899	Sr4077	Ti3349	V_2924	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.1864	6.134	34.68	4.025	1.750	36.25
Stddev	.0003	.014	.78	.098	.042	.08
%RSD	.1738	.2236	2.239	2.434	2.400	.2183
#1	.1862	6.124	33.79	3.912	1.702	36.20
#2	.1863	6.128	35.22	4.076	1.773	36.22
#3	.1868	6.149	35.02	4.087	1.776	36.35

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3395.8	22278.	9858.3	20916.
Stddev	2.2	24.	196.8	423.
%RSD	.06559	.10568	1.9959	2.0221
#1	3397.3	22296.	10075.	21391.
#2	3396.8	22286.	9810.1	20774.
#3	3393.2	22251.	9690.1	20582.

Sample Name: ICV 3561908 Acquired: 8/30/2023 15:53:34 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.023	41.67	2.039	20.57	1.965	W 2.173
Stddev	.003	.05	.034	.33	.031	.004
%RSD	.3087	.1174	1.650	1.618	1.598	.1699
#1	1.021	41.73	2.019	20.39	1.948	2.170
#2	1.027	41.63	2.078	20.95	2.001	2.177
#3	1.021	41.67	2.020	20.37	1.945	2.174
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn
Value						2.000
Range						5.000%

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	W 1.897	39.34	W 2.104	2.038	W 2.143	1.947
Stddev	.033	.56	.038	.036	.035	.021
%RSD	1.722	1.418	1.789	1.793	1.617	1.059
#1	1.879	39.14	2.082	2.015	2.125	1.940
#2	1.935	39.96	2.148	2.080	2.183	1.970
#3	1.878	38.90	2.083	2.018	2.120	1.931
Check ?	Chk Warn	Chk Pass	Chk Warn	Chk Pass	Chk Warn	Chk Pass
Value	2.000		2.000		2.000	
Range	-5.000%		5.000%		5.000%	

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	41.04	38.28	2.036	40.11	2.061	W 2.131
Stddev	.56	.04	.002	.63	.028	.036
%RSD	1.371	.1024	.1117	1.564	1.349	1.696
#1	40.86	38.26	2.038	39.93	2.050	2.108
#2	41.67	38.33	2.034	40.80	2.093	2.173
#3	40.58	38.26	2.034	39.59	2.040	2.112
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn
Value						2.000
Range						5.000%

Sample Name: ICV 3561908 Acquired: 8/30/2023 15:53:34 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	38.77	2.085	20.68	2.093	W 2.162	2.078
Stddev	.07	.036	.34	.038	.038	.036
%RSD	.1863	1.716	1.631	1.826	1.748	1.753
#1	38.70	2.064	20.51	2.071	2.136	2.061
#2	38.85	2.126	21.07	2.137	2.205	2.120
#3	38.76	2.065	20.47	2.070	2.143	2.053
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass
Value					2.000	
Range					5.000%	

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	20.24	2.078	W 2.163	W 2.143	2.037	W 2.142
Stddev	.09	.038	.002	.003	.036	.005
%RSD	.4631	1.839	.0965	.1284	1.788	.2201
#1	20.14	2.055	2.165	2.142	2.004	2.143
#2	20.30	2.122	2.162	2.146	2.076	2.147
#3	20.30	2.058	2.161	2.142	2.030	2.138
Check ?	Chk Pass	Chk Pass	Chk Warn	Chk Warn	Chk Pass	Chk Warn
Value			2.000	2.000		2.000
Range			5.000%	5.000%		5.000%

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	W 2.109
Stddev	.039
%RSD	1.828
#1	2.085
#2	2.154
#3	2.089
Check ?	Chk Warn
Value	2.000
Range	5.000%

Sample Name: ICV 3561908 Acquired: 8/30/2023 15:53:34 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3964.1	24105.	9780.6	20639.
Stddev	62.6	362.	49.2	84.
%RSD	1.5794	1.5017	.50326	.40810
#1	4004.9	24328.	9837.4	20736.
#2	3892.0	23688.	9749.7	20603.
#3	3995.4	24300.	9754.7	20580.

Sample Name: ICB Acquired: 8/30/2023 16:03:30 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0002	.0050	.0033	.0132	.0004	.0005
Stddev	.0067	.0202	.0023	.0006	.0002	.0002
%RSD	4248.	405.3	69.71	4.347	45.02	50.96
#1	-.0014	-.0170	.0058	.0138	.0004	.0003
#2	.0070	.0227	.0025	.0131	.0002	.0004
#3	-.0061	.0093	.0015	.0126	.0006	.0008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0003	.0039	.0005	.0003	.0004	.0040
Stddev	.0011	.0047	.0001	.0000	.0001	.0046
%RSD	435.7	120.9	14.98	5.969	19.55	116.1
#1	-.0009	-.0009	.0006	.0003	.0005	.0034
#2	-.0009	.0041	.0004	.0003	.0003	.0089
#3	.0010	.0085	.0006	.0003	.0005	-.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0106	.1205	.0045	-.0037	.0001	.0013
Stddev	.0035	.0221	.0004	.0058	.0001	.0004
%RSD	33.21	18.30	7.953	157.6	76.68	29.07
#1	.0067	.1051	.0047	.0011	.0002	.0016
#2	.0116	.1106	.0040	-.0020	.0000	.0009
#3	.0135	.1457	.0046	-.0102	.0002	.0016
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: ICB Acquired: 8/30/2023 16:03:30 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0205	.0006	.0036	.0011	.0007	.0001
Stddev	.0128	.0004	.0022	.0005	.0019	.0012
%RSD	62.22	76.45	61.22	44.59	278.2	855.8
#1	.0068	.0004	.0042	.0007	.0018	.0001
#2	.0321	.0003	.0011	.0016	-.0015	.0013
#3	.0226	.0011	.0053	.0009	.0017	-.0011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0204	.0008	.0004	.0014	-.0071	-.0038
Stddev	.0018	.0004	.0002	.0013	.0035	.0031
%RSD	8.687	57.28	49.83	93.60	49.29	81.14
#1	.0186	.0008	.0002	.0028	-.0040	-.0002
#2	.0205	.0012	.0003	.0002	-.0064	-.0057
#3	.0221	.0003	.0006	.0012	-.0109	-.0055
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0005
Stddev	.0001
%RSD	15.46
#1	.0004
#2	.0004
#3	.0005
Check ?	Chk Pass
High Limit	
Low Limit	

Sample Name: ICB Acquired: 8/30/2023 16:03:30 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4483.9	25539.	9870.2	20795.
Stddev	9.8	76.	104.5	200.
%RSD	.21949	.29685	1.0585	.95965
#1	4486.4	25547.	9878.4	20810.
#2	4492.2	25611.	9761.9	20589.
#3	4473.0	25460.	9970.3	20987.

Sample Name: ICVL 3561056 Acquired: 8/30/2023 16:07:07 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0557	.5669	.0629	.5225	.0223	.0235
Stddev	.0011	.0249	.0007	.0023	.0002	.0002
%RSD	1.961	4.387	1.171	.4460	.7624	.8598
#1	.0566	.5397	.0622	.5213	.0221	.0234
#2	.0559	.5885	.0628	.5211	.0224	.0237
#3	.0545	.5726	.0637	.5252	.0224	.0233
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.2893	.5565	.0215	.0210	.0284	.0550
Stddev	.0034	.0073	.0001	.0003	.0003	.0078
%RSD	1.164	1.315	.6736	1.448	.9683	14.20
#1	.2931	.5482	.0216	.0207	.0282	.0640
#2	.2882	.5593	.0213	.0209	.0283	.0502
#3	.2866	.5620	.0216	.0213	.0287	.0508
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.5389	3.222	.1070	.5156	.0219	.0428
Stddev	.0109	.012	.0013	.0145	.0003	.0009
%RSD	2.018	.3778	1.260	2.818	1.388	2.017
#1	.5263	3.217	.1066	.4998	.0216	.0422
#2	.5453	3.235	.1085	.5284	.0219	.0425
#3	.5450	3.212	.1059	.5186	.0222	.0438
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: ICVL 3561056 Acquired: 8/30/2023 16:07:07 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.5929	.0218	.1104	.0320	.0672	.1017
Stddev	.0026	.0004	.0013	.0019	.0014	.0042
%RSD	.4390	1.736	1.153	5.933	2.105	4.101
#1	.5902	.0215	.1102	.0317	.0687	.1065
#2	.5954	.0215	.1117	.0340	.0669	.1000
#3	.5933	.0222	.1092	.0302	.0660	.0987
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.054	.1036	.1139	.0330	.0941	.0311
Stddev	.017	.0004	.0012	.0004	.0049	.0005
%RSD	1.562	.3538	1.056	1.087	5.182	1.711
#1	1.047	.1038	.1132	.0334	.0977	.0305
#2	1.073	.1032	.1153	.0328	.0885	.0316
#3	1.043	.1039	.1132	.0329	.0960	.0312
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0413
Stddev	.0000
%RSD	.0338
#1	.0413
#2	.0413
#3	.0413
Check ?	Chk Pass
Value	
Range	

Sample Name: ICVL 3561056 Acquired: 8/30/2023 16:07:07 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4411.5	25438.	9869.5	20769.
Stddev	16.7	99.	76.1	182.
%RSD	.37960	.38918	.77116	.87820
#1	4429.9	25551.	9791.9	20577.
#2	4407.5	25395.	9872.5	20791.
#3	4397.1	25368.	9944.0	20940.

Sample Name: ICSA 3536663 Acquired: 8/30/2023 16:11:49 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0004	519.1	.0048	.0001	F .0105	.0004
Stddev	.0016	9.5	.0005	.0013	.0003	.0001
%RSD	423.3	1.826	10.82	1343.	3.242	24.09
#1	-.0014	509.8	.0046	.0015	.0106	.0003
#2	.0010	518.9	.0044	-.0005	.0102	.0005
#3	.0015	528.7	.0054	-.0008	.0108	.0004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit					.0100	
Low Limit					-.0100	

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0457	510.5	-.0008	-.0021	-.0008	-.0099
Stddev	.0040	.8	.0001	.0003	.0004	.0062
%RSD	8.676	.1570	8.815	15.09	45.51	62.74
#1	.0446	511.3	-.0009	-.0024	-.0005	-.0083
#2	.0425	509.7	-.0008	-.0019	-.0012	-.0046
#3	.0502	510.4	-.0008	-.0019	-.0008	-.0167
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	492.3	.4001	.0242	494.5	.0037	.0004
Stddev	1.0	.0474	.0008	.9	.0002	.0006
%RSD	.2097	11.85	3.177	.1897	4.783	148.4
#1	493.3	.3453	.0234	495.3	.0037	-.0002
#2	491.2	.4292	.0246	493.5	.0035	.0005
#3	492.4	.4256	.0248	494.6	.0038	.0010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: ICSA 3536663 Acquired: 8/30/2023 16:11:49 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0182	.0031	-.0141	.0020	.0073	-.0102
Stddev	.0108	.0004	.0031	.0004	.0010	.0008
%RSD	58.97	13.39	21.78	20.23	13.62	7.509
#1	-.0100	.0035	-.0168	.0024	.0084	-.0110
#2	-.0143	.0026	-.0149	.0016	.0067	-.0094
#3	-.0304	.0032	-.0107	.0018	.0067	-.0103
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0109	.0027	-.0057	-.0021	.0232	.0007
Stddev	.0023	.0011	.0002	.0010	.0058	.0036
%RSD	21.27	41.40	3.172	47.86	25.06	481.6
#1	-.0083	.0025	-.0055	-.0027	.0197	.0005
#2	-.0129	.0040	-.0059	-.0028	.0200	-.0027
#3	-.0115	.0017	-.0057	-.0010	.0300	.0045
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0013
Stddev	.0004
%RSD	27.71
#1	-.0017
#2	-.0013
#3	-.0010
Check ?	Chk Pass
High Limit	
Low Limit	

Sample Name: ICSA 3536663 Acquired: 8/30/2023 16:11:49 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3611.5	22454.	9535.8	20266.
Stddev	14.9	56.	199.5	436.
%RSD	.41385	.24861	2.0925	2.1519
#1	3624.1	22494.	9745.7	20723.
#2	3615.5	22477.	9513.3	20223.
#3	3595.0	22390.	9348.5	19854.

Sample Name: 580-130915-C-38-E Acquired: 8/30/2023 16:39:30 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0000	.0527	.0022	.0152	.0004	.0009
Stddev	.0014	.0169	.0015	.0027	.0001	.0001
%RSD	6981.	32.05	67.81	17.70	30.12	12.67
#1	.0013	.0712	.0031	.0178	.0005	.0009
#2	-.0015	.0382	.0005	.0153	.0004	.0010
#3	.0002	.0487	.0030	.0124	.0003	.0008

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0001	.0196	.0004	.0004	.0003	-.0032
Stddev	.0009	.0024	.0001	.0002	.0003	.0040
%RSD	1709.	12.34	35.19	40.12	95.26	124.4
#1	-.0009	.0172	.0005	.0005	.0006	-.0014
#2	-.0001	.0220	.0003	.0004	.0001	-.0005
#3	.0009	.0194	.0003	.0002	.0001	-.0078

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0274	.0579	-.0042	.0021	.0007	.0052
Stddev	.0049	.0237	.0006	.0108	.0005	.0015
%RSD	17.88	40.92	13.74	516.8	73.96	28.65
#1	.0245	.0488	-.0042	-.0067	.0011	.0069
#2	.0330	.0849	-.0036	-.0012	.0010	.0045
#3	.0246	.0401	-.0048	.0142	.0001	.0041

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0022	-.0001	.0036	.0013	-.0010	.0076
Stddev	.0177	.0004	.0004	.0014	.0015	.0050
%RSD	785.1	288.7	12.48	113.6	147.1	65.93
#1	-.0150	.0003	.0031	.0029	-.0026	.0130
#2	.0203	-.0001	.0040	.0007	-.0010	.0031
#3	.0015	-.0006	.0037	.0002	.0005	.0068

Sample Name: 580-130915-C-38-E Acquired: 8/30/2023 16:39:30 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0273	.0006	.0009	.0020	.0210	.0016
Stddev	.0064	.0001	.0001	.0015	.0113	.0031
%RSD	23.31	9.489	15.10	77.23	54.04	195.6
#1	.0200	.0007	.0009	.0012	.0333	.0048
#2	.0303	.0006	.0011	.0038	.0184	-.0013
#3	.0315	.0006	.0008	.0010	.0111	.0012

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0011
Stddev	.0001
%RSD	12.42
#1	-.0010
#2	-.0012
#3	-.0012

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4644.8	26640.	10536.	22298.
Stddev	31.7	154.	59.	126.
%RSD	.68325	.57742	.56218	.56452
#1	4677.8	26809.	10605.	22440.
#2	4642.1	26603.	10503.	22256.
#3	4614.5	26509.	10501.	22199.

Sample Name: ICSAB 3496533 Acquired: 8/30/2023 16:15:15 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9884	515.4	.9933	9.836	.9954	.5202
Stddev	.0219	11.0	.0026	.061	.0033	.0098
%RSD	2.211	2.130	.2621	.6168	.3269	1.876
#1	.9715	506.7	.9958	9.801	.9942	.5122
#2	.9807	511.8	.9906	9.801	.9929	.5174
#3	1.013	527.7	.9937	9.906	.9991	.5311
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F .0426	513.5	.9808	.9607	1.019	.9932
Stddev	.0021	1.6	.0039	.0040	.006	.0060
%RSD	4.829	.3057	.4004	.4195	.6183	.6032
#1	.0449	512.1	.9811	.9596	1.016	.9978
#2	.0416	513.2	.9768	.9573	1.015	.9955
#3	.0412	515.2	.9846	.9652	1.026	.9864
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	.0000					
Range	20.00%					

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	496.7	9.885	F .0164	500.1	.9986	1.014
Stddev	1.6	.146	.0030	1.8	.0053	.008
%RSD	.3184	1.481	18.57	.3654	.5318	.8135
#1	495.3	9.803	.0129	498.3	.9954	1.007
#2	496.3	9.798	.0180	500.1	.9957	1.012
#3	498.4	10.05	.0183	501.9	1.005	1.023
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
Value			1.000			
Range			-20.00%			

Sample Name: ICSAB 3496533 Acquired: 8/30/2023 16:15:15 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	9.748	.9716	9.783	.9717	1.070	.9834
Stddev	.187	.0020	.090	.0003	.006	.0078
%RSD	1.914	.2048	.9184	.0286	.5257	.7931
#1	9.618	.9711	9.745	.9719	1.069	.9792
#2	9.663	.9699	9.718	.9713	1.065	.9787
#3	9.961	.9738	9.885	.9717	1.076	.9924
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	8.982	.9797	1.030	1.004	.9968	1.003
Stddev	.154	.0065	.022	.022	.0130	.018
%RSD	1.715	.6613	2.104	2.152	1.303	1.785
#1	8.850	.9766	1.014	.9831	.9833	.9934
#2	8.945	.9754	1.022	1.002	.9978	.9913
#3	9.152	.9872	1.055	1.026	1.009	1.023
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.9766
Stddev	.0029
%RSD	.2962
#1	.9769
#2	.9736
#3	.9794
Check ?	Chk Pass
Value	
Range	

Sample Name: ICSAB 3496533 Acquired: 8/30/2023 16:15:15 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3584.9	22453.	9664.9	20500.
Stddev	21.8	113.	202.3	463.
%RSD	.60729	.50124	2.0933	2.2565
#1	3594.9	22502.	9813.8	20851.
#2	3599.8	22532.	9746.4	20672.
#3	3559.9	22324.	9434.5	19975.

Sample Name: CCV 3565024 Acquired: 8/30/2023 16:18:22 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.023	104.7	5.089	49.62	5.046	5.417
Stddev	.003	.2	.012	.10	.012	.018
%RSD	.2432	.1825	.2423	.2063	.2288	.3301
#1	1.024	104.8	5.080	49.57	5.040	5.426
#2	1.021	104.5	5.084	49.55	5.039	5.397
#3	1.026	104.8	5.103	49.73	5.060	5.429
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.866	98.79	5.194	5.095	5.227	4.907
Stddev	.012	.40	.006	.007	.012	.023
%RSD	.2365	.4011	.1258	.1422	.2270	.4764
#1	4.862	99.22	5.193	5.093	5.220	4.934
#2	4.857	98.45	5.189	5.088	5.221	4.892
#3	4.879	98.69	5.202	5.102	5.241	4.895
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	102.1	100.5	5.032	100.8	5.041	5.182
Stddev	.4	.4	.012	.3	.017	.012
%RSD	.3756	.3880	.2442	.2905	.3414	.2216
#1	102.5	101.0	5.044	101.0	5.059	5.175
#2	101.8	100.3	5.019	100.5	5.024	5.176
#3	102.0	100.3	5.032	100.9	5.042	5.195
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCV 3565024 Acquired: 8/30/2023 16:18:22 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	99.73	5.116	49.95	5.116	5.041	5.139
Stddev	.42	.008	.05	.006	.009	.001
%RSD	.4202	.1496	.0979	.1222	.1748	.0237
#1	100.2	5.113	49.89	5.110	5.039	5.139
#2	99.44	5.111	49.97	5.116	5.033	5.137
#3	99.54	5.125	49.98	5.122	5.050	5.140
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	49.18	5.152	5.354	5.283	4.997	5.328
Stddev	.10	.009	.014	.016	.015	.015
%RSD	.2072	.1686	.2596	.2943	.3083	.2898
#1	49.12	5.148	5.370	5.288	4.981	5.328
#2	49.12	5.146	5.344	5.265	5.000	5.312
#3	49.30	5.162	5.348	5.295	5.012	5.343
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	5.194
Stddev	.010
%RSD	.1940
#1	5.192
#2	5.184
#3	5.204
Check ?	Chk Pass
Value	
Range	

Sample Name: CCV 3565024 Acquired: 8/30/2023 16:18:22 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3782.8	23654.	9632.0	20401.
Stddev	3.1	12.	3.0	18.
%RSD	.08107	.04890	.03076	.08941
#1	3780.6	23642.	9635.4	20422.
#2	3781.4	23665.	9630.1	20387.
#3	3786.3	23656.	9630.4	20395.

Sample Name: CCB Acquired: 8/30/2023 16:22:44 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0016	.0051	.0066	.0455	.0019	.0006
Stddev	.0018	.0243	.0009	.0053	.0004	.0002
%RSD	114.8	471.6	12.98	11.55	18.89	27.63
#1	.0037	.0332	.0060	.0445	.0016	.0004
#2	.0007	-.0080	.0062	.0511	.0023	.0006
#3	.0003	-.0097	.0076	.0407	.0019	.0008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0018	.0226	.0020	.0015	.0017	-.0027
Stddev	.0011	.0080	.0005	.0004	.0007	.0060
%RSD	61.35	35.55	22.99	27.69	41.82	220.0
#1	.0017	.0136	.0015	.0011	.0011	.0039
#2	.0030	.0292	.0024	.0019	.0026	-.0077
#3	.0008	.0249	.0021	.0015	.0016	-.0044
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0253	.1102	.0068	.0235	.0008	.0062
Stddev	.0041	.0415	.0019	.0111	.0001	.0008
%RSD	16.36	37.68	27.80	47.38	13.54	13.62
#1	.0239	.0887	.0046	.0232	.0008	.0067
#2	.0221	.1581	.0081	.0126	.0007	.0066
#3	.0300	.0838	.0078	.0348	.0009	.0052
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: CCB Acquired: 8/30/2023 16:22:44 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0085	.0016	.0177	.0022	.0020	.0054
Stddev	.0159	.0004	.0038	.0012	.0019	.0030
%RSD	186.8	26.30	21.45	54.36	95.34	55.89
#1	-.0099	.0011	.0136	.0011	.0007	.0063
#2	.0174	.0018	.0210	.0035	.0012	.0020
#3	.0180	.0018	.0184	.0020	.0042	.0079
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0270	.0024	.0005	.0014	-.0054	-.0017
Stddev	.0067	.0002	.0003	.0012	.0028	.0023
%RSD	24.63	9.226	57.50	85.03	52.60	131.5
#1	.0253	.0023	.0004	.0004	-.0025	.0009
#2	.0343	.0027	.0003	.0027	-.0055	-.0028
#3	.0214	.0023	.0009	.0011	-.0081	-.0033
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0018
Stddev	.0004
%RSD	22.59
#1	.0014
#2	.0022
#3	.0018
Check ?	Chk Pass
High Limit	
Low Limit	

Sample Name: CCB Acquired: 8/30/2023 16:22:44 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4441.5	25332.	9960.2	21034.
Stddev	29.7	160.	42.2	78.
%RSD	.66951	.63271	.42342	.37315
#1	4475.7	25516.	9991.2	21094.
#2	4421.6	25220.	9977.3	21063.
#3	4427.2	25261.	9912.2	20945.

Sample Name: CCVL 3561056 Acquired: 8/30/2023 16:26:21 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0574	.5459	.0628	.5300	.0220	.0231
Stddev	.0020	.0469	.0022	.0013	.0002	.0003
%RSD	3.406	8.599	3.451	.2445	.8070	1.274
#1	.0595	.5734	.0610	.5299	.0219	.0234
#2	.0556	.5727	.0623	.5288	.0219	.0229
#3	.0571	.4917	.0652	.5314	.0222	.0229
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.2890	.5596	.0213	.0208	.0283	.0502
Stddev	.0001	.0080	.0001	.0003	.0001	.0020
%RSD	.0306	1.424	.3626	1.316	.3604	3.891
#1	.2889	.5668	.0213	.0205	.0282	.0508
#2	.2891	.5510	.0213	.0211	.0284	.0480
#3	.2890	.5610	.0212	.0207	.0283	.0517
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.5490	3.238	.1067	.5633	.0214	.0435
Stddev	.0028	.052	.0009	.0105	.0010	.0001
%RSD	.5039	1.617	.8629	1.865	4.626	.3114
#1	.5507	3.294	.1076	.5554	.0214	.0435
#2	.5458	3.190	.1067	.5752	.0204	.0434
#3	.5505	3.230	.1058	.5593	.0224	.0436
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCVL 3561056 Acquired: 8/30/2023 16:26:21 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.5790	.0210	.1065	.0327	.0663	.0989
Stddev	.0099	.0006	.0012	.0014	.0018	.0013
%RSD	1.716	2.983	1.132	4.370	2.728	1.354
#1	.5795	.0215	.1079	.0328	.0645	.1004
#2	.5887	.0203	.1060	.0340	.0662	.0982
#3	.5689	.0211	.1056	.0312	.0681	.0980
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.068	.1021	.1136	.0339	.0927	.0325
Stddev	.018	.0011	.0008	.0020	.0046	.0020
%RSD	1.672	1.034	.6911	5.794	4.925	6.113
#1	1.083	.1011	.1144	.0362	.0874	.0343
#2	1.048	.1019	.1135	.0329	.0957	.0304
#3	1.073	.1032	.1129	.0327	.0949	.0330
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0403
Stddev	.0002
%RSD	.5815
#1	.0404
#2	.0401
#3	.0405
Check ?	Chk Pass
Value	
Range	

Sample Name: CCVL 3561056 Acquired: 8/30/2023 16:26:21 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4418.8	25535.	10020.	21147.
Stddev	19.7	122.	71.	161.
%RSD	.44607	.47609	.71037	.76225
#1	4429.1	25581.	9954.4	20994.
#2	4431.2	25626.	10009.	21132.
#3	4396.0	25397.	10096.	21315.

Sample Name: CCV 3565024 Acquired: 8/30/2023 17:03:40 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9959	101.4	5.021	49.27	4.951	5.250
Stddev	.0002	.1	.012	.15	.016	.002
%RSD	.0220	.1422	.2394	.3060	.3163	.0408
#1	.9960	101.3	5.023	49.20	4.944	5.250
#2	.9956	101.6	5.007	49.17	4.940	5.252
#3	.9960	101.5	5.031	49.44	4.969	5.248
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.786	97.82	5.054	4.973	5.135	4.909
Stddev	.021	.35	.025	.023	.017	.020
%RSD	.4324	.3584	.4909	.4649	.3262	.3971
#1	4.772	97.71	5.037	4.959	5.131	4.906
#2	4.776	97.54	5.042	4.960	5.121	4.892
#3	4.810	98.21	5.083	5.000	5.154	4.931
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	101.1	98.04	4.911	100.0	5.009	5.117
Stddev	.4	.31	.004	.5	.021	.018
%RSD	.4287	.3198	.0791	.5185	.4200	.3570
#1	100.9	98.36	4.909	99.66	4.997	5.108
#2	100.9	98.04	4.908	99.75	4.996	5.105
#3	101.6	97.73	4.915	100.6	5.033	5.138
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCV 3565024 Acquired: 8/30/2023 17:03:40 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	97.42	4.998	49.02	5.004	4.974	5.115
Stddev	.40	.022	.45	.018	.016	.013
%RSD	.4070	.4333	.9133	.3524	.3213	.2537
#1	97.84	4.986	49.51	4.993	4.963	5.115
#2	97.37	4.985	48.92	4.995	4.967	5.102
#3	97.05	5.023	48.64	5.024	4.993	5.127
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	47.93	5.013	5.241	5.111	4.876	5.178
Stddev	.20	.013	.001	.006	.025	.017
%RSD	.4184	.2622	.0161	.1210	.5117	.3229
#1	47.70	5.008	5.241	5.104	4.853	5.159
#2	47.99	5.003	5.240	5.112	4.873	5.183
#3	48.09	5.028	5.241	5.116	4.902	5.192
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	5.030
Stddev	.027
%RSD	.5372
#1	5.009
#2	5.021
#3	5.061
Check ?	Chk Pass
Value	
Range	

Sample Name: CCV 3565024 Acquired: 8/30/2023 17:03:40 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3832.0	23943.	9910.1	21049.
Stddev	10.6	60.	22.3	33.
%RSD	.27754	.25013	.22526	.15440
#1	3835.2	23970.	9905.4	21051.
#2	3840.7	23985.	9890.5	21015.
#3	3820.2	23874.	9934.4	21080.

Sample Name: MB 580-436117/15-A Acquired: 8/30/2023 16:29:51 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0009	.0054	.0020	.0067	.0000	.0002
Stddev	.0007	.0184	.0011	.0010	.0001	.0000
%RSD	77.10	340.3	55.00	14.34	380.0	18.83
#1	.0007	.0084	.0032	.0078	-.0001	.0001
#2	.0017	-.0143	.0017	.0060	.0000	.0002
#3	.0003	.0221	.0011	.0063	.0001	.0002

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0009	.0038	.0002	.0003	-.0004	.0013
Stddev	.0015	.0037	.0001	.0003	.0001	.0010
%RSD	171.0	95.92	29.11	114.8	23.85	75.33
#1	-.0021	-.0001	.0002	.0005	-.0003	.0024
#2	-.0014	.0044	.0002	.0004	-.0004	.0007
#3	.0008	.0072	.0001	-.0001	-.0005	.0007

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0191	.0022	-.0073	-.0010	.0003	.0009
Stddev	.0018	.0150	.0008	.0180	.0002	.0005
%RSD	9.299	674.7	10.75	1726.	70.89	56.20
#1	.0170	-.0127	-.0082	-.0081	.0001	.0008
#2	.0198	.0020	-.0072	.0194	.0002	.0014
#3	.0203	.0174	-.0066	-.0144	.0005	.0004

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0152	.0002	.0027	.0012	.0014	-.0002
Stddev	.0135	.0003	.0008	.0008	.0019	.0011
%RSD	89.02	134.4	28.43	68.54	137.3	475.2
#1	-.0025	.0003	.0035	.0006	.0030	-.0015
#2	-.0136	-.0001	.0019	.0008	.0018	.0004
#3	-.0294	.0004	.0027	.0021	-.0007	.0004

Sample Name: MB 580-436117/15-A Acquired: 8/30/2023 16:29:51 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0142	.0001	.0003	.0011	-.0056	.0009
Stddev	.0051	.0006	.0001	.0014	.0024	.0046
%RSD	36.10	1094.	48.50	124.7	43.01	509.2
#1	.0139	-.0002	.0003	.0025	-.0029	.0062
#2	.0093	.0007	.0004	.0012	-.0075	-.0024
#3	.0195	-.0004	.0001	-.0003	-.0064	-.0010

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0011
Stddev	.0000
%RSD	3.791
#1	-.0011
#2	-.0012
#3	-.0011

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4578.6	26164.	10237.	21635.
Stddev	19.5	113.	27.	70.
%RSD	.42553	.43097	.26353	.32225
#1	4600.2	26286.	10266.	21700.
#2	4573.5	26143.	10233.	21644.
#3	4562.2	26064.	10212.	21561.

Sample Name: LCS 580-436117/16-A Acquired: 8/30/2023 16:33:26 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.046	21.48	1.028	10.52	1.046	1.103
Stddev	.004	.04	.006	.04	.003	.003
%RSD	.4205	.1955	.6250	.3420	.3296	.2405
#1	1.046	21.43	1.023	10.50	1.045	1.100
#2	1.050	21.51	1.025	10.50	1.044	1.106
#3	1.041	21.50	1.035	10.56	1.050	1.103

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0015	19.68	1.046	1.017	1.088	.9738
Stddev	.0017	.08	.001	.001	.003	.0084
%RSD	112.6	.4231	.1203	.0876	.2397	.8662
#1	.0001	19.63	1.046	1.017	1.087	.9698
#2	-.0014	19.62	1.045	1.017	1.086	.9681
#3	-.0034	19.77	1.048	1.018	1.091	.9834

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	20.58	19.25	1.007	20.28	1.024	1.063
Stddev	.09	.02	.001	.13	.008	.006
%RSD	.4457	.1002	.1233	.6643	.8130	.5258
#1	20.52	19.24	1.006	20.21	1.019	1.058
#2	20.54	19.27	1.009	20.20	1.018	1.062
#3	20.69	19.23	1.007	20.44	1.033	1.069

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	19.45	1.027	5.226	1.045	1.072	1.055
Stddev	.03	.001	.028	.003	.005	.010
%RSD	.1570	.0976	.5320	.2469	.4292	.9154
#1	19.47	1.026	5.242	1.044	1.072	1.046
#2	19.47	1.027	5.194	1.043	1.067	1.054
#3	19.42	1.028	5.243	1.048	1.077	1.065

Sample Name: LCS 580-436117/16-A Acquired: 8/30/2023 16:33:26 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	9.722	1.039	1.090	1.070	1.018	1.072
Stddev	.012	.002	.002	.002	.031	.006
%RSD	.1267	.2038	.2077	.1431	3.005	.5392
#1	9.712	1.038	1.087	1.070	.9840	1.073
#2	9.736	1.039	1.091	1.072	1.025	1.078
#3	9.719	1.042	1.091	1.069	1.044	1.066

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	1.046
Stddev	.001
%RSD	.0757
#1	1.046
#2	1.045
#3	1.046

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4258.1	25463.	10160.	21490.
Stddev	9.8	82.	18.	22.
%RSD	.23011	.32090	.17318	.10083
#1	4261.0	25462.	10150.	21504.
#2	4266.1	25545.	10149.	21465.
#3	4247.2	25382.	10180.	21500.

Sample Name: LCSD 580-436117/17-A Acquired: 8/30/2023 16:36:28 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.038	21.29	1.024	10.41	1.041	1.097
Stddev	.005	.07	.004	.02	.002	.003
%RSD	.5141	.3388	.3659	.1762	.1418	.2862
#1	1.032	21.24	1.020	10.39	1.040	1.098
#2	1.041	21.37	1.027	10.40	1.041	1.100
#3	1.042	21.26	1.026	10.43	1.043	1.094

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0039	19.65	1.043	1.013	1.082	.9664
Stddev	.0016	.05	.003	.004	.003	.0077
%RSD	42.20	.2746	.2964	.4473	.2814	.7968
#1	-.0056	19.71	1.039	1.008	1.080	.9749
#2	-.0023	19.62	1.043	1.014	1.080	.9644
#3	-.0039	19.61	1.045	1.017	1.085	.9599

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	20.55	19.18	1.004	20.26	1.024	1.062
Stddev	.04	.08	.002	.07	.001	.001
%RSD	.1866	.4135	.1455	.3650	.0718	.1297
#1	20.58	19.11	1.003	20.34	1.024	1.061
#2	20.57	19.18	1.005	20.22	1.024	1.062
#3	20.51	19.26	1.003	20.21	1.025	1.063

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	19.28	1.022	5.179	1.042	1.067	1.049
Stddev	.05	.004	.010	.003	.003	.004
%RSD	.2819	.4135	.1860	.2718	.3032	.4193
#1	19.22	1.018	5.169	1.041	1.064	1.047
#2	19.32	1.022	5.181	1.040	1.066	1.054
#3	19.30	1.027	5.188	1.045	1.070	1.047

Sample Name: LCSD 580-436117/17-A Acquired: 8/30/2023 16:36:28 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	9.554	1.034	1.084	1.062	1.032	1.071
Stddev	.022	.003	.005	.001	.013	.004
%RSD	.2315	.3282	.4196	.0551	1.218	.4112
#1	9.533	1.031	1.080	1.061	1.017	1.067
#2	9.577	1.035	1.089	1.062	1.036	1.075
#3	9.552	1.038	1.085	1.063	1.041	1.070

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	1.039
Stddev	.004
%RSD	.3551
#1	1.035
#2	1.040
#3	1.043

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4338.4	25977.	10406.	22014.
Stddev	10.1	32.	27.	80.
%RSD	.23322	.12159	.26219	.36148
#1	4348.1	25991.	10436.	22106.
#2	4339.2	25999.	10398.	21968.
#3	4327.9	25941.	10383.	21967.

Sample Name: MB 580-436053/21-A Acquired: 8/30/2023 16:43:05 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0003	-.0035	.0031	.0074	-.0003	-.0000
Stddev	.0018	.0258	.0019	.0007	.0001	.0001
%RSD	543.4	740.4	62.68	10.15	52.45	935.0
#1	-.0017	.0027	.0013	.0082	-.0003	-.0001
#2	.0017	.0187	.0028	.0068	-.0001	.0002
#3	.0010	-.0318	.0052	.0071	-.0004	-.0001

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0004	.0106	-.0000	-.0001	.0006	-.0014
Stddev	.0019	.0052	.0000	.0001	.0002	.0014
%RSD	493.7	49.32	103.1	79.54	35.96	97.40
#1	.0011	.0167	.0000	-.0002	.0009	-.0023
#2	-.0018	.0078	-.0001	-.0000	.0006	-.0022
#3	.0019	.0074	-.0000	-.0001	.0004	.0002

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0090	-.0086	-.0095	-.0121	.0003	.0016
Stddev	.0016	.0568	.0023	.0178	.0008	.0002
%RSD	17.30	657.9	23.87	147.0	268.8	14.65
#1	.0108	.0372	-.0117	.0010	.0006	.0018
#2	.0079	.0091	-.0097	-.0324	-.0006	.0014
#3	.0083	-.0722	-.0072	-.0049	.0010	.0015

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0227	-.0006	.0168	.0019	.0020	-.0002
Stddev	.0059	.0006	.0009	.0005	.0017	.0022
%RSD	25.93	106.6	5.068	25.41	84.20	1063.
#1	-.0179	-.0005	.0177	.0023	.0015	.0009
#2	-.0293	.0000	.0168	.0014	.0006	.0013
#3	-.0210	-.0012	.0160	.0020	.0038	-.0028

Sample Name: MB 580-436053/21-A Acquired: 8/30/2023 16:43:05 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0232	.0094	.0001	.0033	-.0078	-.0017
Stddev	.0058	.0001	.0001	.0003	.0070	.0023
%RSD	24.86	1.317	105.8	8.272	88.98	138.0
#1	.0228	.0095	-.0000	.0034	-.0002	.0010
#2	.0291	.0095	.0001	.0030	-.0139	-.0032
#3	.0176	.0093	.0001	.0035	-.0093	-.0030

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0003
Stddev	.0001
%RSD	32.67
#1	-.0002
#2	-.0004
#3	-.0002

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4567.6	26236.	10303.	21790.
Stddev	15.2	86.	116.	203.
%RSD	.33207	.32878	1.1235	.93220
#1	4570.7	26264.	10171.	21559.
#2	4580.9	26305.	10355.	21871.
#3	4551.1	26140.	10385.	21940.

Sample Name: LCS 580-436053/22-A Acquired: 8/30/2023 16:46:40 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.052	21.77	1.004	9.862	1.056	1.120
Stddev	.004	.04	.001	.027	.003	.002
%RSD	.4048	.1634	.1180	.2712	.2387	.1851
#1	1.048	21.81	1.003	9.865	1.055	1.118
#2	1.052	21.74	1.003	9.834	1.053	1.122
#3	1.057	21.78	1.005	9.887	1.058	1.122

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0028	20.33	1.028	1.021	1.107	.9908
Stddev	.0017	.05	.002	.003	.004	.0075
%RSD	58.74	.2691	.2067	.2646	.3409	.7539
#1	-.0047	20.38	1.028	1.020	1.106	.9822
#2	-.0021	20.27	1.026	1.019	1.103	.9949
#3	-.0016	20.33	1.031	1.024	1.111	.9953

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	21.27	19.53	1.014	20.77	1.051	1.087
Stddev	.11	.03	.002	.08	.005	.002
%RSD	.5323	.1423	.2265	.3711	.4736	.1478
#1	21.39	19.51	1.012	20.85	1.057	1.087
#2	21.16	19.56	1.016	20.70	1.047	1.087
#3	21.25	19.51	1.013	20.78	1.050	1.089

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	19.72	1.024	5.209	1.034	1.046	.9986
Stddev	.02	.002	.011	.002	.004	.0064
%RSD	.0932	.1910	.2116	.1498	.4251	.6416
#1	19.72	1.024	5.198	1.035	1.050	.9976
#2	19.74	1.023	5.208	1.032	1.041	.9928
#3	19.70	1.026	5.220	1.034	1.046	1.005

Sample Name: LCS 580-436053/22-A Acquired: 8/30/2023 16:46:40 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	7.845	1.042	1.105	1.087	1.036	1.084
Stddev	.021	.004	.001	.001	.005	.006
%RSD	.2740	.3480	.0707	.1028	.4537	.5262
#1	7.831	1.040	1.105	1.088	1.036	1.079
#2	7.835	1.039	1.106	1.086	1.031	1.084
#3	7.870	1.046	1.104	1.086	1.041	1.090

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	1.031
Stddev	.002
%RSD	.1648
#1	1.031
#2	1.030
#3	1.033

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4341.6	25864.	10429.	22054.
Stddev	4.1	37.	44.	87.
%RSD	.09403	.14337	.42349	.39272
#1	4342.6	25863.	10479.	22153.
#2	4345.0	25902.	10394.	21991.
#3	4337.1	25828.	10414.	22017.

Sample Name: LCSD 580-436053/23-A Acquired: 8/30/2023 16:49:42 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9979	20.48	.9624	9.502	1.011	1.053
Stddev	.0032	.01	.0080	.061	.006	.003
%RSD	.3256	.0540	.8323	.6384	.6385	.2495
#1	.9961	20.48	.9568	9.461	1.007	1.056
#2	.9959	20.47	.9588	9.473	1.008	1.054
#3	1.002	20.49	.9716	9.571	1.019	1.050

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0031	19.05	.9766	.9710	1.054	.9305
Stddev	.0022	.14	.0079	.0076	.007	.0104
%RSD	70.92	.7535	.8059	.7857	.7137	1.121
#1	-.0056	18.93	.9718	.9666	1.048	.9218
#2	-.0020	19.01	.9724	.9665	1.050	.9276
#3	-.0017	19.21	.9857	.9798	1.062	.9420

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	19.94	18.65	.9662	19.53	.9920	1.044
Stddev	.17	.02	.0014	.13	.0083	.008
%RSD	.8286	.1087	.1426	.6423	.8374	.8081
#1	19.80	18.66	.9669	19.39	.9847	1.037
#2	19.90	18.66	.9671	19.56	.9904	1.042
#3	20.13	18.63	.9646	19.63	1.001	1.053

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	18.75	.9762	4.945	.9843	.9974	.9525
Stddev	.01	.0074	.057	.0071	.0065	.0111
%RSD	.0663	.7627	1.155	.7217	.6537	1.161
#1	18.77	.9709	4.897	.9794	.9915	.9481
#2	18.75	.9730	4.930	.9811	.9963	.9443
#3	18.75	.9847	5.008	.9925	1.004	.9651

Sample Name: LCSD 580-436053/23-A Acquired: 8/30/2023 16:49:42 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	8.208	.9920	1.046	1.025	.9919	1.024
Stddev	.016	.0079	.000	.002	.0097	.006
%RSD	.1959	.7934	.0096	.1606	.9731	.5503
#1	8.205	.9856	1.046	1.026	.9878	1.025
#2	8.194	.9896	1.046	1.025	.9849	1.029
#3	8.226	1.001	1.047	1.023	1.003	1.018

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.9821
Stddev	.0079
%RSD	.8066
#1	.9769
#2	.9782
#3	.9912

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4488.0	26822.	10726.	22741.
Stddev	24.9	132.	60.	128.
%RSD	.55474	.49207	.55663	.56291
#1	4507.5	26915.	10667.	22609.
#2	4496.5	26879.	10725.	22751.
#3	4459.9	26671.	10786.	22864.

Sample Name: 580-130915-A-40-A Acquired: 8/30/2023 16:52:45 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0063	211.5	.0949	.0721	1.487	.0098
Stddev	.0018	11.4	.0015	.0016	.005	.0005
%RSD	27.91	5.379	1.584	2.203	.3589	4.764
#1	-.0068	217.2	.0965	.0739	1.483	.0101
#2	-.0079	198.3	.0945	.0711	1.485	.0092
#3	-.0044	218.8	.0936	.0711	1.493	.0099

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0130	69.85	.0040	.1775	.3557	.9686
Stddev	.0010	1.75	.0005	.0022	.0015	.0277
%RSD	7.699	2.505	12.54	1.246	.4116	2.855
#1	.0120	71.06	.0037	.1754	.3546	.9893
#2	.0130	67.84	.0046	.1798	.3551	.9372
#3	.0140	70.65	.0038	.1773	.3573	.9792

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	279.1	8.227	.1044	57.86	7.057	.0124
Stddev	6.8	.443	.0060	1.31	.169	.0011
%RSD	2.431	5.379	5.765	2.272	2.400	9.255
#1	283.7	8.463	.1080	58.71	7.173	.0137
#2	271.3	7.716	.0974	56.35	6.863	.0117
#3	282.2	8.501	.1077	58.52	7.135	.0117

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	12.66	.3173	7.664	.1192	.0105	.0074
Stddev	.68	.0020	.023	.0024	.0023	.0012
%RSD	5.331	.6245	.3011	1.998	21.70	16.43
#1	13.02	.3154	7.637	.1168	.0126	.0077
#2	11.88	.3172	7.674	.1216	.0108	.0084
#3	13.08	.3194	7.680	.1193	.0081	.0060

Sample Name: 580-130915-A-40-A Acquired: 8/30/2023 16:52:45 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	2.579	.0193	.5483	13.38	.0177	.8539
Stddev	.138	.0010	.0287	.73	.0093	.0485
%RSD	5.347	5.318	5.243	5.448	52.34	5.676
#1	2.663	.0203	.5637	13.76	.0278	.8802
#2	2.420	.0183	.5151	12.54	.0095	.7980
#3	2.655	.0194	.5660	13.84	.0158	.8836

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	3.757
Stddev	.016
%RSD	.4194
#1	3.742
#2	3.755
#3	3.773

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4174.9	26110.	11156.	23682.
Stddev	19.2	122.	364.	759.
%RSD	.45979	.46559	3.2584	3.2069
#1	4189.4	26198.	11061.	23480.
#2	4182.2	26162.	11558.	24521.
#3	4153.1	25972.	10850.	23043.

Sample Name: 580-130915-A-42-A Acquired: 8/30/2023 16:55:52 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0058	301.7	.0996	.0753	1.885	.0124
Stddev	.0003	2.1	.0011	.0003	.011	.0001
%RSD	5.006	.6985	1.129	.4180	.5860	.7112
#1	-.0059	304.2	.0984	.0756	1.880	.0123
#2	-.0055	300.3	.1005	.0752	1.897	.0125
#3	-.0061	300.7	.1000	.0750	1.877	.0123

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0196	78.91	.0039	.2824	.4496	.7504
Stddev	.0019	.48	.0002	.0018	.0027	.0075
%RSD	9.898	.6138	6.290	.6452	.6106	1.001
#1	.0218	78.52	.0039	.2827	.4488	.7424
#2	.0185	79.45	.0041	.2840	.4526	.7572
#3	.0185	78.75	.0036	.2804	.4473	.7517

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	424.7	12.52	.1870	69.65	13.53	.0045
Stddev	2.7	.15	.0023	.34	.07	.0005
%RSD	.6311	1.160	1.256	.4878	.5450	11.22
#1	422.6	12.69	.1892	69.46	13.48	.0047
#2	427.7	12.44	.1875	70.04	13.62	.0039
#3	423.8	12.43	.1845	69.44	13.50	.0048

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	15.00	.3824	9.537	.1897	.0032	.0068
Stddev	.11	.0013	.043	.0015	.0045	.0044
%RSD	.7436	.3325	.4503	.7980	139.7	64.62
#1	15.13	.3817	9.509	.1904	.0009	.0022
#2	14.96	.3839	9.587	.1907	.0084	.0110
#3	14.92	.3816	9.517	.1879	.0003	.0072

Sample Name: 580-130915-A-42-A Acquired: 8/30/2023 16:55:52 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.813	.0176	.6097	11.31	.0149	1.146
Stddev	.016	.0014	.0045	.06	.0035	.016
%RSD	.8538	7.668	.7417	.5553	23.77	1.350
#1	1.827	.0161	.6150	11.38	.0182	1.163
#2	1.796	.0179	.6071	11.27	.0112	1.137
#3	1.816	.0188	.6072	11.27	.0152	1.136

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	3.854
Stddev	.021
%RSD	.5344
#1	3.856
#2	3.874
#3	3.833

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4139.9	26507.	11031.	23443.
Stddev	29.8	227.	43.	94.
%RSD	.71924	.85541	.38967	.40305
#1	4171.2	26752.	10986.	23349.
#2	4111.9	26304.	11071.	23538.
#3	4136.6	26466.	11037.	23444.

Sample Name: 580-130915-A-43-A Acquired: 8/30/2023 16:59:00 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0075	313.6	.1200	.0982	2.504	.0132
Stddev	.0021	.2	.0025	.0004	.005	.0000
%RSD	27.47	.0512	2.054	.4206	.2193	.0331
#1	-.0071	313.5	.1202	.0985	2.506	.0132
#2	-.0057	313.8	.1223	.0978	2.497	.0132
#3	-.0097	313.5	.1174	.0985	2.507	.0133

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0236	99.70	.0066	.3056	.4631	.8525
Stddev	.0015	.24	.0003	.0007	.0011	.0091
%RSD	6.213	.2363	4.093	.2347	.2356	1.065
#1	.0219	99.95	.0064	.3054	.4635	.8616
#2	.0242	99.49	.0065	.3050	.4619	.8435
#3	.0246	99.66	.0069	.3064	.4639	.8526

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	480.0	14.82	.1949	68.39	17.49	.0057
Stddev	1.4	.01	.0009	.25	.05	.0001
%RSD	.2967	.0952	.4518	.3584	.3056	2.114
#1	481.6	14.83	.1958	68.57	17.55	.0056
#2	478.9	14.83	.1940	68.11	17.45	.0057
#3	479.5	14.81	.1949	68.48	17.46	.0058

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	16.84	.4719	11.68	.1843	.0060	.0106
Stddev	.03	.0016	.03	.0021	.0015	.0037
%RSD	.1834	.3312	.2506	1.130	24.40	35.03
#1	16.85	.4712	11.68	.1841	.0066	.0098
#2	16.86	.4709	11.65	.1865	.0070	.0074
#3	16.80	.4737	11.70	.1824	.0043	.0147

Sample Name: 580-130915-A-43-A Acquired: 8/30/2023 16:59:00 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	2.479	.0195	.6885	12.17	.0079	1.297
Stddev	.017	.0006	.0011	.00	.0029	.004
%RSD	.6916	3.238	.1532	.0216	36.24	.2929
#1	2.499	.0202	.6897	12.17	.0108	1.298
#2	2.467	.0194	.6882	12.17	.0078	1.300
#3	2.471	.0190	.6877	12.17	.0051	1.293

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	5.119
Stddev	.007
%RSD	.1461
#1	5.118
#2	5.112
#3	5.127

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4098.1	26228.	10953.	23256.
Stddev	13.1	87.	12.	29.
%RSD	.32031	.33016	.10832	.12256
#1	4083.0	26130.	10940.	23224.
#2	4104.6	26294.	10962.	23271.
#3	4106.7	26261.	10958.	23274.

Sample Name: CCB Acquired: 8/30/2023 17:08:00 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0006	.0224	.0046	.0397	.0016	.0008
Stddev	.0022	.0076	.0007	.0022	.0003	.0001
%RSD	355.4	33.71	15.13	5.559	22.35	11.90
#1	.0010	.0170	.0042	.0374	.0012	.0009
#2	.0026	.0310	.0055	.0418	.0017	.0008
#3	-.0018	.0192	.0043	.0398	.0018	.0007
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0005	.0197	.0015	.0015	.0017	.0007
Stddev	.0013	.0041	.0004	.0005	.0005	.0032
%RSD	284.1	21.02	28.99	32.71	29.57	432.8
#1	-.0016	.0150	.0010	.0009	.0011	-.0029
#2	.0010	.0218	.0018	.0017	.0019	.0021
#3	-.0008	.0225	.0018	.0018	.0020	.0029
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0327	.1251	.0084	.0163	.0015	.0053
Stddev	.0032	.0062	.0007	.0070	.0006	.0003
%RSD	9.764	4.923	8.221	43.05	42.53	5.531
#1	.0363	.1245	.0085	.0213	.0010	.0054
#2	.0303	.1316	.0089	.0192	.0012	.0055
#3	.0315	.1193	.0076	.0083	.0022	.0050
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: CCB Acquired: 8/30/2023 17:08:00 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0339	.0010	.0198	.0026	.0032	.0027
Stddev	.0059	.0005	.0057	.0017	.0017	.0017
%RSD	17.47	47.53	28.61	65.33	53.39	62.45
#1	.0382	.0004	.0133	.0007	.0013	.0031
#2	.0363	.0013	.0224	.0039	.0037	.0041
#3	.0271	.0012	.0237	.0031	.0045	.0008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0187	.0018	.0008	.0020	-.0008	-.0015
Stddev	.0079	.0008	.0001	.0013	.0017	.0013
%RSD	42.03	43.22	14.04	64.25	221.1	83.20
#1	.0252	.0009	.0009	.0015	-.0027	-.0030
#2	.0210	.0023	.0008	.0034	.0004	-.0005
#3	.0100	.0022	.0007	.0010	.0001	-.0011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0004
Stddev	.0005
%RSD	131.0
#1	-.0002
#2	.0006
#3	.0007
Check ?	Chk Pass
High Limit	
Low Limit	

Sample Name: CCB Acquired: 8/30/2023 17:08:00 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4473.0	25803.	10230.	21695.
Stddev	17.4	118.	48.	89.
%RSD	.38922	.45540	.46597	.40901
#1	4482.5	25893.	10262.	21770.
#2	4483.6	25847.	10253.	21720.
#3	4452.9	25670.	10175.	21597.

Sample Name: CCVL 3561056 Acquired: 8/30/2023 17:11:37 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0579	.5564	.0635	.5262	.0217	.0225
Stddev	.0069	.0182	.0012	.0014	.0001	.0001
%RSD	12.00	3.274	1.871	.2735	.6171	.5813
#1	.0521	.5773	.0623	.5268	.0218	.0224
#2	.0560	.5485	.0635	.5246	.0217	.0225
#3	.0656	.5435	.0647	.5273	.0216	.0227
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.2842	.5593	.0211	.0209	.0283	.0484
Stddev	.0026	.0103	.0001	.0001	.0002	.0127
%RSD	.8985	1.845	.4403	.4533	.7147	26.29
#1	.2825	.5525	.0211	.0209	.0283	.0412
#2	.2830	.5543	.0210	.0207	.0282	.0631
#3	.2872	.5712	.0212	.0209	.0286	.0409
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.5508	3.224	.1032	.5366	.0220	.0431
Stddev	.0011	.037	.0007	.0148	.0002	.0006
%RSD	.1964	1.141	.6867	2.766	1.045	1.425
#1	.5511	3.186	.1040	.5386	.0221	.0424
#2	.5516	3.259	.1028	.5503	.0217	.0436
#3	.5496	3.229	.1028	.5208	.0222	.0433
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCVL 3561056 Acquired: 8/30/2023 17:11:37 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.5425	.0203	.1044	.0314	.0657	.1055
Stddev	.0036	.0004	.0009	.0015	.0014	.0035
%RSD	.6712	1.821	.8619	4.636	2.099	3.319
#1	.5467	.0200	.1044	.0320	.0669	.1065
#2	.5406	.0207	.1053	.0297	.0642	.1084
#3	.5402	.0201	.1035	.0324	.0659	.1016
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.051	.1010	.1116	.0336	.0922	.0325
Stddev	.005	.0008	.0005	.0010	.0006	.0012
%RSD	.4878	.7947	.4291	3.052	.6465	3.672
#1	1.049	.1010	.1111	.0346	.0925	.0318
#2	1.057	.1002	.1117	.0336	.0925	.0318
#3	1.047	.1018	.1120	.0326	.0915	.0339
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0399
Stddev	.0001
%RSD	.2559
#1	.0399
#2	.0398
#3	.0400
Check ?	Chk Pass
Value	
Range	

Sample Name: CCVL 3561056 Acquired: 8/30/2023 17:11:37 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4435.6	25785.	10272.	21791.
Stddev	12.4	71.	30.	40.
%RSD	.27893	.27417	.28735	.18499
#1	4448.4	25859.	10242.	21750.
#2	4434.7	25778.	10273.	21792.
#3	4423.7	25718.	10301.	21831.

Sample Name: 580-130915-A-44-A Acquired: 8/30/2023 17:15:03 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0024	294.1	.0796	.0932	2.121	.0116
Stddev	.0012	.2	.0017	.0011	.005	.0000
%RSD	52.67	.0786	2.090	1.144	.2250	.3163
#1	-.0010	294.1	.0785	.0935	2.126	.0116
#2	-.0026	294.4	.0787	.0921	2.117	.0117
#3	-.0035	293.9	.0815	.0942	2.120	.0116

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0179	63.41	.0043	.2619	.4303	.7112
Stddev	.0016	.39	.0003	.0003	.0001	.0070
%RSD	8.828	.6109	5.780	.1282	.0237	.9807
#1	.0165	63.83	.0042	.2620	.4304	.7121
#2	.0196	63.07	.0042	.2616	.4302	.7038
#3	.0176	63.34	.0046	.2623	.4303	.7177

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	346.9	12.33	.1794	56.46	9.801	.0048
Stddev	1.8	.02	.0006	.33	.060	.0003
%RSD	.5303	.1918	.3503	.5896	.6134	6.958
#1	348.9	12.33	.1787	56.82	9.868	.0046
#2	345.3	12.35	.1796	56.16	9.751	.0052
#3	346.6	12.30	.1798	56.39	9.786	.0046

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	10.32	.4258	6.814	.1624	.0032	.0023
Stddev	.01	.0011	.018	.0004	.0010	.0033
%RSD	.0484	.2572	.2583	.2675	30.34	145.5
#1	10.32	.4263	6.806	.1622	.0036	-.0001
#2	10.33	.4246	6.835	.1629	.0021	.0009
#3	10.32	.4266	6.802	.1621	.0040	.0061

Sample Name: 580-130915-A-44-A Acquired: 8/30/2023 17:15:03 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	2.724	.0177	.4627	11.68	.0210	1.072
Stddev	.014	.0005	.0003	.02	.0069	.003
%RSD	.5228	2.872	.0735	.1547	33.13	.2838
#1	2.723	.0181	.4625	11.70	.0265	1.069
#2	2.711	.0171	.4630	11.69	.0231	1.073
#3	2.739	.0178	.4624	11.66	.0132	1.075

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	4.561
Stddev	.005
%RSD	.1075
#1	4.562
#2	4.555
#3	4.564

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4172.4	26514.	10913.	23058.
Stddev	13.7	88.	71.	134.
%RSD	.32868	.33235	.64763	.57937
#1	4178.5	26559.	10992.	23208.
#2	4182.1	26572.	10890.	23014.
#3	4156.8	26413.	10856.	22952.

Sample Name: CCVL 3561056 Acquired: 8/30/2023 18:09:25 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0506	.5309	.0605	.5093	.0209	.0211
Stddev	.0029	.0300	.0007	.0016	.0000	.0001
%RSD	5.801	5.657	1.125	.3057	.2318	.5973
#1	.0486	.5312	.0611	.5094	.0210	.0211
#2	.0492	.5007	.0598	.5077	.0209	.0210
#3	.0540	.5607	.0605	.5108	.0209	.0213
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.2699	.5290	.0201	.0197	.0269	.0475
Stddev	.0028	.0037	.0000	.0002	.0002	.0032
%RSD	1.055	.7065	.2384	.8224	.6771	6.754
#1	.2673	.5247	.0201	.0196	.0267	.0471
#2	.2694	.5311	.0201	.0196	.0271	.0445
#3	.2730	.5313	.0200	.0198	.0270	.0509
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.5161	3.131	.1008	.5008	.0201	.0422
Stddev	.0026	.019	.0013	.0242	.0010	.0004
%RSD	.5074	.6061	1.312	4.828	5.001	.9311
#1	.5158	3.151	.1023	.5014	.0211	.0418
#2	.5136	3.126	.1001	.5247	.0200	.0423
#3	.5188	3.114	.1000	.4764	.0191	.0426
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCVL 3561056 Acquired: 8/30/2023 18:09:25 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.5301	.0195	.1070	.0306	.0644	.0970
Stddev	.0071	.0003	.0015	.0007	.0003	.0007
%RSD	1.341	1.422	1.445	2.336	.3959	.6857
#1	.5371	.0196	.1052	.0298	.0647	.0963
#2	.5304	.0197	.1081	.0306	.0642	.0970
#3	.5229	.0192	.1077	.0313	.0644	.0977
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.008	.0956	.1067	.0312	.0880	.0311
Stddev	.005	.0001	.0003	.0010	.0016	.0026
%RSD	.4810	.0777	.3012	3.336	1.858	8.250
#1	1.004	.0956	.1064	.0302	.0890	.0340
#2	1.006	.0955	.1068	.0323	.0861	.0293
#3	1.013	.0956	.1070	.0312	.0890	.0300
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0377
Stddev	.0001
%RSD	.3692
#1	.0378
#2	.0376
#3	.0378
Check ?	Chk Pass
Value	
Range	

Sample Name: CCVL 3561056 Acquired: 8/30/2023 18:09:25 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4572.4	26658.	10491.	22382.
Stddev	12.5	86.	21.	66.
%RSD	.27446	.32207	.20158	.29492
#1	4575.6	26707.	10514.	22428.
#2	4583.1	26707.	10473.	22306.
#3	4558.6	26559.	10484.	22412.

Sample Name: 580-130915-A-45-A Acquired: 8/30/2023 17:18:10 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0049	289.5	.0821	.0609	2.534	.0165
Stddev	.0033	.4	.0016	.0008	.006	.0001
%RSD	67.56	.1546	1.959	1.245	.2350	.4600
#1	-.0011	289.9	.0820	.0618	2.537	.0166
#2	-.0068	289.4	.0805	.0603	2.527	.0164
#3	-.0067	289.1	.0837	.0607	2.538	.0165

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0363	103.2	.0054	.3135	.2629	.6921
Stddev	.0023	.2	.0001	.0010	.0004	.0062
%RSD	6.395	.1457	1.245	.3042	.1403	.8923
#1	.0360	103.1	.0054	.3134	.2631	.6952
#2	.0341	103.3	.0053	.3126	.2625	.6850
#3	.0387	103.3	.0054	.3145	.2631	.6962

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	615.7	8.726	.1444	73.85	22.21	.0020
Stddev	6.0	.041	.0013	.13	.04	.0005
%RSD	.9740	.4681	.9274	.1749	.1732	23.20
#1	610.2	8.696	.1437	73.70	22.18	.0020
#2	614.9	8.710	.1460	73.96	22.21	.0024
#3	622.1	8.773	.1437	73.88	22.25	.0015

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	50.65	.3680	8.904	.1018	.0078	.0047
Stddev	.14	.0015	.043	.0003	.0016	.0028
%RSD	.2759	.3951	.4818	.2936	20.92	59.82
#1	50.74	.3668	8.871	.1017	.0059	.0020
#2	50.49	.3676	8.889	.1015	.0086	.0076
#3	50.72	.3696	8.953	.1021	.0088	.0046

Sample Name: 580-130915-A-45-A Acquired: 8/30/2023 17:18:10 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	2.269	.0179	.5711	38.34	.0140	1.489
Stddev	.006	.0005	.0015	.06	.0085	.001
%RSD	.2491	2.925	.2696	.1480	60.59	.0480
#1	2.263	.0185	.5724	38.40	.0231	1.489
#2	2.275	.0176	.5694	38.29	.0063	1.488
#3	2.270	.0175	.5715	38.34	.0126	1.490

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	3.517
Stddev	.008
%RSD	.2164
#1	3.510
#2	3.516
#3	3.525

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4052.5	25897.	10816.	22922.
Stddev	4.5	52.	35.	82.
%RSD	.11026	.19980	.32135	.35699
#1	4050.2	25908.	10786.	22853.
#2	4057.6	25942.	10854.	23013.
#3	4049.6	25840.	10808.	22900.

Sample Name: 580-130915-A-41-B Acquired: 8/30/2023 17:22:58 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0037	189.9	.0723	.0578	1.752	.0083
Stddev	.0011	.7	.0020	.0003	.003	.0001
%RSD	29.84	.3874	2.792	.4676	.1517	.7976
#1	-.0049	189.1	.0708	.0580	1.754	.0082
#2	-.0027	190.3	.0714	.0575	1.749	.0084
#3	-.0036	190.4	.0746	.0579	1.753	.0083

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0133	40.81	.0041	.2275	.2527	.4459
Stddev	.0005	.14	.0001	.0005	.0002	.0061
%RSD	3.564	.3406	3.304	.2334	.0784	1.360
#1	.0130	40.72	.0039	.2280	.2526	.4431
#2	.0139	40.74	.0042	.2270	.2527	.4529
#3	.0131	40.97	.0041	.2275	.2529	.4418

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	242.3	8.623	.0941	40.41	14.54	.0032
Stddev	1.0	.038	.0007	.13	.07	.0002
%RSD	.4102	.4398	.7664	.3122	.4781	7.134
#1	241.6	8.665	.0934	40.36	14.50	.0033
#2	242.0	8.591	.0948	40.33	14.50	.0029
#3	243.5	8.613	.0940	40.56	14.62	.0033

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	6.486	.3302	6.690	.0880	.0035	.0090
Stddev	.024	.0003	.009	.0028	.0010	.0057
%RSD	.3766	.1008	.1370	3.172	27.63	63.82
#1	6.459	.3300	6.688	.0848	.0035	.0124
#2	6.504	.3299	6.682	.0898	.0026	.0121
#3	6.497	.3305	6.700	.0894	.0045	.0024

Sample Name: 580-130915-A-41-B Acquired: 8/30/2023 17:22:58 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	2.832	.0125	.3025	10.30	.0095	.7667
Stddev	.005	.0009	.0011	.04	.0016	.0024
%RSD	.1698	7.386	.3772	.3582	16.86	.3098
#1	2.827	.0118	.3012	10.26	.0113	.7657
#2	2.836	.0136	.3032	10.31	.0083	.7650
#3	2.834	.0122	.3031	10.34	.0089	.7695

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	4.295
Stddev	.001
%RSD	.0241
#1	4.295
#2	4.294
#3	4.296

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4165.7	25777.	10640.	22516.
Stddev	22.4	140.	65.	136.
%RSD	.53853	.54183	.61533	.60219
#1	4187.5	25909.	10714.	22668.
#2	4167.0	25791.	10615.	22474.
#3	4142.7	25631.	10591.	22407.

Sample Name: 580-130915-A-39-B Acquired: 8/30/2023 17:26:08 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0038	321.1	.4931	.2156	2.133	.0207
Stddev	.0004	.5	.0044	.0009	.004	.0002
%RSD	11.72	.1475	.8935	.4260	.2003	.8126
#1	-.0042	321.6	.4980	.2159	2.132	.0209
#2	-.0038	321.0	.4895	.2145	2.129	.0205
#3	-.0033	320.7	.4919	.2163	2.137	.0206

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0396	88.26	.0026	.3009	.3746	1.400
Stddev	.0006	.31	.0003	.0001	.0005	.006
%RSD	1.636	.3517	12.31	.0201	.1294	.4431
#1	.0390	87.96	.0023	.3010	.3746	1.405
#2	.0394	88.23	.0025	.3009	.3742	1.393
#3	.0403	88.58	.0029	.3009	.3751	1.403

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	554.3	11.51	.1511	96.43	16.31	.0242
Stddev	1.4	.07	.0008	.13	.05	.0006
%RSD	.2508	.5966	.5406	.1318	.3303	2.315
#1	553.3	11.55	.1520	96.42	16.28	.0247
#2	553.7	11.55	.1510	96.31	16.29	.0236
#3	555.9	11.43	.1504	96.57	16.38	.0241

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	24.01	.5112	11.49	.1368	.0083	.0170
Stddev	.04	.0015	.03	.0028	.0042	.0008
%RSD	.1580	.2854	.2302	2.055	50.70	4.883
#1	24.04	.5096	11.46	.1338	.0069	.0162
#2	24.03	.5116	11.51	.1393	.0130	.0169
#3	23.97	.5124	11.50	.1373	.0050	.0178

Sample Name: 580-130915-A-39-B Acquired: 8/30/2023 17:26:08 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	2.368	.0168	1.891	12.34	.0212	1.094
Stddev	.001	.0003	.003	.01	.0028	.005
%RSD	.0458	1.607	.1642	.0617	13.09	.4319
#1	2.367	.0169	1.893	12.34	.0230	1.093
#2	2.369	.0165	1.893	12.35	.0180	1.089
#3	2.368	.0170	1.887	12.35	.0227	1.099

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	2.732
Stddev	.001
%RSD	.0456
#1	2.731
#2	2.732
#3	2.734

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4020.5	25447.	10655.	22589.
Stddev	11.6	89.	6.	34.
%RSD	.28790	.34996	.05205	.15160
#1	4029.5	25510.	10660.	22612.
#2	4024.5	25486.	10649.	22549.
#3	4007.4	25345.	10656.	22605.

Sample Name: 580-130915-A-37-A Acquired: 8/30/2023 17:30:00 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0047	263.4	.1627	.0387	2.374	.0131
Stddev	.0024	.5	.0027	.0001	.001	.0001
%RSD	50.27	.1971	1.636	.3671	.0209	.4477
#1	-.0072	263.2	.1657	.0389	2.375	.0131
#2	-.0024	263.9	.1617	.0386	2.374	.0131
#3	-.0047	262.9	.1607	.0386	2.375	.0130

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0326	129.2	.0062	.4382	.3609	.9476
Stddev	.0023	.6	.0000	.0007	.0006	.0038
%RSD	7.011	.4406	.3747	.1536	.1758	.4025
#1	.0303	128.6	.0062	.4375	.3608	.9437
#2	.0328	129.2	.0062	.4382	.3616	.9479
#3	.0348	129.7	.0062	.4389	.3603	.9513

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	518.9	6.110	.0940	125.8	38.95	.0030
Stddev	2.3	.018	.0018	.5	.15	.0001
%RSD	.4468	.2933	1.941	.3855	.3801	2.962
#1	516.5	6.103	.0927	125.3	38.79	.0030
#2	519.2	6.131	.0933	125.8	38.98	.0030
#3	521.1	6.098	.0961	126.3	39.08	.0031

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	37.09	.6424	10.15	.1118	.0064	.0163
Stddev	.09	.0008	.01	.0003	.0022	.0025
%RSD	.2537	.1266	.1208	.2508	34.47	15.57
#1	37.00	.6431	10.16	.1116	.0088	.0138
#2	37.19	.6415	10.15	.1121	.0044	.0189
#3	37.09	.6426	10.14	.1118	.0060	.0162

Sample Name: 580-130915-A-37-A Acquired: 8/30/2023 17:30:00 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.754	.0177	.5528	25.05	.0087	1.342
Stddev	.004	.0003	.0009	.04	.0053	.004
%RSD	.2441	1.515	.1540	.1622	60.31	.2661
#1	1.753	.0180	.5522	25.00	.0145	1.338
#2	1.750	.0175	.5537	25.08	.0042	1.344
#3	1.758	.0175	.5523	25.07	.0075	1.344

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	4.858
Stddev	.005
%RSD	.0959
#1	4.862
#2	4.853
#3	4.859

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4110.1	26234.	11169.	23632.
Stddev	14.2	76.	22.	30.
%RSD	.34530	.29147	.19523	.12752
#1	4125.1	26320.	11190.	23650.
#2	4108.1	26209.	11147.	23597.
#3	4097.0	26173.	11170.	23649.

Sample Name: CCV 3565024 Acquired: 8/30/2023 17:34:37 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9719	100.2	4.818	47.31	4.801	5.134
Stddev	.0062	.6	.035	.25	.018	.037
%RSD	.6375	.5975	.7202	.5302	.3828	.7173
#1	.9767	100.7	4.794	47.16	4.791	5.168
#2	.9649	99.54	4.803	47.18	4.790	5.095
#3	.9740	100.2	4.858	47.60	4.823	5.141
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.611	95.27	4.924	4.831	4.933	4.718
Stddev	.022	.67	.023	.021	.034	.030
%RSD	.4741	.7004	.4662	.4365	.6908	.6452
#1	4.597	94.59	4.907	4.818	4.909	4.684
#2	4.600	95.29	4.914	4.820	4.918	4.726
#3	4.636	95.92	4.950	4.856	4.972	4.744
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	98.03	94.65	4.738	96.67	4.861	4.866
Stddev	.71	.81	.029	.84	.029	.039
%RSD	.7269	.8590	.6227	.8662	.6006	.8035
#1	97.27	95.55	4.769	95.83	4.832	4.839
#2	98.11	93.97	4.711	96.68	4.862	4.848
#3	98.69	94.44	4.733	97.50	4.890	4.911
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCV 3565024 Acquired: 8/30/2023 17:34:37 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	92.91	4.833	45.92	4.854	4.752	4.848
Stddev	.86	.023	.47	.026	.033	.044
%RSD	.9226	.4684	1.013	.5340	.6969	.9007
#1	93.90	4.820	45.54	4.838	4.728	4.818
#2	92.42	4.820	45.78	4.841	4.738	4.828
#3	92.42	4.859	46.44	4.884	4.789	4.898
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	46.30	4.838	5.095	5.029	4.567	5.113
Stddev	.31	.036	.037	.038	.096	.043
%RSD	.6705	.7500	.7278	.7486	2.100	.8471
#1	46.44	4.809	5.136	5.071	4.471	5.152
#2	45.94	4.827	5.064	4.997	4.568	5.066
#3	46.51	4.879	5.085	5.019	4.663	5.121
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	4.868
Stddev	.041
%RSD	.8327
#1	4.837
#2	4.853
#3	4.914
Check ?	Chk Pass
Value	
Range	

Sample Name: CCV 3565024 Acquired: 8/30/2023 17:34:37 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3906.8	24509.	10175.	21535.
Stddev	12.3	94.	92.	192.
%RSD	.31383	.38192	.90658	.88939
#1	3918.9	24602.	10073.	21321.
#2	3907.1	24512.	10253.	21690.
#3	3894.4	24415.	10198.	21594.

Sample Name: CCB Acquired: 8/30/2023 17:38:56 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0017	.0032	.0049	.0289	.0012	.0009
Stddev	.0020	.0321	.0016	.0007	.0002	.0001
%RSD	116.1	992.9	31.50	2.345	16.15	12.43
#1	.0040	-.0006	.0058	.0296	.0010	.0008
#2	.0007	-.0268	.0031	.0283	.0013	.0008
#3	.0005	.0371	.0059	.0286	.0014	.0010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0014	.0243	.0011	.0012	.0012	-.0016
Stddev	.0004	.0058	.0002	.0004	.0005	.0043
%RSD	29.91	23.96	20.64	36.05	47.19	276.0
#1	.0010	.0311	.0009	.0009	.0009	.0033
#2	.0016	.0215	.0011	.0011	.0008	-.0050
#3	.0018	.0204	.0014	.0017	.0018	-.0030
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0391	.0770	.0052	.0351	.0011	.0048
Stddev	.0041	.0076	.0016	.0134	.0006	.0010
%RSD	10.54	9.928	30.99	38.34	55.12	20.72
#1	.0430	.0682	.0067	.0387	.0004	.0058
#2	.0395	.0817	.0055	.0463	.0014	.0050
#3	.0348	.0812	.0035	.0202	.0015	.0038
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: CCB Acquired: 8/30/2023 17:38:56 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0100	.0003	.0185	.0023	.0011	.0065
Stddev	.0101	.0007	.0055	.0015	.0014	.0016
%RSD	101.6	229.4	29.74	63.84	125.7	24.07
#1	.0212	.0010	.0192	.0006	-.0005	.0082
#2	.0070	-.0003	.0127	.0029	.0017	.0059
#3	.0016	.0002	.0236	.0035	.0022	.0053
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0149	.0011	.0009	.0016	-.0079	.0000
Stddev	.0068	.0001	.0002	.0034	.0012	.0005
%RSD	45.29	7.384	17.21	204.7	15.61	2689.
#1	.0164	.0011	.0011	.0053	-.0065	.0002
#2	.0208	.0011	.0009	-.0013	-.0088	-.0006
#3	.0076	.0012	.0008	.0009	-.0085	.0004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0001
Stddev	.0004
%RSD	372.6
#1	-.0003
#2	.0001
#3	.0005
Check ?	Chk Pass
High Limit	
Low Limit	

Sample Name: CCB Acquired: 8/30/2023 17:38:56 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4519.4	26136.	10320.	21842.
Stddev	11.1	86.	51.	107.
%RSD	.24613	.33007	.48979	.49184
#1	4523.7	26176.	10326.	21872.
#2	4527.7	26195.	10266.	21723.
#3	4506.8	26037.	10367.	21932.

Sample Name: CCVL 3561056 Acquired: 8/30/2023 17:42:33 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0536	.5507	.0630	.5011	.0209	.0217
Stddev	.0013	.0113	.0030	.0020	.0001	.0002
%RSD	2.380	2.058	4.730	.3931	.5989	.9886
#1	.0534	.5602	.0642	.5002	.0208	.0219
#2	.0549	.5539	.0653	.4998	.0209	.0216
#3	.0524	.5382	.0597	.5034	.0211	.0215
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.2748	.5347	.0204	.0199	.0271	.0544
Stddev	.0021	.0072	.0001	.0000	.0003	.0096
%RSD	.7780	1.351	.7063	.1151	1.034	17.69
#1	.2737	.5273	.0203	.0199	.0270	.0456
#2	.2733	.5349	.0203	.0199	.0269	.0530
#3	.2772	.5417	.0206	.0199	.0274	.0647
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.5311	3.089	.1022	.5081	.0219	.0410
Stddev	.0029	.066	.0020	.0134	.0008	.0003
%RSD	.5413	2.142	1.962	2.643	3.471	.8488
#1	.5299	3.045	.1042	.4983	.0211	.0406
#2	.5291	3.056	.1002	.5027	.0220	.0413
#3	.5344	3.165	.1021	.5234	.0226	.0410
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCVL 3561056 Acquired: 8/30/2023 17:42:33 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.5233	.0200	.1072	.0305	.0615	.0948
Stddev	.0030	.0000	.0031	.0026	.0030	.0033
%RSD	.5784	.1961	2.851	8.472	4.898	3.512
#1	.5267	.0200	.1038	.0287	.0595	.0910
#2	.5209	.0201	.1098	.0292	.0600	.0961
#3	.5222	.0200	.1079	.0334	.0649	.0973
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9952	.0974	.1075	.0340	.0913	.0280
Stddev	.0052	.0006	.0001	.0006	.0050	.0018
%RSD	.5239	.6081	.1277	1.724	5.424	6.463
#1	.9949	.0980	.1074	.0333	.0872	.0273
#2	.9901	.0968	.1077	.0342	.0899	.0300
#3	1.001	.0973	.1075	.0344	.0968	.0266
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0385
Stddev	.0002
%RSD	.3934
#1	.0384
#2	.0386
#3	.0386
Check ?	Chk Pass
Value	
Range	

Sample Name: CCVL 3561056 Acquired: 8/30/2023 17:42:33 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4546.8	26446.	10501.	22195.
Stddev	10.8	62.	61.	128.
%RSD	.23840	.23321	.57981	.57813
#1	4551.6	26496.	10522.	22247.
#2	4554.4	26465.	10432.	22048.
#3	4534.4	26377.	10548.	22289.

Sample Name: 580-130931-K-1-B Acquired: 8/30/2023 18:53:50 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0029	4.751	.0266	.0618	.0751	-.0000
Stddev	.0003	.020	.0004	.0001	.0004	.0001
%RSD	8.716	.4182	1.349	.1569	.5682	820.6
#1	-.0030	4.770	.0263	.0618	.0747	-.0001
#2	-.0030	4.753	.0270	.0617	.0751	.0000
#3	-.0026	4.730	.0265	.0619	.0756	.0000

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0010	37.44	-.0001	.0045	.0246	.0251
Stddev	.0017	.16	.0000	.0002	.0000	.0034
%RSD	165.5	.4265	42.48	5.183	.0689	13.42
#1	.0006	37.28	-.0001	.0043	.0246	.0217
#2	.0029	37.60	-.0001	.0044	.0246	.0252
#3	-.0004	37.43	-.0001	.0047	.0246	.0285

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	15.82	4.320	-.0044	33.68	1.085	.0042
Stddev	.06	.047	.0007	.07	.003	.0004
%RSD	.3549	1.094	15.60	.1993	.2792	10.68
#1	15.76	4.266	-.0052	33.64	1.082	.0038
#2	15.88	4.348	-.0040	33.76	1.088	.0047
#3	15.82	4.347	-.0040	33.65	1.085	.0040

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	91.76	.0337	20.25	-.0106	.0015	-.0035
Stddev	.22	.0004	.17	.0011	.0008	.0010
%RSD	.2444	1.080	.8278	9.884	52.94	29.05
#1	92.00	.0339	20.07	-.0117	.0008	-.0044
#2	91.71	.0333	20.29	-.0096	.0023	-.0037
#3	91.56	.0340	20.40	-.0106	.0013	-.0024

Sample Name: 580-130931-K-1-B Acquired: 8/30/2023 18:53:50 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	22.62	.0004	.2596	.3249	-.0067	.0103
Stddev	.08	.0004	.0001	.0014	.0041	.0022
%RSD	.3612	97.42	.0318	.4198	60.58	21.56
#1	22.67	.0000	.2595	.3236	-.0082	.0122
#2	22.66	.0004	.2597	.3264	-.0021	.0079
#3	22.52	.0008	.2596	.3247	-.0098	.0109

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0878
Stddev	.0001
%RSD	.1359
#1	.0877
#2	.0878
#3	.0880

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4206.5	25484.	10535.	22408.
Stddev	16.4	104.	14.	62.
%RSD	.38914	.40751	.13590	.27836
#1	4224.7	25603.	10546.	22473.
#2	4193.0	25413.	10539.	22401.
#3	4201.7	25435.	10519.	22349.

Sample Name: 580-130915-A-40-B DU Acquired: 8/30/2023 17:46:03 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0050	175.7	.0768	.0563	1.204	.0076
Stddev	.0016	.4	.0020	.0013	.033	.0001
%RSD	33.02	.2108	2.575	2.383	2.753	1.563
#1	-.0050	176.2	.0748	.0548	1.166	.0075
#2	-.0034	175.4	.0787	.0572	1.220	.0077
#3	-.0067	175.6	.0770	.0571	1.226	.0075

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0117	57.64	.0028	.1455	.2647	.7918
Stddev	.0009	1.35	.0004	.0047	.0073	.0239
%RSD	8.044	2.340	14.35	3.263	2.761	3.025
#1	.0108	56.08	.0025	.1400	.2563	.7665
#2	.0126	58.32	.0027	.1481	.2683	.7949
#3	.0116	58.50	.0033	.1483	.2696	.8141

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	231.1	7.130	.0868	47.32	7.426	.0057
Stddev	5.7	.034	.0010	1.13	.188	.0002
%RSD	2.475	.4813	1.119	2.379	2.527	2.993
#1	224.5	7.136	.0868	46.03	7.211	.0056
#2	233.8	7.093	.0878	47.90	7.516	.0059
#3	235.0	7.161	.0859	48.04	7.552	.0056

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	11.21	.2517	6.796	.1089	.0054	.0012
Stddev	.05	.0079	.187	.0033	.0053	.0015
%RSD	.4599	3.140	2.747	3.073	99.31	130.2
#1	11.27	.2426	6.581	.1050	.0115	.0002
#2	11.18	.2554	6.893	.1107	.0020	.0004
#3	11.19	.2570	6.914	.1109	.0026	.0029

Sample Name: 580-130915-A-40-B DU Acquired: 8/30/2023 17:46:03 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	2.352	.0156	.4685	11.63	.0003	.7179
Stddev	.008	.0011	.0016	.03	.0084	.0055
%RSD	.3301	7.027	.3333	.2778	2443.	.7626
#1	2.361	.0146	.4703	11.67	.0001	.7240
#2	2.349	.0154	.4676	11.61	-.0079	.7163
#3	2.346	.0167	.4676	11.62	.0089	.7134

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	2.993
Stddev	.077
%RSD	2.560
#1	2.905
#2	3.028
#3	3.046

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4325.3	26842.	11183.	23712.
Stddev	97.2	628.	40.	110.
%RSD	2.2476	2.3394	.35331	.46226
#1	4437.4	27566.	11138.	23594.
#2	4273.6	26497.	11203.	23732.
#3	4264.8	26461.	11209.	23810.

Sample Name: 580-130915-A-40-C MS Acquired: 8/30/2023 17:49:14 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.170	526.7	1.252	10.97	3.568	1.223
Stddev	.040	16.1	.002	.02	.010	.037
%RSD	3.452	3.060	.1306	.1476	.2796	3.022
#1	1.138	513.3	1.254	10.98	3.579	1.192
#2	1.216	544.6	1.252	10.95	3.560	1.264
#3	1.158	522.1	1.251	10.98	3.564	1.214

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0176	153.9	1.229	1.442	1.762	2.936
Stddev	.0035	.6	.001	.005	.004	.006
%RSD	19.86	.3675	.0873	.3538	.2536	.2210
#1	.0200	154.1	1.230	1.448	1.767	2.930
#2	.0136	153.2	1.228	1.439	1.759	2.943
#3	.0193	154.3	1.228	1.439	1.760	2.936

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	512.5	45.29	1.452	131.2	10.39	1.154
Stddev	1.5	1.50	.048	.3	.03	.003
%RSD	.2921	3.321	3.311	.2167	.3134	.2888
#1	512.6	44.03	1.413	131.2	10.40	1.157
#2	510.9	46.95	1.506	130.9	10.35	1.151
#3	513.9	44.87	1.438	131.4	10.41	1.155

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	49.42	1.726	17.12	1.399	1.029	1.131
Stddev	1.63	.002	.05	.004	.004	.009
%RSD	3.290	.1317	.2942	.2483	.4188	.7812
#1	48.10	1.729	17.16	1.403	1.029	1.126
#2	51.24	1.725	17.06	1.399	1.024	1.126
#3	48.93	1.726	17.13	1.396	1.033	1.141

Sample Name: 580-130915-A-40-C MS Acquired: 8/30/2023 17:49:14 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	8.574	1.193	2.262	32.25	1.220	2.900
Stddev	.268	.002	.073	.98	.008	.086
%RSD	3.127	.1389	3.209	3.047	.6493	2.974
#1	8.355	1.194	2.207	31.45	1.215	2.833
#2	8.873	1.193	2.344	33.35	1.216	2.997
#3	8.493	1.191	2.236	31.97	1.229	2.871

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	7.995
Stddev	.008
%RSD	.0962
#1	8.001
#2	7.998
#3	7.986

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3829.2	25267.	10439.	22194.
Stddev	10.2	82.	327.	707.
%RSD	.26575	.32386	3.1371	3.1837
#1	3832.0	25289.	10722.	22783.
#2	3837.6	25335.	10080.	21411.
#3	3817.9	25176.	10514.	22389.

Sample Name: 580-130915-A-40D MSD Acquired: 8/30/2023 17:52:11 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9311	303.6	.9209	7.946	2.391	.8150
Stddev	.0072	1.1	.0051	.037	.008	.0020
%RSD	.7774	.3676	.5527	.4689	.3403	.2489
#1	.9328	304.5	.9171	7.912	2.383	.8155
#2	.9373	303.9	.9191	7.941	2.390	.8168
#3	.9232	302.3	.9267	7.986	2.399	.8128

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0115	92.87	.8627	.9665	1.195	1.854
Stddev	.0011	1.10	.0011	.0021	.003	.024
%RSD	9.223	1.182	.1331	.2157	.2719	1.297
#1	.0111	92.72	.8614	.9641	1.193	1.839
#2	.0107	91.86	.8636	.9678	1.194	1.842
#3	.0127	94.04	.8631	.9676	1.199	1.882

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	322.4	28.70	.9611	80.87	7.785	.8397
Stddev	3.6	.09	.0031	.89	.087	.0039
%RSD	1.129	.3302	.3188	1.104	1.119	.4625
#1	321.9	28.75	.9629	80.79	7.770	.8363
#2	319.1	28.76	.9629	80.03	7.706	.8388
#3	326.3	28.59	.9576	81.81	7.879	.8440

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	31.74	1.125	12.15	.9840	.7795	.8551
Stddev	.16	.002	.05	.0038	.0005	.0042
%RSD	.5159	.1689	.3854	.3884	.0587	.4875
#1	31.83	1.123	12.17	.9808	.7790	.8598
#2	31.85	1.126	12.10	.9882	.7796	.8519
#3	31.55	1.127	12.19	.9829	.7799	.8536

Sample Name: 580-130915-A-40D MSD Acquired: 8/30/2023 17:52:11 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	5.375	.8151	1.439	18.77	.9326	1.845
Stddev	.019	.0020	.004	.06	.0120	.005
%RSD	.3483	.2409	.2979	.3130	1.288	.2650
#1	5.387	.8128	1.440	18.80	.9188	1.850
#2	5.384	.8163	1.443	18.82	.9400	1.845
#3	5.353	.8161	1.435	18.71	.9391	1.840

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	4.402
Stddev	.005
%RSD	.1224
#1	4.398
#2	4.408
#3	4.400

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4087.1	26054.	10770.	22919.
Stddev	9.7	97.	118.	262.
%RSD	.23722	.37098	1.0998	1.1444
#1	4094.6	26109.	10757.	22932.
#2	4090.6	26110.	10659.	22650.
#3	4076.1	25942.	10895.	23174.

Sample Name: 580-130915-A-40A PDS Acquired: 8/30/2023 17:55:10 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.8648	228.2	.9763	8.821	2.283	.9247
Stddev	.0010	.7	.0065	.025	.006	.0048
%RSD	.1197	.3046	.6621	.2795	.2706	.5212
#1	.8656	227.4	.9703	8.802	2.277	.9197
#2	.8636	228.2	.9756	8.812	2.281	.9249
#3	.8651	228.8	.9831	8.849	2.289	.9294

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0119	83.14	.9005	1.056	1.259	1.770
Stddev	.0026	.67	.0019	.003	.003	.016
%RSD	22.12	.8113	.2109	.2423	.2683	.8778
#1	.0107	83.16	.8992	1.054	1.257	1.783
#2	.0102	82.46	.8996	1.055	1.257	1.753
#3	.0150	83.80	.9027	1.059	1.263	1.775

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	283.9	25.01	.9714	72.76	7.576	.9253
Stddev	2.2	.05	.0010	.61	.060	.0031
%RSD	.7717	.2146	.1049	.8438	.7925	.3303
#1	284.1	24.95	.9703	72.80	7.593	.9221
#2	281.6	25.02	.9715	72.12	7.509	.9256
#3	286.0	25.06	.9723	73.35	7.625	.9282

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	29.10	1.194	11.73	1.012	.9168	.9129
Stddev	.05	.004	.03	.005	.0032	.0045
%RSD	.1828	.3129	.2958	.5093	.3491	.4921
#1	29.05	1.191	11.71	1.013	.9139	.9176
#2	29.11	1.193	11.72	1.006	.9202	.9087
#3	29.16	1.198	11.77	1.016	.9162	.9123

Sample Name: 580-130915-A-40A PDS Acquired: 8/30/2023 17:55:10 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	10.32	.9154	1.460	13.97	.9176	1.751
Stddev	.03	.0027	.002	.05	.0044	.009
%RSD	.2631	.2918	.1673	.3666	.4756	.5051
#1	10.29	.9130	1.458	13.92	.9144	1.742
#2	10.31	.9149	1.460	13.97	.9158	1.760
#3	10.35	.9183	1.463	14.02	.9226	1.750

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	4.428
Stddev	.010
%RSD	.2254
#1	4.422
#2	4.421
#3	4.439

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4131.9	26142.	10762.	22980.
Stddev	6.8	77.	70.	161.
%RSD	.16521	.29524	.64919	.70081
#1	4133.4	26181.	10830.	23121.
#2	4137.8	26193.	10690.	22804.
#3	4124.4	26054.	10767.	23013.

Sample Name: 580-130733-A-5-F Acquired: 8/30/2023 19:27:54 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0020	.0830	.0019	.0326	.0029	-.0001
Stddev	.0007	.0302	.0019	.0007	.0002	.0001
%RSD	35.90	36.32	99.26	2.252	7.432	203.1
#1	-.0024	.1141	.0016	.0333	.0029	-.0002
#2	-.0011	.0811	.0039	.0318	.0027	-.0000
#3	-.0024	.0539	.0002	.0327	.0031	.0000

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0011	31.76	.0003	.0001	.0089	.0014
Stddev	.0011	.33	.0002	.0001	.0001	.0068
%RSD	102.5	1.048	75.87	46.73	1.109	487.8
#1	.0003	32.15	.0005	.0002	.0088	-.0052
#2	.0023	31.57	.0004	.0001	.0089	.0084
#3	.0006	31.57	.0000	.0001	.0090	.0010

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.5650	C .0000	k .0157	1.367	.0238	.0004
Stddev	.0085	.0000	.0015	.016	.0005	.0003
%RSD	1.502	.0000	9.509	1.194	2.268	84.45
#1	.5747	C .0000	k .0140	1.364	.0244	.0001
#2	.5597	C .0000	k .0162	1.384	.0234	.0004
#3	.5604	C .0000	k .0169	1.352	.0235	.0008

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	k 62.85	.0040	.5135	.0018	.0019	-.0009
Stddev	.71	.0001	.0047	.0015	.0016	.0031
%RSD	1.132	3.003	.9207	86.22	84.04	341.8
#1	k 63.61	.0039	.5129	.0000	.0002	-.0044
#2	k 62.75	.0040	.5092	.0028	.0022	.0006
#3	k 62.20	.0042	.5186	.0024	.0032	.0012

Sample Name: 580-130733-A-5-F Acquired: 8/30/2023 19:27:54 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.1586	.0086	.4352	.0067	k -.0180	-.0005
Stddev	.0026	.0004	.0023	.0010	.0017	.0007
%RSD	1.651	4.430	.5320	14.47	9.670	133.8
#1	.1558	.0087	.4370	.0066	k -.0172	-.0009
#2	.1589	.0082	.4360	.0076	k -.0200	-.0010
#3	.1610	.0089	.4326	.0057	k -.0168	.0003

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0465
Stddev	.0005
%RSD	1.042
#1	.0465
#2	.0459
#3	.0469

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3706.0	24002.	10241.	21788.
Stddev	39.5	271.	59.	135.
%RSD	1.0670	1.1299	.57615	.62076
#1	3674.9	23785.	10254.	21826.
#2	3750.5	24306.	10293.	21901.
#3	3692.7	23916.	10177.	21638.

Sample Name: 580-130915-A40A SD@5 Acquired: 8/30/2023 17:58:07 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0020	44.55	.0238	.0265	.3072	.0021
Stddev	.0029	.14	.0035	.0019	.0022	.0001
%RSD	148.7	.3102	14.66	7.285	.7229	5.399
#1	.0013	44.59	.0243	.0287	.3058	.0022
#2	-.0044	44.39	.0269	.0260	.3060	.0020
#3	-.0027	44.66	.0200	.0249	.3097	.0020

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0022	14.03	.0007	.0350	.0728	.1919
Stddev	.0015	.13	.0002	.0002	.0003	.0035
%RSD	68.56	.9072	29.68	.4987	.4438	1.820
#1	.0018	13.94	.0009	.0349	.0724	.1896
#2	.0038	13.97	.0007	.0349	.0730	.1901
#3	.0009	14.17	.0005	.0352	.0728	.1959

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	56.89	1.834	.0266	11.75	1.438	.0064
Stddev	.48	.038	.0009	.09	.015	.0013
%RSD	.8455	2.090	3.501	.7558	1.072	20.88
#1	56.60	1.871	.0256	11.69	1.429	.0079
#2	56.62	1.836	.0274	11.71	1.430	.0062
#3	57.44	1.794	.0268	11.85	1.456	.0052

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	2.626	.0625	1.541	.0237	.0046	.0041
Stddev	.010	.0013	.005	.0007	.0034	.0028
%RSD	.3903	2.016	.3020	3.076	72.90	68.37
#1	2.621	.0615	1.536	.0234	.0074	.0010
#2	2.620	.0620	1.544	.0233	.0009	.0065
#3	2.638	.0639	1.544	.0246	.0056	.0048

Sample Name: 580-130915-A40A SD@5 Acquired: 8/30/2023 17:58:07 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.6117	.0046	.1168	2.774	.0146	.1805
Stddev	.0124	.0006	.0002	.007	.0033	.0016
%RSD	2.029	13.43	.1686	.2546	22.47	.8682
#1	.6241	.0051	.1166	2.781	.0182	.1805
#2	.5993	.0039	.1168	2.772	.0138	.1821
#3	.6117	.0046	.1170	2.768	.0118	.1789

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.7283
Stddev	.0062
%RSD	.8577
#1	.7243
#2	.7251
#3	.7355

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4438.8	26591.	10704.	22879.
Stddev	23.3	135.	40.	75.
%RSD	.52554	.50882	.37490	.32942
#1	4450.1	26657.	10659.	22810.
#2	4454.4	26680.	10716.	22869.
#3	4412.0	26435.	10737.	22959.

Sample Name: CCV 3565024 Acquired: 8/30/2023 18:01:28 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9713	99.31	4.917	48.32	4.837	5.084
Stddev	.0029	.09	.031	.20	.016	.006
%RSD	.3025	.0905	.6222	.4040	.3241	.1229
#1	.9747	99.24	4.899	48.17	4.826	5.091
#2	.9700	99.27	4.901	48.25	4.830	5.079
#3	.9693	99.41	4.953	48.54	4.855	5.082
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.650	94.75	4.905	4.835	5.026	4.762
Stddev	.014	.89	.011	.011	.019	.047
%RSD	.2938	.9344	.2174	.2345	.3706	.9858
#1	4.639	94.86	4.899	4.830	5.012	4.757
#2	4.645	93.81	4.898	4.827	5.017	4.718
#3	4.665	95.57	4.917	4.848	5.047	4.811
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	98.20	95.90	4.769	97.28	4.860	5.029
Stddev	.93	.26	.009	1.09	.046	.020
%RSD	.9462	.2694	.1963	1.116	.9450	.3949
#1	98.29	96.11	4.772	97.25	4.867	5.015
#2	97.23	95.99	4.777	96.21	4.810	5.020
#3	99.09	95.61	4.759	98.38	4.901	5.052
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCV 3565024 Acquired: 8/30/2023 18:01:28 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	94.74	4.855	48.35	4.886	4.824	5.008
Stddev	.40	.013	.15	.018	.020	.028
%RSD	.4219	.2679	.3189	.3724	.4159	.5513
#1	94.99	4.847	48.23	4.877	4.813	4.982
#2	94.95	4.849	48.29	4.875	4.812	5.005
#3	94.28	4.870	48.52	4.907	4.847	5.037
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	47.04	4.884	5.119	4.955	4.738	5.058
Stddev	.04	.013	.009	.004	.016	.011
%RSD	.0817	.2750	.1834	.0918	.3287	.2109
#1	47.07	4.879	5.124	4.957	4.729	5.053
#2	47.00	4.875	5.125	4.958	4.729	5.070
#3	47.06	4.900	5.108	4.950	4.756	5.050
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	4.868
Stddev	.007
%RSD	.1413
#1	4.865
#2	4.862
#3	4.875
Check ?	Chk Pass
Value	
Range	

Sample Name: CCV 3565024 Acquired: 8/30/2023 18:01:28 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3874.2	24290.	10005.	21336.
Stddev	12.1	80.	74.	171.
%RSD	.31326	.32735	.73682	.80285
#1	3879.5	24336.	10014.	21368.
#2	3882.7	24336.	9927.3	21151.
#3	3860.3	24198.	10074.	21489.

Sample Name: CCB Acquired: 8/30/2023 19:43:55 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0002	.0204	.0040	.0353	.0020	.0010
Stddev	.0025	.0157	.0015	.0093	.0006	.0001
%RSD	1609.	76.75	37.87	26.23	32.99	6.308
#1	-.0022	.0246	.0032	.0458	.0027	.0010
#2	-.0008	.0336	.0058	.0318	.0014	.0009
#3	.0026	.0031	.0031	.0283	.0018	.0011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0013	.0250	.0023	.0022	.0022	-.0038
Stddev	.0002	.0033	.0006	.0005	.0006	.0011
%RSD	14.85	13.20	28.05	24.78	27.61	29.70
#1	.0014	.0230	.0030	.0028	.0029	-.0046
#2	.0011	.0288	.0019	.0019	.0020	-.0042
#3	.0014	.0233	.0019	.0019	.0018	-.0025
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0300	1.205	.0082	.0192	.0013	.0055
Stddev	.0009	.037	.0024	.0187	.0002	.0014
%RSD	3.117	3.114	28.99	97.41	15.72	26.16
#1	.0311	1.248	.0089	.0056	.0015	.0071
#2	.0296	1.180	.0100	.0405	.0014	.0049
#3	.0294	1.187	.0055	.0115	.0011	.0045
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: CCB Acquired: 8/30/2023 19:43:55 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0586	.0012	.0298	.0048	.0021	.0047
Stddev	.0066	.0012	.0060	.0009	.0005	.0003
%RSD	11.28	98.27	20.15	18.52	23.38	7.108
#1	.0584	.0025	.0367	.0059	.0023	.0048
#2	.0654	.0006	.0261	.0043	.0016	.0044
#3	.0522	.0005	.0265	.0043	.0025	.0050
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0342	.0019	.0010	.0030	-.0059	.0005
Stddev	.0046	.0004	.0001	.0000	.0024	.0044
%RSD	13.53	19.46	9.741	1.200	40.94	971.3
#1	.0383	.0023	.0011	.0030	-.0031	-.0024
#2	.0353	.0017	.0009	.0031	-.0073	-.0017
#3	.0292	.0016	.0010	.0030	-.0072	.0055
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0009
Stddev	.0007
%RSD	78.75
#1	.0016
#2	.0004
#3	.0005
Check ?	Chk Pass
High Limit	
Low Limit	

Sample Name: CCB Acquired: 8/30/2023 19:43:55 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4665.8	27056.	10940.	23238.
Stddev	10.8	93.	60.	133.
%RSD	.23046	.34531	.54450	.57437
#1	4677.9	27163.	10883.	23096.
#2	4662.2	27012.	10935.	23259.
#3	4657.3	26992.	11002.	23361.

Sample Name: CCB Acquired: 8/30/2023 18:05:48 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0009	-.0043	.0051	.0399	.0014	.0008
Stddev	.0015	.0303	.0022	.0027	.0004	.0001
%RSD	162.5	702.4	43.88	6.644	30.58	14.41
#1	-.0020	.0257	.0077	.0407	.0012	.0010
#2	-.0016	-.0037	.0038	.0370	.0011	.0007
#3	.0008	-.0350	.0039	.0422	.0019	.0008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0020	.0157	.0016	.0016	.0015	-.0021
Stddev	.0026	.0047	.0003	.0006	.0007	.0012
%RSD	132.8	29.71	16.62	33.91	46.84	60.24
#1	.0040	.0113	.0014	.0011	.0011	-.0028
#2	-.0010	.0152	.0015	.0016	.0010	-.0006
#3	.0029	.0206	.0019	.0022	.0023	-.0028
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0272	.1477	.0066	.0300	.0010	.0051
Stddev	.0008	.0738	.0018	.0290	.0003	.0008
%RSD	2.852	50.00	27.16	96.64	30.72	15.11
#1	.0281	.1472	.0079	.0615	.0012	.0060
#2	.0268	.2217	.0073	.0042	.0012	.0049
#3	.0267	.0740	.0046	.0244	.0007	.0045
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: CCB Acquired: 8/30/2023 18:05:48 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0333	.0006	.0216	.0023	.0025	.0057
Stddev	.0024	.0008	.0042	.0013	.0020	.0035
%RSD	7.159	143.7	19.39	57.89	78.39	61.06
#1	.0355	.0007	.0239	.0033	.0019	.0042
#2	.0336	-.0003	.0168	.0008	.0009	.0032
#3	.0307	.0014	.0242	.0029	.0047	.0096
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0182	.0022	.0008	.0028	-.0021	.0006
Stddev	.0088	.0001	.0001	.0020	.0022	.0021
%RSD	48.35	2.540	18.21	71.42	103.8	337.5
#1	.0282	.0021	.0009	.0036	-.0021	.0028
#2	.0119	.0022	.0008	.0005	-.0043	-.0015
#3	.0144	.0022	.0006	.0043	.0001	.0007
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0003
Stddev	.0004
%RSD	124.0
#1	.0001
#2	.0000
#3	.0007
Check ?	Chk Pass
High Limit	
Low Limit	

Sample Name: CCB Acquired: 8/30/2023 18:05:48 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4551.3	26371.	10358.	22079.
Stddev	10.1	58.	32.	66.
%RSD	.22298	.21839	.30805	.29930
#1	4552.0	26357.	10394.	22155.
#2	4561.0	26435.	10347.	22034.
#3	4540.8	26322.	10333.	22048.

Sample Name: 580-130928-E-3-A Acquired: 8/30/2023 18:12:52 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0028	1.825	.0413	.1226	.0266	.0002
Stddev	.0037	.004	.0026	.0008	.0003	.0000
%RSD	135.0	.2246	6.379	.6299	1.006	12.78
#1	-.0052	1.821	.0389	.1234	.0263	.0002
#2	.0015	1.824	.0410	.1224	.0266	.0002
#3	-.0046	1.829	.0441	.1219	.0269	.0002

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0017	36.05	.0001	.0050	.0064	.0124
Stddev	.0010	.09	.0001	.0001	.0002	.0022
%RSD	61.58	.2576	48.14	2.956	2.420	17.70
#1	.0028	36.14	.0002	.0049	.0062	.0134
#2	.0012	35.96	.0001	.0051	.0065	.0139
#3	.0010	36.06	.0001	.0049	.0065	.0099

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	5.614	4.143	-.0011	49.93	1.898	.0062
Stddev	.008	.063	.0011	.20	.003	.0003
%RSD	.1471	1.514	96.59	.4028	.1710	4.080
#1	5.623	4.089	.0001	50.14	1.902	.0064
#2	5.607	4.212	-.0014	49.89	1.897	.0060
#3	5.612	4.129	-.0020	49.74	1.896	.0063

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	37.26	.0179	.2461	-.0151	-.0003	-.0026
Stddev	.02	.0008	.0023	.0010	.0012	.0023
%RSD	.0476	4.262	.9326	6.875	375.0	89.45
#1	37.26	.0187	.2455	-.0147	.0001	-.0015
#2	37.25	.0173	.2441	-.0163	-.0016	-.0052
#3	37.28	.0176	.2486	-.0144	.0005	-.0010

Sample Name: 580-130928-E-3-A Acquired: 8/30/2023 18:12:52 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	22.42	.0001	.2483	.1127	-.0070	.0060
Stddev	.04	.0004	.0008	.0017	.0030	.0012
%RSD	.1958	409.3	.3270	1.507	43.14	19.78
#1	22.38	.0005	.2475	.1135	-.0035	.0049
#2	22.46	.0001	.2482	.1139	-.0084	.0060
#3	22.42	-.0003	.2491	.1108	-.0091	.0072

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0849
Stddev	.0003
%RSD	.3271
#1	.0847
#2	.0848
#3	.0852

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4300.9	25939.	10485.	22350.
Stddev	6.4	37.	24.	68.
%RSD	.14792	.14195	.23353	.30259
#1	4305.6	25969.	10508.	22428.
#2	4303.4	25951.	10460.	22306.
#3	4293.7	25898.	10486.	22316.

Sample Name: 580-130928-E-3-B DU Acquired: 8/30/2023 18:16:14 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0006	1.736	.0408	.1206	.0257	.0001
Stddev	.0010	.040	.0018	.0003	.0003	.0002
%RSD	156.4	2.291	4.382	.2489	1.068	131.5
#1	.0005	1.702	.0387	.1210	.0255	.0001
#2	-.0010	1.780	.0421	.1204	.0255	.0003
#3	-.0013	1.726	.0415	.1205	.0260	-.0000

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0001	36.08	.0001	.0049	.0066	.0052
Stddev	.0010	.19	.0001	.0000	.0001	.0030
%RSD	1049.	.5248	110.3	.6162	2.276	57.04
#1	-.0006	35.86	.0002	.0049	.0064	.0037
#2	-.0004	36.19	.0001	.0049	.0066	.0033
#3	.0013	36.19	.0000	.0049	.0067	.0087

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	5.622	4.214	-.0010	50.08	1.903	.0056
Stddev	.034	.053	.0012	.30	.012	.0002
%RSD	.6005	1.255	130.3	.5952	.6146	3.229
#1	5.583	4.173	-.0023	49.74	1.889	.0054
#2	5.642	4.195	.0002	50.21	1.910	.0057
#3	5.642	4.274	-.0007	50.30	1.909	.0057

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	37.44	.0184	.2519	-.0143	.0019	-.0044
Stddev	.12	.0002	.0029	.0006	.0016	.0004
%RSD	.3243	1.273	1.161	4.152	84.28	9.631
#1	37.38	.0186	.2544	-.0143	.0034	-.0044
#2	37.37	.0182	.2487	-.0150	.0002	-.0048
#3	37.58	.0182	.2528	-.0138	.0020	-.0040

Sample Name: 580-130928-E-3-B DU Acquired: 8/30/2023 18:16:14 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	22.18	-.0001	.2498	.1112	-.0091	.0043
Stddev	.08	.0003	.0007	.0007	.0014	.0029
%RSD	.3665	244.5	.2705	.5983	14.91	67.46
#1	22.09	.0001	.2491	.1119	-.0090	.0010
#2	22.20	-.0005	.2498	.1110	-.0105	.0053
#3	22.25	-.0000	.2504	.1106	-.0078	.0066

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0874
Stddev	.0015
%RSD	1.737
#1	.0891
#2	.0862
#3	.0868

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4278.6	25818.	10394.	22171.
Stddev	4.0	30.	31.	51.
%RSD	.09424	.11435	.29895	.22839
#1	4281.9	25838.	10373.	22125.
#2	4274.1	25784.	10430.	22225.
#3	4279.8	25831.	10379.	22163.

Sample Name: 580-130928-E-3-C MS Acquired: 8/30/2023 18:19:36 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.011	23.15	1.061	10.51	1.043	1.062
Stddev	.004	.06	.003	.04	.004	.003
%RSD	.4247	.2391	.2848	.3660	.4142	.3209
#1	1.012	23.11	1.058	10.49	1.040	1.060
#2	1.014	23.13	1.061	10.48	1.041	1.060
#3	1.006	23.22	1.064	10.56	1.048	1.066

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0034	54.53	1.021	.9975	1.066	.9639
Stddev	.0004	.30	.003	.0026	.004	.0070
%RSD	11.85	.5467	.3019	.2657	.3553	.7277
#1	-.0038	54.18	1.019	.9961	1.063	.9613
#2	-.0032	54.72	1.020	.9958	1.064	.9718
#3	-.0031	54.67	1.025	1.001	1.070	.9585

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	25.77	23.21	.9819	68.58	2.838	1.060
Stddev	.15	.05	.0023	.27	.015	.005
%RSD	.5742	.2333	.2324	.3991	.5346	.5210
#1	25.60	23.22	.9793	68.28	2.821	1.055
#2	25.86	23.16	.9828	68.82	2.841	1.058
#3	25.85	23.26	.9836	68.63	2.850	1.066

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	55.64	1.017	5.456	1.009	1.051	1.051
Stddev	.13	.004	.011	.002	.002	.007
%RSD	.2320	.3745	.2013	.2151	.2264	.6679
#1	55.77	1.013	5.454	1.007	1.048	1.047
#2	55.52	1.017	5.446	1.010	1.052	1.047
#3	55.62	1.021	5.468	1.011	1.051	1.060

Sample Name: 580-130928-E-3-C MS Acquired: 8/30/2023 18:19:36 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	32.61	1.021	1.300	1.145	.9937	1.041
Stddev	.03	.004	.002	.004	.0209	.004
%RSD	.0854	.3825	.1564	.3422	2.103	.3718
#1	32.61	1.019	1.298	1.144	.9709	1.037
#2	32.58	1.019	1.301	1.142	.9986	1.045
#3	32.64	1.026	1.302	1.149	1.012	1.040

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	1.091
Stddev	.003
%RSD	.2420
#1	1.089
#2	1.091
#3	1.094

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4197.5	25857.	10489.	22404.
Stddev	12.0	64.	33.	47.
%RSD	.28555	.24794	.31662	.21148
#1	4210.2	25923.	10451.	22351.
#2	4186.4	25795.	10512.	22444.
#3	4195.9	25854.	10505.	22416.

Sample Name: 580-130928-E-3-D MSD Acquired: 8/30/2023 18:22:37 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.009	23.04	1.061	10.52	1.048	1.065
Stddev	.002	.08	.004	.03	.003	.004
%RSD	.2134	.3505	.4036	.3057	.3016	.3419
#1	1.008	22.98	1.056	10.50	1.047	1.061
#2	1.008	23.01	1.063	10.50	1.045	1.065
#3	1.011	23.13	1.064	10.55	1.051	1.068

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0029	54.38	1.024	1.001	1.067	.9679
Stddev	.0007	.02	.004	.003	.003	.0090
%RSD	25.28	.0390	.3415	.3059	.2396	.9350
#1	-.0037	54.36	1.024	1.000	1.066	.9673
#2	-.0024	54.37	1.020	.9989	1.066	.9591
#3	-.0026	54.40	1.027	1.005	1.070	.9772

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	25.66	23.13	.9878	68.19	2.834	1.064
Stddev	.02	.03	.0011	.01	.005	.003
%RSD	.0855	.1213	.1063	.0129	.1746	.2905
#1	25.64	23.16	.9883	68.20	2.834	1.063
#2	25.68	23.12	.9885	68.18	2.830	1.062
#3	25.65	23.11	.9866	68.18	2.840	1.067

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	55.53	1.021	5.467	1.012	1.053	1.047
Stddev	.03	.004	.010	.004	.003	.006
%RSD	.0484	.3697	.1763	.4134	.2512	.6212
#1	55.51	1.019	5.477	1.008	1.051	1.043
#2	55.52	1.018	5.458	1.011	1.054	1.044
#3	55.56	1.025	5.467	1.016	1.056	1.055

Sample Name: 580-130928-E-3-D MSD Acquired: 8/30/2023 18:22:37 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	33.02	1.025	1.306	1.154	1.022	1.048
Stddev	.03	.006	.000	.004	.012	.004
%RSD	.0817	.6125	.0148	.3397	1.176	.3683
#1	33.04	1.025	1.306	1.150	1.014	1.043
#2	33.01	1.020	1.306	1.155	1.015	1.050
#3	32.99	1.032	1.306	1.157	1.035	1.050

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	1.093
Stddev	.004
%RSD	.3620
#1	1.092
#2	1.090
#3	1.098

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4203.2	25880.	10475.	22348.
Stddev	7.4	21.	13.	25.
%RSD	.17692	.08133	.12025	.11057
#1	4203.8	25885.	10482.	22360.
#2	4210.3	25898.	10483.	22365.
#3	4195.5	25857.	10461.	22320.

Sample Name: 580-130928-E-3-A PDS Acquired: 8/30/2023 18:25:38 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9644	21.68	1.014	10.12	.9924	1.018
Stddev	.0044	.03	.003	.02	.0020	.001
%RSD	.4533	.1454	.2470	.2421	.2058	.0496
#1	.9682	21.71	1.017	10.11	.9923	1.018
#2	.9596	21.68	1.012	10.11	.9904	1.018
#3	.9653	21.64	1.014	10.15	.9945	1.017

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0044	53.21	.9745	.9521	1.016	.9143
Stddev	.0022	.41	.0004	.0007	.003	.0113
%RSD	50.05	.7787	.0450	.0692	.2977	1.238
#1	-.0038	52.77	.9744	.9519	1.015	.9041
#2	-.0026	53.29	.9741	.9515	1.013	.9265
#3	-.0069	53.58	.9750	.9528	1.019	.9124

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	24.59	22.15	.9417	67.04	2.775	1.015
Stddev	.18	.02	.0007	.54	.021	.004
%RSD	.7321	.0802	.0746	.8123	.7413	.3567
#1	24.39	22.15	.9416	66.44	2.753	1.012
#2	24.61	22.17	.9411	67.19	2.780	1.013
#3	24.75	22.14	.9425	67.50	2.793	1.019

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	54.54	.9737	5.213	.9611	1.010	1.003
Stddev	.17	.0006	.020	.0012	.002	.006
%RSD	.3081	.0568	.3778	.1214	.1500	.6040
#1	54.73	.9733	5.211	.9599	1.010	.9970
#2	54.41	.9735	5.194	.9613	1.008	1.003
#3	54.47	.9743	5.233	.9622	1.011	1.009

Sample Name: 580-130928-E-3-A PDS Acquired: 8/30/2023 18:25:38 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	31.43	.9741	1.254	1.102	.9695	1.008
Stddev	.04	.0027	.001	.003	.0197	.004
%RSD	.1225	.2769	.1001	.3061	2.036	.4200
#1	31.48	.9713	1.253	1.101	.9467	1.004
#2	31.41	.9766	1.254	1.106	.9803	1.012
#3	31.41	.9742	1.255	1.099	.9814	1.008

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	1.055
Stddev	.000
%RSD	.0232
#1	1.055
#2	1.054
#3	1.055

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4184.8	25684.	10334.	22018.
Stddev	2.0	39.	60.	98.
%RSD	.04792	.15304	.57895	.44496
#1	4187.1	25711.	10268.	21909.
#2	4183.6	25701.	10350.	22047.
#3	4183.7	25639.	10384.	22098.

Sample Name: 580-130928-E-3A SD@5 Acquired: 8/30/2023 18:28:40 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0020	.4257	.0128	.0417	.0062	.0004
Stddev	.0028	.0156	.0014	.0029	.0005	.0002
%RSD	139.7	3.665	10.70	6.846	7.682	43.91
#1	-.0040	.4077	.0119	.0443	.0067	.0006
#2	.0012	.4335	.0122	.0421	.0062	.0003
#3	-.0031	.4358	.0144	.0387	.0058	.0003

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0009	7.099	.0005	.0013	.0018	.0022
Stddev	.0010	.021	.0001	.0002	.0002	.0045
%RSD	111.2	.2912	25.92	15.87	8.275	201.7
#1	-.0007	7.087	.0007	.0015	.0020	.0019
#2	-.0019	7.087	.0005	.0011	.0018	-.0021
#3	-.0000	7.123	.0004	.0013	.0017	.0069

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.118	.9321	.0081	9.806	.3763	.0063
Stddev	.006	.0334	.0018	.059	.0012	.0014
%RSD	.5174	3.588	22.00	.5998	.3175	22.08
#1	1.123	.9534	.0093	9.780	.3755	.0078
#2	1.111	.9493	.0089	9.764	.3758	.0060
#3	1.120	.8935	.0060	9.873	.3777	.0051

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	7.326	.0041	.0542	-.0006	-.0003	.0013
Stddev	.012	.0003	.0033	.0008	.0010	.0058
%RSD	.1642	7.030	6.107	121.9	294.8	436.8
#1	7.339	.0042	.0573	-.0008	.0007	.0054
#2	7.316	.0043	.0507	.0002	-.0004	.0039
#3	7.324	.0037	.0545	-.0013	-.0013	-.0053

Sample Name: 580-130928-E-3A SD@5 Acquired: 8/30/2023 18:28:40 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.647	.0004	.0501	.0261	.0075	.0026
Stddev	.035	.0005	.0001	.0017	.0074	.0029
%RSD	.7522	123.1	.1937	6.352	99.40	109.4
#1	4.607	.0002	.0500	.0258	.0160	.0026
#2	4.674	.0011	.0500	.0246	.0042	.0055
#3	4.659	.0001	.0502	.0279	.0023	-.0002

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0157
Stddev	.0002
%RSD	1.057
#1	.0158
#2	.0155
#3	.0158

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4482.4	26367.	10534.	22393.
Stddev	22.3	128.	18.	59.
%RSD	.49794	.48427	.17032	.26462
#1	4501.0	26480.	10555.	22458.
#2	4488.6	26391.	10523.	22380.
#3	4457.7	26229.	10524.	22342.

Sample Name: CCV 3565024 Acquired: 8/30/2023 18:32:10 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9697	98.61	4.899	48.21	4.824	5.067
Stddev	.0022	.19	.021	.17	.022	.010
%RSD	.2282	.1953	.4186	.3520	.4496	.1924
#1	.9698	98.84	4.884	48.13	4.813	5.078
#2	.9674	98.50	4.891	48.09	4.810	5.060
#3	.9719	98.51	4.922	48.40	4.849	5.063
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.641	94.33	4.910	4.832	5.020	4.738
Stddev	.020	.52	.023	.021	.020	.025
%RSD	.4325	.5540	.4740	.4343	.3905	.5211
#1	4.629	93.86	4.895	4.820	5.010	4.726
#2	4.630	94.24	4.899	4.821	5.007	4.723
#3	4.664	94.90	4.937	4.857	5.043	4.767
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	97.81	95.03	4.748	97.03	4.837	5.015
Stddev	.50	.30	.016	.57	.027	.020
%RSD	.5110	.3105	.3273	.5889	.5653	.3979
#1	97.43	95.37	4.766	96.81	4.810	5.002
#2	97.62	94.82	4.737	96.60	4.837	5.005
#3	98.38	94.92	4.742	97.68	4.865	5.038
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCV 3565024 Acquired: 8/30/2023 18:32:10 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	94.05	4.855	48.10	4.884	4.825	4.999
Stddev	.32	.022	.27	.019	.014	.022
%RSD	.3385	.4499	.5535	.3874	.2990	.4328
#1	94.41	4.838	47.87	4.875	4.813	4.991
#2	93.83	4.847	48.05	4.872	4.821	4.983
#3	93.90	4.879	48.39	4.906	4.841	5.024
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	47.04	4.889	5.096	4.926	4.755	5.031
Stddev	.07	.023	.013	.007	.046	.017
%RSD	.1492	.4780	.2609	.1502	.9651	.3427
#1	47.06	4.874	5.111	4.930	4.726	5.050
#2	46.96	4.877	5.092	4.918	4.732	5.017
#3	47.10	4.916	5.086	4.931	4.808	5.027
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	4.882
Stddev	.026
%RSD	.5297
#1	4.865
#2	4.870
#3	4.912
Check ?	Chk Pass
Value	
Range	

Sample Name: CCV 3565024 Acquired: 8/30/2023 18:32:10 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3889.8	24367.	10013.	21343.
Stddev	16.4	118.	29.	76.
%RSD	.42050	.48494	.29349	.35547
#1	3901.1	24443.	9987.5	21257.
#2	3897.2	24427.	10045.	21401.
#3	3871.0	24231.	10007.	21372.

Sample Name: CCB Acquired: 8/30/2023 18:36:29 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0003	-.0009	.0041	.0360	.0009	.0007
Stddev	.0031	.0169	.0012	.0031	.0004	.0002
%RSD	976.5	1807.	29.34	8.662	46.68	29.01
#1	.0001	-.0184	.0028	.0357	.0007	.0008
#2	.0025	.0153	.0052	.0331	.0006	.0005
#3	-.0037	.0003	.0043	.0393	.0013	.0009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0008	.0136	.0009	.0010	.0009	.0015
Stddev	.0005	.0046	.0005	.0004	.0005	.0047
%RSD	64.22	34.17	49.06	35.30	55.03	312.4
#1	.0010	.0182	.0007	.0009	.0004	-.0009
#2	.0002	.0089	.0006	.0007	.0008	-.0016
#3	.0013	.0136	.0015	.0014	.0014	.0070
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0192	.1812	.0070	.0267	.0009	.0049
Stddev	.0035	.0333	.0013	.0148	.0007	.0006
%RSD	18.34	18.39	17.92	55.16	79.09	11.80
#1	.0202	.2140	.0084	.0097	.0002	.0055
#2	.0221	.1474	.0067	.0356	.0016	.0043
#3	.0153	.1821	.0060	.0349	.0009	.0049
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: CCB Acquired: 8/30/2023 18:36:29 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0405	.0009	.0109	.0005	.0019	.0048
Stddev	.0111	.0002	.0058	.0012	.0013	.0036
%RSD	27.39	23.65	53.85	249.3	68.06	75.03
#1	.0532	.0010	.0057	-.0009	.0010	.0053
#2	.0333	.0007	.0097	.0009	.0013	.0010
#3	.0349	.0012	.0172	.0014	.0033	.0082
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0153	.0010	.0008	.0016	-.0026	.0004
Stddev	.0096	.0006	.0001	.0015	.0065	.0080
%RSD	62.55	59.06	16.12	93.43	254.8	2196.
#1	.0250	.0003	.0009	.0013	.0047	.0080
#2	.0152	.0013	.0009	.0032	-.0046	-.0080
#3	.0058	.0013	.0006	.0003	-.0078	.0012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0004
Stddev	.0005
%RSD	108.4
#1	-.0007
#2	-.0007
#3	.0001
Check ?	Chk Pass
High Limit	
Low Limit	

Sample Name: CCB Acquired: 8/30/2023 18:36:29 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4543.1	26186.	10245.	21875.
Stddev	25.0	131.	55.	111.
%RSD	.55092	.50061	.53368	.50906
#1	4561.8	26280.	10182.	21748.
#2	4552.9	26241.	10283.	21921.
#3	4514.7	26036.	10269.	21956.

Sample Name: 580-130928-B-1-A Acquired: 8/30/2023 18:40:05 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0009	.5693	.0102	.0951	.0639	.0003
Stddev	.0019	.0090	.0021	.0013	.0002	.0001
%RSD	205.4	1.580	21.03	1.412	.3095	26.69
#1	-.0027	.5766	.0082	.0966	.0642	.0002
#2	.0010	.5721	.0124	.0946	.0638	.0003
#3	-.0011	.5593	.0099	.0940	.0639	.0004

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0017	35.38	.0002	.0012	.0503	.0079
Stddev	.0020	.18	.0001	.0002	.0001	.0047
%RSD	120.9	.5075	50.20	16.69	.1287	59.54
#1	-.0013	35.49	.0003	.0013	.0503	.0025
#2	-.0039	35.48	.0002	.0013	.0502	.0107
#3	.0001	35.18	.0001	.0010	.0503	.0106

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.593	8.286	-.0017	53.89	.0384	.0043
Stddev	.010	.055	.0009	.23	.0008	.0006
%RSD	.6368	.6688	51.76	.4203	2.111	13.17
#1	1.596	8.335	-.0019	54.03	.0391	.0050
#2	1.601	8.226	-.0007	54.01	.0375	.0041
#3	1.581	8.296	-.0024	53.63	.0385	.0039

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	47.29	.0562	.1462	-.0085	.0001	-.0021
Stddev	.07	.0010	.0054	.0027	.0040	.0015
%RSD	.1449	1.791	3.695	31.72	4123.	70.91
#1	47.36	.0562	.1520	-.0083	.0031	-.0010
#2	47.23	.0553	.1451	-.0059	.0016	-.0015
#3	47.29	.0573	.1414	-.0113	-.0044	-.0037

Sample Name: 580-130928-B-1-A Acquired: 8/30/2023 18:40:05 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	16.14	.0003	.4193	.0375	-.0067	.0041
Stddev	.03	.0005	.0006	.0041	.0024	.0020
%RSD	.1968	165.2	.1488	10.92	35.72	48.31
#1	16.16	.0001	.4192	.0352	-.0040	.0022
#2	16.11	.0008	.4187	.0351	-.0084	.0062
#3	16.16	-.0000	.4199	.0423	-.0078	.0039

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.1443
Stddev	.0006
%RSD	.3984
#1	.1442
#2	.1439
#3	.1450

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4285.2	25778.	10302.	21907.
Stddev	7.5	70.	26.	66.
%RSD	.17540	.27198	.25464	.29992
#1	4276.5	25702.	10297.	21904.
#2	4289.4	25792.	10330.	21974.
#3	4289.7	25840.	10278.	21843.

Sample Name: 580-130928-B-2-A Acquired: 8/30/2023 18:43:29 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0016	2.302	.0063	.0444	.0260	.0002
Stddev	.0021	.026	.0007	.0009	.0001	.0001
%RSD	131.0	1.110	10.39	2.003	.5692	32.80
#1	-.0031	2.310	.0070	.0454	.0261	.0003
#2	-.0027	2.273	.0060	.0441	.0259	.0001
#3	.0008	2.322	.0058	.0438	.0260	.0003

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0007	49.24	.0001	.0019	.0107	.0093
Stddev	.0017	.56	.0001	.0002	.0002	.0022
%RSD	223.6	1.139	179.5	9.590	1.695	23.18
#1	-.0016	48.59	-.0000	.0019	.0108	.0088
#2	.0012	49.49	.0000	.0018	.0108	.0074
#3	-.0018	49.63	.0002	.0021	.0105	.0116

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	2.245	3.057	.0006	19.41	1.040	.0017
Stddev	.022	.010	.0014	.17	.010	.0002
%RSD	.9913	.3352	209.7	.8832	.9999	14.69
#1	2.221	3.056	.0021	19.22	1.028	.0016
#2	2.249	3.048	.0005	19.50	1.045	.0019
#3	2.265	3.068	-.0006	19.53	1.048	.0015

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	16.48	.0166	.1536	-.0102	.0006	-.0050
Stddev	.06	.0003	.0009	.0020	.0021	.0049
%RSD	.3549	1.985	.5691	19.42	374.8	98.48
#1	16.41	.0169	.1531	-.0109	.0011	.0006
#2	16.51	.0163	.1531	-.0079	.0024	-.0088
#3	16.52	.0167	.1546	-.0117	-.0017	-.0068

Sample Name: 580-130928-B-2-A Acquired: 8/30/2023 18:43:29 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	15.87	-.0002	.3051	.1985	-.0113	.0064
Stddev	.06	.0004	.0013	.0023	.0052	.0019
%RSD	.4068	232.6	.4204	1.155	45.81	29.22
#1	15.80	.0001	.3038	.1960	-.0148	.0062
#2	15.90	-.0006	.3051	.2005	-.0053	.0084
#3	15.92	.0001	.3063	.1990	-.0138	.0047

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0447
Stddev	.0001
%RSD	.3197
#1	.0448
#2	.0445
#3	.0447

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4398.9	26163.	10600.	22551.
Stddev	31.0	200.	41.	99.
%RSD	.70401	.76419	.38389	.43681
#1	4432.9	26381.	10618.	22602.
#2	4391.3	26120.	10629.	22613.
#3	4372.3	25988.	10554.	22437.

Sample Name: 580-130928-E-4-A Acquired: 8/30/2023 18:46:54 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0017	1.472	.0363	.1158	.0245	-.0001
Stddev	.0025	.015	.0011	.0004	.0003	.0000
%RSD	145.6	.9995	2.902	.3763	1.321	85.14
#1	-.0023	1.459	.0351	.1160	.0248	-.0000
#2	-.0038	1.470	.0370	.1153	.0245	-.0000
#3	.0010	1.488	.0367	.1161	.0242	-.0001

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0006	35.45	.0001	.0048	.0054	.0040
Stddev	.0015	.06	.0001	.0002	.0001	.0030
%RSD	253.1	.1696	90.69	4.760	1.405	74.53
#1	-.0002	35.50	.0002	.0046	.0053	.0027
#2	-.0004	35.46	.0000	.0047	.0055	.0019
#3	.0023	35.38	.0001	.0050	.0053	.0074

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.947	4.030	-.0003	48.72	1.843	.0054
Stddev	.020	.016	.0016	.17	.003	.0001
%RSD	.4008	.3988	622.5	.3482	.1667	2.075
#1	4.969	4.011	-.0012	48.91	1.847	.0053
#2	4.931	4.041	-.0012	48.60	1.843	.0055
#3	4.940	4.037	.0016	48.64	1.841	.0054

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	36.07	.0159	.2230	-.0144	-.0002	.0019
Stddev	.06	.0007	.0047	.0011	.0015	.0029
%RSD	.1765	4.397	2.105	7.755	796.8	154.3
#1	36.03	.0165	.2177	-.0136	.0012	.0050
#2	36.03	.0152	.2245	-.0157	-.0018	.0014
#3	36.14	.0161	.2267	-.0140	.0001	-.0008

Sample Name: 580-130928-E-4-A Acquired: 8/30/2023 18:46:54 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	21.27	.0000	.2422	.0943	-.0100	.0029
Stddev	.07	.0005	.0006	.0006	.0026	.0024
%RSD	.3320	1326.	.2519	.6884	26.05	80.40
#1	21.24	-.0006	.2419	.0940	-.0070	.0021
#2	21.22	.0002	.2418	.0950	-.0111	.0011
#3	21.35	.0005	.2429	.0938	-.0118	.0056

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0713
Stddev	.0003
%RSD	.4815
#1	.0711
#2	.0711
#3	.0717

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4273.8	25767.	10488.	22290.
Stddev	11.8	78.	67.	151.
%RSD	.27643	.30215	.63745	.67942
#1	4282.9	25835.	10550.	22407.
#2	4278.1	25784.	10497.	22344.
#3	4260.4	25682.	10417.	22119.

Sample Name: 580-130934-C-1-A PDS Acquired: 8/30/2023 20:48:28 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9503	19.62	.9536	9.863	.9725	1.002
Stddev	.0032	.03	.0064	.051	.0038	.001
%RSD	.3355	.1410	.6669	.5172	.3879	.1218
#1	.9474	19.59	.9525	9.819	.9697	1.004
#2	.9498	19.64	.9478	9.851	.9710	1.002
#3	.9537	19.63	.9604	9.919	.9768	1.002

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0031	27.37	.9652	.9407	1.002	.9135
Stddev	.0029	.03	.0042	.0042	.007	.0067
%RSD	93.40	.1017	.4302	.4430	.6570	.7314
#1	-.0037	27.39	.9633	.9378	.9964	.9095
#2	-.0057	27.34	.9623	.9388	.9993	.9212
#3	.0000	27.38	.9700	.9455	1.009	.9098

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	19.56	18.06	.9048	22.57	1.004	.9872
Stddev	.02	.05	.0007	.06	.002	.0079
%RSD	.0786	.2805	.0789	.2449	.1892	.8007
#1	19.58	18.01	.9039	22.60	1.006	.9796
#2	19.56	18.10	.9052	22.51	1.002	.9866
#3	19.54	18.09	.9051	22.61	1.004	.9953

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	21.43	.9490	4.764	.9610	.9665	.9786
Stddev	.06	.0025	.065	.0043	.0186	.0091
%RSD	.2577	.2620	1.371	.4492	1.927	.9253
#1	21.37	.9475	4.711	.9597	.9475	.9720
#2	21.48	.9477	4.744	.9575	.9673	.9750
#3	21.43	.9519	4.837	.9658	.9848	.9889

Sample Name: 580-130934-C-1-A PDS Acquired: 8/30/2023 20:48:28 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	13.58	.9540	1.047	.9875	.9777	.9862
Stddev	.04	.0071	.001	.0008	.0055	.0045
%RSD	.3113	.7439	.1209	.0854	.5629	.4540
#1	13.56	.9474	1.046	.9866	.9716	.9844
#2	13.56	.9532	1.049	.9883	.9823	.9913
#3	13.63	.9615	1.047	.9876	.9792	.9829

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.9854
Stddev	.0065
%RSD	.6623
#1	.9805
#2	.9830
#3	.9928

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4387.0	26352.	10796.	22865.
Stddev	16.8	90.	55.	100.
%RSD	.38345	.34032	.50492	.43920
#1	4401.2	26425.	10847.	22962.
#2	4391.4	26380.	10803.	22871.
#3	4368.4	26252.	10738.	22761.

Sample Name: 580-130928-D-5-A Acquired: 8/30/2023 18:50:15 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0015	.0169	.0027	.0006	.0011	-.0001
Stddev	.0027	.0427	.0006	.0009	.0002	.0001
%RSD	183.4	252.9	21.99	167.2	15.09	150.0
#1	.0013	.0638	.0027	.0013	.0010	-.0001
#2	-.0017	-.0199	.0033	.0008	.0010	.0000
#3	-.0041	.0069	.0021	-.0005	.0013	-.0002

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0007	.0336	.0001	-.0001	.0003	-.0039
Stddev	.0012	.0015	.0001	.0001	.0000	.0016
%RSD	179.5	4.321	53.47	134.7	15.00	39.81
#1	-.0001	.0320	.0000	-.0003	.0003	-.0037
#2	.0020	.0348	.0002	-.0000	.0003	-.0025
#3	.0000	.0341	.0002	-.0000	.0002	-.0056

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0190	.0128	-.0059	.0422	.0017	-.0000
Stddev	.0022	.0105	.0003	.0249	.0001	.0005
%RSD	11.38	82.37	5.255	59.11	8.639	5785.
#1	.0203	.0103	-.0057	.0259	.0019	-.0005
#2	.0165	.0244	-.0057	.0709	.0017	.0005
#3	.0202	.0038	-.0063	.0297	.0016	-.0000

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0830	.0000	.0139	.0018	.0005	-.0026
Stddev	.0056	.0003	.0011	.0023	.0034	.0021
%RSD	6.700	805.3	7.619	127.8	705.0	80.35
#1	.0892	.0002	.0141	-.0004	-.0031	-.0040
#2	.0810	.0002	.0128	.0041	.0036	-.0036
#3	.0786	-.0003	.0149	.0016	.0010	-.0002

Sample Name: 580-130928-D-5-A Acquired: 8/30/2023 18:50:15 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0464	.0000	.0003	.0009	-.0124	-.0014
Stddev	.0076	.0005	.0001	.0012	.0014	.0028
%RSD	16.36	2381.	28.00	129.4	11.63	200.8
#1	.0545	-.0001	.0002	.0017	-.0137	-.0024
#2	.0394	.0005	.0004	-.0005	-.0108	.0018
#3	.0454	-.0004	.0002	.0015	-.0127	-.0036

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0002
Stddev	.0001
%RSD	48.76
#1	-.0004
#2	-.0002
#3	-.0002

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4678.5	26894.	10720.	22777.
Stddev	6.6	46.	38.	74.
%RSD	.14204	.17071	.35855	.32418
#1	4671.3	26841.	10706.	22768.
#2	4679.8	26917.	10764.	22855.
#3	4684.4	26924.	10691.	22708.

Sample Name: CCV 3565024 Acquired: 8/30/2023 20:58:32 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9641	97.84	4.878	47.78	4.793	5.081
Stddev	.0008	.24	.017	.15	.018	.013
%RSD	.0845	.2415	.3400	.3221	.3644	.2488
#1	.9649	98.11	4.874	47.75	4.788	5.093
#2	.9633	97.66	4.864	47.65	4.779	5.081
#3	.9641	97.76	4.897	47.95	4.813	5.068
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.664	96.10	4.945	4.853	4.978	4.796
Stddev	.017	.48	.029	.028	.019	.040
%RSD	.3651	.5021	.5886	.5684	.3745	.8405
#1	4.658	95.74	4.931	4.839	4.973	4.776
#2	4.651	95.92	4.926	4.835	4.962	4.770
#3	4.684	96.65	4.978	4.885	4.998	4.843
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	99.29	F 88.88	4.648	97.27	4.911	4.947
Stddev	.60	.94	.005	.47	.034	.018
%RSD	.6013	1.060	.1150	.4783	.6871	.3722
#1	98.81	89.96	4.654	97.07	4.893	4.944
#2	99.10	88.28	4.643	96.94	4.891	4.930
#3	99.96	88.39	4.648	97.80	4.950	4.966
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		100.0				
Range		-10.00%				

Sample Name: CCV 3565024 Acquired: 8/30/2023 20:58:32 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	91.78	4.871	47.98	4.869	4.838	4.955
Stddev	.55	.028	.36	.022	.018	.016
%RSD	.6022	.5709	.7457	.4564	.3658	.3259
#1	92.40	4.855	47.63	4.864	4.833	4.952
#2	91.35	4.854	47.98	4.849	4.824	4.940
#3	91.59	4.903	48.34	4.893	4.858	4.972
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	46.09	4.899	5.074	4.971	4.768	5.007
Stddev	.08	.028	.008	.015	.042	.026
%RSD	.1636	.5630	.1553	.3004	.8715	.5163
#1	46.09	4.888	5.083	4.988	4.732	5.037
#2	46.02	4.879	5.068	4.968	4.759	4.995
#3	46.17	4.931	5.072	4.959	4.814	4.989
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	4.932
Stddev	.030
%RSD	.6090
#1	4.916
#2	4.913
#3	4.966
Check ?	Chk Pass
Value	
Range	

Sample Name: CCV 3565024 Acquired: 8/30/2023 20:58:32 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3932.3	24597.	10369.	21934.
Stddev	20.5	106.	37.	66.
%RSD	.52163	.43115	.35856	.30210
#1	3944.3	24663.	10327.	21869.
#2	3944.1	24654.	10382.	21932.
#3	3908.6	24475.	10398.	22001.

Sample Name: 580-130967-G-2-A Acquired: 8/30/2023 18:57:10 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0038	34.29	.0074	.0779	.1806	.0006
Stddev	.0031	.08	.0007	.0008	.0009	.0001
%RSD	80.91	.2457	9.373	1.091	.5119	12.36
#1	-.0033	34.35	.0082	.0789	.1797	.0005
#2	-.0010	34.32	.0072	.0773	.1805	.0006
#3	-.0071	34.19	.0069	.0776	.1815	.0007

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0028	17.24	-.0002	.0142	.0458	.0274
Stddev	.0009	.02	.0001	.0001	.0002	.0028
%RSD	33.64	.1341	24.35	1.043	.4061	10.05
#1	.0025	17.22	-.0002	.0141	.0460	.0285
#2	.0038	17.26	-.0002	.0142	.0458	.0243
#3	.0020	17.24	-.0003	.0144	.0456	.0294

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	27.35	4.890	.0066	13.08	.7208	.0014
Stddev	.07	.024	.0013	.05	.0039	.0001
%RSD	.2491	.4856	19.76	.3758	.5413	8.149
#1	27.28	4.895	.0077	13.13	.7165	.0015
#2	27.40	4.865	.0070	13.09	.7240	.0014
#3	27.38	4.911	.0052	13.03	.7220	.0012

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	27.35	.0711	.5256	-.0147	.0000	-.0040
Stddev	.06	.0008	.0044	.0007	.0005	.0008
%RSD	.2032	1.068	.8287	4.433	994.4	21.05
#1	27.40	.0705	.5305	-.0150	-.0005	-.0046
#2	27.35	.0709	.5239	-.0151	.0002	-.0030
#3	27.29	.0719	.5223	-.0139	.0004	-.0044

Sample Name: 580-130967-G-2-A Acquired: 8/30/2023 18:57:10 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	28.60	.0027	.1980	1.331	-.0103	.0604
Stddev	.23	.0005	.0003	.007	.0010	.0027
%RSD	.8073	19.79	.1727	.5123	9.835	4.391
#1	28.37	.0025	.1978	1.339	-.0095	.0578
#2	28.60	.0022	.1984	1.327	-.0115	.0631
#3	28.83	.0032	.1978	1.327	-.0101	.0604

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0521
Stddev	.0002
%RSD	.4277
#1	.0519
#2	.0522
#3	.0523

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4354.2	26091.	10482.	22263.
Stddev	24.1	153.	13.	44.
%RSD	.55429	.58583	.12551	.19984
#1	4379.3	26262.	10495.	22307.
#2	4352.1	26041.	10483.	22264.
#3	4331.2	25969.	10469.	22218.

Sample Name: 580-130934-D-2-C MSD Acquired: 8/30/2023 21:09:29 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9537	18.69	.9983	10.12	1.002	1.010
Stddev	.0543	.99	.0019	.02	.003	.055
%RSD	5.698	5.281	.1889	.2177	.2672	5.429
#1	.8910	17.55	.9977	10.11	1.000	.9467
#2	.9855	19.24	.9968	10.11	1.002	1.042
#3	.9847	19.27	1.000	10.15	1.005	1.042

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0029	46.08	1.019	.9870	1.032	.9607
Stddev	.0012	.66	.003	.0027	.002	.0141
%RSD	43.33	1.426	.2898	.2690	.2375	1.467
#1	-.0043	45.32	1.016	.9852	1.030	.9444
#2	-.0023	46.38	1.019	.9858	1.030	.9694
#3	-.0020	46.53	1.022	.9901	1.034	.9682

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	20.07	19.46	.9018	29.10	1.005	1.020
Stddev	.29	1.02	.0503	.47	.017	.003
%RSD	1.469	5.264	5.574	1.632	1.673	.3173
#1	19.73	18.28	.8439	28.55	.9860	1.018
#2	20.21	20.01	.9281	29.36	1.015	1.018
#3	20.27	20.10	.9335	29.38	1.015	1.023

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	25.60	.9995	5.197	.9959	1.056	1.025
Stddev	1.37	.0029	.029	.0025	.005	.002
%RSD	5.359	.2930	.5594	.2496	.4351	.1824
#1	24.01	.9969	5.175	.9980	1.052	1.028
#2	26.32	.9989	5.187	.9931	1.056	1.025
#3	26.45	1.003	5.230	.9964	1.061	1.024

Sample Name: 580-130934-D-2-C MSD Acquired: 8/30/2023 21:09:29 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	22.17	1.008	1.123	.9942	1.018	.9646
Stddev	1.19	.003	.062	.0524	.012	.0503
%RSD	5.348	.3185	5.487	5.269	1.157	5.210
#1	20.80	1.005	1.051	.9337	1.004	.9066
#2	22.85	1.008	1.156	1.023	1.021	.9957
#3	22.86	1.012	1.160	1.025	1.027	.9915

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	1.023
Stddev	.003
%RSD	.3263
#1	1.020
#2	1.022
#3	1.027

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4381.7	26254.	11307.	23695.
Stddev	11.1	80.	494.	1053.
%RSD	.25342	.30639	4.3668	4.4453
#1	4390.6	26315.	11877.	24910.
#2	4385.2	26283.	11050.	23143.
#3	4369.3	26163.	10996.	23033.

Sample Name: CCV 3565024 Acquired: 8/30/2023 19:00:31 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.030	105.6	5.169	50.73	5.092	5.426
Stddev	.010	.9	.020	.19	.018	.058
%RSD	.9519	.8303	.3922	.3686	.3535	1.073
#1	1.041	106.6	5.157	50.61	5.084	5.492
#2	1.027	105.2	5.157	50.63	5.080	5.403
#3	1.023	105.0	5.192	50.94	5.113	5.383
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.910	99.84	5.165	5.087	5.300	4.998
Stddev	.019	.64	.020	.019	.020	.027
%RSD	.3861	.6448	.3927	.3722	.3706	.5355
#1	4.896	99.67	5.152	5.075	5.290	4.984
#2	4.901	99.30	5.155	5.076	5.286	4.981
#3	4.931	100.6	5.189	5.109	5.322	5.028
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	103.5	100.9	5.034	101.9	5.117	5.274
Stddev	.7	1.1	.045	.6	.037	.022
%RSD	.6397	1.107	.8940	.6216	.7199	.4223
#1	103.3	102.1	5.085	101.7	5.113	5.257
#2	102.9	100.6	5.017	101.4	5.081	5.265
#3	104.2	99.92	4.999	102.6	5.155	5.299
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCV 3565024 Acquired: 8/30/2023 19:00:31 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	99.21	5.104	50.56	5.125	5.085	5.258
Stddev	1.33	.021	.23	.023	.012	.028
%RSD	1.337	.4118	.4540	.4564	.2420	.5293
#1	100.7	5.090	50.47	5.113	5.081	5.233
#2	98.86	5.093	50.39	5.110	5.075	5.252
#3	98.10	5.128	50.83	5.152	5.099	5.288
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	51.32	5.145	5.429	5.288	4.979	5.385
Stddev	.46	.026	.048	.043	.030	.054
%RSD	.8925	.5034	.8770	.8119	.6047	.9969
#1	51.84	5.135	5.483	5.336	4.945	5.446
#2	51.15	5.127	5.413	5.277	4.991	5.362
#3	50.97	5.175	5.392	5.252	5.001	5.346
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	5.125
Stddev	.023
%RSD	.4429
#1	5.114
#2	5.110
#3	5.152
Check ?	Chk Pass
Value	
Range	

Sample Name: CCV 3565024 Acquired: 8/30/2023 19:00:31 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3717.2	23239.	9511.4	20218.
Stddev	9.5	68.	107.8	227.
%RSD	.25632	.29101	1.1337	1.1210
#1	3722.5	23263.	9404.2	19997.
#2	3722.8	23291.	9510.0	20209.
#3	3706.2	23163.	9619.9	20450.

Sample Name: 580-130934-D-5-A Acquired: 8/30/2023 21:19:30 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0036	-.0031	.0023	.0323	.0088	-.0001
Stddev	.0022	.0336	.0014	.0003	.0002	.0001
%RSD	61.81	1100.	60.78	.9210	2.398	107.8
#1	-.0051	-.0402	.0007	.0326	.0090	.0000
#2	-.0010	.0059	.0034	.0320	.0086	-.0001
#3	-.0046	.0252	.0026	.0324	.0088	-.0001

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0006	24.62	.0001	-.0001	.0002	.0050
Stddev	.0022	.13	.0002	.0002	.0002	.0042
%RSD	386.3	.5183	125.1	237.3	113.2	83.32
#1	.0002	24.52	.0002	.0001	-.0000	.0005
#2	.0012	24.58	-.0001	-.0003	.0003	.0088
#3	-.0031	24.77	.0002	-.0000	.0002	.0056

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0123	2.795	-.0068	9.370	-.0002	.0007
Stddev	.0027	.015	.0011	.075	.0010	.0008
%RSD	21.77	.5327	16.93	.7989	631.5	109.3
#1	.0124	2.810	-.0081	9.355	.0001	.0016
#2	.0096	2.793	-.0062	9.303	.0007	.0005
#3	.0149	2.781	-.0060	9.451	-.0013	.0000

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	7.808	.0009	.0822	-.0095	-.0019	-.0024
Stddev	.022	.0001	.0010	.0015	.0009	.0044
%RSD	.2869	11.34	1.170	16.15	48.08	185.2
#1	7.803	.0008	.0824	-.0107	-.0028	-.0014
#2	7.788	.0010	.0831	-.0101	-.0018	.0014
#3	7.832	.0010	.0812	-.0078	-.0010	-.0072

Sample Name: 580-130934-D-5-A Acquired: 8/30/2023 21:19:30 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	13.70	-.0005	.1123	.0003	-.0094	.0048
Stddev	.04	.0004	.0003	.0014	.0022	.0017
%RSD	.2764	71.99	.2844	545.9	22.84	34.93
#1	13.69	-.0004	.1119	-.0011	-.0070	.0052
#2	13.68	-.0009	.1124	.0001	-.0112	.0029
#3	13.75	-.0002	.1125	.0018	-.0101	.0062

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0007
Stddev	.0002
%RSD	24.07
#1	-.0005
#2	-.0008
#3	-.0008

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4654.0	26876.	11331.	23606.
Stddev	22.6	120.	19.	33.
%RSD	.48521	.44809	.16688	.13942
#1	4676.7	26989.	11349.	23641.
#2	4653.6	26890.	11333.	23599.
#3	4631.6	26749.	11311.	23577.

Sample Name: CCB Acquired: 8/30/2023 19:04:53 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0006	.0030	.0049	.0311	.0004	.0009
Stddev	.0027	.0482	.0001	.0026	.0001	.0001
%RSD	425.6	1625.	2.798	8.266	17.46	7.967
#1	.0038	-.0440	.0048	.0340	.0004	.0009
#2	-.0012	.0005	.0049	.0303	.0005	.0009
#3	-.0006	.0523	.0050	.0291	.0004	.0008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0006	.0106	.0007	.0008	.0006	-.0020
Stddev	.0017	.0063	.0002	.0001	.0002	.0043
%RSD	286.7	59.90	22.32	11.61	38.07	212.2
#1	-.0006	.0035	.0007	.0008	.0005	.0005
#2	.0025	.0125	.0008	.0008	.0004	.0004
#3	-.0001	.0157	.0005	.0007	.0008	-.0070
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0205	.1062	.0066	.0044	.0013	.0042
Stddev	.0007	.0273	.0016	.0383	.0005	.0010
%RSD	3.318	25.72	24.73	867.5	40.86	24.51
#1	.0210	.1372	.0082	.0253	.0008	.0052
#2	.0208	.0858	.0049	.0278	.0018	.0042
#3	.0197	.0956	.0068	-.0398	.0012	.0032
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: CCB Acquired: 8/30/2023 19:04:53 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0394	.0006	.0090	.0005	.0008	-.0005
Stddev	.0075	.0004	.0019	.0010	.0026	.0009
%RSD	18.99	67.22	21.31	210.7	321.2	158.5
#1	.0327	.0011	.0086	.0001	.0034	.0000
#2	.0381	.0002	.0111	-.0003	-.0018	-.0015
#3	.0475	.0006	.0073	.0016	.0009	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.1397	.0009	.0009	.0032	-.0077	.0010
Stddev	.0134	.0002	.0001	.0008	.0078	.0026
%RSD	9.565	27.68	14.56	26.30	101.4	252.0
#1	.1524	.0007	.0010	.0035	-.0022	.0016
#2	.1408	.0007	.0009	.0022	-.0166	.0033
#3	.1257	.0011	.0007	.0038	-.0042	-.0018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0005
Stddev	.0002
%RSD	27.69
#1	-.0004
#2	-.0007
#3	-.0005
Check ?	Chk Pass
High Limit	
Low Limit	

Sample Name: CCB Acquired: 8/30/2023 19:04:53 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4381.3	25250.	9964.7	21150.
Stddev	24.1	187.	94.3	198.
%RSD	.54938	.73931	.94669	.93823
#1	4398.8	25379.	9861.0	20930.
#2	4391.3	25336.	9987.9	21205.
#3	4353.9	25036.	10045.	21315.

Sample Name: CCVL 3561056 Acquired: 8/30/2023 19:08:30 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0553	.5535	.0638	.5354	.0220	.0230
Stddev	.0015	.0172	.0018	.0033	.0003	.0001
%RSD	2.743	3.108	2.835	.6087	1.259	.2954
#1	.0544	.5657	.0621	.5355	.0218	.0230
#2	.0544	.5338	.0636	.5321	.0218	.0230
#3	.0571	.5610	.0657	.5386	.0223	.0229
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.2880	.5596	.0210	.0207	.0287	.0465
Stddev	.0022	.0019	.0003	.0002	.0004	.0006
%RSD	.7803	.3332	1.284	.8816	1.306	1.310
#1	.2863	.5582	.0207	.0209	.0291	.0472
#2	.2873	.5588	.0211	.0205	.0284	.0463
#3	.2906	.5617	.0212	.0207	.0286	.0460
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.5428	3.232	.1059	.5306	.0227	.0439
Stddev	.0020	.007	.0005	.0214	.0003	.0003
%RSD	.3716	.2040	.4276	4.036	1.201	.5776
#1	.5451	3.228	.1058	.5114	.0230	.0436
#2	.5414	3.240	.1064	.5268	.0226	.0439
#3	.5419	3.230	.1055	.5537	.0226	.0441
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCVL 3561056 Acquired: 8/30/2023 19:08:30 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.5725	.0204	.1118	.0322	.0646	.1027
Stddev	.0075	.0004	.0026	.0006	.0021	.0029
%RSD	1.312	2.039	2.343	1.878	3.210	2.849
#1	.5641	.0203	.1098	.0315	.0623	.1059
#2	.5747	.0209	.1148	.0325	.0648	.1001
#3	.5786	.0201	.1109	.0326	.0665	.1021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.132	.1016	.1130	.0327	.0915	.0337
Stddev	.004	.0009	.0003	.0007	.0041	.0030
%RSD	.3197	.8449	.2452	2.224	4.495	9.010
#1	1.128	.1008	.1128	.0324	.0867	.0325
#2	1.135	.1025	.1128	.0335	.0936	.0315
#3	1.133	.1017	.1133	.0322	.0941	.0372
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0400
Stddev	.0001
%RSD	.3332
#1	.0399
#2	.0400
#3	.0401
Check ?	Chk Pass
Value	
Range	

Sample Name: CCVL 3561056 Acquired: 8/30/2023 19:08:30 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4339.7	25192.	9903.0	21076.
Stddev	13.5	74.	47.9	95.
%RSD	.31013	.29559	.48374	.45165
#1	4354.0	25250.	9919.0	21110.
#2	4337.8	25218.	9849.2	20969.
#3	4327.2	25108.	9940.9	21150.

Sample Name: 580-130733-A-6-D Acquired: 8/30/2023 19:11:56 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0006	.1455	.0011	.0170	.0025	-.0001
Stddev	.0031	.0140	.0008	.0008	.0000	.0001
%RSD	486.7	9.635	73.21	4.500	.0696	55.07
#1	-.0030	.1294	.0010	.0177	.0025	-.0002
#2	-.0018	.1541	.0003	.0162	.0025	-.0001
#3	.0029	.1532	.0019	.0171	.0025	-.0001

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0018	1.077	.0010	.0001	.0055	.0036
Stddev	.0011	.007	.0001	.0001	.0001	.0028
%RSD	61.54	.6955	10.04	57.32	1.624	76.88
#1	.0015	1.076	.0009	.0002	.0056	.0036
#2	.0009	1.071	.0010	.0000	.0055	.0009
#3	.0030	1.085	.0011	.0001	.0054	.0064

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.4290	374.8	-.0067	2.930	.0242	.0011
Stddev	.0066	7.2	.0015	.031	.0010	.0001
%RSD	1.529	1.930	22.35	1.067	4.040	10.62
#1	.4290	382.1	-.0084	2.934	.0246	.0010
#2	.4225	374.5	-.0057	2.959	.0249	.0010
#3	.4356	367.7	-.0060	2.897	.0231	.0012

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.532	.0056	.5654	.0016	.0001	.0005
Stddev	.017	.0003	.0036	.0016	.0036	.0077
%RSD	1.133	5.895	.6328	102.3	2536.	1546.
#1	1.516	.0059	.5677	-.0003	-.0039	.0029
#2	1.530	.0052	.5613	.0022	.0030	-.0081
#3	1.550	.0058	.5672	.0027	.0014	.0066

Sample Name: 580-130733-A-6-D Acquired: 8/30/2023 19:11:56 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.3832	.0099	.0105	.0109	.0196	.0035
Stddev	.0128	.0008	.0001	.0007	.0021	.0002
%RSD	3.348	7.953	.4854	6.011	10.88	6.461
#1	.3959	.0107	.0106	.0117	.0218	.0032
#2	.3836	.0099	.0105	.0106	.0176	.0035
#3	.3702	.0092	.0105	.0105	.0194	.0037

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0546
Stddev	.0002
%RSD	.4547
#1	.0544
#2	.0545
#3	.0549

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4142.5	25151.	10145.	21516.
Stddev	12.3	82.	6.	28.
%RSD	.29588	.32707	.05794	.13028
#1	4147.1	25170.	10138.	21488.
#2	4151.8	25223.	10149.	21544.
#3	4128.6	25062.	10147.	21517.

Sample Name: 580-130733-A-7-D Acquired: 8/30/2023 19:15:25 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0174	26.29	.0470	.3111	.8364	.0013
Stddev	.0017	.29	.0017	.0025	.0092	.0001
%RSD	9.944	1.086	3.577	.8078	1.100	6.970
#1	.0163	26.05	.0488	.3126	.8470	.0012
#2	.0165	26.22	.0468	.3082	.8308	.0014
#3	.0194	26.61	.0454	.3125	.8315	.0013

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.4723	195.6	.0391	.0225	.6542	2.639
Stddev	.0056	1.6	.0003	.0003	.0069	.023
%RSD	1.184	.8248	.8219	1.251	1.058	.8880
#1	.4781	197.4	.0394	.0228	.6622	2.666
#2	.4719	195.1	.0388	.0223	.6498	2.626
#3	.4669	194.3	.0392	.0225	.6506	2.625

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	38.61	C .0000	k .0316	89.03	.9950	.1557
Stddev	.27	.0000	.0034	.76	.0071	.0010
%RSD	.6869	.0000	10.63	.8546	.7175	.6283
#1	38.89	C .0000	k .0278	89.90	1.003	.1567
#2	38.55	C .0000	k .0328	88.70	.9918	.1548
#3	38.37	C .0000	k .0342	88.48	.9900	.1555

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	k 36.89	.2286	236.0	.2062	.0231	.0979
Stddev	.29	.0010	3.1	.0025	.0018	.0013
%RSD	.7729	.4162	1.301	1.219	7.846	1.323
#1	k 36.77	.2297	239.5	.2087	.0252	.0990
#2	k 36.68	.2283	233.9	.2037	.0225	.0983
#3	k 37.21	.2279	234.6	.2061	.0218	.0965

Sample Name: 580-130733-A-7-D Acquired: 8/30/2023 19:15:25 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.367	.4020	.9592	.7043	k -.0201	.3003
Stddev	.075	.0041	.0103	.0108	.0020	.0034
%RSD	1.720	1.031	1.075	1.533	9.960	1.135
#1	4.297	.4068	.9527	.6961	k -.0210	.2968
#2	4.359	.4000	.9538	.7004	k -.0215	.3005
#3	4.446	.3992	.9711	.7166	k -.0178	.3036

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	7.351
Stddev	.087
%RSD	1.179
#1	7.451
#2	7.307
#3	7.295

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3468.0	22404.	9684.0	20639.
Stddev	35.2	211.	97.7	219.
%RSD	1.0139	.94373	1.0087	1.0623
#1	3427.7	22161.	9736.2	20706.
#2	3492.7	22541.	9744.4	20817.
#3	3483.6	22511.	9571.3	20394.

Sample Name: CCB Acquired: 8/30/2023 21:44:49 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0035	.0203	.0062	.0485	.0019	.0008
Stddev	.0003	.0263	.0015	.0052	.0009	.0000
%RSD	9.633	129.4	24.57	10.76	46.74	.0945
#1	-.0034	.0501	.0067	.0427	.0009	.0008
#2	-.0038	.0105	.0045	.0527	.0024	.0008
#3	-.0032	.0004	.0074	.0501	.0023	.0008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0012	.0179	.0019	.0019	.0017	-.0025
Stddev	.0019	.0057	.0009	.0009	.0010	.0061
%RSD	157.9	32.12	50.23	46.86	59.89	240.8
#1	.0003	.0165	.0008	.0009	.0005	-.0082
#2	-.0001	.0242	.0025	.0024	.0023	-.0032
#3	.0033	.0130	.0024	.0023	.0022	.0039
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0282	.2235	-.0009	.0125	.0013	.0051
Stddev	.0006	.0249	.0015	.0070	.0006	.0004
%RSD	2.043	11.13	157.9	56.02	41.07	8.148
#1	.0280	.2514	.0007	.0146	.0020	.0048
#2	.0289	.2035	-.0021	.0047	.0010	.0055
#3	.0278	.2157	-.0014	.0182	.0010	.0049
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: CCB Acquired: 8/30/2023 21:44:49 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0351	.0013	.0198	.0030	.0026	.0010
Stddev	.0089	.0010	.0086	.0021	.0009	.0043
%RSD	25.38	76.14	43.16	70.56	35.38	417.3
#1	.0452	.0002	.0100	.0009	.0022	-.0029
#2	.0321	.0016	.0251	.0030	.0019	.0056
#3	.0281	.0020	.0244	.0052	.0036	.0004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0405	.0021	.0009	.0032	-.0063	-.0013
Stddev	.0057	.0009	.0001	.0006	.0004	.0013
%RSD	14.06	44.06	11.92	17.94	5.960	95.38
#1	.0441	.0010	.0010	.0038	-.0063	-.0010
#2	.0339	.0027	.0009	.0032	-.0067	-.0027
#3	.0435	.0025	.0008	.0027	-.0059	-.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0006
Stddev	.0009
%RSD	148.4
#1	-.0004
#2	.0012
#3	.0010
Check ?	Chk Pass
High Limit	
Low Limit	

Sample Name: CCB Acquired: 8/30/2023 21:44:49 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4601.6	25919.	11005.	22755.
Stddev	37.0	225.	47.	115.
%RSD	.80303	.86831	.42338	.50577
#1	4583.9	25829.	10966.	22642.
#2	4644.1	26175.	11057.	22872.
#3	4576.9	25753.	10993.	22750.

Sample Name: 580-130733-A-3-D Acquired: 8/30/2023 19:18:33 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0014	20.74	.0181	.1415	.2704	.0060
Stddev	.0037	.05	.0018	.0010	.0006	.0001
%RSD	272.0	.2584	10.21	.6899	.2093	2.158
#1	-.0015	20.77	.0201	.1417	.2709	.0060
#2	.0024	20.77	.0165	.1404	.2698	.0058
#3	-.0050	20.67	.0177	.1424	.2705	.0061

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0268	15.15	.1220	.1474	1.327	.4097
Stddev	.0026	.09	.0005	.0008	.003	.0054
%RSD	9.836	.5780	.4263	.5211	.2179	1.324
#1	.0265	15.06	.1217	.1472	1.326	.4105
#2	.0295	15.16	.1216	.1468	1.324	.4039
#3	.0243	15.23	.1226	.1483	1.330	.4147

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	339.2	C .0000	k .0329	27.17	53.60	.0304
Stddev	2.1	.0000	.0009	.16	.30	.0003
%RSD	.6258	.0000	2.823	.5940	.5606	1.023
#1	336.9	C .0000	k .0340	26.98	53.27	.0307
#2	339.7	C .0000	k .0324	27.24	53.67	.0303
#3	341.1	C .0000	k .0324	27.28	53.86	.0301

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	k 7.988	.2656	342.4	.0106	-.0020	.0304
Stddev	.029	.0015	.7	.0027	.0020	.0029
%RSD	.3650	.5698	.1906	25.94	100.6	9.675
#1	k 8.022	.2654	343.1	.0075	-.0003	.0337
#2	k 7.970	.2642	341.8	.0116	-.0015	.0283
#3	k 7.972	.2672	342.1	.0126	-.0043	.0291

Sample Name: 580-130733-A-3-D Acquired: 8/30/2023 19:18:33 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	2.535	.0126	.1479	.6200	k -.0307	.8715
Stddev	.031	.0001	.0005	.0026	.0049	.0056
%RSD	1.219	.7705	.3414	.4168	16.08	.6440
#1	2.568	.0127	.1484	.6172	k -.0276	.8654
#2	2.530	.0125	.1474	.6206	k -.0364	.8763
#3	2.507	.0127	.1479	.6223	k -.0281	.8730

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	2.180
Stddev	.012
%RSD	.5307
#1	2.172
#2	2.176
#3	2.194

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3963.2	25951.	10922.	23280.
Stddev	10.9	77.	38.	80.
%RSD	.27395	.29833	.34358	.34284
#1	3973.1	26034.	10880.	23193.
#2	3964.8	25941.	10933.	23298.
#3	3951.6	25880.	10952.	23349.

Sample Name: 580-130733-A-4-D Acquired: 8/30/2023 19:23:14 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0048	18.53	.0141	.0634	.2891	.0046
Stddev	.0009	.40	.0028	.0007	.0017	.0002
%RSD	18.43	2.165	20.11	1.177	.5853	3.852
#1	-.0039	18.99	.0148	.0626	.2878	.0047
#2	-.0049	18.36	.0109	.0636	.2885	.0047
#3	-.0057	18.25	.0164	.0641	.2910	.0044

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0234	18.33	.0991	.1527	1.152	.4903
Stddev	.0018	.13	.0007	.0005	.005	.0053
%RSD	7.664	.6897	.7137	.3388	.4777	1.085
#1	.0254	18.47	.0986	.1529	1.150	.4955
#2	.0219	18.22	.0988	.1521	1.149	.4906
#3	.0229	18.32	.0999	.1531	1.159	.4849

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	312.9	C .0000	k .0260	22.95	56.55	.0223
Stddev	1.5	.0000	.0005	.09	.30	.0004
%RSD	.4952	.0000	1.803	.4026	.5245	1.916
#1	314.2	C .0000	k .0258	23.04	56.81	.0218
#2	311.2	C .0000	k .0265	22.86	56.22	.0226
#3	313.2	C .0000	k .0257	22.95	56.61	.0224

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	k 4.407	.2335	298.6	.0096	-.0034	.0302
Stddev	.131	.0016	1.0	.0006	.0006	.0022
%RSD	2.961	.6865	.3294	6.409	18.63	7.303
#1	k 4.555	.2324	299.6	.0094	-.0039	.0277
#2	k 4.358	.2328	297.6	.0090	-.0027	.0320
#3	k 4.308	.2353	298.7	.0102	-.0034	.0309

Sample Name: 580-130733-A-4-D Acquired: 8/30/2023 19:23:14 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	2.495	.0109	.0789	.4035	k -.0273	.7594
Stddev	.067	.0005	.0020	.0104	.0085	.0187
%RSD	2.676	4.733	2.515	2.588	31.24	2.461
#1	2.572	.0112	.0811	.4155	k -.0370	.7809
#2	2.462	.0103	.0781	.3977	k -.0208	.7485
#3	2.451	.0111	.0774	.3971	k -.0242	.7487

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	1.763
Stddev	.005
%RSD	.2686
#1	1.760
#2	1.760
#3	1.768

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3953.9	25582.	10409.	22190.
Stddev	12.6	108.	199.	431.
%RSD	.31963	.42111	1.9116	1.9413
#1	3962.3	25655.	10182.	21702.
#2	3960.1	25634.	10488.	22349.
#3	3939.4	25458.	10555.	22518.

Sample Name: 580-130733-A-1-E Acquired: 8/30/2023 19:31:22 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0062	23.21	.0182	.0961	.3120	.0038
Stddev	.0024	.09	.0029	.0003	.0005	.0001
%RSD	38.39	.4006	16.13	.3060	.1474	1.587
#1	-.0087	23.31	.0155	.0961	.3119	.0038
#2	-.0040	23.20	.0176	.0964	.3116	.0038
#3	-.0060	23.13	.0213	.0958	.3125	.0037

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0142	690.7	.0711	.1323	.7156	.4004
Stddev	.0033	4.4	.0003	.0003	.0012	.0017
%RSD	23.57	.6410	.4502	.2621	.1702	.4264
#1	.0111	695.7	.0708	.1319	.7158	.3998
#2	.0177	687.3	.0712	.1325	.7143	.4023
#3	.0137	689.1	.0714	.1326	.7167	.3991

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	202.0	C .0000	k .0628	40.04	35.34	.0216
Stddev	1.3	.0000	.0001	.28	.21	.0004
%RSD	.6544	.0000	.2289	.7112	.5983	1.941
#1	203.5	C .0000	k .0628	40.35	35.58	.0220
#2	201.0	C .0000	k .0627	39.79	35.20	.0212
#3	201.5	C .0000	k .0629	40.00	35.24	.0216

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	k 8.688	.1650	209.1	.0320	-.0027	.0160
Stddev	.040	.0002	1.4	.0013	.0028	.0043
%RSD	.4645	.1089	.6833	4.057	104.4	26.75
#1	k 8.735	.1652	208.3	.0326	-.0005	.0169
#2	k 8.660	.1648	208.3	.0328	-.0059	.0114
#3	k 8.670	.1649	210.8	.0305	-.0017	.0198

Sample Name: 580-130733-A-1-E Acquired: 8/30/2023 19:31:22 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	3.001	.0118	7.456	.8946	k -.0231	.5438
Stddev	.009	.0004	.056	.0021	.0033	.0049
%RSD	.3014	3.790	.7527	.2355	14.06	.8994
#1	2.991	.0123	7.485	.8954	k -.0246	.5491
#2	3.009	.0119	7.391	.8962	k -.0254	.5427
#3	3.002	.0114	7.492	.8922	k -.0194	.5395

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	1.574
Stddev	.002
%RSD	.1134
#1	1.574
#2	1.573
#3	1.576

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3694.4	24445.	10856.	23128.
Stddev	2.9	40.	43.	94.
%RSD	.07918	.16312	.39379	.40538
#1	3694.7	24431.	10902.	23223.
#2	3697.1	24490.	10850.	23123.
#3	3691.3	24414.	10817.	23036.

Sample Name: 580-130524-B-8-C@2 Acquired: 8/30/2023 19:36:26 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0064	287.5	.0632	.0531	1.533	.0098
Stddev	.0013	.8	.0009	.0002	.004	.0001
%RSD	20.43	.2834	1.445	.3463	.2416	1.201
#1	-.0056	286.8	.0642	.0530	1.530	.0097
#2	-.0057	288.4	.0631	.0533	1.531	.0099
#3	-.0079	287.3	.0624	.0529	1.537	.0098

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0236	94.70	.0060	.1242	.8577	.5547
Stddev	.0016	.44	.0001	.0009	.0042	.0067
%RSD	6.582	.4681	2.193	.6913	.4892	1.206
#1	.0243	94.42	.0060	.1232	.8545	.5619
#2	.0218	94.47	.0062	.1246	.8563	.5487
#3	.0246	95.21	.0059	.1248	.8625	.5535

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	382.2	9.144	.2683	88.34	10.20	.0134
Stddev	1.9	.185	.0004	.40	.05	.0004
%RSD	.4932	2.023	.1492	.4487	.5015	2.776
#1	380.9	9.341	.2679	88.02	10.16	.0130
#2	381.3	9.118	.2687	88.21	10.18	.0135
#3	384.3	8.974	.2682	88.78	10.26	.0137

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	2.880	.4825	5.011	.0826	.0078	.0016
Stddev	.014	.0011	.030	.0008	.0021	.0018
%RSD	.4941	.2284	.6080	.9885	26.40	116.7
#1	2.876	.4816	4.985	.0823	.0082	.0037
#2	2.896	.4821	5.005	.0836	.0097	.0006
#3	2.868	.4837	5.045	.0821	.0056	.0004

Sample Name: 580-130524-B-8-C@2 Acquired: 8/30/2023 19:36:26 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.229	.0099	.2410	20.21	.0189	1.375
Stddev	.024	.0003	.0002	.04	.0063	.001
%RSD	.5587	3.525	.0841	.1807	32.99	.0542
#1	4.217	.0100	.2408	20.17	.0228	1.374
#2	4.256	.0095	.2412	20.24	.0223	1.375
#3	4.214	.0102	.2410	20.21	.0117	1.376

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	1.305
Stddev	.007
%RSD	.5635
#1	1.297
#2	1.305
#3	1.312

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4197.0	26747.	11287.	23982.
Stddev	8.7	65.	29.	77.
%RSD	.20649	.24393	.25633	.32310
#1	4200.0	26785.	11274.	23913.
#2	4203.7	26785.	11266.	23968.
#3	4187.2	26672.	11320.	24066.

Sample Name: CCV 3565024 Acquired: 8/30/2023 19:39:35 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9783	100.1	4.879	47.92	4.812	5.148
Stddev	.0182	1.4	.021	.17	.017	.074
%RSD	1.862	1.355	.4241	.3645	.3544	1.430
#1	.9994	101.6	4.874	47.87	4.805	5.231
#2	.9680	99.51	4.862	47.77	4.799	5.126
#3	.9677	99.05	4.902	48.11	4.831	5.089
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.636	96.12	4.911	4.828	4.990	4.804
Stddev	.022	.11	.015	.018	.018	.012
%RSD	.4669	.1147	.3002	.3759	.3597	.2497
#1	4.632	96.14	4.904	4.820	4.986	4.803
#2	4.617	96.01	4.901	4.816	4.974	4.793
#3	4.660	96.22	4.928	4.849	5.009	4.817
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	99.48	F 74.31	4.754	97.59	4.920	4.950
Stddev	.14	.78	.064	.06	.004	.019
%RSD	.1383	1.044	1.335	.0615	.0745	.3894
#1	99.49	75.16	4.827	97.57	4.919	4.939
#2	99.33	74.11	4.725	97.66	4.917	4.939
#3	99.61	73.65	4.711	97.55	4.924	4.972
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		100.0				
Range		-10.00%				

Sample Name: CCV 3565024 Acquired: 8/30/2023 19:39:35 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	91.45	4.838	46.33	4.854	4.808	4.949
Stddev	1.36	.014	.15	.015	.015	.025
%RSD	1.490	.2967	.3140	.2995	.3130	.5043
#1	92.99	4.831	46.29	4.842	4.812	4.940
#2	90.99	4.829	46.22	4.849	4.792	4.929
#3	90.38	4.855	46.50	4.870	4.821	4.977
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	47.05	4.859	5.146	5.044	4.678	5.102
Stddev	.56	.015	.078	.069	.021	.075
%RSD	1.182	.3178	1.510	1.365	.4404	1.461
#1	47.66	4.853	5.235	5.123	4.658	5.186
#2	46.94	4.848	5.113	5.011	4.676	5.078
#3	46.56	4.877	5.091	4.998	4.699	5.042
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	4.868
Stddev	.016
%RSD	.3252
#1	4.859
#2	4.858
#3	4.886
Check ?	Chk Pass
Value	
Range	

Sample Name: CCV 3565024 Acquired: 8/30/2023 19:39:35 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3950.6	24757.	10305.	21854.
Stddev	17.8	121.	111.	260.
%RSD	.45179	.48859	1.0804	1.1920
#1	3963.3	24833.	10177.	21553.
#2	3958.4	24821.	10359.	21999.
#3	3930.2	24617.	10380.	22009.

Sample Name: CCVL 3561056 Acquired: 8/30/2023 19:47:32 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0504	.5407	.0607	.4987	.0207	.0214
Stddev	.0029	.0056	.0009	.0018	.0003	.0001
%RSD	5.724	1.036	1.431	.3608	1.379	.4299
#1	.0530	.5385	.0598	.4979	.0204	.0215
#2	.0508	.5470	.0615	.4973	.0207	.0214
#3	.0473	.5364	.0608	.5007	.0210	.0214
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.2720	.5372	.0202	.0198	.0270	.0502
Stddev	.0014	.0079	.0001	.0001	.0001	.0055
%RSD	.5110	1.465	.3307	.5903	.5340	10.88
#1	.2707	.5288	.0202	.0199	.0269	.0462
#2	.2734	.5443	.0202	.0197	.0272	.0480
#3	.2720	.5385	.0203	.0198	.0270	.0565
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.5229	3.704	.0997	.4952	.0217	.0410
Stddev	.0012	.018	.0015	.0086	.0005	.0003
%RSD	.2199	.4929	1.551	1.727	2.280	.6234
#1	.5226	3.701	.0998	.5023	.0222	.0410
#2	.5219	3.724	.1011	.4857	.0212	.0407
#3	.5242	3.688	.0980	.4976	.0216	.0412
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCVL 3561056 Acquired: 8/30/2023 19:47:32 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.5351	.0194	.1069	.0318	.0631	.0997
Stddev	.0083	.0004	.0017	.0014	.0012	.0026
%RSD	1.558	1.991	1.636	4.501	1.963	2.642
#1	.5438	.0190	.1084	.0316	.0617	.0972
#2	.5272	.0193	.1050	.0304	.0640	.1024
#3	.5343	.0198	.1074	.0333	.0636	.0994
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.008	.0974	.1068	.0326	.0930	.0309
Stddev	.011	.0003	.0003	.0008	.0059	.0027
%RSD	1.129	.3328	.3174	2.511	6.324	8.769
#1	1.014	.0977	.1071	.0321	.0863	.0278
#2	1.015	.0971	.1069	.0335	.0956	.0328
#3	.9946	.0974	.1065	.0322	.0972	.0321
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0380
Stddev	.0002
%RSD	.5147
#1	.0379
#2	.0378
#3	.0382
Check ?	Chk Pass
Value	
Range	

Sample Name: CCVL 3561056 Acquired: 8/30/2023 19:47:32 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4637.0	27068.	10896.	23093.
Stddev	10.6	93.	51.	124.
%RSD	.22825	.34286	.46637	.53826
#1	4636.0	27076.	10847.	22966.
#2	4648.1	27157.	10949.	23214.
#3	4627.0	26972.	10893.	23099.

Sample Name: MN 50 Acquired: 8/30/2023 19:50:59 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0019	.0228	.0021	.0004	-.0001	-.0001
Stddev	.0014	.0047	.0017	.0004	.0002	.0001
%RSD	73.03	20.75	79.38	120.5	123.3	140.0
#1	-.0021	.0282	.0023	.0006	.0001	-.0001
#2	-.0004	.0196	.0003	.0006	-.0003	.0000
#3	-.0031	.0206	.0037	-.0001	-.0002	-.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0006	.0015	.0001	.0001	.0048	-.0002
Stddev	.0015	.0023	.0000	.0001	.0001	.0052
%RSD	256.9	157.1	12.19	101.1	1.376	2640.
#1	.0015	.0010	.0001	.0001	.0049	-.0022
#2	.0014	.0040	.0001	.0002	.0047	-.0041
#3	-.0011	-.0006	.0001	-.0000	.0048	.0057
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0226	.8709	-.0001	-.0702	F 40.25	-.0033
Stddev	.0012	.0107	.0004	.0098	1.39	.0002
%RSD	5.404	1.226	290.3	13.91	3.444	5.623
#1	.0232	.8832	-.0005	-.0738	38.82	-.0034
#2	.0235	.8659	.0003	-.0777	40.34	-.0031
#3	.0212	.8636	-.0001	-.0592	41.59	-.0033
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit					.0100	
Low Limit					-.0100	

Sample Name: MN 50 Acquired: 8/30/2023 19:50:59 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0024	.0021	.0054	.0053	.0010	.0243
Stddev	.0071	.0002	.0007	.0008	.0009	.0031
%RSD	298.6	8.875	12.12	15.99	90.51	12.87
#1	-.0057	.0021	.0059	.0061	.0018	.0219
#2	-.0072	.0019	.0047	.0053	.0000	.0232
#3	.0058	.0023	.0057	.0044	.0011	.0278
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0162	-.0002	.0001	.0014	-.0147	-.0015
Stddev	.0073	.0005	.0001	.0006	.0061	.0054
%RSD	45.01	201.5	171.8	39.25	41.18	358.6
#1	.0137	-.0003	.0000	.0013	-.0102	-.0066
#2	.0244	.0003	.0002	.0020	-.0123	-.0020
#3	.0105	-.0007	.0000	.0010	-.0216	.0041
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0011
Stddev	.0000
%RSD	1.528
#1	-.0011
#2	-.0011
#3	-.0011
Check ?	Chk Pass
High Limit	
Low Limit	

Sample Name: MN 50 Acquired: 8/30/2023 19:50:59 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4624.5	27098.	10940.	23190.
Stddev	19.6	123.	42.	99.
%RSD	.42317	.45479	.38005	.42532
#1	4643.9	27218.	10982.	23292.
#2	4624.8	27103.	10939.	23185.
#3	4604.8	26972.	10899.	23095.

Sample Name: RINSE9 Acquired: 8/30/2023 19:56:09 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0026	.0149	.0033	.0033	.0006	.0007
Stddev	.0007	.0079	.0016	.0005	.0001	.0001
%RSD	26.05	53.15	49.30	14.40	20.14	7.709
#1	-.0026	.0059	.0048	.0028	.0005	.0006
#2	-.0019	.0209	.0034	.0037	.0005	.0006
#3	-.0033	.0178	.0016	.0034	.0007	.0007

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0009	.0166	.0008	.0008	.0006	-.0017
Stddev	.0017	.0064	.0001	.0001	.0002	.0021
%RSD	202.3	38.34	12.66	7.464	27.07	122.5
#1	.0011	.0143	.0007	.0009	.0007	.0001
#2	.0024	.0118	.0009	.0008	.0004	-.0012
#3	-.0010	.0238	.0007	.0008	.0007	-.0041

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0183	.7394	-.0011	-.0010	.0030	.0004
Stddev	.0015	.0879	.0001	.0084	.0003	.0002
%RSD	8.074	11.89	4.960	821.6	11.48	56.05
#1	.0191	.6940	-.0012	-.0079	.0027	.0005
#2	.0193	.8407	-.0011	.0083	.0028	.0002
#3	.0166	.6835	-.0011	-.0034	.0034	.0006

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0130	.0001	.0143	.0021	.0019	-.0004
Stddev	.0052	.0001	.0020	.0010	.0011	.0019
%RSD	40.31	110.3	14.11	46.95	59.05	448.5
#1	.0103	.0002	.0155	.0028	.0032	.0012
#2	.0190	.0001	.0120	.0010	.0013	-.0025
#3	.0096	-.0000	.0154	.0025	.0012	.0000

Sample Name: RINSE9 Acquired: 8/30/2023 19:56:09 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0011	.0002	.0008	.0021	-.0078	-.0022
Stddev	.0042	.0001	.0001	.0017	.0005	.0035
%RSD	387.0	44.34	13.51	81.05	6.445	159.9
#1	.0058	.0003	.0009	.0008	-.0080	-.0019
#2	-.0025	.0001	.0008	.0014	-.0081	-.0058
#3	-.0000	.0003	.0007	.0041	-.0072	.0011

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0006
Stddev	.0000
%RSD	7.337
#1	-.0006
#2	-.0005
#3	-.0005

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4696.5	27127.	10784.	22937.
Stddev	22.1	142.	71.	125.
%RSD	.47040	.52217	.66003	.54386
#1	4701.1	27158.	10719.	22819.
#2	4715.9	27250.	10771.	22923.
#3	4672.4	26972.	10860.	23068.

Sample Name: RINSE10 Acquired: 8/30/2023 19:59:47 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0041	.0121	.0036	.0019	.0005	.0007
Stddev	.0023	.0228	.0013	.0004	.0000	.0001
%RSD	55.82	189.3	37.00	18.99	5.038	11.99
#1	-.0059	-.0143	.0030	.0020	.0005	.0007
#2	-.0015	.0258	.0051	.0021	.0005	.0007
#3	-.0048	.0246	.0027	.0015	.0006	.0006

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0004	.0184	.0007	.0008	.0007	.0015
Stddev	.0012	.0023	.0000	.0001	.0002	.0059
%RSD	270.0	12.47	2.048	13.42	27.07	388.8
#1	.0001	.0173	.0007	.0008	.0008	.0048
#2	.0003	.0168	.0007	.0007	.0008	-.0053
#3	-.0017	.0210	.0007	.0009	.0005	.0051

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0205	.6835	-.0026	.0140	.0022	.0002
Stddev	.0005	.0252	.0003	.0039	.0004	.0004
%RSD	2.251	3.681	13.36	27.71	17.60	190.8
#1	.0206	.7123	-.0024	.0098	.0023	.0000
#2	.0200	.6724	-.0024	.0147	.0018	.0006
#3	.0209	.6659	-.0030	.0175	.0026	-.0001

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0117	.0005	.0098	.0022	.0015	-.0020
Stddev	.0029	.0004	.0020	.0006	.0020	.0004
%RSD	24.67	83.50	19.96	29.49	132.2	22.08
#1	.0108	.0009	.0110	.0027	.0016	-.0017
#2	.0149	.0005	.0076	.0023	-.0005	-.0017
#3	.0094	.0001	.0109	.0015	.0033	-.0025

Sample Name: RINSE10 Acquired: 8/30/2023 19:59:47 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0098	.0004	.0008	.0026	-.0094	.0012
Stddev	.0034	.0002	.0000	.0008	.0011	.0033
%RSD	34.37	47.26	2.210	31.70	11.92	274.4
#1	.0109	.0004	.0008	.0022	-.0094	.0031
#2	.0060	.0005	.0008	.0036	-.0106	-.0026
#3	.0125	.0002	.0008	.0021	-.0083	.0031

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0006
Stddev	.0001
%RSD	17.63
#1	-.0005
#2	-.0005
#3	-.0007

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4639.1	26787.	10717.	22786.
Stddev	18.4	106.	28.	62.
%RSD	.39708	.39405	.25811	.27049
#1	4654.8	26881.	10705.	22752.
#2	4643.6	26806.	10697.	22750.
#3	4618.8	26673.	10749.	22858.

Sample Name: FE1000 Acquired: 8/30/2023 20:03:22 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0038	-.0326	-.0050	-.0194	.0017	-.0000
Stddev	.0018	.0055	.0023	.0002	.0003	.0001
%RSD	47.55	16.87	45.08	1.218	20.52	752.9
#1	-.0026	-.0389	-.0029	-.0193	.0020	.0001
#2	-.0030	-.0297	-.0074	-.0193	.0017	-.0000
#3	-.0059	-.0290	-.0046	-.0197	.0013	-.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0830	-.0026	-.0057	-.0049	-.0019	-.0039
Stddev	.0058	.0070	.0004	.0002	.0001	.0013
%RSD	7.018	275.9	6.184	3.965	7.426	33.52
#1	.0894	.0043	-.0059	-.0049	-.0020	-.0033
#2	.0818	-.0098	-.0053	-.0046	-.0020	-.0055
#3	.0779	-.0021	-.0060	-.0050	-.0017	-.0031
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F 995.3	.5235	-.0051	-.0965	.0011	-.0053
Stddev	39.7	.0208	.0007	.0305	.0009	.0001
%RSD	3.989	3.965	13.01	31.66	85.00	2.193
#1	1041.	.5452	-.0054	-.1186	.0012	-.0055
#2	970.6	.5213	-.0043	-.1092	.0019	-.0053
#3	974.1	.5039	-.0055	-.0616	.0001	-.0053
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.2500					
Low Limit	-.2500					

Sample Name: FE1000 Acquired: 8/30/2023 20:03:22 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0092	.0014	-.0042	-.0111	.0009	.0067
Stddev	.0026	.0006	.0018	.0016	.0006	.0024
%RSD	28.14	40.15	43.41	14.21	70.29	36.09
#1	-.0114	.0012	-.0023	-.0109	.0012	.0055
#2	-.0097	.0009	-.0059	-.0127	.0013	.0051
#3	-.0063	.0020	-.0046	-.0096	.0002	.0095
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0434	.0001	.0002	.0004	-.0021	.0035
Stddev	.0087	.0002	.0000	.0007	.0033	.0008
%RSD	19.93	189.8	17.27	164.7	160.3	23.77
#1	-.0418	.0001	.0002	-.0003	.0008	.0026
#2	-.0528	.0002	.0003	.0005	-.0013	.0043
#3	-.0357	-.0001	.0002	.0010	-.0057	.0038
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0058
Stddev	.0001
%RSD	1.883
#1	-.0060
#2	-.0058
#3	-.0057
Check ?	Chk Pass
High Limit	
Low Limit	

Sample Name: FE1000 Acquired: 8/30/2023 20:03:22 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4497.1	25927.	10624.	22610.
Stddev	10.4	39.	147.	295.
%RSD	.23144	.15218	1.3798	1.3032
#1	4495.1	25929.	10462.	22286.
#2	4508.3	25966.	10662.	22684.
#3	4487.8	25887.	10748.	22861.

Sample Name: RINSE9 Acquired: 8/30/2023 20:06:54 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0017	.0341	.0020	.0000	.0006	.0010
Stddev	.0023	.0122	.0003	.0003	.0001	.0001
%RSD	135.5	35.68	13.83	973.5	16.78	6.703
#1	-.0040	.0403	.0021	.0003	.0005	.0009
#2	.0006	.0418	.0017	-.0003	.0007	.0010
#3	-.0016	.0201	.0022	.0001	.0007	.0011

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0015	.0220	.0008	.0008	.0007	.0008
Stddev	.0004	.0028	.0001	.0000	.0002	.0045
%RSD	23.79	12.53	6.620	2.711	24.78	581.2
#1	-.0016	.0214	.0008	.0008	.0009	-.0039
#2	-.0018	.0249	.0009	.0008	.0006	.0011
#3	-.0011	.0195	.0008	.0008	.0006	.0051

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.3075	.5065	-.0022	-.0034	.0018	.0002
Stddev	.1202	.0172	.0015	.0159	.0002	.0002
%RSD	39.10	3.394	66.45	473.9	9.641	88.83
#1	.4390	.5166	-.0020	-.0207	.0017	.0002
#2	.2803	.5163	-.0038	-.0000	.0019	.0005
#3	.2032	.4866	-.0009	.0106	.0016	.0001

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0027	.0001	.0109	.0025	.0032	-.0023
Stddev	.0064	.0006	.0016	.0008	.0021	.0048
%RSD	241.2	471.4	14.91	30.42	65.65	214.9
#1	.0100	.0006	.0112	.0033	.0039	.0025
#2	-.0021	.0003	.0091	.0023	.0049	-.0021
#3	.0001	-.0005	.0123	.0018	.0009	-.0072

Sample Name: RINSE9 Acquired: 8/30/2023 20:06:54 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0027	.0007	.0010	.0010	-.0080	.0028
Stddev	.0074	.0002	.0001	.0002	.0027	.0031
%RSD	272.5	25.41	7.496	25.23	34.21	113.2
#1	-.0016	.0006	.0010	.0007	-.0085	-.0006
#2	.0113	.0007	.0010	.0012	-.0050	.0033
#3	-.0015	.0009	.0011	.0010	-.0103	.0056

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0006
Stddev	.0001
%RSD	19.87
#1	-.0005
#2	-.0007
#3	-.0007

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4631.9	26717.	10747.	22789.
Stddev	26.6	159.	25.	50.
%RSD	.57418	.59470	.23620	.21859
#1	4632.1	26708.	10718.	22733.
#2	4658.4	26880.	10761.	22829.
#3	4605.2	26562.	10763.	22804.

Sample Name: RINSE10 Acquired: 8/30/2023 20:10:31 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0008	-.0179	.0005	-.0018	.0005	.0007
Stddev	.0026	.0110	.0015	.0004	.0001	.0002
%RSD	319.7	61.11	333.3	20.33	25.20	26.90
#1	-.0033	-.0215	.0022	-.0015	.0005	.0010
#2	.0020	-.0056	-.0001	-.0016	.0004	.0006
#3	-.0012	-.0266	-.0007	-.0022	.0007	.0006

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0002	.0160	.0008	.0008	.0006	.0011
Stddev	.0006	.0056	.0000	.0002	.0003	.0033
%RSD	380.8	34.72	5.924	25.08	44.41	311.6
#1	.0004	.0219	.0007	.0006	.0005	-.0019
#2	.0007	.0108	.0008	.0009	.0004	.0046
#3	-.0006	.0154	.0008	.0010	.0009	.0004

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0463	.4928	-.0018	-.0153	.0016	.0003
Stddev	.0134	.0697	.0010	.0089	.0006	.0003
%RSD	28.88	14.14	54.41	58.49	36.94	75.85
#1	.0615	.5195	-.0014	-.0214	.0014	.0001
#2	.0411	.5452	-.0029	-.0050	.0011	.0006
#3	.0363	.4137	-.0011	-.0194	.0022	.0003

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0002	-.0000	.0097	.0030	-.0004	.0004
Stddev	.0119	.0002	.0008	.0008	.0003	.0011
%RSD	7339.	6091.	8.586	27.40	75.14	246.5
#1	-.0108	-.0001	.0103	.0039	-.0003	.0017
#2	-.0024	.0002	.0100	.0023	-.0008	-.0002
#3	.0127	-.0002	.0087	.0028	-.0002	-.0001

Sample Name: RINSE10 Acquired: 8/30/2023 20:10:31 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0027	.0006	.0008	.0026	-.0111	.0011
Stddev	.0061	.0003	.0000	.0006	.0033	.0033
%RSD	224.5	47.63	1.331	23.13	30.20	309.4
#1	.0090	.0004	.0008	.0032	-.0143	.0006
#2	.0025	.0005	.0008	.0020	-.0113	.0046
#3	-.0033	.0009	.0008	.0027	-.0076	-.0020

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0007
Stddev	.0000
%RSD	3.906
#1	-.0007
#2	-.0006
#3	-.0007

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4667.6	26835.	10837.	22984.
Stddev	14.9	118.	31.	40.
%RSD	.31918	.43789	.28488	.17339
#1	4678.5	26901.	10810.	22976.
#2	4673.6	26904.	10871.	23028.
#3	4650.6	26699.	10830.	22950.

Sample Name: RINSE11 Acquired: 8/30/2023 20:14:09 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0022	.0358	.0011	-.0028	.0006	.0006
Stddev	.0012	.0125	.0000	.0005	.0001	.0002
%RSD	52.94	34.88	2.969	18.31	10.62	26.38
#1	-.0014	.0243	.0011	-.0026	.0005	.0005
#2	-.0035	.0491	.0010	-.0024	.0006	.0008
#3	-.0016	.0339	.0011	-.0033	.0006	.0005

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0005	.0189	.0007	.0007	.0005	.0013
Stddev	.0022	.0025	.0002	.0001	.0002	.0072
%RSD	411.4	13.07	28.28	8.299	31.92	567.0
#1	-.0013	.0176	.0008	.0007	.0007	.0019
#2	-.0001	.0174	.0008	.0006	.0004	-.0062
#3	.0030	.0218	.0005	.0006	.0004	.0081

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0522	.4260	-.0047	.0056	.0014	.0002
Stddev	.0060	.0103	.0018	.0035	.0006	.0002
%RSD	11.41	2.416	37.66	62.88	47.21	88.06
#1	.0476	.4278	-.0053	.0059	.0020	.0004
#2	.0589	.4352	-.0060	.0019	.0007	.0001
#3	.0501	.4149	-.0027	.0089	.0014	.0001

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0017	.0001	.0099	.0016	.0011	-.0025
Stddev	.0026	.0001	.0028	.0002	.0040	.0016
%RSD	150.4	151.1	28.00	15.26	355.1	63.09
#1	.0006	.0002	.0070	.0014	-.0012	-.0008
#2	-.0046	.0001	.0103	.0019	.0058	-.0026
#3	-.0012	-.0001	.0125	.0016	-.0012	-.0039

Sample Name: RINSE11 Acquired: 8/30/2023 20:14:09 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0029	.0007	.0009	.0016	-.0093	-.0004
Stddev	.0064	.0003	.0001	.0002	.0054	.0022
%RSD	218.3	36.56	6.930	11.21	58.37	545.5
#1	.0090	.0007	.0009	.0018	-.0063	-.0028
#2	.0035	.0009	.0009	.0017	-.0156	-.0000
#3	-.0037	.0004	.0008	.0014	-.0061	.0016

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0007
Stddev	.0000
%RSD	6.699
#1	-.0007
#2	-.0007
#3	-.0007

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4668.9	26960.	10655.	22621.
Stddev	22.9	149.	45.	118.
%RSD	.49013	.55376	.41838	.52120
#1	4686.8	27068.	10619.	22506.
#2	4676.6	27022.	10705.	22741.
#3	4643.1	26789.	10641.	22615.

Sample Name: CCV 3565024 Acquired: 8/30/2023 20:17:47 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9656	98.72	4.962	48.60	4.878	5.086
Stddev	.0038	.14	.069	.61	.066	.001
%RSD	.3884	.1380	1.382	1.265	1.358	.0108
#1	.9693	98.87	5.036	49.27	4.951	5.086
#2	.9618	98.61	4.948	48.48	4.863	5.086
#3	.9657	98.67	4.901	48.06	4.821	5.087
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.733	96.83	5.016	4.926	5.071	4.837
Stddev	.054	1.43	.071	.067	.070	.068
%RSD	1.143	1.481	1.421	1.354	1.390	1.403
#1	4.789	98.45	5.095	5.000	5.147	4.915
#2	4.728	96.28	4.999	4.907	5.057	4.809
#3	4.681	95.75	4.956	4.870	5.008	4.788
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	100.3	F 89.18	4.671	98.67	4.963	5.039
Stddev	1.5	.62	.008	1.46	.069	.064
%RSD	1.482	.6957	.1651	1.480	1.391	1.263
#1	101.9	89.84	4.664	100.3	5.041	5.110
#2	99.78	89.10	4.679	98.08	4.939	5.021
#3	99.07	88.60	4.672	97.59	4.910	4.987
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		100.0				
Range		-10.00%				

Sample Name: CCV 3565024 Acquired: 8/30/2023 20:17:47 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	92.62	4.944	48.54	4.951	4.910	5.043
Stddev	.21	.067	.80	.076	.058	.067
%RSD	.2273	1.363	1.654	1.528	1.175	1.336
#1	92.80	5.018	49.39	5.033	4.973	5.118
#2	92.66	4.926	48.45	4.934	4.896	5.024
#3	92.39	4.887	47.79	4.885	4.860	4.987
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	46.52	4.976	5.091	4.977	4.837	5.047
Stddev	.14	.074	.005	.002	.053	.018
%RSD	.3065	1.490	.0936	.0333	1.100	.3472
#1	46.36	5.057	5.087	4.976	4.893	5.059
#2	46.64	4.957	5.096	4.977	4.831	5.056
#3	46.56	4.912	5.090	4.979	4.787	5.027
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	5.001
Stddev	.074
%RSD	1.478
#1	5.083
#2	4.980
#3	4.939
Check ?	Chk Pass
Value	
Range	

Sample Name: CCV 3565024 Acquired: 8/30/2023 20:17:47 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3911.7	24471.	10371.	22006.
Stddev	53.3	315.	26.	43.
%RSD	1.3618	1.2885	.24630	.19689
#1	3851.5	24115.	10398.	22056.
#2	3930.9	24581.	10347.	21975.
#3	3952.7	24716.	10367.	21988.

Sample Name: CCB Acquired: 8/30/2023 20:22:08 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0012	.0591	.0049	.0370	.0021	.0016
Stddev	.0012	.0269	.0011	.0058	.0003	.0005
%RSD	98.60	45.60	23.18	15.64	12.43	32.10
#1	.0002	.0408	.0062	.0431	.0023	.0014
#2	-.0019	.0465	.0044	.0364	.0022	.0012
#3	-.0019	.0900	.0042	.0316	.0018	.0022
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0011	.0260	.0023	.0021	.0022	-.0012
Stddev	.0023	.0084	.0003	.0003	.0003	.0006
%RSD	215.7	32.47	13.45	14.64	14.02	53.93
#1	.0035	.0224	.0026	.0023	.0024	-.0016
#2	.0009	.0200	.0022	.0022	.0024	-.0005
#3	-.0012	.0357	.0020	.0017	.0019	-.0015
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0411	.5178	.0015	.0110	.0024	.0056
Stddev	.0122	.0222	.0008	.0193	.0006	.0010
%RSD	29.70	4.282	55.07	175.1	23.65	18.47
#1	.0350	.5329	.0007	-.0031	.0028	.0067
#2	.0331	.5282	.0024	.0329	.0018	.0056
#3	.0551	.4924	.0014	.0031	.0028	.0046
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: CCB Acquired: 8/30/2023 20:22:08 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0317	.0018	.0264	.0045	.0007	.0031
Stddev	.0064	.0005	.0030	.0008	.0027	.0006
%RSD	20.19	26.76	11.50	17.55	376.4	18.47
#1	.0266	.0023	.0291	.0054	-.0022	.0031
#2	.0389	.0018	.0272	.0043	.0013	.0036
#3	.0295	.0013	.0231	.0038	.0031	.0025
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0287	.0023	.0014	.0030	-.0046	-.0021
Stddev	.0137	.0005	.0005	.0020	.0023	.0036
%RSD	47.70	21.97	37.04	66.76	49.96	171.3
#1	.0442	.0027	.0011	.0028	-.0019	-.0052
#2	.0182	.0017	.0011	.0011	-.0061	-.0030
#3	.0238	.0025	.0020	.0050	-.0057	.0019
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0009
Stddev	.0002
%RSD	29.37
#1	.0011
#2	.0009
#3	.0006
Check ?	Chk Pass
High Limit	
Low Limit	

Sample Name: CCB Acquired: 8/30/2023 20:22:08 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4649.2	26811.	10633.	22551.
Stddev	20.2	145.	77.	169.
%RSD	.43393	.54134	.72624	.75089
#1	4647.9	26805.	10546.	22366.
#2	4670.0	26959.	10695.	22698.
#3	4629.8	26669.	10656.	22590.

Sample Name: MB 580-436115/26-A Acquired: 8/30/2023 20:25:43 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0014	.0145	.0018	.0026	.0001	.0004
Stddev	.0028	.0113	.0011	.0013	.0002	.0000
%RSD	200.9	77.67	60.69	50.59	399.9	7.577
#1	-.0002	.0029	.0029	.0040	-.0000	.0004
#2	.0006	.0153	.0008	.0023	-.0001	.0004
#3	-.0046	.0254	.0017	.0014	.0003	.0004

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0003	.0042	.0004	.0003	-.0001	-.0026
Stddev	.0014	.0027	.0001	.0001	.0001	.0030
%RSD	512.3	65.24	34.79	36.50	52.58	113.5
#1	-.0011	.0019	.0002	.0003	-.0001	-.0024
#2	.0016	.0035	.0004	.0004	-.0001	-.0057
#3	.0003	.0072	.0005	.0002	-.0002	.0002

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0200	.3700	-.0095	-.0124	.0012	.0013
Stddev	.0034	.0271	.0006	.0090	.0004	.0004
%RSD	16.85	7.335	6.601	72.78	31.73	31.36
#1	.0161	.3832	-.0089	-.0054	.0012	.0017
#2	.0219	.3388	-.0101	-.0092	.0015	.0012
#3	.0219	.3879	-.0093	-.0225	.0008	.0009

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0021	-.0002	.0064	.0008	-.0002	-.0045
Stddev	.0065	.0002	.0005	.0004	.0014	.0029
%RSD	303.8	142.9	7.230	56.84	707.7	65.20
#1	-.0087	.0000	.0066	.0012	.0011	-.0017
#2	-.0019	-.0004	.0059	.0003	-.0017	-.0076
#3	.0042	-.0001	.0068	.0008	.0000	-.0043

Sample Name: MB 580-436115/26-A Acquired: 8/30/2023 20:25:43 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0106	-.0000	.0004	.0014	-.0065	.0002
Stddev	.0079	.0005	.0001	.0002	.0016	.0021
%RSD	74.12	1832.	27.11	15.58	24.69	1299.
#1	.0027	.0003	.0003	.0015	-.0048	-.0022
#2	.0185	.0002	.0005	.0015	-.0079	.0016
#3	.0106	-.0006	.0004	.0012	-.0069	.0011

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0012
Stddev	.0001
%RSD	10.02
#1	-.0011
#2	-.0011
#3	-.0013

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4806.7	27684.	11094.	23523.
Stddev	18.9	98.	25.	61.
%RSD	.39425	.35228	.22546	.26045
#1	4826.8	27795.	11065.	23452.
#2	4804.1	27644.	11111.	23559.
#3	4789.2	27612.	11106.	23558.

Sample Name: LCS 580-436115/27-A Acquired: 8/30/2023 20:29:19 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.026	20.99	1.021	10.43	1.032	1.079
Stddev	.003	.04	.004	.03	.001	.002
%RSD	.2820	.1834	.3938	.2445	.1296	.1970
#1	1.022	21.01	1.021	10.43	1.031	1.076
#2	1.027	20.95	1.017	10.40	1.030	1.080
#3	1.028	21.02	1.025	10.45	1.033	1.080

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0042	19.45	1.029	1.003	1.077	.9605
Stddev	.0005	.10	.003	.004	.003	.0022
%RSD	12.70	.4917	.2440	.3619	.2453	.2335
#1	-.0045	19.40	1.027	1.001	1.076	.9596
#2	-.0045	19.38	1.027	1.001	1.074	.9630
#3	-.0036	19.56	1.031	1.007	1.079	.9587

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	20.42	18.75	.9758	20.13	1.023	1.056
Stddev	.09	.08	.0029	.04	.002	.003
%RSD	.4350	.4077	.2993	.1956	.2244	.2623
#1	20.36	18.78	.9762	20.17	1.022	1.053
#2	20.38	18.67	.9727	20.13	1.021	1.055
#3	20.53	18.81	.9785	20.09	1.026	1.059

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	18.85	1.013	5.164	1.032	1.062	1.052
Stddev	.02	.004	.021	.001	.004	.005
%RSD	.1107	.3615	.4089	.0725	.4257	.5088
#1	18.83	1.010	5.140	1.032	1.063	1.046
#2	18.85	1.011	5.177	1.031	1.057	1.053
#3	18.87	1.017	5.175	1.032	1.066	1.057

Sample Name: LCS 580-436115/27-A Acquired: 8/30/2023 20:29:19 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	9.612	1.020	1.077	1.048	1.006	1.053
Stddev	.014	.003	.001	.004	.030	.005
%RSD	.1454	.2566	.0639	.3966	2.954	.4548
#1	9.615	1.018	1.076	1.044	.9770	1.048
#2	9.597	1.019	1.077	1.052	1.004	1.052
#3	9.625	1.023	1.077	1.048	1.036	1.058

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	1.021
Stddev	.003
%RSD	.2915
#1	1.018
#2	1.020
#3	1.024

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4394.2	26370.	10628.	22569.
Stddev	15.1	93.	20.	72.
%RSD	.34285	.35123	.18671	.31988
#1	4384.1	26295.	10605.	22488.
#2	4411.5	26474.	10638.	22589.
#3	4387.0	26341.	10641.	22628.

Sample Name: LCSD 580-436115/28-A Acquired: 8/30/2023 20:32:21 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9911	20.25	.9966	10.06	1.002	1.046
Stddev	.0028	.01	.0052	.03	.003	.001
%RSD	.2842	.0448	.5188	.2857	.2550	.1117
#1	.9939	20.25	.9937	10.05	1.001	1.048
#2	.9883	20.26	.9935	10.03	1.001	1.045
#3	.9913	20.25	1.003	10.09	1.005	1.046

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0032	18.94	1.004	.9786	1.045	.9478
Stddev	.0008	.02	.004	.0034	.003	.0079
%RSD	26.49	.1031	.3863	.3508	.2652	.8353
#1	-.0042	18.95	1.001	.9763	1.044	.9558
#2	-.0029	18.92	1.002	.9770	1.043	.9476
#3	-.0025	18.95	1.008	.9826	1.048	.9399

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	19.88	18.03	.9473	19.56	.9955	1.031
Stddev	.01	.06	.0020	.06	.0002	.003
%RSD	.0616	.3296	.2118	.3205	.0192	.2791
#1	19.89	18.10	.9479	19.59	.9954	1.029
#2	19.87	17.99	.9490	19.49	.9955	1.029
#3	19.87	18.01	.9451	19.61	.9958	1.034

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	18.29	.9863	4.996	1.006	1.037	1.032
Stddev	.01	.0053	.043	.004	.005	.003
%RSD	.0747	.5418	.8522	.3725	.4908	.2896
#1	18.30	.9820	4.985	1.004	1.036	1.029
#2	18.30	.9846	4.959	1.003	1.032	1.033
#3	18.28	.9922	5.042	1.010	1.043	1.034

Sample Name: LCSD 580-436115/28-A Acquired: 8/30/2023 20:32:21 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	9.293	.9936	1.045	1.019	1.002	1.015
Stddev	.023	.0041	.000	.003	.017	.005
%RSD	.2437	.4134	.0384	.3271	1.695	.4998
#1	9.305	.9919	1.045	1.023	.9832	1.021
#2	9.308	.9907	1.045	1.017	1.005	1.012
#3	9.267	.9983	1.045	1.018	1.017	1.012

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.9905
Stddev	.0034
%RSD	.3434
#1	.9885
#2	.9886
#3	.9944

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4470.7	26809.	10854.	23025.
Stddev	6.7	43.	25.	68.
%RSD	.14974	.16021	.23233	.29558
#1	4464.2	26774.	10835.	23011.
#2	4470.3	26796.	10843.	22965.
#3	4477.6	26857.	10882.	23099.

Sample Name: 580-130934-C-1-A Acquired: 8/30/2023 20:35:22 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0026	.1595	.0036	.0219	.0092	.0009
Stddev	.0018	.0325	.0009	.0027	.0002	.0001
%RSD	67.21	20.39	23.80	12.40	1.744	14.04
#1	-.0025	.1550	.0046	.0247	.0093	.0007
#2	-.0044	.1295	.0031	.0219	.0093	.0010
#3	-.0009	.1940	.0031	.0192	.0090	.0009

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0008	9.111	.0005	.0005	.0004	.0031
Stddev	.0016	.052	.0002	.0003	.0001	.0068
%RSD	203.4	.5694	36.38	50.55	27.77	216.4
#1	.0016	9.053	.0006	.0005	.0005	.0105
#2	.0019	9.155	.0006	.0007	.0003	.0017
#3	-.0011	9.124	.0003	.0002	.0005	-.0028

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.2214	1.193	-.0066	3.823	.0438	.0050
Stddev	.0036	.023	.0007	.016	.0005	.0011
%RSD	1.620	1.925	10.79	.4169	1.168	22.56
#1	.2176	1.212	-.0069	3.842	.0437	.0062
#2	.2218	1.200	-.0058	3.814	.0444	.0051
#3	.2247	1.168	-.0071	3.815	.0434	.0039

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	3.970	.0008	.0538	-.0019	.0013	.0045
Stddev	.010	.0003	.0017	.0011	.0018	.0034
%RSD	.2514	37.28	3.068	56.38	139.1	75.68
#1	3.972	.0007	.0557	-.0015	.0033	.0083
#2	3.960	.0011	.0530	-.0031	-.0001	.0031
#3	3.980	.0005	.0527	-.0011	.0006	.0020

Sample Name: 580-130934-C-1-A Acquired: 8/30/2023 20:35:22 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.893	.0001	.0505	.0108	.0119	.0041
Stddev	.022	.0003	.0001	.0008	.0109	.0017
%RSD	.4563	231.0	.2142	7.739	91.40	42.85
#1	4.885	.0004	.0504	.0115	.0218	.0058
#2	4.876	-.0001	.0504	.0099	.0138	.0040
#3	4.918	.0000	.0506	.0110	.0002	.0023

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0156
Stddev	.0002
%RSD	.9987
#1	.0158
#2	.0156
#3	.0155

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4643.4	26937.	10939.	23201.
Stddev	20.7	117.	55.	96.
%RSD	.44594	.43396	.50200	.41474
#1	4666.7	27072.	10955.	23233.
#2	4636.3	26868.	10983.	23277.
#3	4627.2	26872.	10877.	23093.

Sample Name: 580-130934-C-1-B DU Acquired: 8/30/2023 20:38:53 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0011	.1522	.0026	.0125	.0091	.0001
Stddev	.0003	.0091	.0007	.0006	.0001	.0001
%RSD	25.35	5.960	29.24	5.180	1.458	93.99
#1	-.0008	.1554	.0025	.0133	.0090	.0001
#2	-.0014	.1419	.0033	.0122	.0090	-.0000
#3	-.0012	.1591	.0018	.0120	.0092	.0001

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0001	9.197	.0001	.0002	.0001	.0004
Stddev	.0010	.049	.0001	.0002	.0000	.0040
%RSD	836.2	.5326	46.69	63.30	16.60	970.7
#1	.0010	9.185	.0002	.0001	.0001	.0015
#2	-.0010	9.155	.0002	.0004	.0002	.0038
#3	-.0004	9.250	.0001	.0002	.0001	-.0041

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.2047	1.161	-.0070	3.866	.0433	.0016
Stddev	.0011	.010	.0008	.043	.0009	.0002
%RSD	.5299	.8436	11.51	1.102	2.149	10.64
#1	.2050	1.155	-.0064	3.856	.0436	.0017
#2	.2034	1.156	-.0066	3.830	.0423	.0016
#3	.2055	1.172	-.0079	3.913	.0441	.0014

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.043	.0006	.0497	-.0030	.0016	-.0004
Stddev	.006	.0003	.0004	.0013	.0014	.0009
%RSD	.1507	43.06	.8042	44.05	89.62	206.1
#1	4.050	.0003	.0494	-.0017	.0014	.0006
#2	4.040	.0006	.0495	-.0044	.0002	-.0008
#3	4.040	.0008	.0501	-.0029	.0030	-.0011

Sample Name: 580-130934-C-1-B DU Acquired: 8/30/2023 20:38:53 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.971	-.0002	.0506	.0093	-.0102	.0004
Stddev	.021	.0002	.0001	.0003	.0002	.0029
%RSD	.4117	72.33	.1839	3.737	1.579	672.0
#1	4.994	-.0004	.0506	.0093	-.0103	.0021
#2	4.963	-.0000	.0506	.0090	-.0100	-.0029
#3	4.955	-.0003	.0507	.0097	-.0103	.0021

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0156
Stddev	.0000
%RSD	.1655
#1	.0156
#2	.0156
#3	.0156

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4671.8	27063.	10894.	23106.
Stddev	11.4	65.	47.	70.
%RSD	.24306	.24116	.43108	.30240
#1	4671.6	27088.	10847.	23062.
#2	4683.3	27112.	10896.	23069.
#3	4660.6	26989.	10940.	23186.

Sample Name: 580-130934-C-1-C MS Acquired: 8/30/2023 20:42:23 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9974	20.66	1.002	10.20	1.024	1.058
Stddev	.0016	.03	.006	.04	.004	.000
%RSD	.1608	.1656	.6089	.3468	.3953	.0362
#1	.9955	20.63	.9955	10.17	1.022	1.058
#2	.9984	20.69	1.005	10.19	1.023	1.057
#3	.9982	20.65	1.007	10.24	1.029	1.058

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0029	28.58	1.018	.9909	1.058	.9598
Stddev	.0015	.05	.004	.0040	.004	.0034
%RSD	50.40	.1672	.3523	.4034	.3963	.3544
#1	-.0012	28.55	1.015	.9880	1.055	.9616
#2	-.0037	28.56	1.016	.9892	1.056	.9559
#3	-.0038	28.63	1.022	.9955	1.062	.9619

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	20.54	19.06	.9513	23.80	1.059	1.039
Stddev	.04	.07	.0030	.06	.002	.005
%RSD	.2013	.3748	.3110	.2650	.1826	.5033
#1	20.51	19.07	.9492	23.73	1.059	1.034
#2	20.52	19.13	.9547	23.83	1.057	1.039
#3	20.59	18.99	.9500	23.85	1.061	1.044

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	22.49	1.001	5.032	1.014	1.048	1.032
Stddev	.03	.003	.020	.003	.006	.004
%RSD	.1400	.3044	.4043	.2944	.6174	.3520
#1	22.50	.9986	5.029	1.013	1.042	1.029
#2	22.50	.9993	5.013	1.011	1.047	1.032
#3	22.45	1.004	5.054	1.017	1.055	1.036

Sample Name: 580-130934-C-1-C MS Acquired: 8/30/2023 20:42:23 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	14.23	1.009	1.103	1.043	.9956	1.032
Stddev	.00	.004	.003	.003	.0269	.004
%RSD	.0137	.3587	.2458	.3148	2.702	.3980
#1	14.23	1.007	1.100	1.042	.9749	1.037
#2	14.23	1.008	1.106	1.040	.9859	1.029
#3	14.23	1.013	1.103	1.046	1.026	1.031

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	1.024
Stddev	.004
%RSD	.4153
#1	1.021
#2	1.023
#3	1.029

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4333.3	26077.	10695.	22653.
Stddev	17.3	85.	11.	47.
%RSD	.39856	.32707	.10208	.20862
#1	4343.0	26135.	10704.	22707.
#2	4343.6	26117.	10697.	22634.
#3	4313.4	25979.	10683.	22619.

Sample Name: 580-130934-C-1-D MSD Acquired: 8/30/2023 20:45:26 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.020	21.15	1.023	10.42	1.040	1.081
Stddev	.003	.04	.006	.03	.004	.003
%RSD	.2948	.2003	.5805	.2702	.3324	.3160
#1	1.019	21.14	1.017	10.40	1.037	1.078
#2	1.024	21.11	1.023	10.41	1.039	1.085
#3	1.018	21.20	1.029	10.45	1.044	1.082

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0023	28.95	1.033	1.005	1.073	.9620
Stddev	.0010	.04	.003	.002	.002	.0032
%RSD	42.09	.1390	.2466	.2436	.1900	.3313
#1	-.0028	28.90	1.031	1.003	1.072	.9584
#2	-.0028	28.97	1.033	1.005	1.072	.9643
#3	-.0012	28.98	1.036	1.008	1.075	.9633

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	20.76	19.30	.9691	23.98	1.069	1.058
Stddev	.02	.07	.0075	.03	.004	.004
%RSD	.0796	.3716	.7737	.1187	.3352	.3490
#1	20.74	19.23	.9605	23.95	1.068	1.055
#2	20.77	19.31	.9741	23.98	1.067	1.057
#3	20.76	19.37	.9727	24.00	1.074	1.062

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	22.78	1.015	5.246	1.028	1.064	1.053
Stddev	.05	.003	.012	.004	.007	.002
%RSD	.2177	.2499	.2244	.3863	.6620	.2181
#1	22.72	1.012	5.233	1.024	1.058	1.055
#2	22.82	1.015	5.255	1.029	1.063	1.050
#3	22.79	1.017	5.249	1.031	1.072	1.053

Sample Name: 580-130934-C-1-D MSD Acquired: 8/30/2023 20:45:26 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	14.54	1.026	1.121	1.067	1.026	1.060
Stddev	.04	.000	.003	.006	.018	.008
%RSD	.2873	.0036	.2843	.5380	1.727	.7300
#1	14.50	1.026	1.118	1.061	1.007	1.051
#2	14.59	1.026	1.124	1.067	1.029	1.063
#3	14.54	1.026	1.121	1.072	1.042	1.065

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	1.046
Stddev	.003
%RSD	.2471
#1	1.043
#2	1.046
#3	1.048

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4358.5	26215.	10681.	22615.
Stddev	7.1	35.	42.	101.
%RSD	.16239	.13530	.39780	.44464
#1	4366.7	26255.	10726.	22723.
#2	4354.8	26202.	10642.	22525.
#3	4354.1	26188.	10673.	22596.

Sample Name: 580-130934-C-1A SD@5 Acquired: 8/30/2023 20:51:30 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0043	.0455	.0050	.0166	.0021	.0003
Stddev	.0014	.0109	.0004	.0016	.0002	.0002
%RSD	32.26	23.91	8.601	9.640	8.949	76.78
#1	-.0028	.0576	.0048	.0184	.0022	.0006
#2	-.0055	.0363	.0055	.0154	.0019	.0003
#3	-.0047	.0428	.0048	.0160	.0021	.0001

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0018	1.811	.0006	.0006	.0004	-.0010
Stddev	.0010	.012	.0002	.0004	.0001	.0044
%RSD	58.39	.6350	26.64	60.87	28.76	429.2
#1	-.0017	1.824	.0008	.0010	.0005	-.0051
#2	-.0008	1.805	.0005	.0002	.0003	.0036
#3	-.0028	1.803	.0006	.0007	.0004	-.0015

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0452	.5198	-.0004	.7476	.0088	.0054
Stddev	.0056	.0313	.0016	.0112	.0003	.0012
%RSD	12.29	6.019	445.2	1.502	3.385	21.76
#1	.0514	.5122	-.0005	.7349	.0088	.0067
#2	.0407	.4930	.0013	.7516	.0091	.0050
#3	.0434	.5542	-.0019	.7563	.0085	.0044

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.7935	-.0000	.0103	.0000	.0067	.0039
Stddev	.0102	.0007	.0021	.0011	.0030	.0013
%RSD	1.283	1653.	20.24	2530.	45.17	31.91
#1	.7865	-.0004	.0083	-.0009	.0075	.0051
#2	.7888	-.0005	.0125	-.0003	.0034	.0041
#3	.8052	.0008	.0100	.0013	.0093	.0026

Sample Name: 580-130934-C-1A SD@5 Acquired: 8/30/2023 20:51:30 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.029	.0007	.0103	.0036	-.0034	-.0017
Stddev	.006	.0001	.0002	.0004	.0034	.0045
%RSD	.5886	19.92	2.005	10.24	101.5	274.1
#1	1.035	.0009	.0105	.0039	-.0073	-.0006
#2	1.027	.0006	.0101	.0037	-.0015	-.0066
#3	1.023	.0008	.0102	.0032	-.0013	.0022

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0024
Stddev	.0001
%RSD	2.225
#1	.0023
#2	.0024
#3	.0024

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4605.7	26710.	10658.	22592.
Stddev	14.3	87.	12.	46.
%RSD	.31093	.32505	.11268	.20479
#1	4607.9	26734.	10654.	22562.
#2	4618.8	26782.	10671.	22645.
#3	4590.4	26613.	10648.	22568.

Sample Name: 580-130934-D-2-A Acquired: 8/30/2023 20:55:01 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0011	.0387	.0028	.0317	.0098	.0001
Stddev	.0021	.0119	.0009	.0007	.0002	.0000
%RSD	180.6	30.86	30.68	2.174	2.118	26.00
#1	-.0015	.0398	.0034	.0323	.0096	.0001
#2	.0011	.0263	.0031	.0318	.0096	.0001
#3	-.0030	.0501	.0018	.0310	.0100	.0001

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0003	26.71	.0001	-.0002	.0002	.0039
Stddev	.0015	.09	.0002	.0001	.0001	.0042
%RSD	463.3	.3319	222.3	41.62	92.52	109.4
#1	.0014	26.62	.0002	-.0002	.0001	.0007
#2	-.0007	26.70	-.0001	-.0002	.0001	.0022
#3	-.0016	26.80	.0001	-.0001	.0003	.0086

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0176	3.195	-.0059	10.03	.0003	.0018
Stddev	.0019	.062	.0016	.04	.0001	.0003
%RSD	11.09	1.930	27.60	.3683	19.02	15.06
#1	.0157	3.124	-.0040	9.988	.0003	.0021
#2	.0196	3.227	-.0070	10.06	.0002	.0017
#3	.0174	3.235	-.0068	10.04	.0003	.0015

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	8.396	.0012	.0785	-.0106	.0020	.0017
Stddev	.021	.0001	.0013	.0018	.0025	.0019
%RSD	.2508	10.74	1.709	17.26	125.3	111.0
#1	8.380	.0013	.0799	-.0092	.0017	.0038
#2	8.388	.0012	.0772	-.0126	.0047	.0002
#3	8.420	.0010	.0784	-.0099	-.0003	.0011

Sample Name: 580-130934-D-2-A Acquired: 8/30/2023 20:55:01 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	14.64	.0001	.1279	.0001	-.0072	.0058
Stddev	.05	.0005	.0003	.0002	.0019	.0020
%RSD	.3268	426.9	.2528	150.3	26.07	35.27
#1	14.61	.0007	.1276	-.0000	-.0075	.0081
#2	14.62	-.0003	.1281	.0001	-.0089	.0043
#3	14.69	.0000	.1282	.0004	-.0052	.0049

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0002
Stddev	.0001
%RSD	36.12
#1	-.0003
#2	-.0003
#3	-.0001

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4624.7	27041.	10951.	23156.
Stddev	10.0	59.	41.	102.
%RSD	.21612	.21819	.37640	.43976
#1	4632.6	27096.	10979.	23244.
#2	4628.0	27048.	10969.	23181.
#3	4613.4	26978.	10903.	23045.

Sample Name: CCB Acquired: 8/30/2023 21:02:52 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0015	.0245	.0050	.0407	.0018	.0010
Stddev	.0020	.0099	.0010	.0077	.0010	.0001
%RSD	139.9	40.40	19.10	18.91	54.30	12.60
#1	-.0004	.0326	.0055	.0342	.0008	.0011
#2	.0036	.0275	.0056	.0492	.0027	.0008
#3	.0012	.0135	.0039	.0387	.0018	.0009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0020	.0175	.0018	.0017	.0018	.0002
Stddev	.0015	.0041	.0007	.0009	.0008	.0039
%RSD	77.28	23.19	41.05	53.52	43.83	2422.
#1	.0007	.0216	.0011	.0008	.0010	-.0014
#2	.0015	.0135	.0026	.0026	.0026	-.0027
#3	.0036	.0176	.0018	.0017	.0019	.0046
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0363	.4397	.0036	.0068	.0015	.0057
Stddev	.0034	.0525	.0016	.0017	.0009	.0007
%RSD	9.245	11.95	44.13	25.23	56.93	11.69
#1	.0402	.4814	.0052	.0063	.0021	.0059
#2	.0341	.4570	.0037	.0086	.0018	.0063
#3	.0347	.3807	.0020	.0053	.0005	.0050
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: CCB Acquired: 8/30/2023 21:02:52 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0440	.0014	.0181	.0023	.0029	.0031
Stddev	.0023	.0010	.0100	.0024	.0027	.0025
%RSD	5.326	73.92	55.17	105.8	92.57	80.10
#1	.0413	.0003	.0091	.0007	.0046	.0013
#2	.0452	.0023	.0289	.0050	.0044	.0059
#3	.0455	.0015	.0163	.0010	-.0002	.0020
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0224	.0020	.0011	.0018	-.0043	.0011
Stddev	.0043	.0014	.0002	.0002	.0006	.0022
%RSD	19.34	67.54	21.24	10.14	13.99	192.2
#1	.0273	.0009	.0013	.0019	-.0046	-.0003
#2	.0190	.0036	.0009	.0016	-.0036	.0036
#3	.0210	.0016	.0009	.0020	-.0047	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0006
Stddev	.0009
%RSD	159.4
#1	-.0003
#2	.0014
#3	.0006
Check ?	Chk Pass
High Limit	
Low Limit	

Sample Name: CCB Acquired: 8/30/2023 21:02:52 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4626.2	26561.	10531.	22370.
Stddev	9.9	97.	81.	184.
%RSD	.21306	.36671	.77267	.82464
#1	4633.1	26617.	10441.	22163.
#2	4630.5	26618.	10550.	22430.
#3	4614.9	26449.	10601.	22517.

Sample Name: 580-130934-D-2-B MS Acquired: 8/30/2023 21:06:28 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9730	19.43	.9801	9.972	.9866	1.029
Stddev	.0081	.05	.0031	.029	.0030	.002
%RSD	.8334	.2598	.3132	.2871	.3054	.1629
#1	.9644	19.47	.9769	9.949	.9851	1.029
#2	.9742	19.44	.9804	9.963	.9847	1.028
#3	.9804	19.37	.9831	10.00	.9901	1.031

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0035	46.30	.9992	.9687	1.016	.9549
Stddev	.0005	.14	.0028	.0021	.003	.0044
%RSD	13.30	.3039	.2788	.2171	.3177	.4653
#1	-.0040	46.18	.9967	.9666	1.014	.9523
#2	-.0031	46.28	.9987	.9686	1.014	.9524
#3	-.0034	46.46	1.002	.9708	1.020	.9600

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	19.97	20.33	.9229	29.39	.9951	1.000
Stddev	.07	.04	.0019	.04	.0033	.005
%RSD	.3343	.2006	.2077	.1463	.3347	.4906
#1	19.89	20.36	.9245	29.37	.9915	.9972
#2	19.98	20.28	.9208	29.37	.9958	.9977
#3	20.02	20.34	.9234	29.44	.9980	1.006

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	26.40	.9809	5.127	.9790	1.036	1.003
Stddev	.04	.0032	.033	.0052	.007	.005
%RSD	.1492	.3225	.6437	.5331	.6439	.4892
#1	26.38	.9780	5.124	.9733	1.034	.9986
#2	26.38	.9805	5.096	.9835	1.031	1.002
#3	26.45	.9843	5.162	.9803	1.044	1.008

Sample Name: 580-130934-D-2-B MS Acquired: 8/30/2023 21:06:28 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	23.33	.9891	1.148	1.009	.9738	.9920
Stddev	.02	.0012	.001	.004	.0243	.0027
%RSD	.0743	.1181	.0567	.3815	2.492	.2714
#1	23.35	.9887	1.147	1.004	.9478	.9889
#2	23.32	.9882	1.148	1.010	.9776	.9935
#3	23.32	.9904	1.148	1.012	.9959	.9936

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	1.003
Stddev	.003
%RSD	.3029
#1	.9999
#2	1.003
#3	1.006

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4393.3	26364.	10967.	23122.
Stddev	11.5	101.	18.	30.
%RSD	.26096	.38350	.16568	.12792
#1	4406.0	26457.	10962.	23112.
#2	4390.2	26377.	10987.	23155.
#3	4383.7	26256.	10952.	23098.

Sample Name: 580-130934-D-3-A Acquired: 8/30/2023 21:12:31 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0013	.0162	.0054	.0427	.0086	.0006
Stddev	.0013	.0187	.0006	.0033	.0002	.0001
%RSD	99.46	115.0	11.56	7.797	2.570	9.376
#1	-.0009	-.0053	.0047	.0461	.0089	.0006
#2	-.0002	.0266	.0055	.0425	.0085	.0006
#3	-.0027	.0274	.0059	.0395	.0085	.0007

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0008	22.72	.0006	.0003	.0005	.0042
Stddev	.0010	.26	.0002	.0001	.0001	.0011
%RSD	122.9	1.156	33.21	19.25	23.10	26.77
#1	-.0016	22.46	.0008	.0003	.0005	.0053
#2	-.0012	22.71	.0007	.0002	.0007	.0031
#3	.0003	22.98	.0004	.0003	.0005	.0043

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0231	2.672	-.0033	8.650	.0012	.0051
Stddev	.0036	.071	.0003	.097	.0009	.0015
%RSD	15.37	2.660	8.924	1.117	72.68	28.38
#1	.0194	2.590	-.0033	8.562	.0005	.0068
#2	.0234	2.719	-.0030	8.634	.0010	.0047
#3	.0265	2.706	-.0036	8.753	.0023	.0040

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	7.370	.0019	.0837	-.0081	-.0001	.0009
Stddev	.277	.0004	.0018	.0000	.0026	.0011
%RSD	3.755	20.03	2.180	.4436	3563.	133.7
#1	7.052	.0021	.0830	-.0081	-.0030	.0017
#2	7.509	.0022	.0824	-.0081	.0007	.0013
#3	7.550	.0015	.0858	-.0081	.0021	-.0004

Sample Name: 580-130934-D-3-A Acquired: 8/30/2023 21:12:31 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	12.88	.0002	.1032	.0013	.0138	.0042
Stddev	.44	.0005	.0036	.0011	.0065	.0042
%RSD	3.398	212.6	3.474	83.62	46.76	101.3
#1	12.37	.0007	.0991	.0025	.0213	.0087
#2	13.11	-.0002	.1053	.0011	.0104	.0036
#3	13.15	.0002	.1053	.0003	.0099	.0003

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0009
Stddev	.0000
%RSD	2.275
#1	.0009
#2	.0009
#3	.0008

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4708.6	27179.	11299.	23642.
Stddev	1.5	54.	324.	652.
%RSD	.03106	.19850	2.8668	2.7580
#1	4709.8	27240.	11669.	24386.
#2	4709.1	27161.	11065.	23170.
#3	4707.0	27137.	11163.	23371.

Sample Name: 580-130934-D-4-A Acquired: 8/30/2023 21:16:00 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0025	.0914	.0031	.0192	.0073	.0001
Stddev	.0015	.0262	.0034	.0013	.0001	.0001
%RSD	58.66	28.66	110.2	6.561	1.784	98.55
#1	-.0041	.1177	.0031	.0206	.0072	.0001
#2	-.0021	.0912	.0065	.0183	.0074	-.0000
#3	-.0013	.0653	-.0003	.0186	.0074	.0001

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0014	9.105	.0002	.0000	-.0000	-.0016
Stddev	.0010	.062	.0001	.0001	.0001	.0068
%RSD	69.12	.6766	32.19	30020.	313.7	421.8
#1	-.0022	9.051	.0003	.0000	.0001	-.0094
#2	-.0003	9.092	.0002	.0000	-.0001	.0010
#3	-.0016	9.173	.0001	-.0001	-.0000	.0035

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.1375	1.035	-.0068	3.646	.0042	.0014
Stddev	.0019	.015	.0017	.026	.0009	.0002
%RSD	1.407	1.486	25.13	.7046	21.81	16.95
#1	.1364	1.024	-.0051	3.619	.0037	.0016
#2	.1364	1.053	-.0069	3.670	.0036	.0011
#3	.1398	1.029	-.0085	3.651	.0053	.0013

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.023	.0004	.0435	-.0013	-.0007	-.0015
Stddev	.008	.0001	.0019	.0004	.0021	.0020
%RSD	.1932	18.01	4.454	34.98	306.3	133.4
#1	4.032	.0005	.0457	-.0016	.0002	-.0001
#2	4.018	.0003	.0419	-.0014	-.0031	-.0006
#3	4.019	.0004	.0429	-.0008	.0008	-.0039

Sample Name: 580-130934-D-4-A Acquired: 8/30/2023 21:16:00 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.727	-.0002	.0479	.0057	-.0093	.0009
Stddev	.015	.0004	.0001	.0018	.0056	.0012
%RSD	.3138	199.5	.2115	31.56	59.64	139.5
#1	4.738	-.0001	.0479	.0040	-.0030	.0022
#2	4.710	.0001	.0480	.0075	-.0113	.0006
#3	4.732	-.0007	.0478	.0055	-.0136	-.0002

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0099
Stddev	.0001
%RSD	1.499
#1	.0098
#2	.0100
#3	.0100

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4706.2	27018.	11305.	23568.
Stddev	24.2	156.	24.	65.
%RSD	.51318	.57870	.21600	.27791
#1	4723.7	27128.	11279.	23512.
#2	4716.3	27086.	11328.	23640.
#3	4678.6	26839.	11308.	23551.

Sample Name: 580-130934-D-6-A Acquired: 8/30/2023 21:22:59 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0033	-.0007	.0028	.0292	.0091	.0000
Stddev	.0028	.0298	.0012	.0009	.0001	.0001
%RSD	83.25	4408.	43.04	2.929	1.501	17480.
#1	-.0026	.0074	.0020	.0294	.0090	-.0000
#2	-.0010	-.0337	.0042	.0299	.0093	-.0000
#3	-.0064	.0243	.0022	.0283	.0091	.0001

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0000	28.03	.0002	-.0002	.0000	.0012
Stddev	.0019	.03	.0001	.0000	.0001	.0032
%RSD	11860.	.0982	33.20	20.41	181.7	278.6
#1	-.0013	28.03	.0003	-.0002	.0001	.0047
#2	.0021	28.01	.0002	-.0001	.0001	.0005
#3	-.0009	28.06	.0002	-.0002	-.0000	-.0017

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0283	2.968	-.0070	10.09	.0002	.0001
Stddev	.0003	.040	.0005	.02	.0005	.0001
%RSD	1.191	1.356	7.377	.2283	234.8	143.7
#1	.0281	2.976	-.0064	10.07	-.0004	.0002
#2	.0281	3.004	-.0074	10.08	.0006	.0002
#3	.0287	2.925	-.0072	10.12	.0004	-.0001

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	8.771	.0006	.0807	-.0093	.0007	-.0032
Stddev	.004	.0004	.0033	.0010	.0013	.0032
%RSD	.0470	67.83	4.055	10.28	177.7	100.0
#1	8.767	.0007	.0805	-.0093	-.0004	-.0065
#2	8.775	.0002	.0776	-.0103	.0022	-.0029
#3	8.772	.0010	.0842	-.0084	.0004	-.0002

Sample Name: 580-130934-D-6-A Acquired: 8/30/2023 21:22:59 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	12.47	-.0006	.1276	.0010	-.0086	.0043
Stddev	.05	.0007	.0002	.0004	.0040	.0007
%RSD	.4367	112.7	.1909	41.50	46.02	16.09
#1	12.41	-.0003	.1273	.0011	-.0120	.0037
#2	12.49	-.0014	.1276	.0006	-.0043	.0041
#3	12.52	-.0002	.1278	.0014	-.0095	.0050

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0070
Stddev	.0000
%RSD	.2705
#1	.0070
#2	.0070
#3	.0070

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4670.3	27044.	11386.	23795.
Stddev	8.4	64.	25.	87.
%RSD	.18037	.23795	.21866	.36703
#1	4676.3	27090.	11409.	23878.
#2	4674.0	27073.	11390.	23804.
#3	4660.7	26971.	11360.	23704.

Sample Name: 580-130934-C-7-A Acquired: 8/30/2023 21:26:29 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0043	1.030	.0018	.0120	.0141	-.0001
Stddev	.0009	.013	.0012	.0002	.0001	.0001
%RSD	20.09	1.304	63.42	1.784	.6650	79.70
#1	-.0034	1.019	.0005	.0122	.0140	-.0001
#2	-.0051	1.026	.0022	.0119	.0141	-.0000
#3	-.0043	1.045	.0028	.0118	.0142	-.0002

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0018	9.929	.0001	.0004	.0008	.0038
Stddev	.0008	.070	.0001	.0002	.0001	.0029
%RSD	41.72	.7021	90.87	41.23	11.56	77.29
#1	-.0027	9.886	.0002	.0005	.0007	.0070
#2	-.0013	9.892	.0001	.0002	.0009	.0013
#3	-.0015	10.01	.0000	.0004	.0008	.0031

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.282	1.087	-.0074	4.086	.0375	.0001
Stddev	.013	.007	.0018	.015	.0005	.0003
%RSD	.9828	.6615	24.61	.3628	1.223	344.5
#1	1.273	1.095	-.0065	4.092	.0371	.0003
#2	1.277	1.081	-.0062	4.069	.0375	-.0003
#3	1.297	1.084	-.0095	4.097	.0380	.0003

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.206	.0018	.0793	-.0033	.0001	-.0022
Stddev	.007	.0005	.0018	.0008	.0020	.0053
%RSD	.1630	25.38	2.292	25.42	1819.	241.7
#1	4.210	.0023	.0775	-.0031	.0001	-.0037
#2	4.198	.0014	.0794	-.0026	.0021	-.0067
#3	4.210	.0018	.0811	-.0043	-.0019	.0037

Sample Name: 580-130934-C-7-A Acquired: 8/30/2023 21:26:29 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	6.939	-.0006	.0528	.0806	-.0113	.0034
Stddev	.041	.0002	.0001	.0060	.0016	.0021
%RSD	.5915	28.62	.0977	7.414	14.02	62.04
#1	6.973	-.0004	.0528	.0761	-.0131	.0025
#2	6.893	-.0006	.0528	.0783	-.0104	.0058
#3	6.952	-.0007	.0529	.0873	-.0104	.0019

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0741
Stddev	.0004
%RSD	.5235
#1	.0737
#2	.0740
#3	.0745

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4682.1	26902.	11342.	23677.
Stddev	20.4	104.	27.	47.
%RSD	.43507	.38599	.23574	.19694
#1	4698.5	26994.	11333.	23660.
#2	4688.4	26923.	11321.	23641.
#3	4659.3	26790.	11372.	23730.

Sample Name: 580-130934-C-8-A Acquired: 8/30/2023 21:29:57 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0053	.1982	.0030	.0110	.0088	-.0002
Stddev	.0024	.0282	.0016	.0001	.0002	.0001
%RSD	44.99	14.22	51.72	.4878	2.148	33.33
#1	-.0033	.1707	.0045	.0110	.0090	-.0002
#2	-.0079	.1969	.0014	.0110	.0086	-.0001
#3	-.0046	.2271	.0032	.0111	.0088	-.0002

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0021	10.77	.0001	-.0001	-.0000	.0033
Stddev	.0016	.06	.0001	.0001	.0000	.0030
%RSD	76.42	.5412	164.4	58.53	150.1	90.02
#1	-.0008	10.74	.0001	-.0002	-.0000	.0059
#2	-.0017	10.73	-.0001	-.0000	.0000	.0039
#3	-.0039	10.83	.0001	-.0002	-.0000	.0001

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.2877	1.194	-.0090	4.273	.0130	-.0002
Stddev	.0024	.033	.0009	.031	.0007	.0003
%RSD	.8204	2.744	9.969	.7326	5.047	164.1
#1	.2850	1.175	-.0091	4.244	.0123	-.0005
#2	.2890	1.175	-.0098	4.268	.0130	.0002
#3	.2892	1.232	-.0080	4.306	.0137	-.0003

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.383	.0007	.0532	-.0024	-.0002	-.0044
Stddev	.001	.0002	.0011	.0013	.0015	.0039
%RSD	.0295	29.99	1.991	53.28	616.6	89.06
#1	4.383	.0009	.0539	-.0034	.0008	-.0066
#2	4.384	.0005	.0537	-.0028	.0005	-.0065
#3	4.382	.0007	.0520	-.0010	-.0020	.0001

Sample Name: 580-130934-C-8-A Acquired: 8/30/2023 21:29:57 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	5.674	-.0008	.0546	.0146	-.0112	.0013
Stddev	.006	.0003	.0001	.0004	.0011	.0003
%RSD	.1007	38.35	.2206	2.798	9.596	26.83
#1	5.679	-.0011	.0544	.0150	-.0125	.0015
#2	5.676	-.0009	.0546	.0146	-.0106	.0009
#3	5.668	-.0005	.0547	.0142	-.0106	.0014

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0074
Stddev	.0002
%RSD	2.377
#1	.0072
#2	.0075
#3	.0075

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4759.6	27233.	11608.	24173.
Stddev	16.4	108.	18.	11.
%RSD	.34480	.39644	.15152	.04627
#1	4766.3	27296.	11588.	24163.
#2	4771.7	27296.	11615.	24185.
#3	4740.9	27109.	11621.	24171.

Sample Name: 580-130934-D-9-A Acquired: 8/30/2023 21:33:26 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0043	.3558	.0021	.0102	.0099	-.0001
Stddev	.0006	.0300	.0023	.0004	.0002	.0001
%RSD	14.08	8.438	106.1	3.540	1.705	93.19
#1	-.0038	.3882	.0026	.0100	.0098	-.0002
#2	-.0050	.3504	.0042	.0100	.0099	-.0000
#3	-.0041	.3288	-.0003	.0106	.0101	-.0001

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0008	10.80	-.0000	-.0000	.0002	-.0016
Stddev	.0010	.04	.0002	.0001	.0002	.0033
%RSD	119.6	.4018	3117.	221.2	100.8	207.7
#1	.0018	10.78	-.0002	.0001	.0002	-.0030
#2	.0009	10.77	.0001	-.0001	.0000	.0022
#3	-.0002	10.85	.0001	-.0001	.0005	-.0039

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.4616	1.267	-.0098	4.307	.0137	-.0005
Stddev	.0004	.034	.0008	.024	.0006	.0001
%RSD	.0915	2.713	7.907	.5669	4.347	14.31
#1	.4617	1.280	-.0089	4.317	.0136	-.0005
#2	.4611	1.228	-.0100	4.280	.0143	-.0004
#3	.4619	1.293	-.0104	4.326	.0131	-.0006

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.401	.0012	.0753	-.0033	-.0006	-.0031
Stddev	.004	.0002	.0035	.0032	.0021	.0047
%RSD	.0830	16.38	4.588	98.70	332.7	153.5
#1	4.405	.0012	.0782	-.0022	-.0023	.0018
#2	4.399	.0010	.0715	-.0069	-.0014	-.0034
#3	4.398	.0013	.0763	-.0007	.0018	-.0075

Sample Name: 580-130934-D-9-A Acquired: 8/30/2023 21:33:26 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	5.969	-.0007	.0552	.0240	-.0106	.0024
Stddev	.035	.0002	.0002	.0003	.0016	.0036
%RSD	.5923	32.34	.3391	1.162	14.92	152.8
#1	6.009	-.0008	.0553	.0243	-.0090	-.0018
#2	5.954	-.0008	.0552	.0239	-.0122	.0038
#3	5.943	-.0004	.0550	.0238	-.0106	.0050

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0069
Stddev	.0001
%RSD	.7858
#1	.0068
#2	.0069
#3	.0068

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4678.1	26745.	11381.	23665.
Stddev	16.3	104.	34.	54.
%RSD	.34863	.38957	.30127	.22661
#1	4674.1	26741.	11347.	23642.
#2	4696.1	26851.	11416.	23727.
#3	4664.3	26643.	11380.	23628.

Sample Name: 580-130934-D-10-A Acquired: 8/30/2023 21:36:57 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0042	.0032	.0028	.0533	.0128	-.0002
Stddev	.0028	.0257	.0018	.0005	.0002	.0000
%RSD	67.63	806.6	62.35	.8640	1.650	21.64
#1	-.0041	.0192	.0031	.0538	.0131	-.0002
#2	-.0014	-.0264	.0010	.0533	.0127	-.0002
#3	-.0070	.0168	.0045	.0528	.0128	-.0001

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0016	40.36	-.0000	.0000	.0002	.0027
Stddev	.0019	.15	.0001	.0001	.0003	.0029
%RSD	114.0	.3738	405.9	214.2	160.3	109.2
#1	-.0011	40.33	-.0001	-.0000	.0001	.0045
#2	-.0037	40.23	.0000	.0000	.0005	.0042
#3	-.0001	40.53	.0000	.0001	-.0000	-.0007

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0001	3.119	-.0074	15.20	-.0000	-.0002
Stddev	.0008	.032	.0013	.08	.0003	.0005
%RSD	1279.	1.038	18.29	.5415	759.5	271.7
#1	.0003	3.090	-.0065	15.12	-.0004	.0004
#2	-.0010	3.113	-.0089	15.21	.0002	-.0006
#3	.0005	3.154	-.0067	15.28	.0001	-.0003

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	10.30	.0016	.1215	-.0090	.0003	-.0046
Stddev	.01	.0003	.0018	.0009	.0018	.0018
%RSD	.1186	17.52	1.468	10.43	566.5	38.24
#1	10.31	.0013	.1202	-.0100	-.0010	-.0035
#2	10.29	.0017	.1236	-.0081	.0024	-.0066
#3	10.29	.0017	.1208	-.0089	-.0005	-.0037

Sample Name: 580-130934-D-10-A Acquired: 8/30/2023 21:36:57 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	14.12	-.0006	.1776	.0006	-.0096	.0031
Stddev	.01	.0002	.0002	.0007	.0026	.0023
%RSD	.0916	38.93	.1131	127.0	26.64	73.49
#1	14.12	-.0009	.1776	.0010	-.0124	.0044
#2	14.14	-.0005	.1773	-.0003	-.0073	.0043
#3	14.12	-.0005	.1777	.0010	-.0091	.0005

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0050
Stddev	.0001
%RSD	1.660
#1	.0050
#2	.0049
#3	.0050

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4626.5	26726.	11594.	24018.
Stddev	18.1	108.	7.	18.
%RSD	.39155	.40521	.05618	.07380
#1	4631.1	26770.	11595.	24016.
#2	4641.8	26804.	11600.	24037.
#3	4606.5	26602.	11587.	24002.

Sample Name: CCV 3565024 Acquired: 8/30/2023 21:40:28 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9507	91.24	4.928	48.04	4.822	5.079
Stddev	.0054	.16	.087	.75	.077	.009
%RSD	.5666	.1728	1.761	1.560	1.592	.1693
#1	.9568	91.33	4.845	47.36	4.750	5.069
#2	.9467	91.33	5.018	48.84	4.903	5.086
#3	.9485	91.05	4.922	47.93	4.811	5.080
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.861	100.8	5.104	4.991	4.964	5.064
Stddev	.076	2.0	.080	.077	.079	.098
%RSD	1.568	1.995	1.563	1.549	1.586	1.938
#1	4.792	98.85	5.031	4.920	4.892	4.970
#2	4.943	102.9	5.189	5.073	5.048	5.166
#3	4.849	100.7	5.093	4.979	4.952	5.056
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	102.8	F 83.05	4.550	97.83	5.132	4.900
Stddev	2.0	.78	.005	1.87	.102	.080
%RSD	1.900	.9360	.1131	1.910	1.994	1.623
#1	101.0	83.80	4.544	95.96	5.029	4.825
#2	104.9	83.09	4.554	99.70	5.234	4.984
#3	102.7	82.25	4.551	97.85	5.134	4.891
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		100.0				
Range		-10.00%				

Sample Name: CCV 3565024 Acquired: 8/30/2023 21:40:28 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	90.89	5.012	50.56	4.901	5.088	4.979
Stddev	.45	.078	.91	.073	.078	.080
%RSD	.4932	1.551	1.793	1.490	1.529	1.604
#1	91.32	4.938	49.67	4.834	5.017	4.907
#2	90.93	5.093	51.49	4.979	5.171	5.065
#3	90.42	5.004	50.52	4.889	5.075	4.967
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F 43.37	4.978	5.026	5.048	4.932	4.782
Stddev	.07	.080	.008	.006	.096	.011
%RSD	.1589	1.607	.1510	.1205	1.936	.2224
#1	43.30	4.904	5.030	5.041	4.841	4.788
#2	43.43	5.063	5.030	5.051	5.031	4.789
#3	43.38	4.967	5.017	5.051	4.923	4.770
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	50.00					
Range	-10.00%					

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	5.153
Stddev	.084
%RSD	1.620
#1	5.075
#2	5.241
#3	5.143
Check ?	Chk Pass
Value	
Range	

Sample Name: CCV 3565024 Acquired: 8/30/2023 21:40:28 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3951.0	24255.	10926.	22665.
Stddev	64.4	420.	29.	20.
%RSD	1.6292	1.7315	.26137	.08859
#1	4010.4	24651.	10895.	22646.
#2	3882.6	23815.	10931.	22662.
#3	3959.9	24300.	10951.	22686.

Sample Name: 580-130934-D-11-A Acquired: 8/30/2023 21:48:25 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0048	1.955	.0037	.0235	.0205	.0001
Stddev	.0021	.017	.0012	.0012	.0003	.0001
%RSD	43.60	.8687	32.99	4.932	1.670	80.09
#1	-.0027	1.936	.0050	.0244	.0202	.0001
#2	-.0049	1.961	.0027	.0240	.0203	.0000
#3	-.0069	1.969	.0033	.0222	.0209	.0003

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0014	10.36	.0003	.0008	.0016	.0154
Stddev	.0009	.10	.0001	.0003	.0001	.0048
%RSD	63.75	.9746	41.63	33.39	6.227	30.99
#1	-.0025	10.24	.0004	.0007	.0015	.0196
#2	-.0007	10.41	.0002	.0011	.0017	.0164
#3	-.0012	10.43	.0002	.0006	.0016	.0102

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	2.081	1.062	-.0079	4.163	.0391	.0014
Stddev	.014	.048	.0009	.048	.0007	.0006
%RSD	.6890	4.547	11.53	1.160	1.808	42.30
#1	2.066	1.008	-.0071	4.107	.0388	.0021
#2	2.083	1.078	-.0088	4.192	.0386	.0010
#3	2.094	1.100	-.0077	4.189	.0399	.0011

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.349	.0028	.1254	-.0025	.0003	-.0007
Stddev	.009	.0001	.0013	.0019	.0004	.0018
%RSD	.2045	5.012	1.048	76.65	160.2	250.8
#1	4.355	.0027	.1244	-.0009	-.0000	-.0027
#2	4.339	.0029	.1269	-.0047	.0007	-.0003
#3	4.354	.0029	.1250	-.0020	.0001	.0009

Sample Name: 580-130934-D-11-A Acquired: 8/30/2023 21:48:25 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	7.991	-.0001	.0559	.1395	-.0088	.0056
Stddev	.018	.0001	.0001	.0014	.0015	.0036
%RSD	.2316	171.8	.2543	.9865	16.82	65.22
#1	7.975	-.0001	.0558	.1391	-.0096	.0068
#2	8.011	-.0002	.0559	.1411	-.0071	.0084
#3	7.988	.0001	.0561	.1384	-.0097	.0015

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0083
Stddev	.0001
%RSD	.8322
#1	.0084
#2	.0083
#3	.0083

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4713.4	26872.	11604.	23965.
Stddev	20.0	114.	50.	115.
%RSD	.42514	.42387	.42800	.47860
#1	4730.3	26974.	11547.	23837.
#2	4718.5	26893.	11639.	24059.
#3	4691.2	26749.	11625.	23998.

Sample Name: 580-130934-D-12-A Acquired: 8/30/2023 21:51:55 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0019	.1956	.0022	.0178	.0073	-.0001
Stddev	.0021	.0144	.0020	.0003	.0002	.0001
%RSD	110.5	7.345	87.44	1.772	3.126	129.1
#1	-.0036	.1850	.0030	.0181	.0070	-.0002
#2	.0004	.2119	.0000	.0175	.0073	.0000
#3	-.0025	.1898	.0037	.0179	.0075	-.0001

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0002	9.517	.0002	.0001	-.0000	.0141
Stddev	.0020	.044	.0001	.0003	.0001	.0047
%RSD	939.3	.4577	41.12	237.3	632.9	33.00
#1	.0019	9.494	.0002	.0003	-.0001	.0194
#2	-.0020	9.491	.0002	.0003	.0001	.0120
#3	-.0005	9.568	.0004	-.0002	-.0000	.0109

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.2554	.8550	-.0092	3.725	.0060	.0006
Stddev	.0018	.0334	.0014	.052	.0005	.0003
%RSD	.7151	3.911	15.02	1.394	8.310	43.59
#1	.2574	.8906	-.0085	3.746	.0056	.0007
#2	.2537	.8502	-.0084	3.666	.0066	.0007
#3	.2552	.8242	-.0108	3.764	.0058	.0003

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.087	.0006	.0468	-.0021	.0014	-.0044
Stddev	.014	.0006	.0028	.0004	.0027	.0035
%RSD	.3307	110.4	6.088	17.36	192.0	79.52
#1	4.095	.0007	.0495	-.0017	.0016	-.0044
#2	4.071	.0012	.0438	-.0024	-.0014	-.0009
#3	4.094	-.0001	.0471	-.0020	.0039	-.0079

Sample Name: 580-130934-D-12-A Acquired: 8/30/2023 21:51:55 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.829	-.0001	.0479	.0127	-.0097	.0031
Stddev	.023	.0005	.0002	.0008	.0016	.0020
%RSD	.4679	393.5	.3601	6.298	16.06	63.19
#1	4.824	-.0004	.0480	.0136	-.0108	.0047
#2	4.809	-.0004	.0477	.0122	-.0079	.0009
#3	4.853	.0004	.0479	.0123	-.0105	.0037

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0066
Stddev	.0001
%RSD	1.375
#1	.0065
#2	.0066
#3	.0066

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4626.1	26175.	11391.	23466.
Stddev	17.1	123.	37.	52.
%RSD	.36860	.46998	.32732	.21999
#1	4638.8	26279.	11415.	23499.
#2	4632.8	26207.	11409.	23493.
#3	4606.7	26039.	11348.	23407.

Sample Name: 580-130934-D-13-A Acquired: 8/30/2023 21:55:24 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0045	-.0138	.0029	.0343	.0097	-.0001
Stddev	.0013	.0194	.0014	.0002	.0000	.0001
%RSD	29.57	140.3	48.27	.4605	.4005	59.49
#1	-.0043	-.0067	.0020	.0341	.0098	-.0002
#2	-.0059	.0010	.0045	.0344	.0097	-.0001
#3	-.0033	-.0357	.0022	.0343	.0097	-.0001

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0016	30.53	.0001	.0000	-.0003	-.0041
Stddev	.0017	.26	.0001	.0002	.0000	.0080
%RSD	106.8	.8559	133.6	1632.	16.73	195.1
#1	-.0006	30.57	.0002	-.0002	-.0002	-.0133
#2	-.0006	30.26	.0002	.0002	-.0003	.0006
#3	-.0036	30.78	-.0001	.0000	-.0003	.0004

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0045	2.285	-.0080	11.48	-.0003	-.0002
Stddev	.0015	.040	.0011	.05	.0003	.0003
%RSD	33.30	1.752	13.82	.4609	115.1	139.4
#1	.0028	2.328	-.0071	11.52	-.0002	.0001
#2	.0052	2.277	-.0077	11.42	-.0006	-.0002
#3	.0055	2.249	-.0093	11.50	.0000	-.0005

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	8.711	.0003	.0519	-.0088	.0013	-.0024
Stddev	.020	.0004	.0020	.0004	.0020	.0054
%RSD	.2281	133.3	3.831	4.782	146.9	225.3
#1	8.690	.0004	.0510	-.0087	.0001	.0022
#2	8.730	-.0001	.0506	-.0084	.0036	-.0010
#3	8.713	.0005	.0542	-.0092	.0003	-.0083

Sample Name: 580-130934-D-13-A Acquired: 8/30/2023 21:55:24 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	12.51	-.0011	.1357	.0004	-.0088	.0040
Stddev	.03	.0005	.0003	.0013	.0044	.0041
%RSD	.2364	49.98	.2359	287.5	49.52	102.1
#1	12.49	-.0009	.1353	-.0003	-.0038	.0017
#2	12.54	-.0007	.1358	.0019	-.0111	.0016
#3	12.51	-.0017	.1359	-.0003	-.0115	.0087

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0001
Stddev	.0001
%RSD	71.13
#1	.0000
#2	.0001
#3	.0001

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4562.4	25982.	11369.	23372.
Stddev	11.9	97.	51.	85.
%RSD	.26076	.37423	.45135	.36483
#1	4557.7	25960.	11383.	23374.
#2	4575.9	26089.	11312.	23285.
#3	4553.5	25898.	11412.	23456.

Sample Name: 580-130934-D-14-A Acquired: 8/30/2023 21:58:54 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0041	.0274	.0011	.0308	.0083	-.0003
Stddev	.0014	.0110	.0011	.0009	.0001	.0001
%RSD	34.02	40.09	102.9	2.791	1.386	28.30
#1	-.0036	.0328	-.0001	.0317	.0082	-.0002
#2	-.0057	.0346	.0021	.0301	.0084	-.0002
#3	-.0031	.0148	.0014	.0306	.0083	-.0003

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0014	26.74	.0001	-.0001	-.0001	.0055
Stddev	.0012	.12	.0001	.0001	.0003	.0031
%RSD	80.50	.4335	73.96	122.7	243.8	56.87
#1	-.0001	26.72	.0003	.0000	.0002	.0051
#2	-.0023	26.65	.0000	-.0001	-.0002	.0088
#3	-.0019	26.87	.0001	-.0001	-.0003	.0026

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0121	2.104	-.0091	10.10	.0004	-.0001
Stddev	.0013	.022	.0001	.08	.0006	.0004
%RSD	10.72	1.039	1.338	.7458	140.0	517.9
#1	.0106	2.124	-.0090	10.02	.0011	.0004
#2	.0129	2.106	-.0091	10.13	.0002	-.0004
#3	.0129	2.080	-.0092	10.16	-.0000	-.0002

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	8.429	.0002	.0539	-.0101	-.0004	-.0028
Stddev	.017	.0004	.0019	.0011	.0001	.0032
%RSD	.1958	160.6	3.583	11.34	33.25	112.4
#1	8.447	.0005	.0517	-.0109	-.0003	-.0028
#2	8.422	.0004	.0554	-.0106	-.0004	-.0060
#3	8.416	-.0002	.0546	-.0088	-.0005	.0003

Sample Name: 580-130934-D-14-A Acquired: 8/30/2023 21:58:54 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	13.72	-.0008	.1190	.0015	-.0060	.0036
Stddev	.02	.0002	.0003	.0012	.0009	.0014
%RSD	.1642	30.59	.2362	77.56	15.37	38.35
#1	13.70	-.0008	.1193	.0004	-.0070	.0026
#2	13.72	-.0010	.1189	.0027	-.0052	.0051
#3	13.74	-.0005	.1188	.0014	-.0060	.0031

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0005
Stddev	.0000
%RSD	6.387
#1	-.0004
#2	-.0005
#3	-.0005

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4693.3	26652.	11704.	24034.
Stddev	17.2	87.	15.	25.
%RSD	.36585	.32825	.12766	.10409
#1	4706.8	26719.	11721.	24053.
#2	4699.2	26683.	11693.	24006.
#3	4674.0	26553.	11699.	24044.

Sample Name: 580-130934-D-15-A Acquired: 8/30/2023 22:02:23 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0036	.4017	.0020	.0095	.0088	-.0002
Stddev	.0013	.0040	.0026	.0003	.0001	.0001
%RSD	34.78	1.006	129.5	2.792	1.479	34.12
#1	-.0051	.3988	-.0009	.0093	.0089	-.0002
#2	-.0031	.3999	.0041	.0098	.0089	-.0001
#3	-.0027	.4063	.0028	.0096	.0087	-.0002

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0018	9.199	.0001	.0001	.0001	.0018
Stddev	.0013	.097	.0001	.0002	.0000	.0053
%RSD	71.88	1.052	79.38	213.5	48.45	291.4
#1	-.0004	9.096	.0001	-.0000	.0001	.0040
#2	-.0020	9.212	.0000	-.0000	.0001	-.0042
#3	-.0029	9.288	.0001	.0004	.0001	.0056

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.4760	.8732	-.0091	3.610	.0123	-.0003
Stddev	.0034	.0277	.0024	.021	.0007	.0004
%RSD	.7174	3.176	26.42	.5705	5.869	109.3
#1	.4723	.9018	-.0064	3.600	.0130	.0001
#2	.4767	.8465	-.0099	3.597	.0116	-.0007
#3	.4790	.8712	-.0110	3.634	.0122	-.0005

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	3.934	.0010	.0515	-.0039	.0008	-.0037
Stddev	.022	.0003	.0021	.0007	.0013	.0021
%RSD	.5521	31.97	4.084	16.83	162.1	56.85
#1	3.910	.0010	.0520	-.0034	-.0005	-.0056
#2	3.953	.0006	.0533	-.0037	.0020	-.0014
#3	3.938	.0012	.0492	-.0046	.0008	-.0041

Sample Name: 580-130934-D-15-A Acquired: 8/30/2023 22:02:23 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	5.094	-.0005	.0469	.0286	-.0115	.0005
Stddev	.009	.0004	.0001	.0022	.0030	.0024
%RSD	.1791	80.35	.3127	7.789	26.50	465.5
#1	5.104	-.0006	.0468	.0288	-.0119	.0033
#2	5.092	-.0001	.0468	.0307	-.0143	-.0013
#3	5.086	-.0009	.0471	.0262	-.0083	-.0004

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0036
Stddev	.0001
%RSD	3.300
#1	.0037
#2	.0035
#3	.0034

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4777.8	26988.	11714.	24077.
Stddev	19.1	119.	56.	110.
%RSD	.39898	.44037	.47759	.45660
#1	4785.2	27061.	11652.	23950.
#2	4792.1	27053.	11727.	24131.
#3	4756.2	26851.	11762.	24149.

Sample Name: 580-130934-D-16-A Acquired: 8/30/2023 22:05:53 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0040	-.0197	.0022	.0294	.0088	-.0002
Stddev	.0002	.0116	.0020	.0003	.0001	.0001
%RSD	5.090	59.06	90.53	.8875	.6488	33.03
#1	-.0041	-.0265	.0003	.0294	.0087	-.0001
#2	-.0042	-.0063	.0019	.0292	.0088	-.0002
#3	-.0038	-.0263	.0042	.0297	.0089	-.0002

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0000	27.73	.0000	-.0001	-.0001	.0045
Stddev	.0004	.16	.0001	.0001	.0001	.0037
%RSD	4601.	.5854	220.4	170.3	44.18	80.73
#1	-.0004	27.70	.0000	-.0000	-.0001	.0017
#2	-.0000	27.59	.0001	-.0002	-.0001	.0032
#3	.0004	27.91	-.0000	.0000	-.0002	.0087

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0038	2.288	-.0092	10.38	.0003	-.0008
Stddev	.0027	.014	.0002	.06	.0005	.0004
%RSD	72.76	.6009	2.130	.5609	182.1	53.62
#1	.0012	2.295	-.0090	10.39	-.0000	-.0011
#2	.0035	2.272	-.0092	10.32	.0009	-.0011
#3	.0066	2.296	-.0094	10.43	.0000	-.0003

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	8.069	.0004	.0625	-.0074	-.0023	-.0035
Stddev	.009	.0002	.0032	.0002	.0026	.0035
%RSD	.1103	44.35	5.186	2.923	114.8	97.97
#1	8.071	.0002	.0652	-.0073	-.0011	-.0060
#2	8.060	.0004	.0633	-.0074	-.0053	-.0051
#3	8.078	.0005	.0589	-.0077	-.0004	.0004

Sample Name: 580-130934-D-16-A Acquired: 8/30/2023 22:05:53 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	10.70	-.0005	.1237	.0002	-.0097	.0039
Stddev	.12	.0001	.0004	.0009	.0014	.0032
%RSD	1.083	21.30	.3355	416.3	14.86	82.55
#1	10.59	-.0005	.1242	.0001	-.0087	.0004
#2	10.67	-.0004	.1235	-.0006	-.0090	.0047
#3	10.82	-.0005	.1235	.0011	-.0114	.0067

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0006
Stddev	.0001
%RSD	10.67
#1	.0007
#2	.0006
#3	.0005

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4657.9	26609.	11566.	23760.
Stddev	24.3	142.	28.	40.
%RSD	.52094	.53441	.24139	.16832
#1	4674.2	26693.	11591.	23787.
#2	4669.5	26689.	11570.	23779.
#3	4630.0	26444.	11536.	23714.

Sample Name: 580-130934-D-17-A Acquired: 8/30/2023 22:09:23 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0039	.0234	.0016	.0768	.0326	-.0002
Stddev	.0024	.0080	.0014	.0007	.0001	.0001
%RSD	63.19	34.22	88.32	.9702	.3090	46.08
#1	-.0042	.0303	.0018	.0772	.0325	-.0002
#2	-.0061	.0146	.0030	.0760	.0326	-.0001
#3	-.0013	.0253	.0001	.0773	.0327	-.0001

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0006	95.85	.0001	-.0000	-.0001	.0041
Stddev	.0018	.33	.0001	.0001	.0001	.0044
%RSD	285.2	.3414	76.95	8632.	85.29	105.6
#1	.0003	95.65	.0001	.0001	-.0001	.0028
#2	-.0010	95.66	.0001	-.0001	-.0001	.0006
#3	.0026	96.22	.0002	.0000	-.0000	.0090

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0554	5.554	.0286	15.90	.0061	-.0002
Stddev	.0012	.008	.0011	.08	.0003	.0002
%RSD	2.160	.1383	3.912	.4765	5.113	69.62
#1	.0543	5.548	.0298	15.82	.0064	-.0001
#2	.0566	5.551	.0276	15.91	.0058	-.0004
#3	.0552	5.562	.0285	15.97	.0061	-.0002

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	13.06	.0008	.0966	-.0107	.0020	-.0036
Stddev	.01	.0001	.0011	.0014	.0024	.0028
%RSD	.1077	10.59	1.124	12.79	123.0	77.90
#1	13.05	.0008	.0956	-.0117	.0009	-.0069
#2	13.08	.0007	.0963	-.0092	.0047	-.0022
#3	13.05	.0009	.0977	-.0113	.0002	-.0018

Sample Name: 580-130934-D-17-A Acquired: 8/30/2023 22:09:23 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	14.52	-.0006	1.027	.0038	-.0105	.0040
Stddev	.04	.0002	.002	.0001	.0043	.0029
%RSD	.3007	43.42	.1849	3.853	40.85	71.11
#1	14.55	-.0008	1.026	.0036	-.0056	.0023
#2	14.54	-.0004	1.029	.0038	-.0134	.0073
#3	14.47	-.0004	1.025	.0039	-.0125	.0024

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0023
Stddev	.0000
%RSD	.5348
#1	.0023
#2	.0023
#3	.0023

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4509.0	25913.	11432.	23471.
Stddev	16.4	85.	31.	72.
%RSD	.36413	.32664	.27117	.30659
#1	4521.3	25984.	11468.	23551.
#2	4515.3	25936.	11412.	23449.
#3	4490.4	25819.	11417.	23412.

Sample Name: 580-130934-D-18-A Acquired: 8/30/2023 22:12:52 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0044	.8675	.0015	.0061	.0122	-.0002
Stddev	.0012	.0290	.0029	.0002	.0003	.0000
%RSD	27.72	3.341	199.4	4.012	2.133	13.29
#1	-.0042	.8612	.0048	.0062	.0119	-.0002
#2	-.0034	.8991	-.0004	.0058	.0121	-.0002
#3	-.0058	.8422	-.0001	.0062	.0125	-.0002

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0009	9.752	-.0001	.0002	.0009	.0068
Stddev	.0016	.013	.0001	.0001	.0002	.0027
%RSD	179.9	.1295	135.8	60.48	18.20	40.45
#1	.0004	9.741	.0000	.0001	.0007	.0094
#2	-.0004	9.749	-.0001	.0004	.0010	.0039
#3	-.0027	9.765	-.0001	.0002	.0009	.0071

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.051	.9336	-.0090	3.850	.0229	-.0009
Stddev	.005	.0122	.0019	.006	.0004	.0002
%RSD	.5198	1.306	21.30	.1543	1.847	27.42
#1	1.045	.9242	-.0073	3.845	.0225	-.0008
#2	1.055	.9474	-.0086	3.857	.0234	-.0012
#3	1.054	.9292	-.0110	3.849	.0229	-.0007

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.113	.0019	.0723	-.0032	-.0003	-.0028
Stddev	.009	.0005	.0018	.0014	.0017	.0022
%RSD	.2089	25.57	2.454	44.34	586.3	79.00
#1	4.111	.0024	.0712	-.0023	.0009	-.0021
#2	4.106	.0014	.0713	-.0048	-.0022	-.0010
#3	4.123	.0020	.0743	-.0024	.0004	-.0053

Sample Name: 580-130934-D-18-A Acquired: 8/30/2023 22:12:52 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	6.193	-.0005	.0507	.0664	-.0122	.0027
Stddev	.028	.0002	.0001	.0008	.0013	.0010
%RSD	.4450	38.53	.1932	1.274	10.67	37.52
#1	6.225	-.0003	.0508	.0671	-.0114	.0023
#2	6.177	-.0006	.0506	.0655	-.0137	.0020
#3	6.177	-.0006	.0507	.0667	-.0115	.0039

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0076
Stddev	.0002
%RSD	2.069
#1	.0075
#2	.0076
#3	.0078

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4716.6	26640.	11592.	23821.
Stddev	19.6	112.	26.	38.
%RSD	.41499	.41867	.22177	.15933
#1	4734.5	26734.	11616.	23861.
#2	4719.5	26670.	11593.	23818.
#3	4695.7	26517.	11565.	23785.

Sample Name: 580-130934-D-19-A Acquired: 8/30/2023 22:16:22 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0039	1.325	.0007	.0050	.0162	-.0002
Stddev	.0020	.020	.0011	.0005	.0003	.0000
%RSD	52.01	1.503	153.8	9.535	1.624	26.53
#1	-.0023	1.302	.0003	.0054	.0162	-.0001
#2	-.0062	1.338	-.0001	.0051	.0159	-.0002
#3	-.0032	1.335	.0019	.0044	.0164	-.0002

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0002	9.734	.0000	.0002	.0009	.0078
Stddev	.0005	.019	.0000	.0002	.0001	.0016
%RSD	241.2	.1961	118.8	100.4	8.551	21.09
#1	.0005	9.712	.0001	.0003	.0008	.0060
#2	-.0004	9.744	.0000	-.0000	.0009	.0081
#3	.0005	9.745	-.0000	.0003	.0009	.0093

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.494	.9333	-.0085	3.909	.0364	-.0007
Stddev	.006	.0150	.0007	.041	.0007	.0002
%RSD	.4162	1.607	8.345	1.044	1.901	27.76
#1	1.487	.9383	-.0077	3.864	.0362	-.0009
#2	1.498	.9451	-.0090	3.918	.0359	-.0005
#3	1.496	.9164	-.0089	3.944	.0372	-.0007

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.081	.0019	.0880	-.0044	-.0007	-.0027
Stddev	.014	.0005	.0017	.0008	.0011	.0008
%RSD	.3297	28.70	1.951	19.00	163.9	27.99
#1	4.067	.0020	.0860	-.0049	-.0015	-.0025
#2	4.093	.0013	.0892	-.0035	-.0011	-.0021
#3	4.084	.0024	.0887	-.0049	.0006	-.0035

Sample Name: 580-130934-D-19-A Acquired: 8/30/2023 22:16:22 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	6.886	-.0006	.0516	.0947	-.0111	.0050
Stddev	.007	.0006	.0003	.0010	.0039	.0033
%RSD	.1011	108.2	.5985	1.020	34.76	66.33
#1	6.880	-.0013	.0513	.0942	-.0146	.0089
#2	6.884	-.0001	.0519	.0940	-.0117	.0035
#3	6.893	-.0004	.0517	.0958	-.0070	.0027

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0466
Stddev	.0002
%RSD	.4537
#1	.0464
#2	.0465
#3	.0468

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4714.9	26605.	11597.	23759.
Stddev	12.4	63.	24.	66.
%RSD	.26246	.23628	.21072	.27651
#1	4725.5	26628.	11586.	23785.
#2	4718.0	26653.	11625.	23808.
#3	4701.3	26534.	11580.	23685.

Sample Name: 580-130934-D-20-A Acquired: 8/30/2023 22:19:51 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0054	.2432	.0017	.0054	.0094	-.0002
Stddev	.0004	.0186	.0011	.0006	.0003	.0000
%RSD	8.238	7.631	64.39	10.20	2.747	23.12
#1	-.0052	.2297	.0023	.0059	.0093	-.0002
#2	-.0059	.2644	.0004	.0056	.0097	-.0001
#3	-.0052	.2356	.0023	.0048	.0092	-.0002

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0012	9.723	.0001	.0001	-.0001	.0055
Stddev	.0015	.032	.0001	.0000	.0002	.0052
%RSD	122.8	.3255	54.28	38.75	224.3	94.53
#1	-.0000	9.724	.0001	.0001	.0000	.0044
#2	-.0028	9.691	.0001	.0000	.0000	.0113
#3	-.0007	9.754	.0002	.0001	-.0004	.0010

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.3329	.9716	-.0105	3.763	.0063	-.0010
Stddev	.0034	.0262	.0003	.024	.0003	.0002
%RSD	1.016	2.700	3.192	.6243	5.457	16.53
#1	.3324	.9985	-.0109	3.786	.0059	-.0008
#2	.3297	.9461	-.0104	3.739	.0064	-.0011
#3	.3364	.9703	-.0102	3.765	.0066	-.0010

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	3.984	.0006	.0541	-.0020	.0000	-.0036
Stddev	.017	.0001	.0019	.0008	.0008	.0004
%RSD	.4252	23.63	3.540	40.39	66910.	12.11
#1	3.968	.0004	.0520	-.0011	.0008	-.0034
#2	3.984	.0007	.0558	-.0022	-.0007	-.0033
#3	4.001	.0006	.0545	-.0026	-.0001	-.0041

Sample Name: 580-130934-D-20-A Acquired: 8/30/2023 22:19:51 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.940	-.0004	.0501	.0178	-.0073	.0008
Stddev	.013	.0001	.0001	.0014	.0015	.0005
%RSD	.2525	14.57	.1010	7.842	21.03	56.99
#1	4.936	-.0004	.0500	.0185	-.0067	.0010
#2	4.955	-.0005	.0501	.0162	-.0062	.0011
#3	4.931	-.0004	.0501	.0186	-.0091	.0003

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0025
Stddev	.0000
%RSD	.4159
#1	.0025
#2	.0025
#3	.0025

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4717.7	26531.	11585.	23716.
Stddev	18.5	116.	27.	31.
%RSD	.39313	.43610	.23292	.13188
#1	4723.4	26563.	11612.	23751.
#2	4732.7	26628.	11585.	23705.
#3	4696.9	26403.	11558.	23692.

Sample Name: CCV 3565024 Acquired: 8/30/2023 22:23:22 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9536	F 89.20	4.837	47.17	4.769	5.135
Stddev	.0066	.11	.021	.23	.025	.014
%RSD	.6917	.1198	.4230	.4891	.5260	.2658
#1	.9609	89.24	4.826	47.07	4.758	5.150
#2	.9482	89.08	4.825	47.00	4.751	5.132
#3	.9516	89.28	4.861	47.43	4.798	5.123
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		100.0				
Range		-10.00%				

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.871	101.2	5.078	4.953	4.878	5.094
Stddev	.018	.5	.015	.017	.024	.021
%RSD	.3598	.4885	.3023	.3472	.4964	.4168
#1	4.864	100.8	5.076	4.950	4.865	5.086
#2	4.859	101.0	5.064	4.938	4.863	5.078
#3	4.891	101.8	5.094	4.972	4.906	5.118
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	102.5	F 81.56	4.527	96.07	5.157	4.802
Stddev	.6	.28	.004	.52	.022	.028
%RSD	.5383	.3483	.0956	.5413	.4297	.5909
#1	102.0	81.88	4.530	95.58	5.137	4.788
#2	102.3	81.48	4.530	96.02	5.154	4.784
#3	103.1	81.33	4.522	96.62	5.181	4.835
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		100.0				
Range		-10.00%				

Sample Name: CCV 3565024 Acquired: 8/30/2023 22:23:22 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	91.46	4.977	51.56	4.831	5.099	4.863
Stddev	.26	.017	.35	.014	.024	.030
%RSD	.2804	.3494	.6709	.2876	.4678	.6158
#1	91.75	4.975	51.35	4.825	5.094	4.855
#2	91.33	4.961	51.37	4.820	5.079	4.839
#3	91.29	4.996	51.96	4.846	5.126	4.897
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F 42.25	4.915	5.011	5.137	4.924	4.697
Stddev	.05	.016	.004	.004	.022	.005
%RSD	.1233	.3236	.0878	.0848	.4523	.0984
#1	42.28	4.912	5.016	5.139	4.900	4.702
#2	42.19	4.901	5.008	5.132	4.929	4.693
#3	42.28	4.932	5.009	5.140	4.943	4.695
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	50.00					
Range	-10.00%					

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	5.163
Stddev	.014
%RSD	.2621
#1	5.163
#2	5.150
#3	5.177
Check ?	Chk Pass
Value	
Range	

Sample Name: CCV 3565024 Acquired: 8/30/2023 22:23:22 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3904.2	23645.	10744.	21987.
Stddev	13.1	107.	56.	103.
%RSD	.33460	.45393	.51800	.46772
#1	3904.2	23672.	10682.	21869.
#2	3917.3	23737.	10790.	22058.
#3	3891.2	23527.	10760.	22034.

Sample Name: CCB Acquired: 8/30/2023 22:27:42 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0040	-.0028	.0046	.0486	.0019	.0010
Stddev	.0010	.0151	.0007	.0027	.0010	.0001
%RSD	26.27	545.7	16.14	5.591	52.67	6.387
#1	-.0049	-.0081	.0037	.0456	.0007	.0010
#2	-.0042	.0143	.0049	.0492	.0024	.0009
#3	-.0028	-.0144	.0051	.0509	.0025	.0010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0015	.0253	.0018	.0016	.0015	.0007
Stddev	.0005	.0059	.0008	.0009	.0009	.0028
%RSD	31.81	23.40	47.00	57.18	59.23	382.1
#1	.0016	.0215	.0008	.0006	.0005	-.0002
#2	.0009	.0222	.0022	.0018	.0019	-.0015
#3	.0018	.0321	.0024	.0025	.0021	.0038
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0273	.1823	-.0017	.0070	.0014	.0047
Stddev	.0011	.0212	.0015	.0259	.0010	.0003
%RSD	3.880	11.65	90.00	372.3	75.92	5.527
#1	.0285	.1909	-.0035	.0009	.0020	.0044
#2	.0269	.1980	-.0009	-.0154	.0002	.0047
#3	.0264	.1582	-.0007	.0354	.0020	.0050
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: CCB Acquired: 8/30/2023 22:27:42 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

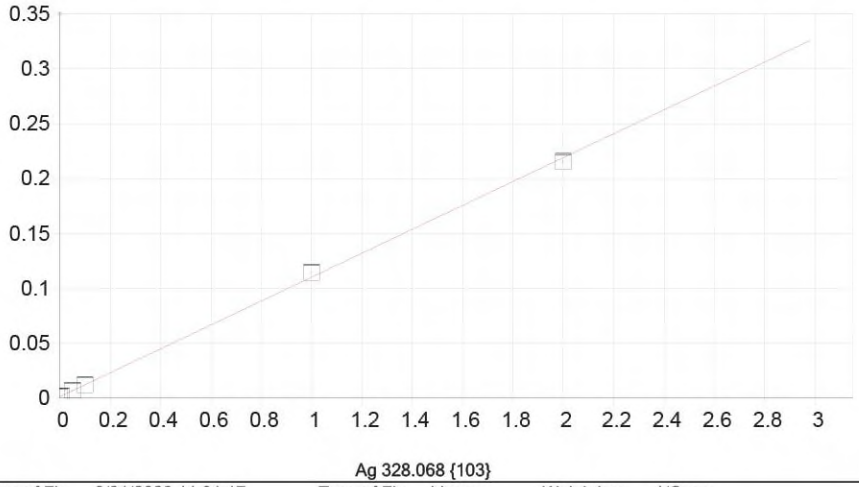
Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0396	.0011	.0205	.0026	.0015	.0002
Stddev	.0099	.0012	.0063	.0012	.0013	.0014
%RSD	24.94	106.8	30.84	45.45	91.76	576.9
#1	.0469	.0002	.0134	.0014	.0007	-.0008
#2	.0435	.0008	.0254	.0037	.0030	.0018
#3	.0283	.0025	.0228	.0027	.0006	-.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0507	.0018	.0010	.0026	-.0024	.0004
Stddev	.0104	.0008	.0001	.0009	.0039	.0004
%RSD	20.55	43.13	14.45	35.00	161.3	108.0
#1	.0624	.0009	.0012	.0036	-.0063	.0007
#2	.0475	.0021	.0011	.0024	-.0024	.0007
#3	.0423	.0023	.0009	.0019	.0015	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0006
Stddev	.0008
%RSD	138.5
#1	-.0003
#2	.0008
#3	.0013
Check ?	Chk Pass
High Limit	
Low Limit	

Sample Name: CCB Acquired: 8/30/2023 22:27:42 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4545.1	25297.	10632.	21727.
Stddev	19.5	124.	167.	364.
%RSD	.42927	.49082	1.5742	1.6761
#1	4554.1	25347.	10793.	22064.
#2	4558.5	25390.	10459.	21340.
#3	4522.7	25156.	10642.	21776.

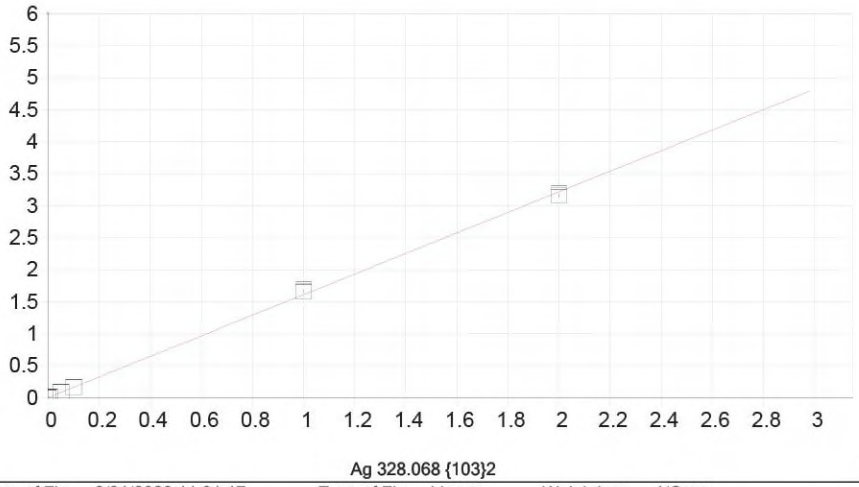


Ag 328.068 {103}

Date of Fit:	8/31/2023 11:01:17	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001359	Re-Slope:	1.000000
A1 (Gain):	0.108865	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999634	Status:	OK.
Std Error of Est:	0.000014		
Predicted MDL:	0.003447		
Predicted MQL:	0.011491		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00000	.000	.000	.00136	.000	1
STD1 35069	.05000	.05098	.001	1.95	.00691	.000	1
STD2 35280	.10000	.09586	-.004	-4.14	.01180	.000	1
STD3 35650	1.0000	1.0386	.039	3.86	.11443	.001	1
STD4 34010	2.0000	1.9646	-.035	-1.77	.21523	.001	1
STD0.1 3519	.00500	.00499	-.000	-.278	.00190	.000	1

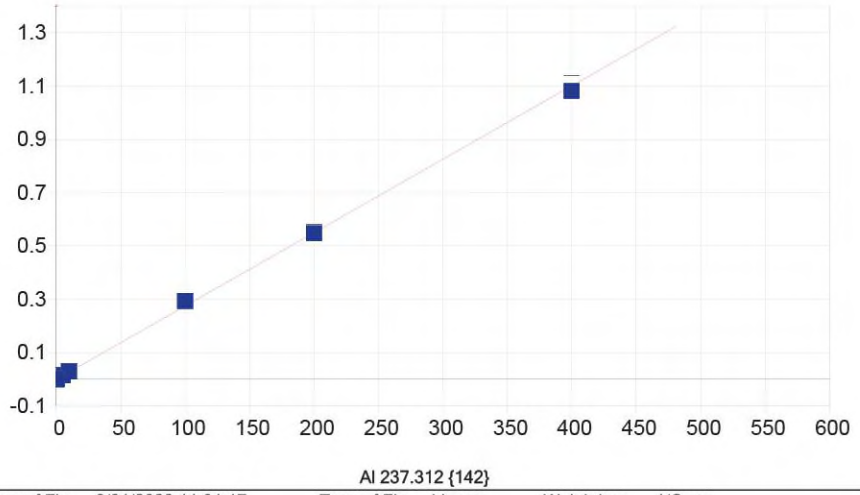


Ag 328.068 {103}2

Date of Fit:	8/31/2023 11:01:17	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.005503	Re-Slope:	1.000000
A1 (Gain):	1.606707	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999716	Status:	OK.
Std Error of Est:	0.000186		
Predicted MDL:	0.001333		
Predicted MQL:	0.004443		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00000	-.000	.000	.00550	.001	1
STD1 35069	.05000	.05043	.000	.859	.08653	.002	1
STD2 35280	.10000	.10097	.001	.974	.16774	.002	1
STD3 35650	1.0000	1.0339	.034	3.39	1.6667	.021	1
STD4 34010	2.0000	1.9646	-.035	-1.77	3.1621	.032	1
STD0.1 3519	.00500	.00505	.000	.928	.01361	.003	1

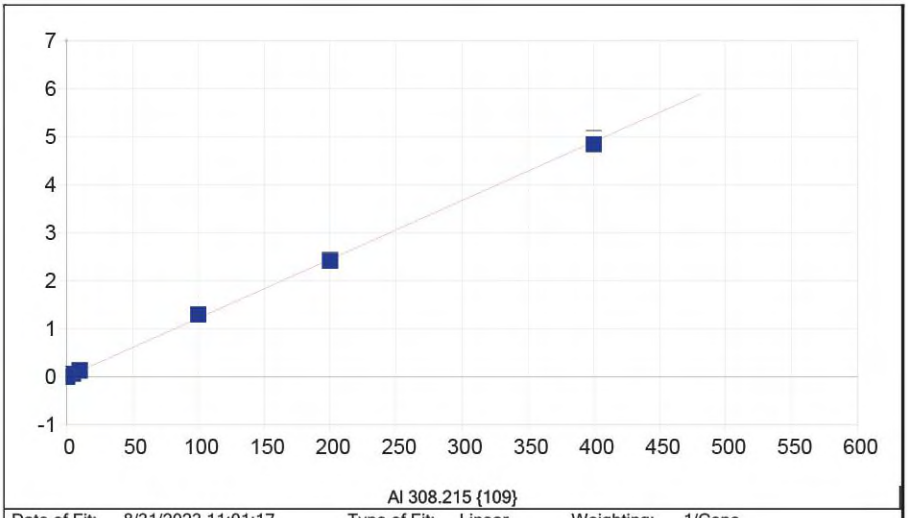


Al 237.312 {142}

Date of Fit:	8/31/2023 11:01:17	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000733	Re-Slope:	1.000000
A1 (Gain):	0.002753	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999545	Status:	OK.
Std Error of Est:	0.000032		
Predicted MDL:	0.091227		
Predicted MQL:	0.304089		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00007	-.000	.000	-.00073	.000	1
STD1 35069	5.0000	5.4029	.403	8.06	.01414	.000	1
STD2 35280	10.000	10.616	.616	6.16	.02850	.000	1
STD3 35650	100.00	106.65	6.65	6.65	.29292	.001	1
STD4 34010	200.00	199.16	-.845	-.422	.54763	.004	1
STD5 35635	400.00	393.07	-6.93	-1.73	1.0816	.026	1
STD0.1 3519	.50000	.58183	.082	16.4	.00087	.000	1
STD0.03 351	.16000	.17747	.017	10.9	-.00024	.000	1

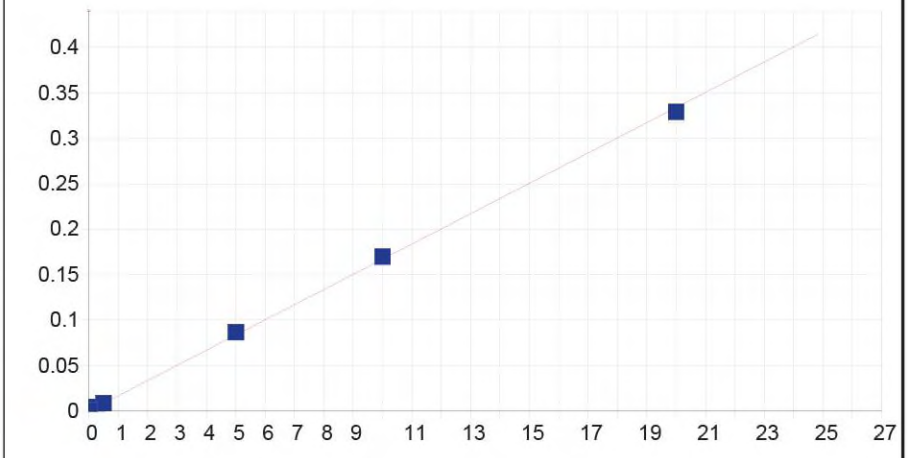


Al 308.215 {109}

Date of Fit:	8/31/2023 11:01:17	Type of Fit: Linear	Weighting: 1/Conc

A0 (Offset):	-0.001185	Re-Slope:	1.000000
A1 (Gain):	0.012254	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999641	Status:	OK.
Std Error of Est:	0.000129		
Predicted MDL:	0.040960		
Predicted MQL:	0.136533		

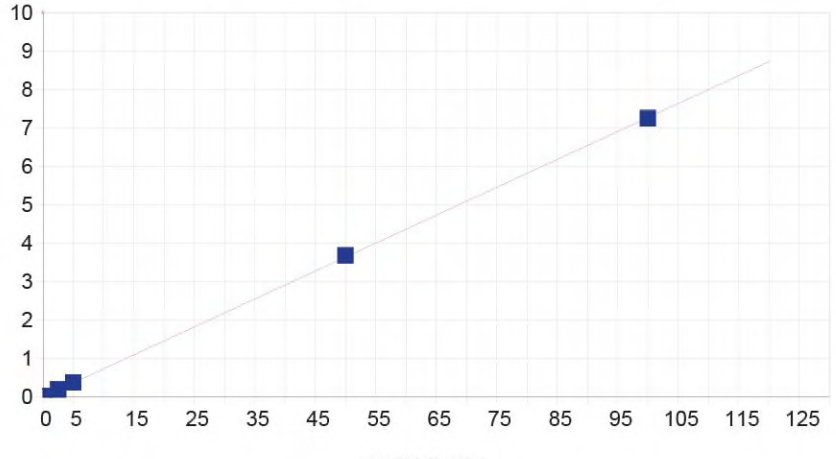
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00007	-.000	.000	-.00119	.000	1
STD1 35069	5.0000	5.4350	.435	8.70	.06568	.001	1
STD2 35280	10.000	10.590	.590	5.90	.12912	.001	1
STD3 35650	100.00	105.93	5.93	5.93	1.3022	.003	1
STD4 34010	200.00	197.46	-2.54	-1.27	2.4292	.017	1
STD5 35635	400.00	395.50	-4.50	-1.12	4.8667	.119	1
STD0.1 3519	.50000	.55665	.057	11.3	.00566	.000	1
STD0.03 351	.16000	.18749	.027	17.2	.00112	.001	1



As 189.042 {478}

Date of Fit:	8/31/2023 11:01:17	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000046		Re-Slope:	1.000000	
A1 (Gain):	0.016693		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999794		Status:	OK.	
Std Error of Est:	0.000007				
Predicted MDL:	0.002289				
Predicted MQL:	0.007629				

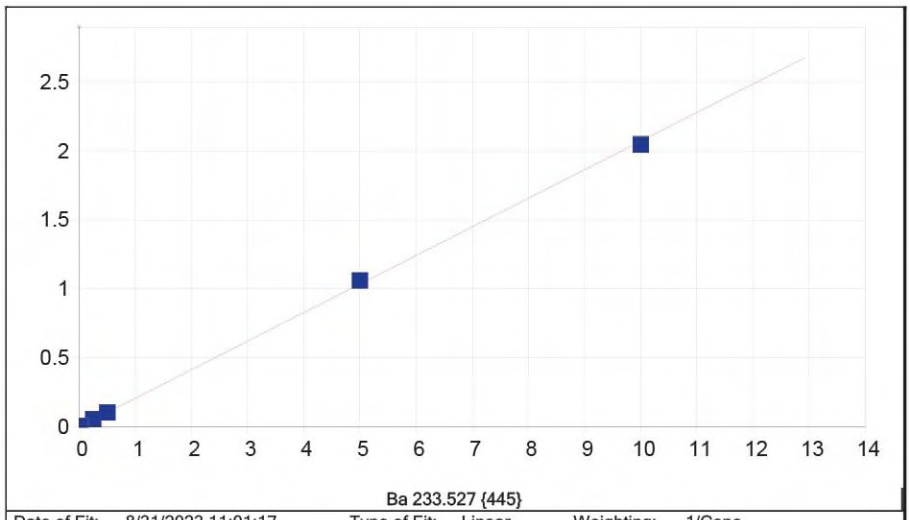
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00000	.000	.000	.00005	.000	1
STD1 35069	.25000	.24564	-.004	-1.74	.00411	.000	1
STD2 35280	.50000	.48470	-.015	-3.06	.00807	.000	1
STD3 35650	5.0000	5.1824	.182	3.65	.08587	.000	1
STD4 34010	10.000	10.151	.151	1.51	.16812	.001	1
STD5 35635	20.000	19.686	-.314	-1.57	.32591	.001	1
STD0.1 3519	.02500	.02581	.001	3.22	.00047	.000	1
STD0.03 351	.00800	.00730	-.001	-8.72	.00017	.000	1



B 208.959 {461}

Date of Fit:	8/31/2023 11:01:17	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.001829		Re-Slope:	1.000000	
A1 (Gain):	0.072722		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999981		Status:	OK.	
Std Error of Est:	0.000059				
Predicted MDL:	0.000661				
Predicted MQL:	0.002204				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00000	-.000	.000	.00183	.000	1
STD1 35069	2.5000	2.5046	.005	.186	.18443	.001	1
STD2 35280	5.0000	4.9916	-.008	-.167	.36575	.001	1
STD3 35650	50.000	50.442	.442	.884	3.6792	.007	1
STD4 34010	100.00	99.559	-.441	-.441	7.2603	.020	1
STD0.1 3519	.25000	.25192	.002	.769	.02020	.000	1
STD0.03 351	.08000	.08042	.000	.523	.00769	.000	1

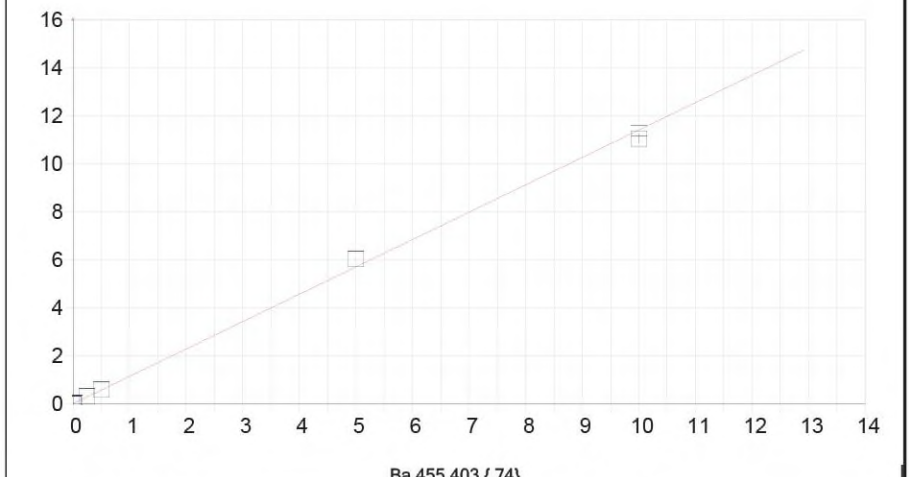


Ba 233.527 {445}

Date of Fit:	8/31/2023 11:01:17	Type of Fit: Linear	Weighting: 1/Conc

A0 (Offset):	0.000283	Re-Slope:	1.000000
A1 (Gain):	0.207269	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999847	Status:	OK.
Std Error of Est:	0.000048		
Predicted MDL:	0.000234		
Predicted MQL:	0.000779		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00000	-.000	.000	.00028	.000	1
STD1 35069	.25000	.25841	.008	3.36	.05369	.000	1
STD2 35280	.50000	.50260	.003	.520	.10415	.000	1
STD3 35650	5.0000	5.1155	.115	2.31	1.0575	.002	1
STD4 34010	10.000	9.8711	-.129	-1.29	2.0402	.005	1
STD0.1 3519	.02500	.02669	.002	6.78	.00580	.000	1
STD0.03 351	.00800	.00871	.001	8.82	.00208	.000	1

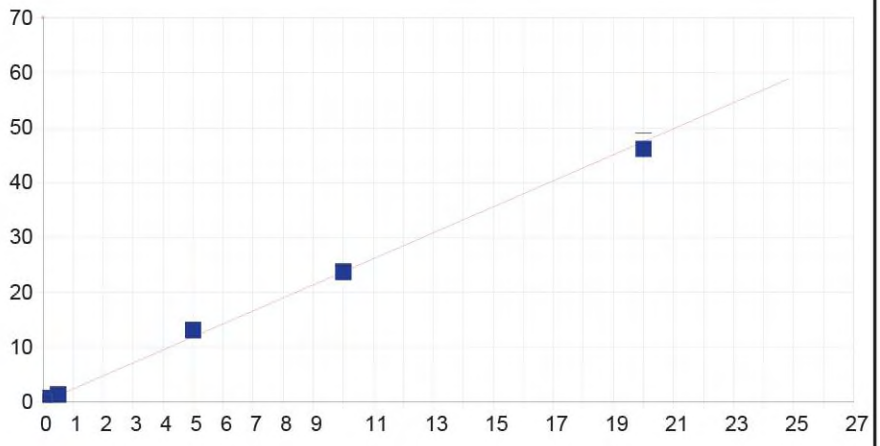


Ba 455.403 { 74}

Date of Fit:	8/31/2023 11:01:17	Type of Fit: Linear	Weighting: 1/Conc

A0 (Offset):	0.006027	Re-Slope:	1.000000
A1 (Gain):	1.140399	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999127	Status:	OK.
Std Error of Est:	0.000634		
Predicted MDL:	0.000349		
Predicted MQL:	0.001162		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00000	-.000	.000	.00602	.000	1
STD1 35069	.25000	.26797	.018	7.19	.31162	.003	1
STD2 35280	.50000	.51089	.011	2.18	.58865	.005	1
STD3 35650	5.0000	5.2814	.281	5.63	6.0289	.011	1
STD4 34010	10.000	9.6861	-.314	-3.14	11.052	.200	1
STD0.1 3519	.02500	.02768	.003	10.7	.03760	.000	1
STD0.03 351	.00800	.00890	.001	11.3	.01618	.000	1

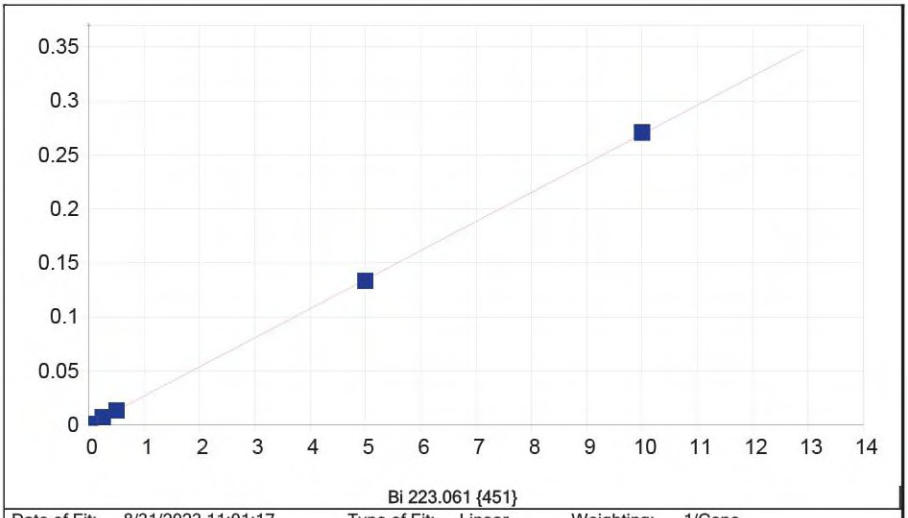


Be 313.042 {108}

Date of Fit:	8/31/2023 11:01:17	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000653	Re-Slope:	1.000000
A1 (Gain):	2.371984	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998919	Status:	OK.
Std Error of Est:	0.002154		
Predicted MDL:	0.000152		
Predicted MQL:	0.000505		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00000	-.000	.000	.00064	.000	1
STD1 35069	.25000	.28192	.032	12.8	.66916	.008	1
STD2 35280	.50000	.53789	.038	7.58	1.2761	.009	1
STD3 35650	5.0000	5.5163	.516	10.3	13.081	.032	1
STD4 34010	10.000	9.9786	-.021	-.214	23.661	.188	1
STD5 35635	20.000	19.430	-.570	-2.85	46.071	1.51	1
STD0.1 3519	.02500	.02891	.004	15.6	.06921	.000	1
STD0.03 351	.00800	.00942	.001	17.7	.02298	.000	1

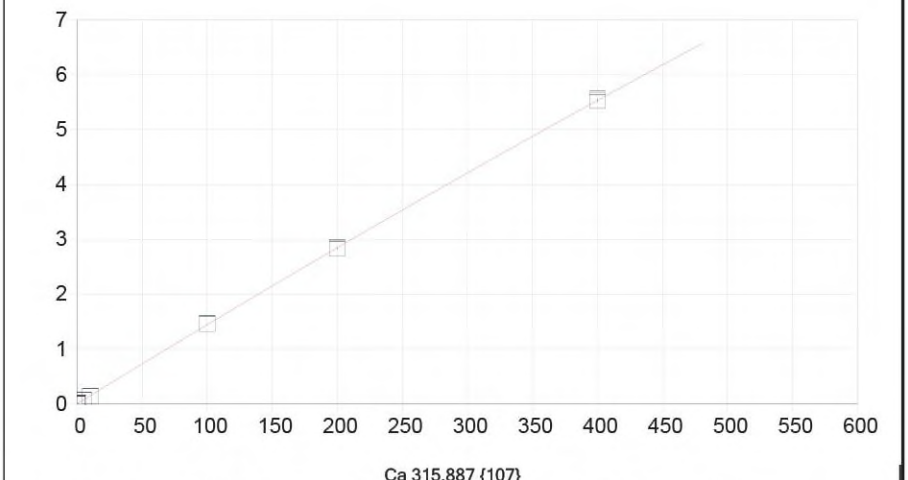


Bi 223.061 {451}

Date of Fit:	8/31/2023 11:01:17	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000018	Re-Slope:	1.000000
A1 (Gain):	0.026893	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999963	Status:	OK.
Std Error of Est:	0.000003		
Predicted MDL:	0.002200		
Predicted MQL:	0.007332		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00000	-.000	.000	.00002	.000	1
STD1 35069	.25000	.25265	.003	1.06	.00680	.000	1
STD2 35280	.50000	.48959	-.010	-2.08	.01317	.000	1
STD3 35650	5.0000	4.9532	-.047	-.935	.13307	.000	1
STD4 34010	10.000	10.053	.053	.525	.27004	.001	1
STD0.1 3519	.02500	.02583	.001	3.34	.00071	.000	1
STD0.03 351	.00800	.00917	.001	14.7	.00026	.000	1

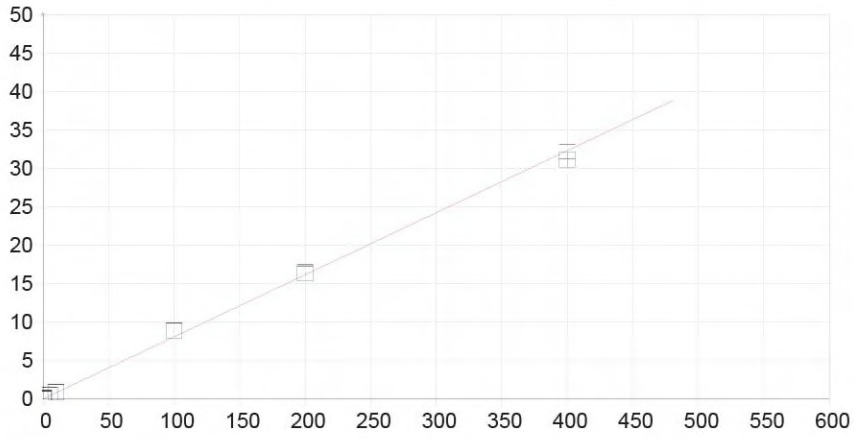


Ca 315.887 {107}

Date of Fit:	8/31/2023 11:01:17	Type of Fit:	Curvilinear	Weighting:	1/Conc

A0 (Offset):	0.000254	Re-Slope:	1.000000
A1 (Gain):	0.014609	Y-int:	0.000000
A2 (Curvature):	-0.000002		
n (Exponent):	1.000000		
Correlation:	0.999973	Status:	OK.
Std Error of Est:	0.000044		
Predicted MDL:	0.007653		
Predicted MQL:	0.025508		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00001	.000	.000	.00025	.000	1
STD1 35069	5.0000	4.8801	-.120	-2.40	.07150	.001	1
STD2 35280	10.000	9.5991	-.401	-4.01	.14031	.001	1
STD3 35650	100.00	101.22	1.22	1.22	1.4589	.005	1
STD4 34010	200.00	199.20	-.798	-.399	2.8326	.017	1
STD5 35635	400.00	400.10	.104	.026	5.5317	.035	1
STD0.1 3519	.50000	.49503	-.005	-.995	.00749	.000	1
STD0.03 351	.16000	.16067	.001	.416	.00260	.000	1

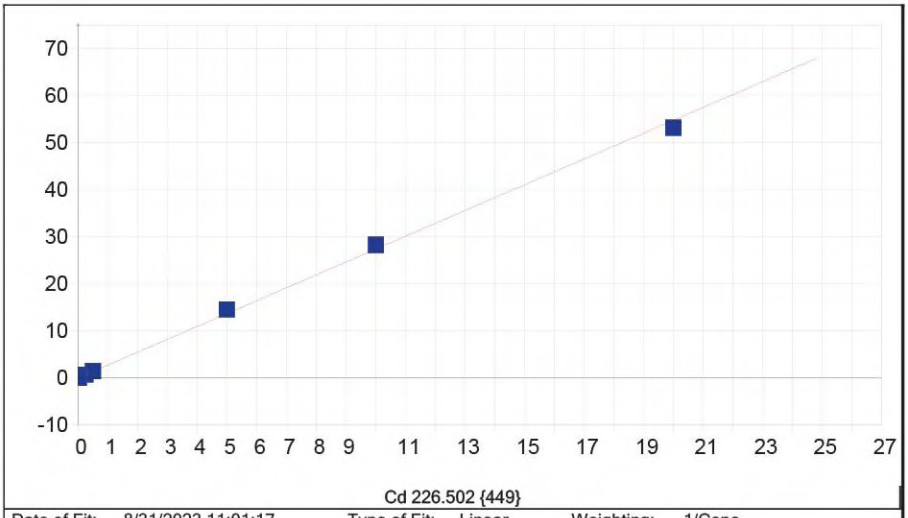


Ca 317.933 {106}

Date of Fit:	8/31/2023 11:01:17	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.010732	Re-Slope:	1.000000
A1 (Gain):	0.080830	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998752	Status:	OK.
Std Error of Est:	0.001578		
Predicted MDL:	0.004059		
Predicted MQL:	0.013531		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00010	-.000	.000	.01072	.000	1
STD1 35069	5.0000	5.6446	.645	12.9	.46698	.006	1
STD2 35280	10.000	11.066	1.07	10.7	.90516	.005	1
STD3 35650	100.00	110.14	10.1	10.1	8.9132	.008	1
STD4 34010	200.00	202.48	2.48	1.24	16.377	.114	1
STD5 35635	400.00	385.57	-14.4	-3.61	31.176	.920	1
STD0.1 3519	.50000	.57033	.070	14.1	.05683	.000	1
STD0.03 351	.16000	.18578	.026	16.1	.02575	.000	1

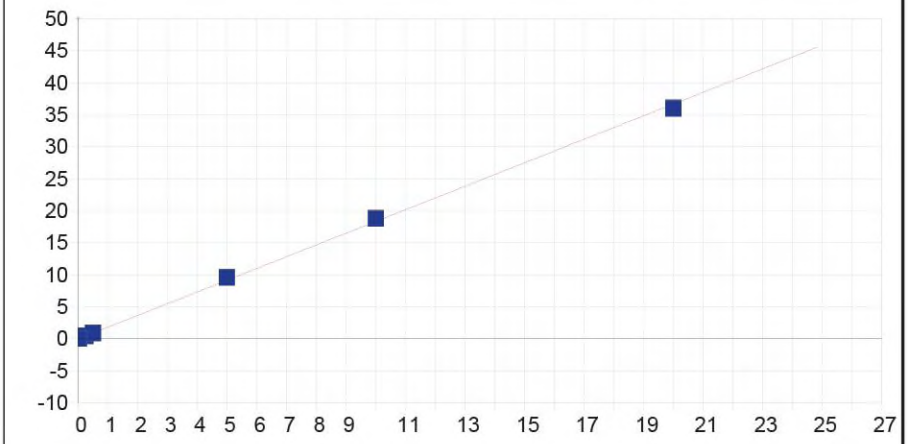


Cd 226.502 {449}

Date of Fit:	8/31/2023 11:01:17	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.002038	Re-Slope:	1.000000
A1 (Gain):	2.738096	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999381	Status:	OK.
Std Error of Est:	0.001884		
Predicted MDL:	0.000130		
Predicted MQL:	0.000432		

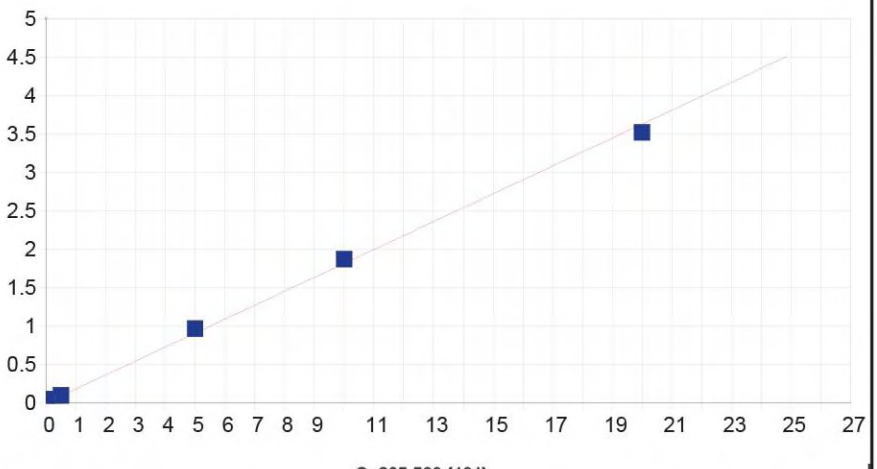
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00000	-.000	.000	-.00204	.000	1
STD1 35069	.25000	.25223	.002	.893	.68931	.001	1
STD2 35280	.50000	.49235	-.008	-1.53	1.3475	.004	1
STD3 35650	5.0000	5.3013	.301	6.03	14.528	.007	1
STD4 34010	10.000	10.294	.294	2.94	28.213	.085	1
STD5 35635	20.000	19.409	-.591	-2.96	53.198	.104	1
STD0.1 3519	.02500	.02567	.001	2.66	.06831	.000	1
STD0.03 351	.00800	.00834	.000	4.20	.02081	.000	1



Co 228.616 {447}

Date of Fit:	8/31/2023 11:01:17	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	-0.000139		Re-Slope:	1.000000	
A1 (Gain):	1.834918		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999705		Status:	OK.	
Std Error of Est:	0.000872				
Predicted MDL:	0.000238				
Predicted MQL:	0.000793				

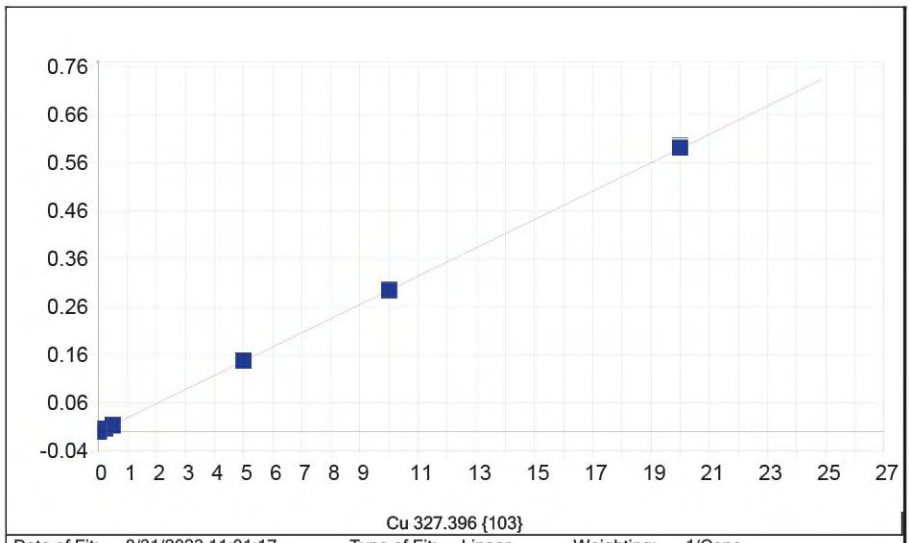
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00000	-.000	.000	-.00014	.000	1
STD1 35069	.25000	.24765	-.002	-.942	.45553	.001	1
STD2 35280	.50000	.48274	-.017	-3.45	.88817	.003	1
STD3 35650	5.0000	5.2000	.200	4.00	9.5666	.008	1
STD4 34010	10.000	10.217	.217	2.17	18.797	.064	1
STD5 35635	20.000	19.602	-.398	-1.99	36.069	.076	1
STD0.1 3519	.02500	.02539	.000	1.57	.04658	.000	1
STD0.03 351	.00800	.00824	.000	2.97	.01502	.000	1



Cr 205.560 {464}

Date of Fit:	8/31/2023 11:01:17	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000063		Re-Slope:	1.000000	
A1 (Gain):	0.181476		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999320		Status:	OK.	
Std Error of Est:	0.000131				
Predicted MDL:	0.000227				
Predicted MQL:	0.000758				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00000	-.000	.000	.00006	.000	1
STD1 35069	.25000	.26600	.016	6.40	.04838	.000	1
STD2 35280	.50000	.51821	.018	3.64	.09419	.000	1
STD3 35650	5.0000	5.3061	.306	6.12	.96383	.001	1
STD4 34010	10.000	10.287	.287	2.87	1.8686	.005	1
STD5 35635	20.000	19.370	-.630	-3.15	3.5186	.007	1
STD0.1 3519	.02500	.02706	.002	8.24	.00498	.000	1
STD0.03 351	.00800	.00885	.001	10.6	.00167	.000	1

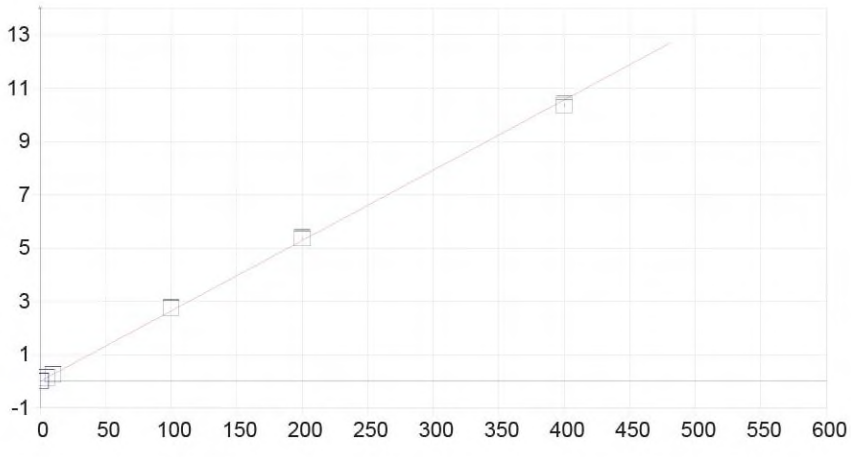


Cu 327.396 {103}

Date of Fit:	8/31/2023 11:01:17	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000263	Re-Slope:	1.000000
A1 (Gain):	0.029513	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999900	Status:	OK.
Std Error of Est:	0.000008		
Predicted MDL:	0.008139		
Predicted MQL:	0.027129		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00001	.000	.000	-.00026	.000	1
STD1 35069	.25000	.23763	-.012	-4.95	.00675	.000	1
STD2 35280	.50000	.46478	-.035	-7.04	.01346	.000	1
STD3 35650	5.0000	5.0209	.021	.417	.14798	.000	1
STD4 34010	10.000	9.9802	-.020	-.198	.29440	.002	1
STD5 35635	20.000	20.057	.057	.286	.59192	.005	1
STD0.1 3519	.02500	.01858	-.006	-25.7	.00029	.000	1
STD0.03 351	.00800	.00384	-.004	-52.0	-.00015	.000	1

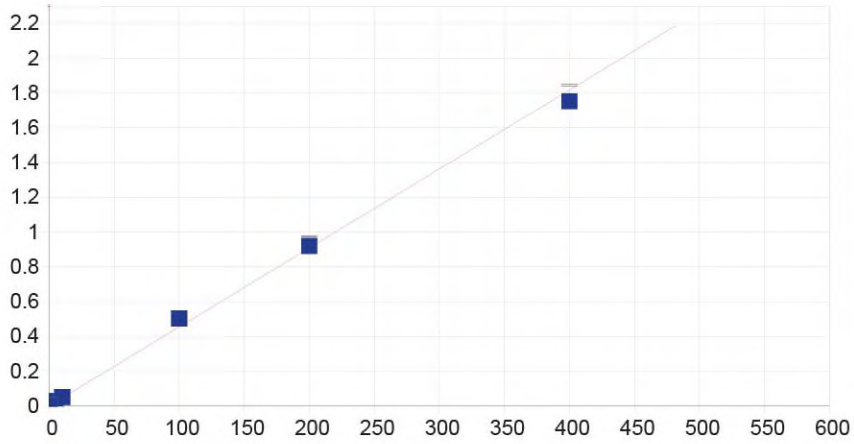


Fe 259.940 {130}

Date of Fit:	8/31/2023 11:01:17	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000077	Re-Slope:	1.000000
A1 (Gain):	0.026394	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999710	Status:	OK.
Std Error of Est:	0.000248		
Predicted MDL:	0.003342		
Predicted MQL:	0.011139		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00003	-.000	.000	.00008	.000	1
STD1 35069	5.0000	5.0940	.094	1.88	.13453	.001	1
STD2 35280	10.000	10.026	.026	.255	.26469	.002	1
STD3 35650	100.00	104.55	4.55	4.55	2.7595	.009	1
STD4 34010	200.00	203.16	3.16	1.58	5.3623	.037	1
STD5 35635	400.00	392.14	-7.86	-1.97	10.350	.070	1
STD0.1 3519	.50000	.52261	.023	4.52	.01387	.000	1
STD0.03 351	.16000	.17480	.015	9.25	.00469	.000	1



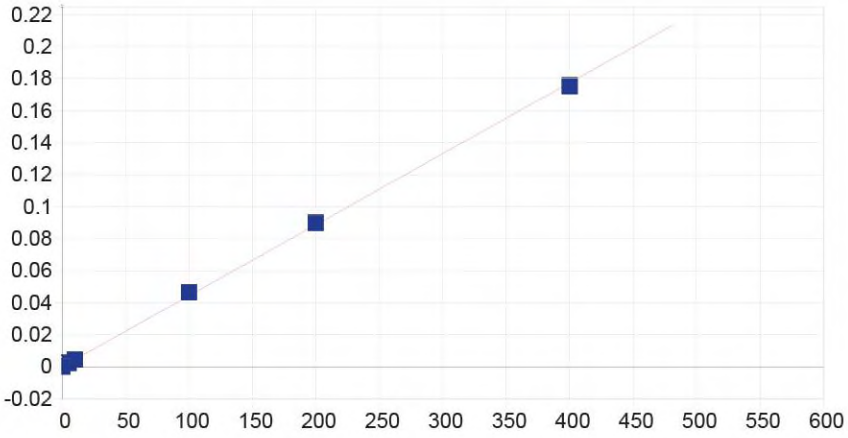
Fe 271.441 {124}

Date of Fit:	8/31/2023 11:01:17	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000156	Re-Slope:	1.000000
A1 (Gain):	0.004541	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998825	Status:	OK.
Std Error of Est:	0.000086		
Predicted MDL:	0.079905		
Predicted MQL:	0.266350		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00008	-.000	.000	.00016	.000	1
STD1 35069	5.0000	5.5213	.521	10.4	.02531	.000	1
STD2 35280	10.000	10.943	.943	9.43	.05002	.001	1
STD3 35650	100.00	110.11	10.1	10.1	.50189	.000	1
STD4 34010	200.00	202.37	2.37	1.18	.92253	.007	1
STD5 35635	400.00	385.97	-14.0	-3.51	1.7597	.043	1
STD0.1 3519	.50000	.57112	.071	14.2	.00276	.000	1

STD0.03 351	.16000	.17447	.014	9.04	.00095	.000	1

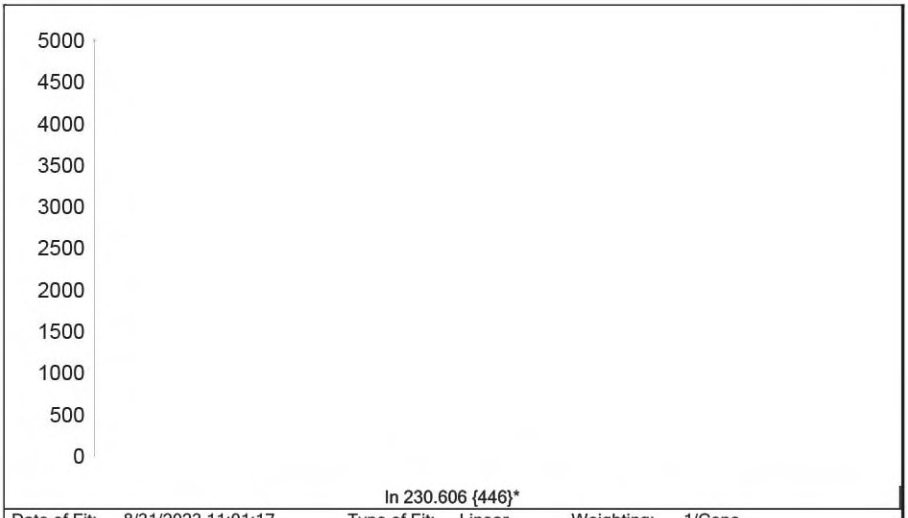


Fe 273.074 {123}

Date of Fit:	8/31/2023 11:01:17	Type of Fit:	Linear
Weighting:	1/Conc		

A0 (Offset):	0.000124	Re-Slope:	1.000000
A1 (Gain):	0.000443	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999234	Status:	OK.
Std Error of Est:	0.000007		
Predicted MDL:	0.253046		
Predicted MQL:	0.843488		

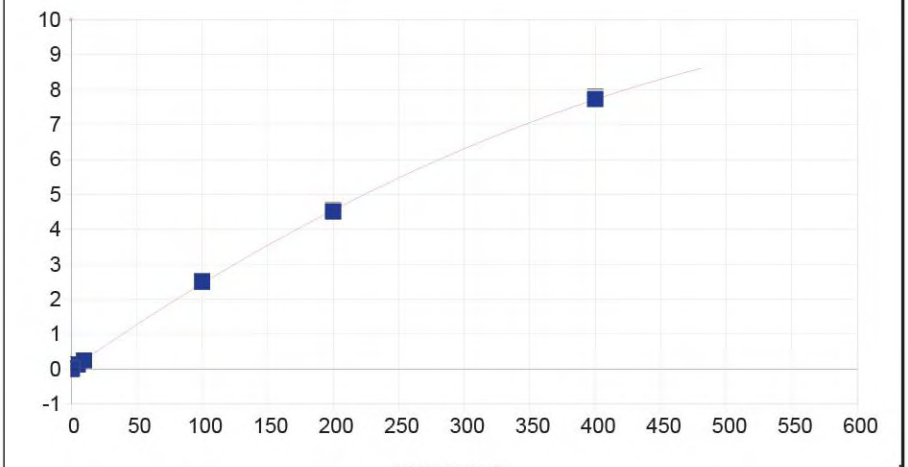
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00041	.000	.000	.00012	.000	1
STD1 35069	5.0000	4.8428	-.157	-3.14	.00227	.000	1
STD2 35280	10.000	9.8323	-.168	-1.68	.00448	.000	1
STD3 35650	100.00	104.35	4.35	4.35	.04634	.000	1
STD4 34010	200.00	202.08	2.08	1.04	.08963	.001	1
STD5 35635	400.00	394.48	-5.52	-1.38	.17484	.001	1
STD0.1 3519	.50000	.24563	-.254	-50.9	.00023	.000	1
STD0.03 351	.16000	-.16747	-.327	-205.	.00005	.000	1



In 230.606 {446}*

Date of Fit:	8/31/2023 11:01:17	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.000000		Status:	Warning	Zero Gain
Std Error of Est:	0.000000				
Predicted MDL:	n/a				
Predicted MQL:	n/a				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00000	.000	.000	4367.4	14.0	1

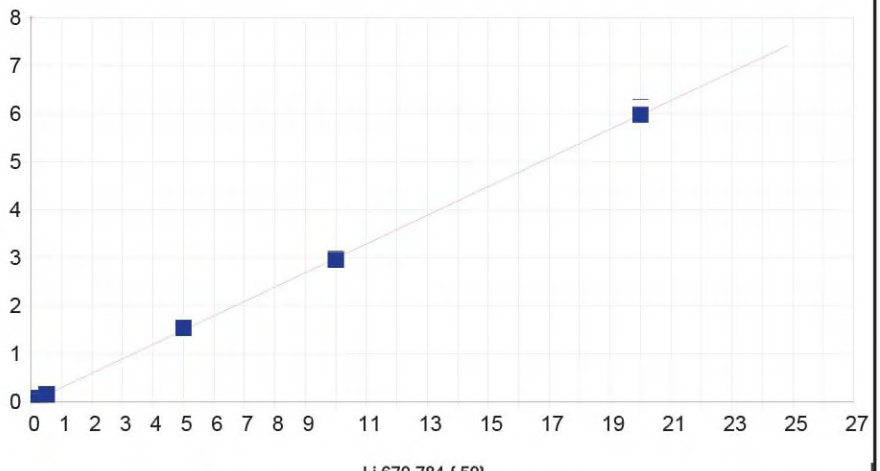


K 766.490 { 44}

Date of Fit:	8/31/2023 11:01:17	Type of Fit:	Curvilinear	Weighting:	1/Conc
A0 (Offset):	-0.002517		Re-Slope:	1.000000	
A1 (Gain):	0.026203		Y-int:	0.000000	
A2 (Curvature):	-0.000017				
n (Exponent):	1.000000				
Correlation:	0.999889		Status:	OK.	

Std Error of Est:	0.000135
Predicted MDL:	0.049671
Predicted MQL:	0.165570

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00001	-.000	.000	-.00252	.001	1
STD1 35069	5.0000	4.7812	-.219	-4.38	.12254	.002	1
STD2 35280	10.000	9.4303	-.570	-5.70	.24339	.002	1
STD3 35650	100.00	102.43	2.43	2.43	2.5042	.006	1
STD4 34010	200.00	197.75	-2.25	-1.12	4.5123	.029	1
STD5 35635	400.00	400.67	.674	.169	7.7446	.066	1
STD0.1 3519	.50000	.48445	-.016	-3.11	.01019	.001	1
STD0.03 351	.16000	.18659	.027	16.6	.00238	.001	1

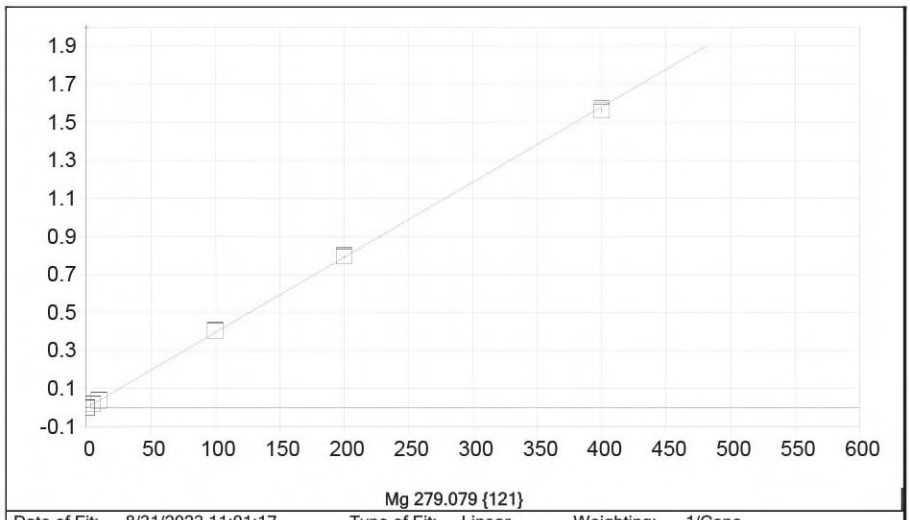


Li 670.784 { 50}

Date of Fit:	8/31/2023 11:01:17	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002882	Re-Slope:	1.000000
A1 (Gain):	0.298853	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999924	Status:	OK.
Std Error of Est:	0.000072		
Predicted MDL:	0.002087		
Predicted MQL:	0.006956		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00000	-.000	.000	.00288	.000	1
STD1 35069	.25000	.25637	.006	2.55	.07962	.001	1
STD2 35280	.50000	.49343	-.007	-1.31	.15060	.001	1
STD3 35650	5.0000	5.1303	.130	2.61	1.5386	.000	1
STD4 34010	10.000	9.8711	-.129	-1.29	2.9579	.025	1
STD5 35635	20.000	19.997	-.003	-.014	5.9892	.152	1
STD0.1 3519	.02500	.02537	.000	1.49	.01048	.000	1
STD0.03 351	.00800	.00916	.001	14.5	.00562	.001	1

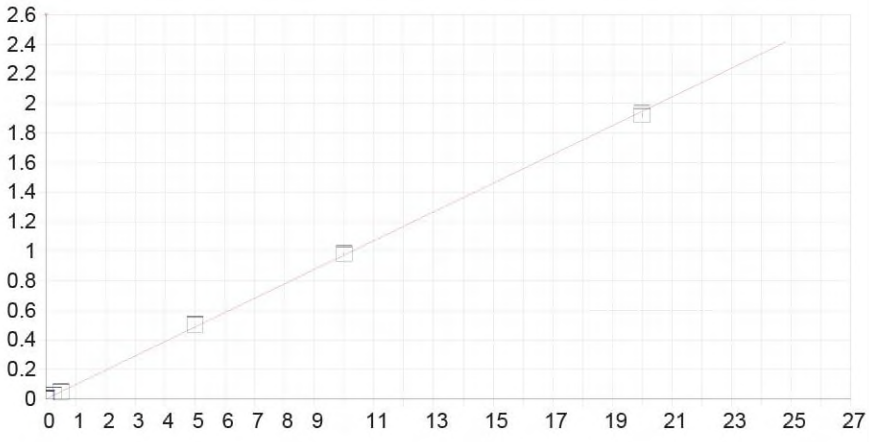


Mg 279.079 {121}

Date of Fit:	8/31/2023 11:01:17	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000133	Re-Slope:	1.000000
A1 (Gain):	0.003951	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999895	Status:	OK.
Std Error of Est:	0.000022		
Predicted MDL:	0.028401		
Predicted MQL:	0.094671		

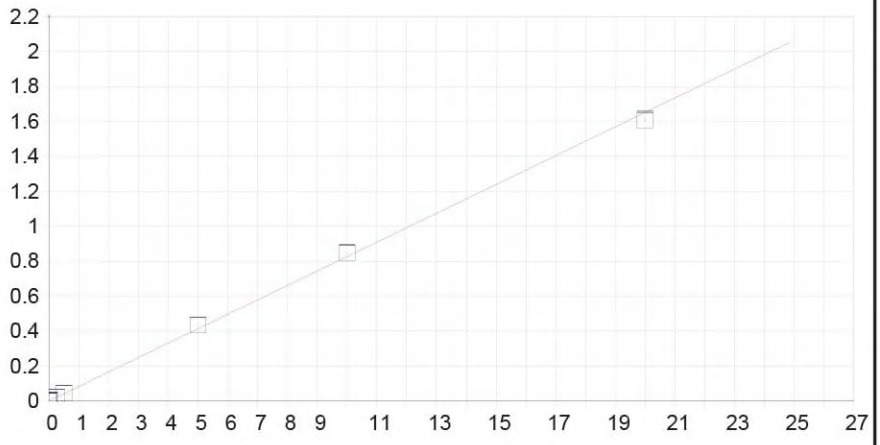
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00002	.000	.000	.00013	.000	1
STD1 35069	5.0000	4.9755	-.025	-.490	.01979	.000	1
STD2 35280	10.000	9.7916	-.208	-2.08	.03882	.000	1
STD3 35650	100.00	102.97	2.97	2.97	.40697	.001	1
STD4 34010	200.00	201.46	1.46	.732	.79609	.005	1
STD5 35635	400.00	395.82	-4.18	-1.05	1.5640	.009	1
STD0.1 3519	.50000	.49774	-.002	-.452	.00210	.000	1
STD0.03 351	.16000	.13833	-.022	-13.5	.00068	.000	1



Mn 257.610 {131}

Date of Fit:	8/31/2023 11:01:17	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000149		Re-Slope:	1.000000	
A1 (Gain):	0.097354		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999841		Status:	OK.	
Std Error of Est:	0.000034				
Predicted MDL:	0.000818				
Predicted MQL:	0.002727				

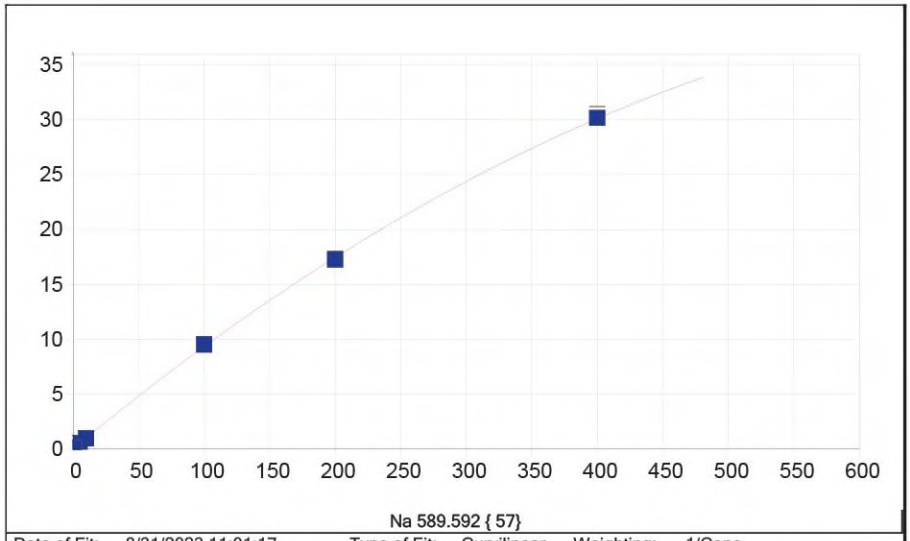
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00000	-.000	.000	.00015	.000	1
STD1 35069	.25000	.25291	.003	1.16	.02477	.000	1
STD2 35280	.50000	.48721	-.013	-2.56	.04758	.000	1
STD3 35650	5.0000	5.1822	.182	3.64	.50466	.001	1
STD4 34010	10.000	10.090	.090	.903	.98247	.006	1
STD5 35635	20.000	19.736	-.264	-1.32	1.9215	.013	1
STD0.1 3519	.02500	.02622	.001	4.90	.00270	.000	1
STD0.03 351	.00800	.00820	.000	2.47	.00095	.000	1



Mo 202.030 {467}

Date of Fit:	8/31/2023 11:01:17	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000179		Re-Slope:	1.000000	
A1 (Gain):	0.082625		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999539		Status:	OK.	
Std Error of Est:	0.000049				
Predicted MDL:	0.000428				
Predicted MQL:	0.001426				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00000	-.000	.000	.00018	.000	1
STD1 35069	.25000	.25593	.006	2.37	.02133	.000	1
STD2 35280	.50000	.50473	.005	.946	.04188	.000	1
STD3 35650	5.0000	5.2499	.250	5.00	.43395	.001	1
STD4 34010	10.000	10.260	.260	2.60	.84788	.002	1
STD5 35635	20.000	19.479	-.521	-2.61	1.6096	.003	1
STD0.1 3519	.02500	.02584	.001	3.36	.00231	.000	1
STD0.03 351	.00800	.00817	.000	2.11	.00085	.000	1

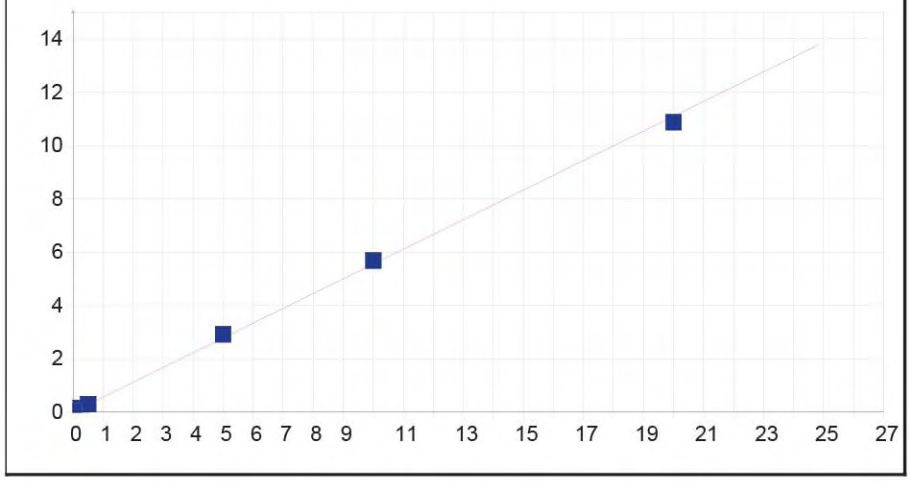


Na 589.592 { 57}

Date of Fit:	8/31/2023 11:01:17	Type of Fit:	Curvilinear	Weighting:	1/Conc

A0 (Offset):	0.004459	Re-Slope:	1.000000
A1 (Gain):	0.099214	Y-int:	0.000000
A2 (Curvature):	-0.000060		
n (Exponent):	1.000000		
Correlation:	0.999934	Status:	OK.
Std Error of Est:	0.000402		
Predicted MDL:	0.013721		
Predicted MQL:	0.045735		

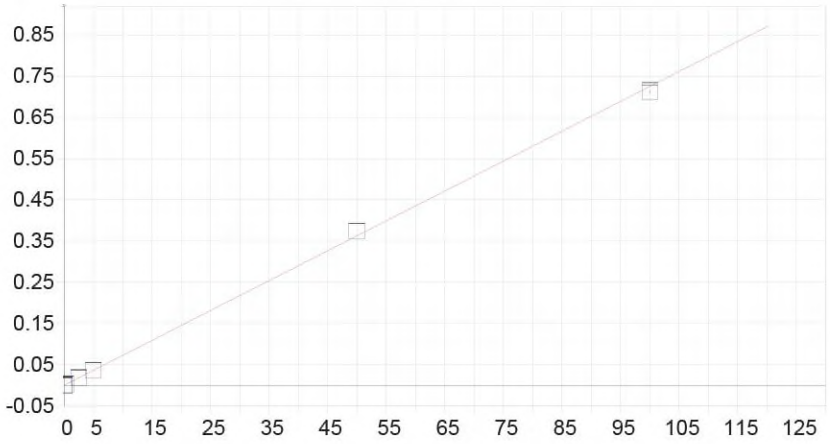
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00002	-.000	.000	.00446	.002	1
STD1 35069	5.0000	4.9527	-.047	-.946	.49481	.007	1
STD2 35280	10.000	9.7254	-.275	-2.75	.96458	.006	1
STD3 35650	100.00	101.99	1.99	1.99	9.5094	.019	1
STD4 34010	200.00	197.25	-2.75	-1.37	17.263	.040	1
STD5 35635	400.00	401.19	1.19	.297	30.208	.289	1
STD0.1 3519	.50000	.52977	.030	5.95	.05705	.002	1
STD0.03 351	.16000	.17534	.015	9.59	.02187	.001	1



Ni 231.604 {446}

Date of Fit:	8/31/2023 11:01:17	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.001385		Re-Slope:	1.000000	
A1 (Gain):	0.554626		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999671		Status:	OK.	
Std Error of Est:	0.000278				
Predicted MDL:	0.000549				
Predicted MQL:	0.001830				

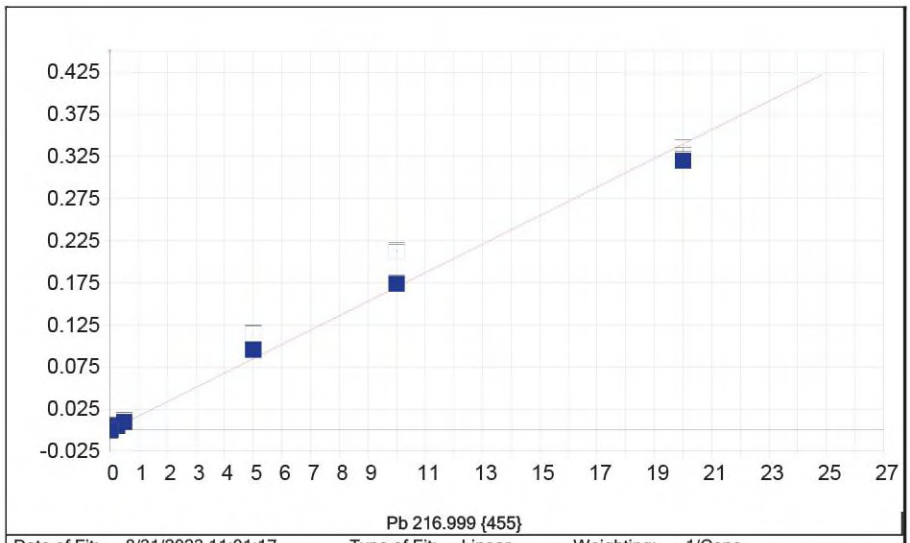
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00000	-.000	.000	.00138	.000	1
STD1 35069	.25000	.25221	.002	.883	.14131	.001	1
STD2 35280	.50000	.49213	-.008	-1.57	.27443	.000	1
STD3 35650	5.0000	5.2227	.223	4.45	2.8990	.001	1
STD4 34010	10.000	10.210	.210	2.10	5.6658	.020	1
STD5 35635	20.000	19.573	-.427	-2.14	10.861	.026	1
STD0.1 3519	.02500	.02565	.001	2.58	.01561	.000	1
STD0.03 351	.00800	.00799	-.000	-.093	.00582	.000	1



P 178.284 {489}

Date of Fit:	8/31/2023 11:01:17	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	-0.000020		Re-Slope:	1.000000	
A1 (Gain):	0.007248		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999737		Status:	OK.	
Std Error of Est:	0.000022				
Predicted MDL:	0.003648				
Predicted MQL:	0.012159				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00001	-.000	.000	-.00002	.000	1
STD1 35069	2.5000	2.5705	.071	2.82	.01861	.000	1
STD2 35280	5.0000	5.0583	.058	1.17	.03664	.000	1
STD3 35650	50.000	51.578	1.58	3.16	.37383	.000	1
STD4 34010	100.00	98.277	-1.72	-1.72	.71232	.004	1
STD0.1 3519	.25000	.26216	.012	4.86	.00188	.000	1
STD0.03 351	.08000	.08339	.003	4.23	.00058	.000	1

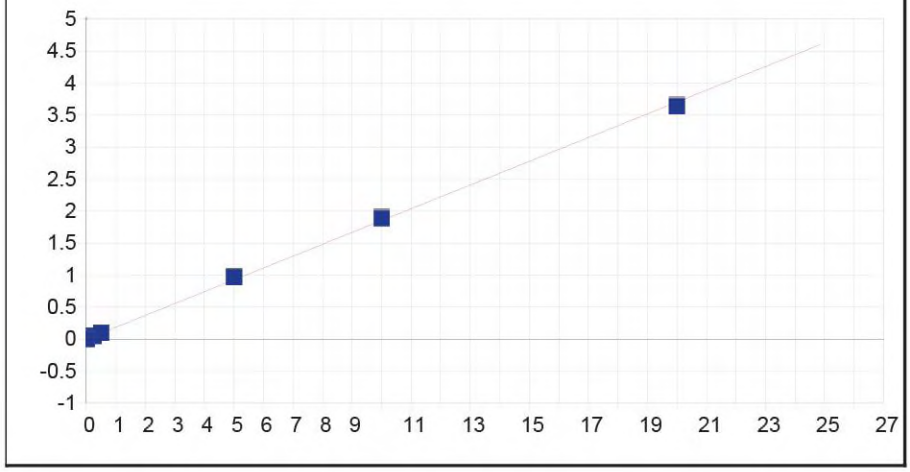


Pb 216.999 {455}

Date of Fit:	8/31/2023 11:01:17	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000430	Re-Slope:	1.000000
A1 (Gain):	0.017003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998107	Status:	OK.
Std Error of Est:	0.000023		
Predicted MDL:	0.007166		
Predicted MQL:	0.023888		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00000	-.000	.000	-.00043	.000	1
STD1 35069	.25000	.29464	.045	17.9	.00556	.000	1
STD2 35280	.50000	.57067	.071	14.1	.01123	.000	1
STD3 35650	5.0000	5.6227	.623	12.5	.11473	.000	1
STD4 34010	10.000	10.236	.236	2.36	.21273	.001	1
STD5 35635	20.000	18.830	-1.17	-5.85	.32879	.007	1
STD0.1 3519	.02500	.02929	.004	17.2	.00017	.000	1
STD0.03 351	.00800	.00627	-.002	-21.6	-.00029	.000	1

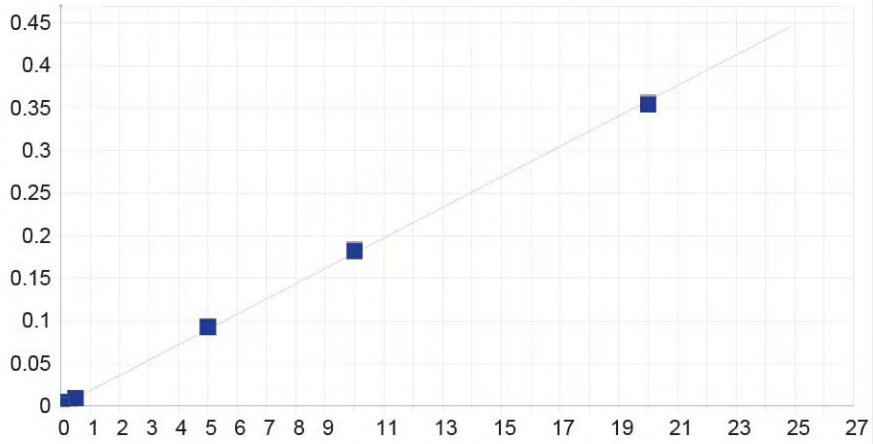


Pb 220.353 {453}

Date of Fit:	8/31/2023 11:01:17	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001362	Re-Slope:	1.000000
A1 (Gain):	0.185211	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999727	Status:	OK.
Std Error of Est:	0.000085		
Predicted MDL:	0.001769		
Predicted MQL:	0.005896		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00000	-.000	.000	-.00136	.000	1
STD1 35069	.25000	.25327	.003	1.31	.04624	.000	1
STD2 35280	.50000	.49562	-.004	-.876	.09181	.000	1
STD3 35650	5.0000	5.2192	.219	4.38	.97911	.001	1
STD4 34010	10.000	10.160	.160	1.60	1.9080	.006	1
STD5 35635	20.000	19.616	-.384	-1.92	3.6500	.008	1
STD0.1 3519	.02500	.02640	.001	5.61	.00360	.001	1
STD0.03 351	.00800	.00924	.001	15.5	.00037	.000	1



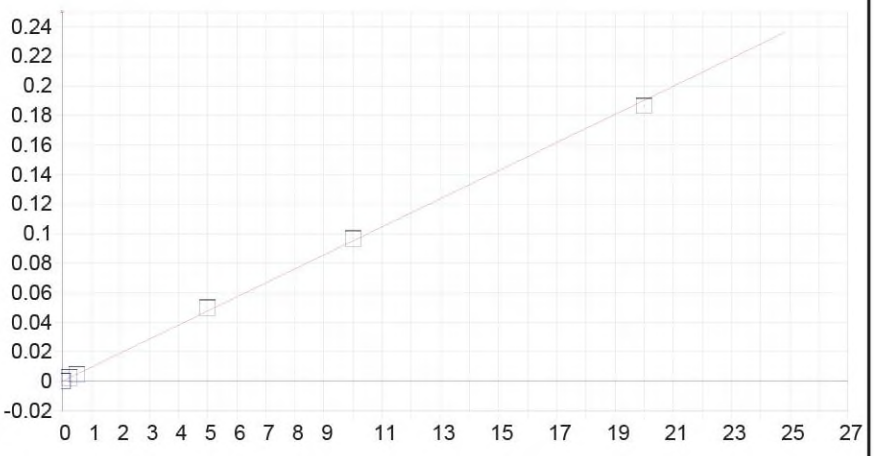
Sb 206.833 {463}

Date of Fit:	8/31/2023 11:01:17	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000054	Re-Slope:	1.000000
A1 (Gain):	0.017940	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999857	Status:	OK.
Std Error of Est:	0.000006		
Predicted MDL:	0.002871		
Predicted MQL:	0.009569		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00000	-.000	.000	.00005	.000	1
STD1 35069	.25000	.24821	-.002	-.718	.00452	.000	1
STD2 35280	.50000	.48633	-.014	-2.73	.00881	.000	1
STD3 35650	5.0000	5.1403	.140	2.81	.09263	.000	1
STD4 34010	10.000	10.128	.128	1.28	.18246	.001	1
STD5 35635	20.000	19.743	-.257	-1.29	.35566	.001	1
STD0.1 3519	.02500	.02704	.002	8.14	.00054	.000	1

STD0.03 351	.00800	.01064	.003	33.1	.00025	.000	1

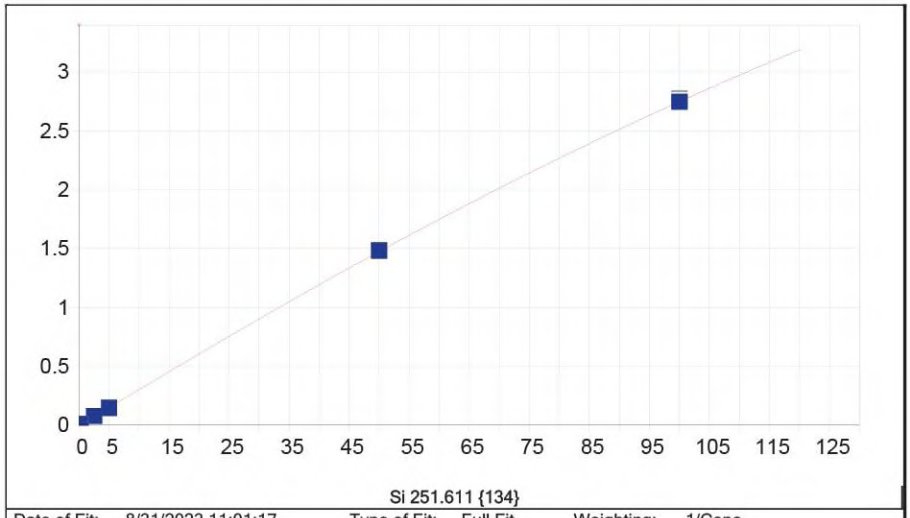


Se 196.090 {472}

Date of Fit:	8/31/2023 11:01:17	Type of Fit:	Linear
Weighting:	1/Conc		

A0 (Offset):	-0.000011	Re-Slope:	1.000000
A1 (Gain):	0.009508	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999689	Status:	OK.
Std Error of Est:	0.000005		
Predicted MDL:	0.004272		
Predicted MQL:	0.014240		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00000	.000	.000	-.00001	.000	1
STD1 35069	.25000	.24630	-.004	-1.48	.00233	.000	1
STD2 35280	.50000	.49451	-.005	-1.10	.00469	.000	1
STD3 35650	5.0000	5.2381	.238	4.76	.04979	.000	1
STD4 34010	10.000	10.167	.167	1.67	.09666	.000	1
STD5 35635	20.000	19.608	-.392	-1.96	.18643	.000	1
STD0.1 3519	.02500	.02200	-.003	-12.0	.00020	.000	1
STD0.03 351	.00800	.00764	-.000	-4.48	.00006	.000	1

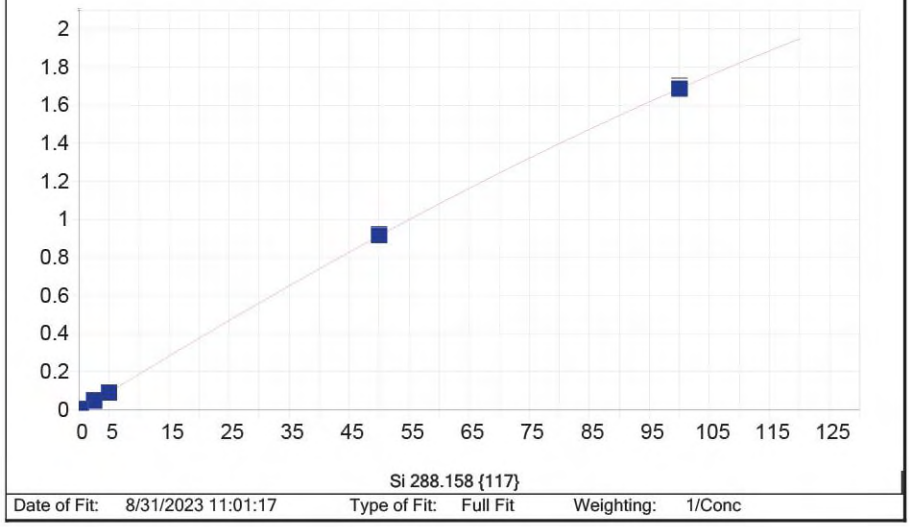


Si 251.611 {134}

Date of Fit:	8/31/2023 11:01:17	Type of Fit:	Full Fit	Weighting:	1/Conc

A0 (Offset):	0.000892	Re-Slope:	1.000000
A1 (Gain):	0.028392	Y-int:	0.000000
A2 (Curvature):	-0.000039		
n (Exponent):	1.030000		
Correlation:	0.999951	Status:	OK.
Std Error of Est:	0.000048		
Predicted MDL:	0.008450		
Predicted MQL:	0.028166		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00000	.000	.000	.00089	.000	1
STD1 35069	2.5000	2.5736	.074	2.94	.07587	.001	1
STD2 35280	5.0000	4.8056	-.194	-3.89	.14309	.001	1
STD3 35650	50.000	50.173	.173	.345	1.4808	.004	1
STD4 34010	100.00	99.909	-.091	-.091	2.7497	.021	1
STD0.1 3519	.25000	.27495	.025	9.98	.00841	.000	1
STD0.03 351	.08000	.09000	.010	12.5	.00327	.000	1

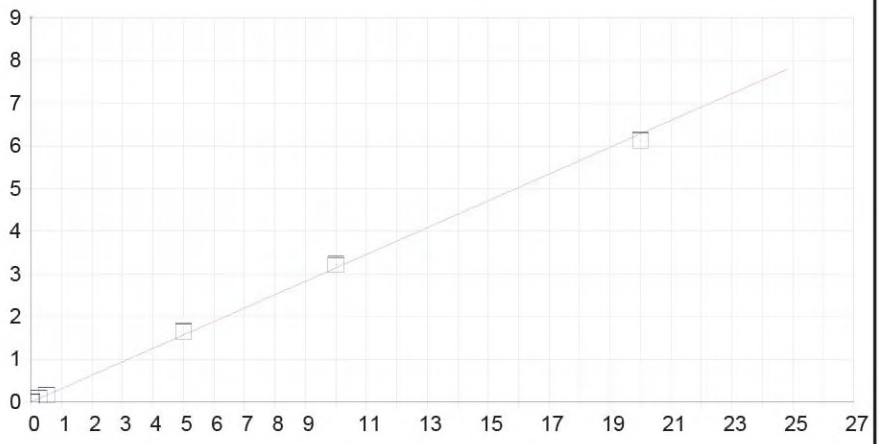


Si 288.158 {117}

Date of Fit:	8/31/2023 11:01:17	Type of Fit:	Full Fit	Weighting:	1/Conc

A0 (Offset):	0.000304	Re-Slope:	1.000000
A1 (Gain):	0.017744	Y-int:	0.000000
A2 (Curvature):	-0.000027		
n (Exponent):	1.030000		
Correlation:	0.999909	Status:	OK.
Std Error of Est:	0.000040		
Predicted MDL:	0.021466		
Predicted MQL:	0.071555		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00000	.000	.000	.00030	.000	1
STD1 35069	2.5000	2.5961	.096	3.84	.04757	.001	1
STD2 35280	5.0000	4.7899	-.210	-4.20	.08881	.001	1
STD3 35650	50.000	50.114	.114	.227	.91682	.003	1
STD4 34010	100.00	99.942	-.058	-.058	1.6881	.014	1
STD0.1 3519	.25000	.28857	.039	15.4	.00524	.000	1
STD0.03 351	.08000	.10581	.026	32.3	.00206	.000	1

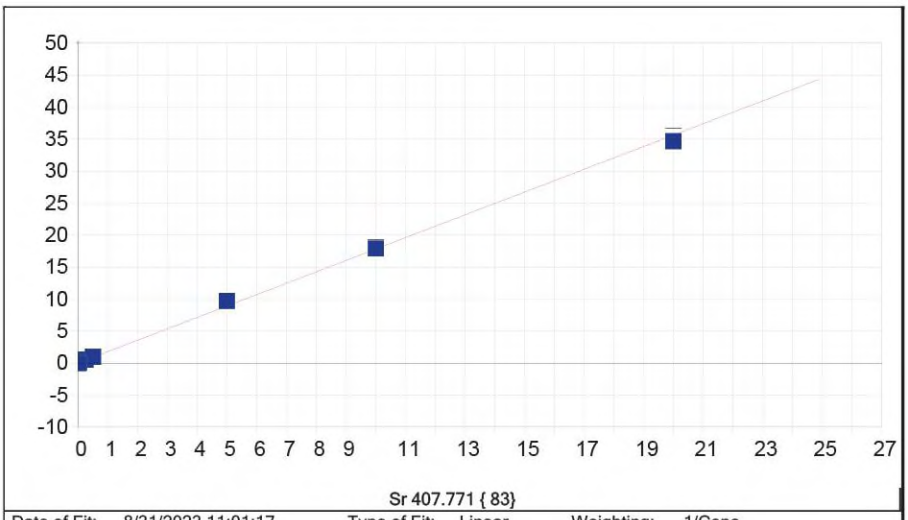


Sn 189.989 {477}

Date of Fit:	8/31/2023 11:01:17	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000248	Re-Slope:	1.000000
A1 (Gain):	0.314263	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999570	Status:	OK.
Std Error of Est:	0.000180		
Predicted MDL:	0.000530		
Predicted MQL:	0.001768		

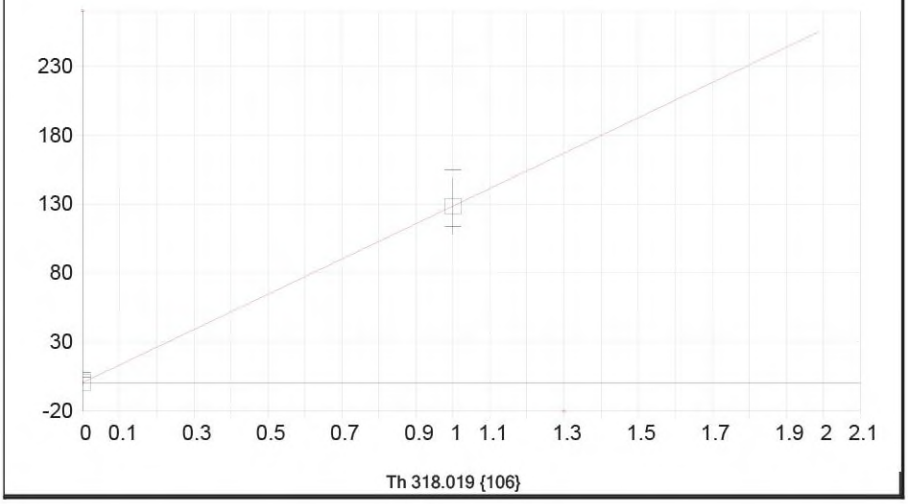
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00000	-.000	.000	.00025	.000	1
STD1 35069	.25000	.25010	.000	.041	.07885	.000	1
STD2 35280	.50000	.48969	-.010	-2.06	.15414	.000	1
STD3 35650	5.0000	5.2583	.258	5.17	1.6528	.001	1
STD4 34010	10.000	10.235	.235	2.35	3.2166	.010	1
STD5 35635	20.000	19.517	-.483	-2.41	6.1338	.014	1
STD0.1 3519	.02500	.02465	-.000	-1.41	.00799	.000	1
STD0.03 351	.00800	.00851	.001	6.36	.00292	.000	1



Date of Fit:	8/31/2023 11:01:17	Type of Fit:	Linear	Weighting:	1/Conc

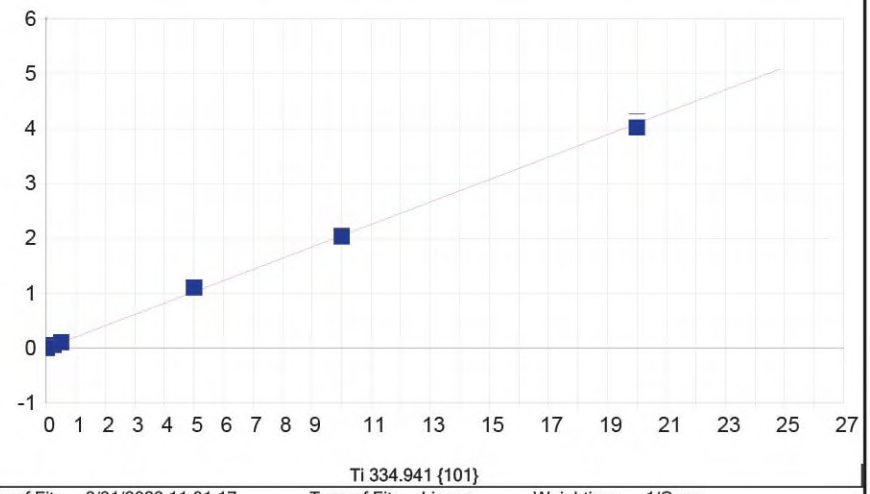
A0 (Offset):	-0.000373	Re-Slope:	1.000000
A1 (Gain):	1.780710	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999193	Status:	OK.
Std Error of Est:	0.001399		
Predicted MDL:	0.000138		
Predicted MQL:	0.000460		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00000	-.000	.000	-.00038	.000	1
STD1 35069	.25000	.27586	.026	10.3	.49116	.005	1
STD2 35280	.50000	.52799	.028	5.60	.94044	.008	1
STD3 35650	5.0000	5.4379	.438	8.76	9.6890	.011	1
STD4 34010	10.000	10.042	.042	.425	17.895	.118	1
STD5 35635	20.000	19.461	-.539	-2.69	34.679	.776	1
STD0.1 3519	.02500	.02839	.003	13.6	.05022	.000	1
STD0.03 351	.00800	.00921	.001	15.1	.01604	.000	1



Date of Fit:	8/31/2023 11:01:17	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.596174		Re-Slope:	1.000000	
A1 (Gain):	127.949266		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	1.000000		Status:	OK.	
Std Error of Est:	0.000000				
Predicted MDL:	0.023059				
Predicted MQL:	0.076864				

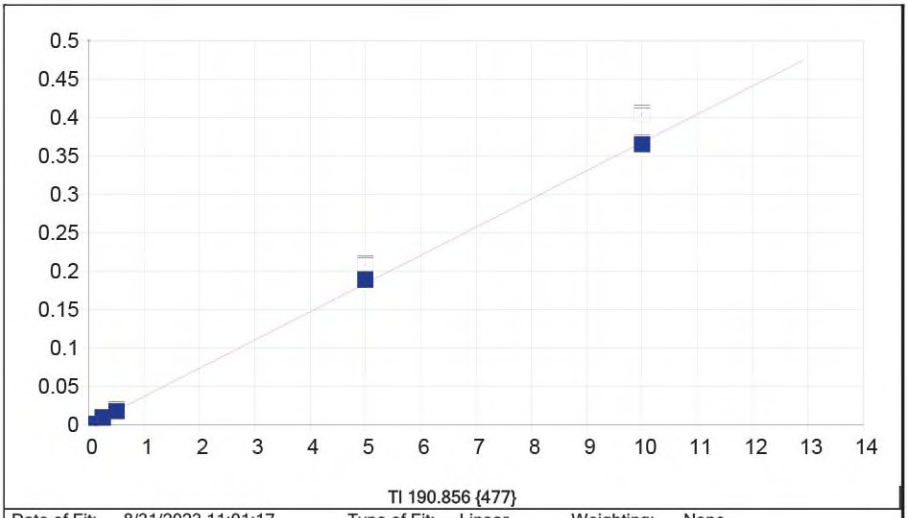
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00000	.000	.000	.59617	1.76	1
STD5 35635	1.0000	1.0000	.000	.000	128.55	20.5	1



Ti 334.941 {101}

Date of Fit:	8/31/2023 11:01:17	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	-0.000123		Re-Slope:	1.000000	
A1 (Gain):	0.204793		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999479		Status:	OK.	
Std Error of Est:	0.000129				
Predicted MDL:	0.001855				
Predicted MQL:	0.006182				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00000	-.000	.000	-.00012	.000	1
STD1 35069	.25000	.27243	.022	8.97	.05568	.001	1
STD2 35280	.50000	.51927	.019	3.85	.10625	.000	1
STD3 35650	5.0000	5.3673	.367	7.35	1.0994	.002	1
STD4 34010	10.000	9.9376	-.062	-.624	2.0357	.016	1
STD5 35635	20.000	19.648	-.352	-1.76	4.0249	.098	1
STD0.1 3519	.02500	.02879	.004	15.2	.00577	.000	1
STD0.03 351	.00800	.00989	.002	23.6	.00190	.000	1

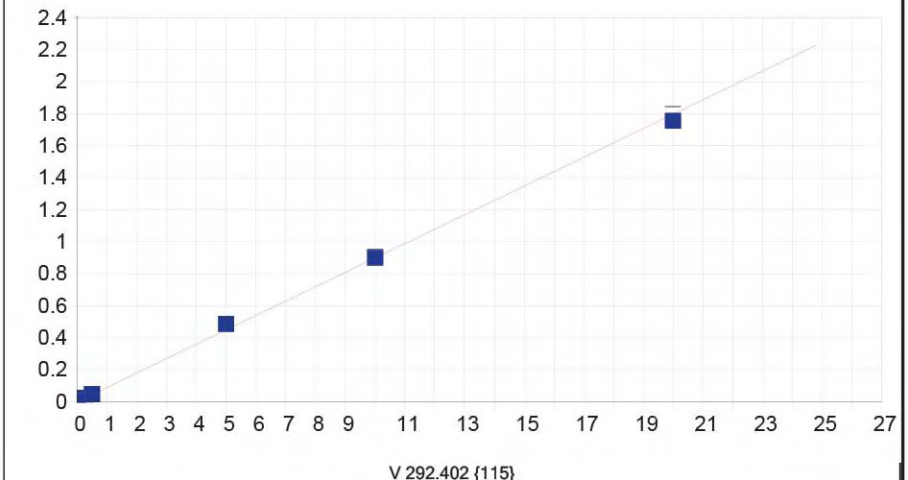


Tl 190.856 {477}

Date of Fit:	8/31/2023 11:01:17	Type of Fit:	Linear	Weighting:	None

A0 (Offset):	0.000436	Re-Slope:	1.000000
A1 (Gain):	0.036743	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999892	Status:	OK.
Std Error of Est:	0.002536		
Predicted MDL:	0.004500		
Predicted MQL:	0.015000		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00825	-.008	.000	.00013	.000	1
STD1 35069	.25000	.23606	-.014	-5.57	.01008	.000	1
STD2 35280	.50000	.47664	-.023	-4.67	.01990	.000	1
STD3 35650	5.0000	5.1354	.135	2.71	.20860	.001	1
STD4 34010	10.000	9.9338	-.066	-.662	.40438	.002	1
STD0.1 3519	.02500	.01184	-.013	-52.6	.00097	.000	1
STD0.03 351	.00800	-.00257	-.011	-132.	.00037	.000	1

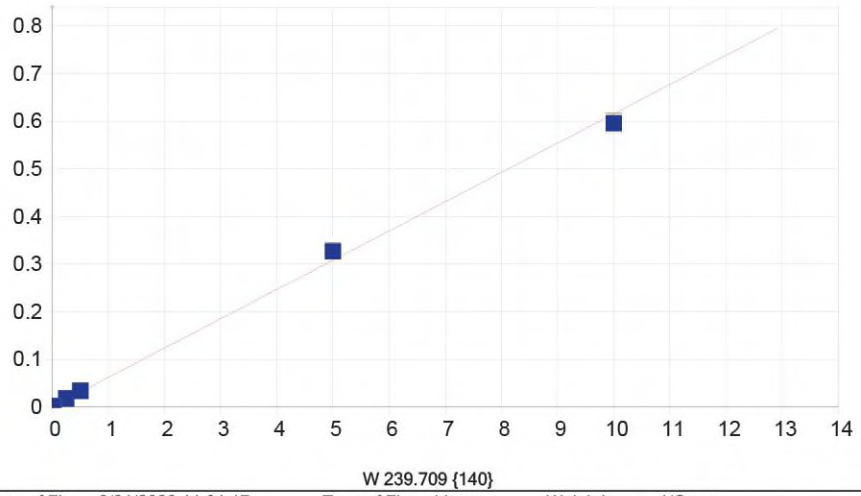


V 292.402 {115}

Date of Fit:	8/31/2023 11:01:17	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000392	Re-Slope:	1.000000
A1 (Gain):	0.089874	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999336	Status:	OK.
Std Error of Est:	0.000064		
Predicted MDL:	0.004652		
Predicted MQL:	0.015507		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00001	-.000	.000	.00039	.000	1
STD1 35069	.25000	.27228	.022	8.91	.02479	.000	1
STD2 35280	.50000	.51927	.019	3.85	.04691	.001	1
STD3 35650	5.0000	5.4036	.404	8.07	.48450	.000	1
STD4 34010	10.000	10.009	.009	.091	.89687	.007	1
STD5 35635	20.000	19.541	-.459	-2.29	1.7505	.042	1
STD0.1 3519	.02500	.02634	.001	5.34	.00275	.000	1
STD0.03 351	.00800	.01126	.003	40.7	.00140	.000	1

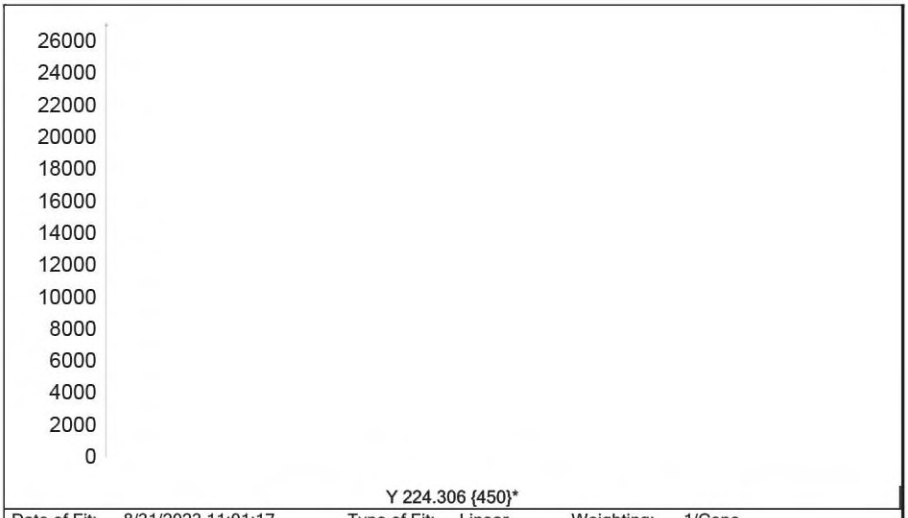


W 239.709 {140}

Date of Fit:	8/31/2023 11:01:17	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000862	Re-Slope:	1.000000
A1 (Gain):	0.061509	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999004	Status:	OK.
Std Error of Est:	0.000036		
Predicted MDL:	0.011603		
Predicted MQL:	0.038676		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00000	.000	.000	.00086	.000	1
STD1 35069	.25000	.26461	.015	5.85	.01702	.000	1
STD2 35280	.50000	.52661	.027	5.32	.03302	.001	1
STD3 35650	5.0000	5.2906	.291	5.81	.32391	.003	1
STD4 34010	10.000	9.6740	-.326	-3.26	.59114	.006	1
STD0.1 3519	.02500	.02153	-.003	-13.9	.00217	.000	1
STD0.03 351	.00800	.00560	-.002	-30.0	.00120	.000	1



Y 224.306 {450}*

Date of Fit:	8/31/2023 11:01:17	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.000000		Status:	Warning	Zero Gain
Std Error of Est:	0.000000				
Predicted MDL:	n/a				
Predicted MQL:	n/a				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00000	.000	.000	25036.	94.6	1

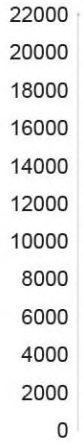


Y 360.073 { 94}*

Date of Fit:	8/31/2023 11:01:17	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.000000		Status:	Warning	Zero Gain

Std Error of Est:	0.000000
Predicted MDL:	n/a
Predicted MQL:	n/a

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00000	.000	.000	9966.0	47.4	1

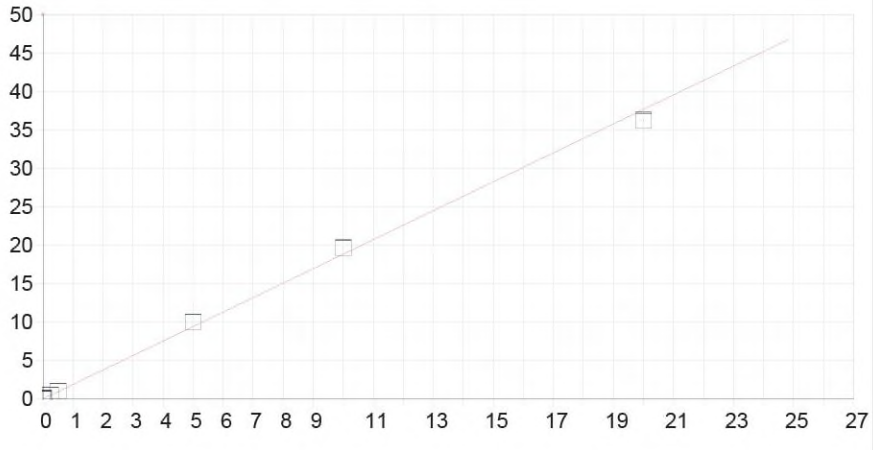


Y 377.433 { 89}*

Date of Fit:	8/31/2023 11:01:17	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.000000	Status:	Warning Zero Gain
Std Error of Est:	0.000000		
Predicted MDL:	n/a		
Predicted MQL:	n/a		

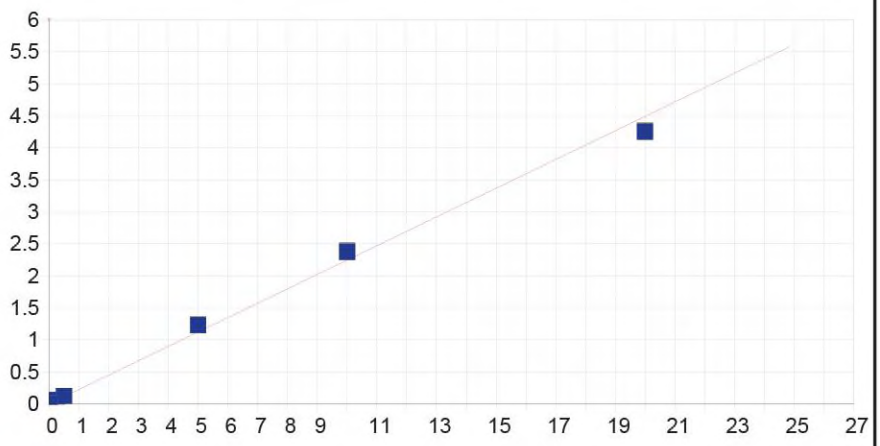
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00000	.000	.000	20762.	116.	1



Zn 206.200 {463}

Date of Fit:	8/31/2023 11:01:17	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.003368		Re-Slope:	1.000000	
A1 (Gain):	1.885029		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999034		Status:	OK.	
Std Error of Est:	0.001619				
Predicted MDL:	0.000124				
Predicted MQL:	0.000412				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00000	-.000	.000	.00337	.000	1
STD1 35069	.25000	.25467	.005	1.87	.48343	.001	1
STD2 35280	.50000	.50829	.008	1.66	.96151	.003	1
STD3 35650	5.0000	5.3191	.319	6.38	10.030	.008	1
STD4 34010	10.000	10.437	.437	4.37	19.677	.059	1
STD5 35635	20.000	19.231	-.769	-3.84	36.255	.079	1
STD0.1 3519	.02500	.02497	-.000	-.133	.05043	.000	1
STD0.03 351	.00800	.00789	-.000	-1.33	.01825	.000	1

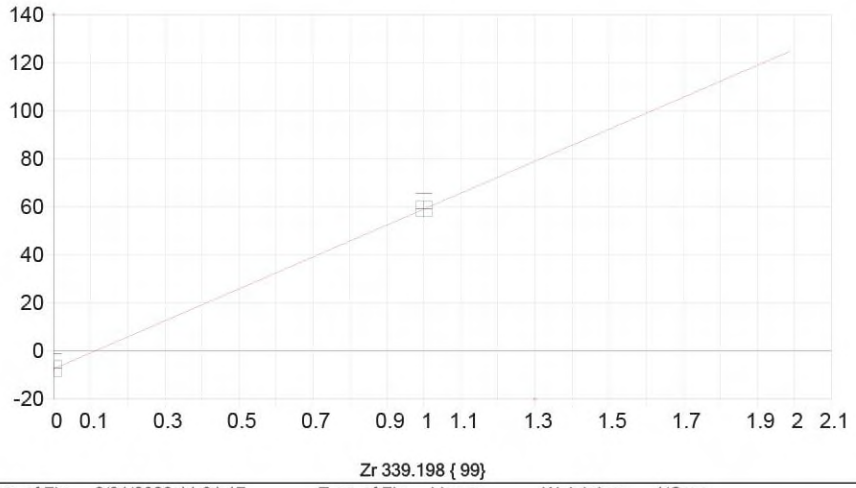


Zn 213.856 {458}

Date of Fit:	8/31/2023 11:01:17	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000561		Re-Slope:	1.000000	
A1 (Gain):	0.224643		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.998066		Status:	OK.	
Std Error of Est:	0.000275				
Predicted MDL:	0.000170				
Predicted MQL:	0.000567				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00000	-.000	.000	.00056	.000	1
STD1 35069	.25000	.27287	.023	9.15	.06215	.000	1
STD2 35280	.50000	.54312	.043	8.62	.12316	.000	1
STD3 35650	5.0000	5.4698	.470	9.40	1.2352	.002	1
STD4 34010	10.000	10.553	.553	5.53	2.3830	.007	1
STD5 35635	20.000	18.909	-1.09	-5.46	4.2719	.009	1
STD0.1 3519	.02500	.02702	.002	8.09	.00666	.000	1

STD0.03 351	.00800	.00862	.001	7.70	.00251	.000	1



Date of Fit:	8/31/2023 11:01:17	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-7.439888	Re-Slope:	1.000000
A1 (Gain):	66.520014	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.075190		
Predicted MQL:	0.250632		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00000	.000	.000	-7.4399	2.89	1
STD5 35635	1.0000	1.0000	.000	.000	59.080	3.36	1

Sample Name: ICIS 3570190 Acquired: 8/30/2023 15:18:13 Type: Cal
Method: NEW IEC MAY 2023(v61) Mode: IR Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130	Bi2230	Ca3158	Cd2265
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0014	-.0012	.0000	.0018	.0000	.0006	.0000	.0003	-.0020
Stddev	.0002	.0004	.0000	.0000	.0000	.0002	.0000	.0001	.0002
%RSD	15.04	36.18	28.44	1.485	59.61	34.68	15.13	22.74	8.645
#1	.0014	-.0017	.0000	.0019	.0001	.0005	.0000	.0003	-.0020
#2	.0015	-.0008	.0000	.0018	.0000	.0006	.0000	.0002	-.0022
#3	.0011	-.0010	.0001	.0018	.0000	.0009	.0000	.0002	-.0019

Elem	Co2286	Cr2055	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.0001	.0001	-.0003	.0001	-.0025	.0029	.0001	.0001	.0002
Stddev	.0002	.0000	.0001	.0001	.0011	.0002	.0001	.0000	.0000
%RSD	111.7	29.05	30.78	101.4	45.56	7.902	111.2	26.23	4.942
#1	-.0003	.0000	-.0002	-.0000	-.0021	.0026	.0003	.0002	.0002
#2	.0000	.0001	-.0003	.0001	-.0017	.0029	.0000	.0001	.0002
#3	-.0001	.0001	-.0003	.0001	-.0038	.0031	.0001	.0002	.0002

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960	Si2516	Sn1899	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0045	.0014	-.0000	-.0014	.0001	-.0000	.0009	.0002	-.0004
Stddev	.0016	.0002	.0000	.0003	.0001	.0000	.0001	.0002	.0001
%RSD	35.71	12.13	55.71	24.96	99.79	132.4	15.03	71.62	39.38
#1	.0051	.0012	-.0000	-.0017	.0000	.0000	.0008	.0004	-.0003
#2	.0026	.0014	-.0000	-.0014	.0000	-.0000	.0010	.0002	-.0005
#3	.0056	.0016	-.0000	-.0010	.0001	-.0000	.0009	.0001	-.0003

Elem	Ti3349	Tl1908	V_2924	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.0001	.0001	.0004	.0034
Stddev	.0001	.0001	.0003	.0001
%RSD	41.57	45.93	88.64	4.444
#1	-.0001	.0001	.0000	.0032
#2	-.0001	.0001	.0007	.0035
#3	-.0002	.0002	.0005	.0033

Sample Name: ICIS 3570190 Acquired: 8/30/2023 15:18:13 Type: Cal
Method: NEW IEC MAY 2023(v61) Mode: IR Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4367.4	25036.	9966.0	20762.
Stddev	14.0	95.	47.4	116.
%RSD	.32079	.37772	.47549	.56018
#1	4374.1	25075.	9911.7	20639.
#2	4376.8	25105.	9999.2	20870.
#3	4351.3	24928.	9987.0	20778.

Sample Name: STD0.03 3519880 Acquired: 8/30/2023 15:21:49 Type: Cal
Method: NEW IEC MAY 2023(v61) Mode: IR Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Al3082	As1890	B_2089	Ba2335	Be3130	Bi2230	Ca3158	Cd2265	Co2286
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0011	.0002	.0077	.0018	.0230	.0003	.0026	.0208	.0150
Stddev	.0005	.0000	.0000	.0000	.0005	.0000	.0002	.0003	.0003
%RSD	45.51	6.720	.6114	2.316	2.159	6.473	6.224	1.435	2.318
#1	.0016	.0002	.0077	.0018	.0235	.0003	.0025	.0205	.0149
#2	.0006	.0002	.0077	.0018	.0225	.0003	.0025	.0209	.0147
#3	.0012	.0002	.0077	.0019	.0229	.0003	.0028	.0210	.0154

Elem	Cr2055	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0017	-.0001	.0047	.0024	.0056	.0007	.0009	.0009	.0219
Stddev	.0000	.0000	.0001	.0011	.0006	.0001	.0000	.0000	.0005
%RSD	2.323	29.51	3.007	44.96	10.51	12.32	3.515	.6718	2.475
#1	.0016	-.0002	.0048	.0029	.0062	.0008	.0009	.0009	.0223
#2	.0017	-.0001	.0047	.0012	.0056	.0006	.0010	.0008	.0221
#3	.0017	-.0001	.0046	.0031	.0051	.0007	.0009	.0009	.0213

Elem	Ni2316	P_1782	Pb2203	Sb2068	Se1960	Si2516	Sn1899	Sr4077	Ti3349
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0058	.0006	.0004	.0002	.0001	.0033	.0029	.0160	.0019
Stddev	.0002	.0000	.0002	.0000	.0000	.0002	.0001	.0004	.0000
%RSD	3.466	1.486	52.33	5.718	15.00	6.320	3.337	2.791	1.499
#1	.0056	.0006	.0003	.0003	.0001	.0034	.0030	.0165	.0019
#2	.0058	.0006	.0003	.0002	.0001	.0034	.0028	.0160	.0019
#3	.0060	.0006	.0006	.0002	.0001	.0030	.0029	.0156	.0019

Elem	Tl1908	V_2924	Zn2062
Units	Cts/S	Cts/S	Cts/S
Avg	.0004	.0014	.0182
Stddev	.0002	.0003	.0002
%RSD	44.42	21.89	1.108
#1	.0003	.0011	.0181
#2	.0002	.0013	.0182
#3	.0006	.0017	.0185

Sample Name: STD0.03 3519880 Acquired: 8/30/2023 15:21:49 Type: Cal
Method: NEW IEC MAY 2023(v61) Mode: IR Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4416.2	25375.	9974.9	20818.
Stddev	15.6	103.	196.8	394.
%RSD	.35257	.40533	1.9733	1.8911
#1	4416.2	25356.	9757.4	20385.
#2	4431.8	25486.	10026.	20916.
#3	4400.7	25283.	10141.	21154.

Sample Name: STD0.1 3519881 Acquired: 8/30/2023 15:25:34 Type: Cal
Method: NEW IEC MAY 2023(v61) Mode: IR Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130	Bi2230	Ca3158	Cd2265
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0019	.0057	.0005	.0202	.0055	.0692	.0007	.0075	.0683
Stddev	.0001	.0003	.0000	.0001	.0001	.0003	.0000	.0001	.0003
%RSD	7.335	5.361	4.961	.5351	1.064	.4824	3.826	1.757	.3685
#1	.0020	.0054	.0005	.0203	.0056	.0689	.0007	.0074	.0684
#2	.0020	.0056	.0005	.0201	.0055	.0692	.0007	.0075	.0680
#3	.0017	.0060	.0005	.0203	.0055	.0695	.0007	.0076	.0685

Elem	Co2286	Cr2055	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0466	.0050	.0003	.0139	.0102	.0105	.0021	.0027	.0023
Stddev	.0001	.0000	.0002	.0001	.0008	.0003	.0001	.0000	.0000
%RSD	.2729	.6338	65.84	1.061	7.901	3.339	3.256	1.483	.8298
#1	.0467	.0050	.0005	.0138	.0095	.0107	.0021	.0027	.0023
#2	.0466	.0049	.0001	.0138	.0111	.0101	.0021	.0027	.0023
#3	.0464	.0050	.0002	.0140	.0100	.0107	.0020	.0027	.0023

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960	Si2516	Sn1899	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0570	.0156	.0019	.0036	.0005	.0002	.0084	.0080	.0502
Stddev	.0016	.0002	.0000	.0006	.0000	.0000	.0001	.0001	.0002
%RSD	2.833	1.490	1.153	16.48	5.955	6.380	1.175	.9736	.3879
#1	.0559	.0158	.0019	.0037	.0006	.0002	.0084	.0081	.0503
#2	.0564	.0154	.0019	.0030	.0006	.0002	.0085	.0079	.0500
#3	.0589	.0157	.0019	.0041	.0005	.0002	.0083	.0080	.0503

Elem	Ti3349	Tl1908	V_2924	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0058	.0010	.0028	.0504
Stddev	.0002	.0003	.0001	.0001
%RSD	2.738	30.08	4.380	.2455
#1	.0056	.0006	.0028	.0505
#2	.0059	.0011	.0026	.0503
#3	.0059	.0011	.0028	.0505

Sample Name: STD0.1 3519881 Acquired: 8/30/2023 15:25:34 Type: Cal
Method: NEW IEC MAY 2023(v61) Mode: IR Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4376.6	25307.	9912.2	20774.
Stddev	18.9	94.	11.3	42.
%RSD	.43273	.37250	.11447	.20112
#1	4371.6	25272.	9917.5	20821.
#2	4397.6	25414.	9920.0	20761.
#3	4360.7	25235.	9899.2	20740.

Sample Name: STD3 3565025 Acquired: 8/30/2023 15:35:24 Type: Cal
Method: NEW IEC MAY 2023(v61) Mode: IR Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130	Bi2230	Ca3158	Cd2265
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.1144	1.302	.0859	3.679	1.045	13.08	.1331	1.459	14.53
Stddev	.0005	.004	.0002	.007	.002	.03	.0002	.005	.01
%RSD	.4801	.2686	.1808	.1899	.1507	.2453	.1569	.3237	.0489
#1	.1150	1.306	.0859	3.677	1.045	13.10	.1331	1.455	14.52
#2	.1139	1.302	.0857	3.674	1.044	13.04	.1329	1.457	14.54
#3	.1143	1.299	.0860	3.687	1.047	13.10	.1333	1.464	14.53

Elem	Co2286	Cr2055	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	9.567	.9638	.1480	2.760	2.504	1.539	.4070	.5047	.4340
Stddev	.008	.0015	.0004	.009	.006	.000	.0011	.0012	.0013
%RSD	.0793	.1523	.3023	.3082	.2571	.0137	.2657	.2376	.3062
#1	9.558	.9629	.1475	2.751	2.511	1.539	.4060	.5033	.4332
#2	9.569	.9630	.1480	2.759	2.503	1.538	.4068	.5050	.4332
#3	9.572	.9655	.1484	2.768	2.498	1.539	.4081	.5056	.4355

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960	Si2516	Sn1899	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	9.509	2.899	.3738	.9791	.0926	.0498	1.481	1.653	9.689
Stddev	.019	.001	.0001	.0007	.0002	.0001	.004	.001	.011
%RSD	.1967	.0243	.0339	.0670	.2363	.1691	.2557	.0566	.1091
#1	9.531	2.898	.3738	.9784	.0925	.0498	1.477	1.652	9.700
#2	9.501	2.899	.3740	.9792	.0925	.0497	1.481	1.654	9.689
#3	9.496	2.899	.3737	.9797	.0929	.0499	1.484	1.652	9.678

Elem	Ti3349	Tl1908	V_2924	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.099	.2086	.4845	10.03
Stddev	.002	.0008	.0004	.01
%RSD	.1445	.3709	.0867	.0798
#1	1.101	.2077	.4849	10.03
#2	1.098	.2092	.4841	10.04
#3	1.099	.2089	.4845	10.02

Sample Name: STD3 3565025 Acquired: 8/30/2023 15:35:24 Type: Cal
Method: NEW IEC MAY 2023(v61) Mode: IR Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3722.1	23285.	9583.0	20284.
Stddev	1.9	22.	26.0	57.
%RSD	.05158	.09457	.27150	.27967
#1	3723.9	23291.	9553.0	20219.
#2	3720.1	23304.	9597.0	20314.
#3	3722.2	23261.	9599.1	20320.

Sample Name: STD1 3506908 Acquired: 8/30/2023 15:29:05 Type: Cal
Method: NEW IEC MAY 2023(v61) Mode: IR Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130	Bi2230	Ca3158	Cd2265
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0069	.0657	.0041	.1844	.0529	.6692	.0068	.0715	.6893
Stddev	.0004	.0012	.0001	.0005	.0001	.0082	.0001	.0005	.0013
%RSD	5.321	1.900	1.386	.2818	.2620	1.228	.8126	.7347	.1931
#1	.0065	.0645	.0041	.1842	.0529	.6627	.0068	.0715	.6886
#2	.0070	.0656	.0041	.1841	.0527	.6664	.0067	.0710	.6884
#3	.0072	.0670	.0042	.1850	.0530	.6784	.0069	.0720	.6908

Elem	Co2286	Cr2055	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.4555	.0484	.0068	.1345	.1225	.0796	.0198	.0248	.0213
Stddev	.0011	.0001	.0001	.0009	.0017	.0013	.0000	.0002	.0002
%RSD	.2348	.2769	1.776	.7009	1.375	1.574	.2027	.9993	.8241
#1	.4558	.0484	.0066	.1341	.1218	.0783	.0197	.0249	.0212
#2	.4543	.0482	.0068	.1339	.1213	.0797	.0198	.0245	.0213
#3	.4564	.0485	.0069	.1356	.1245	.0808	.0198	.0249	.0215

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960	Si2516	Sn1899	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.4948	.1413	.0186	.0462	.0045	.0023	.0759	.0788	.4912
Stddev	.0067	.0005	.0000	.0004	.0000	.0000	.0008	.0005	.0046
%RSD	1.350	.3613	.0703	.8178	.4452	1.445	.9965	.5879	.9270
#1	.4890	.1415	.0186	.0460	.0045	.0023	.0753	.0784	.4878
#2	.4933	.1407	.0186	.0461	.0045	.0023	.0756	.0788	.4893
#3	.5021	.1417	.0186	.0467	.0045	.0024	.0767	.0793	.4963

Elem	Ti3349	Tl1908	V_2924	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0557	.0101	.0248	.4834
Stddev	.0006	.0002	.0002	.0011
%RSD	1.0000	1.765	.9993	.2319
#1	.0551	.0099	.0245	.4830
#2	.0557	.0101	.0248	.4826
#3	.0562	.0103	.0250	.4847

Sample Name: STD1 3506908 Acquired: 8/30/2023 15:29:05 Type: Cal
Method: NEW IEC MAY 2023(v61) Mode: IR Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4357.1	25582.	10019.	21109.
Stddev	20.4	111.	78.	139.
%RSD	.46776	.43288	.77686	.65989
#1	4364.4	25627.	10094.	21243.
#2	4372.8	25663.	10026.	21119.
#3	4334.1	25455.	9938.5	20965.

Sample Name: ICV 3561908 Acquired: 8/30/2023 15:53:34 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.023	41.67	2.039	20.57	1.965	W 2.173
Stddev	.003	.05	.034	.33	.032	.004
%RSD	.3087	.1174	1.650	1.618	1.618	.1699
#1	1.021	41.73	2.019	20.39	1.949	2.170
#2	1.027	41.63	2.078	20.95	2.002	2.177
#3	1.021	41.67	2.020	20.37	1.944	2.174
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn
Value						2.000
Range						5.000%

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	W 1.897	39.34	W 2.104	2.038	W 2.143	1.947
Stddev	.033	.56	.038	.036	.035	.021
%RSD	1.722	1.418	1.789	1.793	1.617	1.059
#1	1.879	39.14	2.082	2.015	2.125	1.940
#2	1.935	39.96	2.148	2.080	2.183	1.970
#3	1.878	38.90	2.083	2.018	2.120	1.931
Check ?	Chk Warn	Chk Pass	Chk Warn	Chk Pass	Chk Warn	Chk Pass
Value	2.000		2.000		2.000	
Range	-5.000%		5.000%		5.000%	

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	41.04	38.28	2.036	40.11	2.061	W 2.131
Stddev	.56	.04	.002	.63	.028	.036
%RSD	1.371	.1024	.1117	1.564	1.349	1.696
#1	40.86	38.26	2.038	39.93	2.050	2.108
#2	41.67	38.33	2.034	40.80	2.093	2.173
#3	40.58	38.26	2.034	39.59	2.040	2.112
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn
Value						2.000
Range						5.000%

Sample Name: ICV 3561908 Acquired: 8/30/2023 15:53:34 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	38.77	2.085	20.68	2.093	W 2.162	2.078
Stddev	.07	.036	.34	.038	.038	.036
%RSD	.1863	1.716	1.631	1.826	1.748	1.753
#1	38.70	2.064	20.51	2.071	2.136	2.061
#2	38.85	2.126	21.07	2.137	2.205	2.120
#3	38.76	2.065	20.47	2.070	2.143	2.053
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass
Value					2.000	
Range					5.000%	

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	20.24	2.078	W 2.163	W 2.143	2.037	W 2.142
Stddev	.09	.038	.002	.003	.036	.005
%RSD	.4631	1.839	.0965	.1284	1.788	.2201
#1	20.14	2.055	2.165	2.142	2.004	2.143
#2	20.30	2.122	2.162	2.146	2.076	2.147
#3	20.30	2.058	2.161	2.142	2.030	2.138
Check ?	Chk Pass	Chk Pass	Chk Warn	Chk Warn	Chk Pass	Chk Warn
Value			2.000	2.000		2.000
Range			5.000%	5.000%		5.000%

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	W 2.109
Stddev	.039
%RSD	1.828
#1	2.085
#2	2.154
#3	2.089
Check ?	Chk Warn
Value	2.000
Range	5.000%

Sample Name: ICV 3561908 Acquired: 8/30/2023 15:53:34 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3964.1	24105.	9780.6	20639.
Stddev	62.6	362.	49.2	84.
%RSD	1.5794	1.5017	.50326	.40810
#1	4004.9	24328.	9837.4	20736.
#2	3892.0	23688.	9749.7	20603.
#3	3995.4	24300.	9754.7	20580.

Sample Name: ICVL 3561056 Acquired: 8/30/2023 16:07:07 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0557	.5669	.0629	.5225	.0224	.0235
Stddev	.0011	.0249	.0007	.0023	.0003	.0002
%RSD	1.961	4.387	1.171	.4460	1.267	.8598
#1	.0566	.5397	.0622	.5213	.0221	.0234
#2	.0559	.5885	.0628	.5211	.0225	.0237
#3	.0545	.5726	.0637	.5252	.0226	.0233
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.2893	.5565	.0215	.0210	.0284	.0550
Stddev	.0034	.0073	.0001	.0003	.0003	.0078
%RSD	1.164	1.315	.6736	1.448	.9683	14.20
#1	.2931	.5482	.0216	.0207	.0282	.0640
#2	.2882	.5593	.0213	.0209	.0283	.0502
#3	.2866	.5620	.0216	.0213	.0287	.0508
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.5389	3.222	.1070	.5156	.0219	.0428
Stddev	.0109	.012	.0013	.0145	.0003	.0009
%RSD	2.018	.3778	1.260	2.818	1.388	2.017
#1	.5263	3.217	.1066	.4998	.0216	.0422
#2	.5453	3.235	.1085	.5284	.0219	.0425
#3	.5450	3.212	.1059	.5186	.0222	.0438
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: ICVL 3561056 Acquired: 8/30/2023 16:07:07 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.5929	.0218	.1104	.0320	.0672	.1017
Stddev	.0026	.0004	.0013	.0019	.0014	.0042
%RSD	.4390	1.736	1.153	5.933	2.105	4.101
#1	.5902	.0215	.1102	.0317	.0687	.1065
#2	.5954	.0215	.1117	.0340	.0669	.1000
#3	.5933	.0222	.1092	.0302	.0660	.0987
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.054	.1036	.1139	.0330	.0941	.0311
Stddev	.017	.0004	.0012	.0004	.0049	.0005
%RSD	1.562	.3538	1.056	1.087	5.182	1.711
#1	1.047	.1038	.1132	.0334	.0977	.0305
#2	1.073	.1032	.1153	.0328	.0885	.0316
#3	1.043	.1039	.1132	.0329	.0960	.0312
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0413
Stddev	.0000
%RSD	.0338
#1	.0413
#2	.0413
#3	.0413
Check ?	Chk Pass
Value	
Range	

Sample Name: ICVL 3561056 Acquired: 8/30/2023 16:07:07 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4411.5	25438.	9869.5	20769.
Stddev	16.7	99.	76.1	182.
%RSD	.37960	.38918	.77116	.87820
#1	4429.9	25551.	9791.9	20577.
#2	4407.5	25395.	9872.5	20791.
#3	4397.1	25368.	9944.0	20940.

Sample Name: STD2 3528066 Acquired: 8/30/2023 15:32:16 Type: Cal
Method: NEW IEC MAY 2023(v61) Mode: IR Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130	Bi2230	Ca3158	Cd2265
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0118	.1291	.0081	.3657	.1028	1.276	.0132	.1403	1.347
Stddev	.0001	.0013	.0000	.0010	.0003	.009	.0001	.0009	.004
%RSD	1.105	1.035	.3041	.2611	.3040	.6733	.8068	.6344	.3107
#1	.0117	.1304	.0081	.3658	.1027	1.286	.0132	.1402	1.347
#2	.0119	.1292	.0081	.3648	.1025	1.272	.0131	.1395	1.344
#3	.0117	.1278	.0081	.3667	.1031	1.270	.0133	.1412	1.352

Elem	Co2286	Cr2055	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.8882	.0942	.0135	.2647	.2434	.1506	.0388	.0476	.0419
Stddev	.0032	.0003	.0002	.0018	.0016	.0011	.0003	.0004	.0001
%RSD	.3567	.2994	1.401	.6938	.6463	.7248	.6955	.8713	.3219
#1	.8871	.0942	.0133	.2647	.2447	.1519	.0389	.0477	.0418
#2	.8857	.0939	.0136	.2628	.2438	.1499	.0385	.0471	.0418
#3	.8917	.0945	.0135	.2665	.2416	.1500	.0390	.0479	.0420

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960	Si2516	Sn1899	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.9646	.2744	.0366	.0918	.0088	.0047	.1431	.1541	.9404
Stddev	.0058	.0004	.0001	.0003	.0000	.0000	.0010	.0005	.0076
%RSD	.6016	.1455	.3856	.3634	.4237	.8052	.6685	.3196	.8097
#1	.9713	.2744	.0366	.0921	.0088	.0047	.1442	.1539	.9490
#2	.9610	.2740	.0365	.0915	.0088	.0047	.1427	.1538	.9381
#3	.9614	.2748	.0368	.0919	.0089	.0047	.1424	.1547	.9343

Elem	Ti3349	Tl1908	V_2924	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.1063	.0199	.0469	.9615
Stddev	.0005	.0001	.0010	.0033
%RSD	.4646	.3958	2.173	.3459
#1	.1066	.0199	.0478	.9603
#2	.1057	.0199	.0471	.9590
#3	.1065	.0198	.0458	.9653

Sample Name: STD2 3528066 Acquired: 8/30/2023 15:32:16 Type: Cal
Method: NEW IEC MAY 2023(v61) Mode: IR Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4309.9	25513.	10024.	21152.
Stddev	17.1	83.	83.	214.
%RSD	.39739	.32705	.82605	1.0137
#1	4315.2	25533.	9955.6	20975.
#2	4323.8	25584.	10001.	21090.
#3	4290.8	25421.	10116.	21390.

Sample Name: STD4 3401016 Acquired: 8/30/2023 15:38:19 Type: Cal
Method: NEW IEC MAY 2023(v61) Mode: IR Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130	Bi2230	Ca3158	Cd2265
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.2152	2.429	.1681	7.260	2.017	23.66	.2700	2.833	28.21
Stddev	.0012	.017	.0006	.020	.005	.19	.0009	.018	.09
%RSD	.5616	.7060	.3669	.2815	.2547	.7950	.3469	.6173	.3024
#1	.2143	2.419	.1678	7.250	2.015	23.59	.2695	2.826	28.19
#2	.2148	2.420	.1677	7.247	2.013	23.52	.2695	2.820	28.14
#3	.2166	2.449	.1688	7.284	2.023	23.87	.2711	2.853	28.31

Elem	Co2286	Cr2055	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	18.80	1.869	.2944	5.362	4.512	2.958	.7961	.9825	.8479
Stddev	.06	.004	.0016	.037	.029	.025	.0051	.0061	.0022
%RSD	.3427	.2409	.5487	.6832	.6497	.8395	.6449	.6247	.2600
#1	18.77	1.866	.2935	5.348	4.546	2.942	.7948	.9799	.8467
#2	18.75	1.866	.2934	5.335	4.497	2.945	.7917	.9780	.8465
#3	18.87	1.874	.2963	5.404	4.494	2.987	.8018	.9895	.8504

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960	Si2516	Sn1899	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	17.26	5.666	.7123	1.908	.1825	.0967	2.750	3.217	17.89
Stddev	.04	.020	.0035	.006	.0006	.0002	.021	.010	.12
%RSD	.2302	.3462	.4918	.3124	.3517	.2470	.7543	.3071	.6573
#1	17.29	5.655	.7091	1.907	.1822	.0966	2.736	3.214	17.92
#2	17.22	5.654	.7117	1.902	.1820	.0964	2.739	3.208	17.77
#3	17.28	5.688	.7161	1.914	.1832	.0969	2.774	3.227	18.00

Elem	Ti3349	Tl1908	V_2924	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2.036	.4044	.8969	19.68
Stddev	.016	.0017	.0074	.06
%RSD	.7773	.4323	.8273	.2998
#1	2.028	.4035	.8939	19.66
#2	2.025	.4033	.8914	19.63
#3	2.054	.4064	.9053	19.74

Sample Name: STD4 3401016 Acquired: 8/30/2023 15:38:19 Type: Cal
Method: NEW IEC MAY 2023(v61) Mode: IR Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3555.9	22799.	9905.9	20998.
Stddev	15.4	96.	49.4	123.
%RSD	.43252	.41898	.49847	.58675
#1	3562.3	22848.	9940.5	21079.
#2	3567.0	22859.	9927.8	21059.
#3	3538.3	22688.	9849.3	20856.

Sample Name: STD5 3563555 Acquired: 8/30/2023 15:41:30 Type: Cal
Method: NEW IEC MAY 2023(v61) Mode: IR Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Al3082	As1890	Be3130	Ca3158	Cd2265	Co2286	Cr2055	Cu3273	Fe2599
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4.867	.3259	46.07	5.532	53.20	36.07	3.519	.5919	10.35
Stddev	.119	.0007	1.51	.035	.10	.08	.007	.0047	.07
%RSD	2.436	.2239	3.280	.6389	.1961	.2112	.1927	.7871	.6802
#1	4.730	.3254	44.34	5.496	53.13	36.02	3.515	.5882	10.29
#2	4.939	.3256	46.72	5.567	53.14	36.03	3.514	.5971	10.43
#3	4.931	.3267	47.15	5.533	53.32	36.16	3.526	.5904	10.34

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7.745	5.989	1.564	1.922	1.610	30.21	10.86	3.650	.3557
Stddev	.066	.152	.009	.013	.004	.29	.03	.008	.0011
%RSD	.8550	2.541	.5919	.6984	.2167	.9556	.2411	.2197	.3185
#1	7.672	5.814	1.555	1.909	1.608	29.88	10.84	3.646	.3548
#2	7.802	6.080	1.574	1.936	1.607	30.30	10.85	3.645	.3552
#3	7.760	6.074	1.563	1.919	1.614	30.44	10.89	3.659	.3570

Elem	Se1960	Sn1899	Sr4077	Ti3349	V_2924	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.1864	6.134	34.68	4.025	1.750	36.25
Stddev	.0003	.014	.78	.098	.042	.08
%RSD	.1738	.2236	2.239	2.434	2.400	.2183
#1	.1862	6.124	33.79	3.912	1.702	36.20
#2	.1863	6.128	35.22	4.076	1.773	36.22
#3	.1868	6.149	35.02	4.087	1.776	36.35

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3395.8	22278.	9858.3	20916.
Stddev	2.2	24.	196.8	423.
%RSD	.06559	.10568	1.9959	2.0221
#1	3397.3	22296.	10075.	21391.
#2	3396.8	22286.	9810.1	20774.
#3	3393.2	22251.	9690.1	20582.

Sample Name: ICB Acquired: 8/30/2023 16:03:30 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0002	.0050	.0033	.0132	.0006	.0005
Stddev	.0067	.0202	.0023	.0006	.0001	.0002
%RSD	4248.	405.3	69.71	4.347	24.42	50.96
#1	-.0014	-.0170	.0058	.0138	.0005	.0003
#2	.0070	.0227	.0025	.0131	.0008	.0004
#3	-.0061	.0093	.0015	.0126	.0005	.0008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0003	.0039	.0005	.0003	.0004	.0040
Stddev	.0011	.0047	.0001	.0000	.0001	.0046
%RSD	435.7	120.9	14.98	5.969	19.55	116.1
#1	-.0009	-.0009	.0006	.0003	.0005	.0034
#2	-.0009	.0041	.0004	.0003	.0003	.0089
#3	.0010	.0085	.0006	.0003	.0005	-.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0106	.1205	.0045	-.0037	.0001	.0013
Stddev	.0035	.0221	.0004	.0058	.0001	.0004
%RSD	33.21	18.30	7.953	157.6	76.68	29.07
#1	.0067	.1051	.0047	.0011	.0002	.0016
#2	.0116	.1106	.0040	-.0020	.0000	.0009
#3	.0135	.1457	.0046	-.0102	.0002	.0016
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: ICB Acquired: 8/30/2023 16:03:30 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0205	.0006	.0036	.0011	.0007	.0001
Stddev	.0128	.0004	.0022	.0005	.0019	.0012
%RSD	62.22	76.45	61.22	44.59	278.2	855.8
#1	.0068	.0004	.0042	.0007	.0018	.0001
#2	.0321	.0003	.0011	.0016	-.0015	.0013
#3	.0226	.0011	.0053	.0009	.0017	-.0011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0204	.0008	.0004	.0014	-.0071	-.0038
Stddev	.0018	.0004	.0002	.0013	.0035	.0031
%RSD	8.687	57.28	49.83	93.60	49.29	81.14
#1	.0186	.0008	.0002	.0028	-.0040	-.0002
#2	.0205	.0012	.0003	.0002	-.0064	-.0057
#3	.0221	.0003	.0006	.0012	-.0109	-.0055
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0005
Stddev	.0001
%RSD	15.46
#1	.0004
#2	.0004
#3	.0005
Check ?	Chk Pass
High Limit	
Low Limit	

Sample Name: ICB Acquired: 8/30/2023 16:03:30 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4483.9	25539.	9870.2	20795.
Stddev	9.8	76.	104.5	200.
%RSD	.21949	.29685	1.0585	.95965
#1	4486.4	25547.	9878.4	20810.
#2	4492.2	25611.	9761.9	20589.
#3	4473.0	25460.	9970.3	20987.

Sample Name: ICSA 3536663 Acquired: 8/30/2023 16:11:49 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0004	519.1	.0048	.0001	.0064	.0004
Stddev	.0016	9.5	.0005	.0013	.0003	.0001
%RSD	423.3	1.826	10.82	1343.	5.329	24.09
#1	-.0014	509.8	.0046	.0015	.0063	.0003
#2	.0010	518.9	.0044	-.0005	.0062	.0005
#3	.0015	528.7	.0054	-.0008	.0068	.0004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0457	510.5	-.0008	-.0021	-.0008	-.0099
Stddev	.0040	.8	.0001	.0003	.0004	.0062
%RSD	8.676	.1570	8.815	15.09	45.51	62.74
#1	.0446	511.3	-.0009	-.0024	-.0005	-.0083
#2	.0425	509.7	-.0008	-.0019	-.0012	-.0046
#3	.0502	510.4	-.0008	-.0019	-.0008	-.0167
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	492.3	.4001	.0242	494.5	.0037	.0004
Stddev	1.0	.0474	.0008	.9	.0002	.0006
%RSD	.2097	11.85	3.177	.1897	4.783	148.4
#1	493.3	.3453	.0234	495.3	.0037	-.0002
#2	491.2	.4292	.0246	493.5	.0035	.0005
#3	492.4	.4256	.0248	494.6	.0038	.0010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: ICSA 3536663 Acquired: 8/30/2023 16:11:49 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0182	.0031	-.0141	.0021	.0073	-.0102
Stddev	.0108	.0004	.0031	.0004	.0010	.0008
%RSD	58.97	13.39	21.78	18.80	13.62	7.509
#1	-.0100	.0035	-.0168	.0025	.0084	-.0110
#2	-.0143	.0026	-.0149	.0018	.0067	-.0094
#3	-.0304	.0032	-.0107	.0020	.0067	-.0103
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0109	.0027	-.0057	-.0021	.0232	.0007
Stddev	.0023	.0011	.0002	.0010	.0058	.0036
%RSD	21.27	41.40	3.172	47.86	25.05	481.6
#1	-.0083	.0025	-.0055	-.0027	.0197	.0005
#2	-.0129	.0040	-.0059	-.0028	.0200	-.0027
#3	-.0115	.0017	-.0057	-.0010	.0300	.0045
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0013
Stddev	.0004
%RSD	27.71
#1	-.0017
#2	-.0013
#3	-.0010
Check ?	Chk Pass
High Limit	
Low Limit	

Sample Name: ICSA 3536663 Acquired: 8/30/2023 16:11:49 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3611.5	22454.	9535.8	20266.
Stddev	14.9	56.	199.5	436.
%RSD	.41385	.24861	2.0925	2.1519
#1	3624.1	22494.	9745.7	20723.
#2	3615.5	22477.	9513.3	20223.
#3	3595.0	22390.	9348.5	19854.

Sample Name: ICSAB 3496533 Acquired: 8/30/2023 16:15:15 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9884	515.4	.9933	9.836	.9920	.5202
Stddev	.0219	11.0	.0026	.061	.0042	.0098
%RSD	2.211	2.130	.2621	.6168	.4199	1.876
#1	.9715	506.7	.9958	9.801	.9906	.5122
#2	.9807	511.8	.9906	9.801	.9888	.5174
#3	1.013	527.7	.9937	9.906	.9967	.5311
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F .0426	513.5	.9808	.9607	1.019	.9932
Stddev	.0021	1.6	.0039	.0040	.006	.0060
%RSD	4.829	.3057	.4004	.4195	.6183	.6032
#1	.0449	512.1	.9811	.9596	1.016	.9978
#2	.0416	513.2	.9768	.9573	1.015	.9955
#3	.0412	515.2	.9846	.9652	1.026	.9864
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	.0000					
Range	20.00%					

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	496.7	9.885	F .0164	500.1	.9986	1.014
Stddev	1.6	.146	.0030	1.8	.0053	.008
%RSD	.3184	1.481	18.57	.3654	.5318	.8135
#1	495.3	9.803	.0129	498.3	.9954	1.007
#2	496.3	9.798	.0180	500.1	.9957	1.012
#3	498.4	10.05	.0183	501.9	1.005	1.023
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
Value			1.000			
Range			-20.00%			

Sample Name: ICSAB 3496533 Acquired: 8/30/2023 16:15:15 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	9.748	.9716	9.783	.9718	1.070	.9834
Stddev	.187	.0020	.090	.0003	.006	.0078
%RSD	1.914	.2048	.9184	.0287	.5257	.7931
#1	9.618	.9711	9.745	.9720	1.069	.9792
#2	9.663	.9699	9.718	.9715	1.065	.9787
#3	9.961	.9738	9.885	.9719	1.076	.9924
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	8.982	.9797	1.030	1.004	.9968	1.003
Stddev	.154	.0065	.022	.022	.0130	.018
%RSD	1.715	.6613	2.104	2.152	1.303	1.785
#1	8.850	.9766	1.014	.9831	.9833	.9934
#2	8.945	.9754	1.022	1.002	.9978	.9913
#3	9.152	.9872	1.055	1.026	1.009	1.023
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.9766
Stddev	.0029
%RSD	.2962
#1	.9769
#2	.9736
#3	.9794
Check ?	Chk Pass
Value	
Range	

Sample Name: ICSAB 3496533 Acquired: 8/30/2023 16:15:15 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3584.9	22453.	9664.9	20500.
Stddev	21.8	113.	202.3	463.
%RSD	.60729	.50124	2.0933	2.2565
#1	3594.9	22502.	9813.8	20851.
#2	3599.8	22532.	9746.4	20672.
#3	3559.9	22324.	9434.5	19975.

Sample Name: CCV 3565024 Acquired: 8/30/2023 16:18:22 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.023	104.7	5.089	49.62	5.048	5.417
Stddev	.003	.2	.012	.10	.013	.018
%RSD	.2432	.1825	.2423	.2063	.2546	.3301
#1	1.024	104.8	5.080	49.57	5.040	5.426
#2	1.021	104.5	5.084	49.55	5.040	5.397
#3	1.026	104.8	5.103	49.73	5.063	5.429
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.866	98.79	5.194	5.095	5.227	4.907
Stddev	.012	.40	.006	.007	.012	.023
%RSD	.2365	.4011	.1258	.1422	.2270	.4764
#1	4.862	99.22	5.193	5.093	5.220	4.934
#2	4.857	98.45	5.189	5.088	5.221	4.892
#3	4.879	98.69	5.202	5.102	5.241	4.895
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	102.1	100.5	5.032	100.8	5.041	5.182
Stddev	.4	.4	.012	.3	.017	.012
%RSD	.3756	.3880	.2442	.2905	.3414	.2216
#1	102.5	101.0	5.044	101.0	5.059	5.175
#2	101.8	100.3	5.019	100.5	5.024	5.176
#3	102.0	100.3	5.032	100.9	5.042	5.195
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCV 3565024 Acquired: 8/30/2023 16:18:22 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	99.73	5.116	49.95	5.116	5.041	5.139
Stddev	.42	.008	.05	.006	.009	.001
%RSD	.4202	.1496	.0979	.1222	.1748	.0237
#1	100.2	5.113	49.89	5.110	5.039	5.139
#2	99.44	5.111	49.97	5.116	5.033	5.137
#3	99.54	5.125	49.98	5.122	5.050	5.140
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	49.18	5.152	5.354	5.283	4.997	5.328
Stddev	.10	.009	.014	.016	.015	.015
%RSD	.2072	.1686	.2596	.2943	.3083	.2898
#1	49.12	5.148	5.370	5.288	4.981	5.328
#2	49.12	5.146	5.344	5.265	5.000	5.312
#3	49.30	5.162	5.348	5.295	5.012	5.343
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	5.194
Stddev	.010
%RSD	.1940
#1	5.192
#2	5.184
#3	5.204
Check ?	Chk Pass
Value	
Range	

Sample Name: CCV 3565024 Acquired: 8/30/2023 16:18:22 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3782.8	23654.	9632.0	20401.
Stddev	3.1	12.	3.0	18.
%RSD	.08107	.04890	.03076	.08941
#1	3780.6	23642.	9635.4	20422.
#2	3781.4	23665.	9630.1	20387.
#3	3786.3	23656.	9630.4	20395.

Sample Name: CCB Acquired: 8/30/2023 16:22:44 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0016	.0051	.0066	.0455	.0021	.0006
Stddev	.0018	.0243	.0009	.0053	.0003	.0002
%RSD	114.8	471.6	12.98	11.55	13.33	27.63
#1	.0037	.0332	.0060	.0445	.0018	.0004
#2	.0007	-.0080	.0062	.0511	.0023	.0006
#3	.0003	-.0097	.0076	.0407	.0021	.0008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0018	.0226	.0020	.0015	.0017	-.0027
Stddev	.0011	.0080	.0005	.0004	.0007	.0060
%RSD	61.35	35.55	22.99	27.69	41.82	220.0
#1	.0017	.0136	.0015	.0011	.0011	.0039
#2	.0030	.0292	.0024	.0019	.0026	-.0077
#3	.0008	.0249	.0021	.0015	.0016	-.0044
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0253	.1102	.0068	.0235	.0008	.0062
Stddev	.0041	.0415	.0019	.0111	.0001	.0008
%RSD	16.36	37.68	27.80	47.38	13.54	13.62
#1	.0239	.0887	.0046	.0232	.0008	.0067
#2	.0221	.1581	.0081	.0126	.0007	.0066
#3	.0300	.0838	.0078	.0348	.0009	.0052
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: CCB Acquired: 8/30/2023 16:22:44 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0085	.0016	.0177	.0022	.0020	.0054
Stddev	.0159	.0004	.0038	.0012	.0019	.0030
%RSD	186.8	26.30	21.45	54.35	95.34	55.89
#1	-.0099	.0011	.0136	.0011	.0007	.0063
#2	.0174	.0018	.0210	.0035	.0012	.0020
#3	.0180	.0018	.0184	.0020	.0042	.0079
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0270	.0024	.0005	.0014	-.0054	-.0017
Stddev	.0067	.0002	.0003	.0012	.0028	.0023
%RSD	24.63	9.226	57.50	85.03	52.60	131.5
#1	.0253	.0023	.0004	.0004	-.0025	.0009
#2	.0343	.0027	.0003	.0027	-.0055	-.0028
#3	.0214	.0023	.0009	.0011	-.0081	-.0033
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0018
Stddev	.0004
%RSD	22.59
#1	.0014
#2	.0022
#3	.0018
Check ?	Chk Pass
High Limit	
Low Limit	

Sample Name: CCB Acquired: 8/30/2023 16:22:44 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4441.5	25332.	9960.2	21034.
Stddev	29.7	160.	42.2	78.
%RSD	.66951	.63271	.42342	.37315
#1	4475.7	25516.	9991.2	21094.
#2	4421.6	25220.	9977.3	21063.
#3	4427.2	25261.	9912.2	20945.

Sample Name: CCVL 3561056 Acquired: 8/30/2023 18:09:25 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0506	.5309	.0605	.5093	.0210	.0211
Stddev	.0029	.0300	.0007	.0016	.0001	.0001
%RSD	5.801	5.657	1.125	.3057	.5333	.5973
#1	.0486	.5312	.0611	.5094	.0210	.0211
#2	.0492	.5007	.0598	.5077	.0208	.0210
#3	.0540	.5607	.0605	.5108	.0210	.0213
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.2699	.5290	.0201	.0197	.0269	.0475
Stddev	.0028	.0037	.0000	.0002	.0002	.0032
%RSD	1.055	.7065	.2384	.8224	.6771	6.754
#1	.2673	.5247	.0201	.0196	.0267	.0471
#2	.2694	.5311	.0201	.0196	.0271	.0445
#3	.2730	.5313	.0200	.0198	.0270	.0509
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.5161	3.131	.1008	.5008	.0201	.0422
Stddev	.0026	.019	.0013	.0242	.0010	.0004
%RSD	.5074	.6061	1.312	4.828	5.001	.9311
#1	.5158	3.151	.1023	.5014	.0211	.0418
#2	.5136	3.126	.1001	.5247	.0200	.0423
#3	.5188	3.114	.1000	.4764	.0191	.0426
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCVL 3561056 Acquired: 8/30/2023 18:09:25 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.5301	.0195	.1070	.0306	.0644	.0970
Stddev	.0071	.0003	.0015	.0007	.0003	.0007
%RSD	1.341	1.422	1.445	2.336	.3959	.6857
#1	.5371	.0196	.1052	.0298	.0647	.0963
#2	.5304	.0197	.1081	.0306	.0642	.0970
#3	.5229	.0192	.1077	.0313	.0644	.0977
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.008	.0956	.1067	.0312	.0880	.0311
Stddev	.005	.0001	.0003	.0010	.0016	.0026
%RSD	.4810	.0777	.3012	3.336	1.858	8.250
#1	1.004	.0956	.1064	.0302	.0890	.0340
#2	1.006	.0955	.1068	.0323	.0861	.0293
#3	1.013	.0956	.1070	.0312	.0890	.0300
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0377
Stddev	.0001
%RSD	.3692
#1	.0378
#2	.0376
#3	.0378
Check ?	Chk Pass
Value	
Range	

Sample Name: CCVL 3561056 Acquired: 8/30/2023 18:09:25 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4572.4	26658.	10491.	22382.
Stddev	12.5	86.	21.	66.
%RSD	.27446	.32207	.20158	.29492
#1	4575.6	26707.	10514.	22428.
#2	4583.1	26707.	10473.	22306.
#3	4558.6	26559.	10484.	22412.

Sample Name: CCVL 3561056 Acquired: 8/30/2023 16:26:21 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0574	.5459	.0628	.5300	.0220	.0231
Stddev	.0020	.0469	.0022	.0013	.0003	.0003
%RSD	3.406	8.599	3.451	.2445	1.206	1.274
#1	.0595	.5734	.0610	.5299	.0219	.0234
#2	.0556	.5727	.0623	.5288	.0218	.0229
#3	.0571	.4917	.0652	.5314	.0223	.0229
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.2890	.5596	.0213	.0208	.0283	.0502
Stddev	.0001	.0080	.0001	.0003	.0001	.0020
%RSD	.0306	1.424	.3626	1.316	.3604	3.891
#1	.2889	.5668	.0213	.0205	.0282	.0508
#2	.2891	.5510	.0213	.0211	.0284	.0480
#3	.2890	.5610	.0212	.0207	.0283	.0517
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.5490	3.238	.1067	.5633	.0214	.0435
Stddev	.0028	.052	.0009	.0105	.0010	.0001
%RSD	.5039	1.617	.8629	1.865	4.626	.3114
#1	.5507	3.294	.1076	.5554	.0214	.0435
#2	.5458	3.190	.1067	.5752	.0204	.0434
#3	.5505	3.230	.1058	.5593	.0224	.0436
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCVL 3561056 Acquired: 8/30/2023 16:26:21 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.5790	.0210	.1065	.0327	.0663	.0989
Stddev	.0099	.0006	.0012	.0014	.0018	.0013
%RSD	1.716	2.983	1.132	4.370	2.728	1.354
#1	.5795	.0215	.1079	.0328	.0645	.1004
#2	.5887	.0203	.1060	.0340	.0662	.0982
#3	.5689	.0211	.1056	.0312	.0681	.0980
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.068	.1021	.1136	.0339	.0927	.0325
Stddev	.018	.0011	.0008	.0020	.0046	.0020
%RSD	1.672	1.034	.6911	5.794	4.925	6.113
#1	1.083	.1011	.1144	.0362	.0874	.0343
#2	1.048	.1019	.1135	.0329	.0957	.0304
#3	1.073	.1032	.1129	.0327	.0949	.0330
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0403
Stddev	.0002
%RSD	.5815
#1	.0404
#2	.0401
#3	.0405
Check ?	Chk Pass
Value	
Range	

Sample Name: CCVL 3561056 Acquired: 8/30/2023 16:26:21 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4418.8	25535.	10020.	21147.
Stddev	19.7	122.	71.	161.
%RSD	.44607	.47609	.71037	.76225
#1	4429.1	25581.	9954.4	20994.
#2	4431.2	25626.	10009.	21132.
#3	4396.0	25397.	10096.	21315.

Sample Name: MB 580-436117/15-A Acquired: 8/30/2023 16:29:51 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0009	.0054	.0020	.0067	.0001	.0002
Stddev	.0007	.0184	.0011	.0010	.0001	.0000
%RSD	77.10	340.3	55.00	14.34	83.71	18.83
#1	.0007	.0084	.0032	.0078	.0000	.0001
#2	.0017	-.0143	.0017	.0060	.0001	.0002
#3	.0003	.0221	.0011	.0063	.0001	.0002

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0009	.0038	.0002	.0003	-.0004	.0013
Stddev	.0015	.0037	.0001	.0003	.0001	.0010
%RSD	171.0	95.92	29.11	114.8	23.85	75.33
#1	-.0021	-.0001	.0002	.0005	-.0003	.0024
#2	-.0014	.0044	.0002	.0004	-.0004	.0007
#3	.0008	.0072	.0001	-.0001	-.0005	.0007

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0191	.0022	-.0073	-.0010	.0003	.0009
Stddev	.0018	.0150	.0008	.0180	.0002	.0005
%RSD	9.299	674.7	10.75	1726.	70.89	56.20
#1	.0170	-.0127	-.0082	-.0081	.0001	.0008
#2	.0198	.0020	-.0072	.0194	.0002	.0014
#3	.0203	.0174	-.0066	-.0144	.0005	.0004

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0152	.0002	.0027	.0012	.0014	-.0002
Stddev	.0135	.0003	.0008	.0008	.0019	.0011
%RSD	89.02	134.4	28.43	68.53	137.3	475.2
#1	-.0025	.0003	.0035	.0006	.0030	-.0015
#2	-.0136	-.0001	.0019	.0008	.0018	.0004
#3	-.0294	.0004	.0027	.0021	-.0007	.0004

Sample Name: MB 580-436117/15-A Acquired: 8/30/2023 16:29:51 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0142	.0001	.0003	.0011	-.0056	.0009
Stddev	.0051	.0006	.0001	.0014	.0024	.0046
%RSD	36.10	1094.	48.50	124.7	43.01	509.2
#1	.0139	-.0002	.0003	.0025	-.0029	.0062
#2	.0093	.0007	.0004	.0012	-.0075	-.0024
#3	.0195	-.0004	.0001	-.0003	-.0064	-.0010

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0011
Stddev	.0000
%RSD	3.791
#1	-.0011
#2	-.0012
#3	-.0011

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4578.6	26164.	10237.	21635.
Stddev	19.5	113.	27.	70.
%RSD	.42553	.43097	.26353	.32225
#1	4600.2	26286.	10266.	21700.
#2	4573.5	26143.	10233.	21644.
#3	4562.2	26064.	10212.	21561.

Sample Name: LCS 580-436117/16-A Acquired: 8/30/2023 16:33:26 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.046	21.48	1.028	10.52	1.046	1.103
Stddev	.004	.04	.006	.04	.003	.003
%RSD	.4205	.1955	.6250	.3420	.2971	.2405
#1	1.046	21.43	1.023	10.50	1.045	1.100
#2	1.050	21.51	1.025	10.50	1.044	1.106
#3	1.041	21.50	1.035	10.56	1.050	1.103

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0015	19.68	1.046	1.017	1.088	.9738
Stddev	.0017	.08	.001	.001	.003	.0084
%RSD	112.6	.4231	.1203	.0876	.2397	.8662
#1	.0001	19.63	1.046	1.017	1.087	.9698
#2	-.0014	19.62	1.045	1.017	1.086	.9681
#3	-.0034	19.77	1.048	1.018	1.091	.9834

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	20.58	19.25	1.007	20.28	1.024	1.063
Stddev	.09	.02	.001	.13	.008	.006
%RSD	.4457	.1002	.1233	.6643	.8130	.5258
#1	20.52	19.24	1.006	20.21	1.019	1.058
#2	20.54	19.27	1.009	20.20	1.018	1.062
#3	20.69	19.23	1.007	20.44	1.033	1.069

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	19.45	1.027	5.226	1.045	1.072	1.055
Stddev	.03	.001	.028	.003	.005	.010
%RSD	.1570	.0976	.5320	.2469	.4292	.9154
#1	19.47	1.026	5.242	1.044	1.072	1.046
#2	19.47	1.027	5.194	1.043	1.067	1.054
#3	19.42	1.028	5.243	1.048	1.077	1.065

Sample Name: LCS 580-436117/16-A Acquired: 8/30/2023 16:33:26 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	9.722	1.039	1.090	1.070	1.018	1.072
Stddev	.012	.002	.002	.002	.031	.006
%RSD	.1267	.2038	.2077	.1431	3.005	.5392
#1	9.712	1.038	1.087	1.070	.9840	1.073
#2	9.736	1.039	1.091	1.072	1.025	1.078
#3	9.719	1.042	1.091	1.069	1.044	1.066

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	1.046
Stddev	.001
%RSD	.0757
#1	1.046
#2	1.045
#3	1.046

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4258.1	25463.	10160.	21490.
Stddev	9.8	82.	18.	22.
%RSD	.23011	.32090	.17318	.10083
#1	4261.0	25462.	10150.	21504.
#2	4266.1	25545.	10149.	21465.
#3	4247.2	25382.	10180.	21500.

Sample Name: LCSD 580-436117/17-A Acquired: 8/30/2023 16:36:28 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.038	21.29	1.024	10.41	1.041	1.097
Stddev	.005	.07	.004	.02	.002	.003
%RSD	.5141	.3388	.3659	.1762	.1747	.2862
#1	1.032	21.24	1.020	10.39	1.040	1.098
#2	1.041	21.37	1.027	10.40	1.041	1.100
#3	1.042	21.26	1.026	10.43	1.043	1.094

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0039	19.65	1.043	1.013	1.082	.9664
Stddev	.0016	.05	.003	.004	.003	.0077
%RSD	42.20	.2746	.2964	.4473	.2814	.7968
#1	-.0056	19.71	1.039	1.008	1.080	.9749
#2	-.0023	19.62	1.043	1.014	1.080	.9644
#3	-.0039	19.61	1.045	1.017	1.085	.9599

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	20.55	19.18	1.004	20.26	1.024	1.062
Stddev	.04	.08	.002	.07	.001	.001
%RSD	.1866	.4135	.1455	.3650	.0718	.1297
#1	20.58	19.11	1.003	20.34	1.024	1.061
#2	20.57	19.18	1.005	20.22	1.024	1.062
#3	20.51	19.26	1.003	20.21	1.025	1.063

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	19.28	1.022	5.179	1.042	1.067	1.049
Stddev	.05	.004	.010	.003	.003	.004
%RSD	.2819	.4135	.1860	.2718	.3032	.4193
#1	19.22	1.018	5.169	1.041	1.064	1.047
#2	19.32	1.022	5.181	1.040	1.066	1.054
#3	19.30	1.027	5.188	1.045	1.070	1.047

Sample Name: LCSD 580-436117/17-A Acquired: 8/30/2023 16:36:28 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	9.554	1.034	1.084	1.062	1.032	1.071
Stddev	.022	.003	.005	.001	.013	.004
%RSD	.2315	.3282	.4196	.0551	1.218	.4112
#1	9.533	1.031	1.080	1.061	1.017	1.067
#2	9.577	1.035	1.089	1.062	1.036	1.075
#3	9.552	1.038	1.085	1.063	1.041	1.070

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	1.039
Stddev	.004
%RSD	.3551
#1	1.035
#2	1.040
#3	1.043

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4338.4	25977.	10406.	22014.
Stddev	10.1	32.	27.	80.
%RSD	.23322	.12159	.26219	.36148
#1	4348.1	25991.	10436.	22106.
#2	4339.2	25999.	10398.	21968.
#3	4327.9	25941.	10383.	21967.

Sample Name: 580-130931-K-1-B Acquired: 8/30/2023 18:53:50 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0029	4.751	.0266	.0618	.0750	-.0000
Stddev	.0003	.020	.0004	.0001	.0005	.0001
%RSD	8.716	.4182	1.349	.1569	.6600	820.6
#1	-.0030	4.770	.0263	.0618	.0749	-.0001
#2	-.0030	4.753	.0270	.0617	.0746	.0000
#3	-.0026	4.730	.0265	.0619	.0756	.0000

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0010	37.44	-.0001	.0045	.0246	.0251
Stddev	.0017	.16	.0000	.0002	.0000	.0034
%RSD	165.5	.4265	42.48	5.183	.0689	13.42
#1	.0006	37.28	-.0001	.0043	.0246	.0217
#2	.0029	37.60	-.0001	.0044	.0246	.0252
#3	-.0004	37.43	-.0001	.0047	.0246	.0285

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	15.82	4.320	-.0044	33.68	1.085	.0042
Stddev	.06	.047	.0007	.07	.003	.0004
%RSD	.3549	1.094	15.60	.1993	.2792	10.68
#1	15.76	4.266	-.0052	33.64	1.082	.0038
#2	15.88	4.348	-.0040	33.76	1.088	.0047
#3	15.82	4.347	-.0040	33.65	1.085	.0040

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	91.76	.0337	20.25	-.0106	.0015	-.0035
Stddev	.22	.0004	.17	.0011	.0008	.0010
%RSD	.2444	1.080	.8278	9.890	52.94	29.05
#1	92.00	.0339	20.07	-.0117	.0008	-.0044
#2	91.71	.0333	20.29	-.0096	.0023	-.0037
#3	91.56	.0340	20.40	-.0106	.0013	-.0024

Sample Name: 580-130931-K-1-B Acquired: 8/30/2023 18:53:50 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	22.62	.0004	.2596	.3249	-.0067	.0103
Stddev	.08	.0004	.0001	.0014	.0041	.0022
%RSD	.3612	97.42	.0318	.4198	60.58	21.56
#1	22.67	.0000	.2595	.3236	-.0082	.0122
#2	22.66	.0004	.2597	.3264	-.0021	.0079
#3	22.52	.0008	.2596	.3247	-.0098	.0109

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0878
Stddev	.0001
%RSD	.1359
#1	.0877
#2	.0878
#3	.0880

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4206.5	25484.	10535.	22408.
Stddev	16.4	104.	14.	62.
%RSD	.38914	.40751	.13590	.27836
#1	4224.7	25603.	10546.	22473.
#2	4193.0	25413.	10539.	22401.
#3	4201.7	25435.	10519.	22349.

Sample Name: CCV 3565024 Acquired: 8/30/2023 17:03:40 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9959	101.4	5.021	49.27	4.951	5.250
Stddev	.0002	.1	.012	.15	.016	.002
%RSD	.0220	.1422	.2394	.3060	.3229	.0408
#1	.9960	101.3	5.023	49.20	4.943	5.250
#2	.9956	101.6	5.007	49.17	4.940	5.252
#3	.9960	101.5	5.031	49.44	4.969	5.248
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.786	97.82	5.054	4.973	5.135	4.909
Stddev	.021	.35	.025	.023	.017	.020
%RSD	.4324	.3584	.4909	.4649	.3262	.3971
#1	4.772	97.71	5.037	4.959	5.131	4.906
#2	4.776	97.54	5.042	4.960	5.121	4.892
#3	4.810	98.21	5.083	5.000	5.154	4.931
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	101.1	98.04	4.911	100.0	5.009	5.117
Stddev	.4	.31	.004	.5	.021	.018
%RSD	.4287	.3198	.0791	.5185	.4200	.3570
#1	100.9	98.36	4.909	99.66	4.997	5.108
#2	100.9	98.04	4.908	99.75	4.996	5.105
#3	101.6	97.73	4.915	100.6	5.033	5.138
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCV 3565024 Acquired: 8/30/2023 17:03:40 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	97.42	4.998	49.02	5.004	4.974	5.115
Stddev	.40	.022	.45	.018	.016	.013
%RSD	.4070	.4333	.9133	.3524	.3213	.2537
#1	97.84	4.986	49.51	4.993	4.963	5.115
#2	97.37	4.985	48.92	4.995	4.967	5.102
#3	97.05	5.023	48.64	5.024	4.993	5.127
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	47.93	5.013	5.241	5.111	4.876	5.178
Stddev	.20	.013	.001	.006	.025	.017
%RSD	.4184	.2622	.0161	.1210	.5117	.3229
#1	47.70	5.008	5.241	5.104	4.853	5.159
#2	47.99	5.003	5.240	5.112	4.873	5.183
#3	48.09	5.028	5.241	5.116	4.902	5.192
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	5.030
Stddev	.027
%RSD	.5372
#1	5.009
#2	5.021
#3	5.061
Check ?	Chk Pass
Value	
Range	

Sample Name: CCV 3565024 Acquired: 8/30/2023 17:03:40 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3832.0	23943.	9910.1	21049.
Stddev	10.6	60.	22.3	33.
%RSD	.27754	.25013	.22526	.15440
#1	3835.2	23970.	9905.4	21051.
#2	3840.7	23985.	9890.5	21015.
#3	3820.2	23874.	9934.4	21080.

Sample Name: CCB Acquired: 8/30/2023 17:08:00 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0006	.0224	.0046	.0397	.0015	.0008
Stddev	.0022	.0076	.0007	.0022	.0003	.0001
%RSD	355.4	33.71	15.13	5.559	20.99	11.90
#1	.0010	.0170	.0042	.0374	.0012	.0009
#2	.0026	.0310	.0055	.0418	.0018	.0008
#3	-.0018	.0192	.0043	.0398	.0016	.0007
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0005	.0197	.0015	.0015	.0017	.0007
Stddev	.0013	.0041	.0004	.0005	.0005	.0032
%RSD	284.1	21.02	28.99	32.71	29.57	432.8
#1	-.0016	.0150	.0010	.0009	.0011	-.0029
#2	.0010	.0218	.0018	.0017	.0019	.0021
#3	-.0008	.0225	.0018	.0018	.0020	.0029
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0327	.1251	.0084	.0163	.0015	.0053
Stddev	.0032	.0062	.0007	.0070	.0006	.0003
%RSD	9.764	4.923	8.221	43.05	42.53	5.531
#1	.0363	.1245	.0085	.0213	.0010	.0054
#2	.0303	.1316	.0089	.0192	.0012	.0055
#3	.0315	.1193	.0076	.0083	.0022	.0050
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: CCB Acquired: 8/30/2023 17:08:00 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0339	.0010	.0198	.0026	.0032	.0027
Stddev	.0059	.0005	.0057	.0017	.0017	.0017
%RSD	17.47	47.53	28.61	65.33	53.39	62.45
#1	.0382	.0004	.0133	.0007	.0013	.0031
#2	.0363	.0013	.0224	.0039	.0037	.0041
#3	.0271	.0012	.0237	.0031	.0045	.0008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0187	.0018	.0008	.0020	-.0008	-.0015
Stddev	.0079	.0008	.0001	.0013	.0017	.0013
%RSD	42.03	43.22	14.04	64.25	221.1	83.20
#1	.0252	.0009	.0009	.0015	-.0027	-.0030
#2	.0210	.0023	.0008	.0034	.0004	-.0005
#3	.0100	.0022	.0007	.0010	.0001	-.0011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0004
Stddev	.0005
%RSD	131.0
#1	-.0002
#2	.0006
#3	.0007
Check ?	Chk Pass
High Limit	
Low Limit	

Sample Name: CCB Acquired: 8/30/2023 17:08:00 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4473.0	25803.	10230.	21695.
Stddev	17.4	118.	48.	89.
%RSD	.38922	.45540	.46597	.40901
#1	4482.5	25893.	10262.	21770.
#2	4483.6	25847.	10253.	21720.
#3	4452.9	25670.	10175.	21597.

Sample Name: CCVL 3561056 Acquired: 8/30/2023 17:11:37 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0579	.5564	.0635	.5262	.0219	.0225
Stddev	.0069	.0182	.0012	.0014	.0001	.0001
%RSD	12.00	3.274	1.871	.2735	.5627	.5813
#1	.0521	.5773	.0623	.5268	.0220	.0224
#2	.0560	.5485	.0635	.5246	.0219	.0225
#3	.0656	.5435	.0647	.5273	.0217	.0227
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.2842	.5593	.0211	.0209	.0283	.0484
Stddev	.0026	.0103	.0001	.0001	.0002	.0127
%RSD	.8985	1.845	.4403	.4533	.7147	26.29
#1	.2825	.5525	.0211	.0209	.0283	.0412
#2	.2830	.5543	.0210	.0207	.0282	.0631
#3	.2872	.5712	.0212	.0209	.0286	.0409
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.5508	3.224	.1032	.5366	.0220	.0431
Stddev	.0011	.037	.0007	.0148	.0002	.0006
%RSD	.1964	1.141	.6867	2.766	1.045	1.425
#1	.5511	3.186	.1040	.5386	.0221	.0424
#2	.5516	3.259	.1028	.5503	.0217	.0436
#3	.5496	3.229	.1028	.5208	.0222	.0433
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCVL 3561056 Acquired: 8/30/2023 17:11:37 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.5425	.0203	.1044	.0314	.0657	.1055
Stddev	.0036	.0004	.0009	.0015	.0014	.0035
%RSD	.6712	1.821	.8619	4.636	2.099	3.319
#1	.5467	.0200	.1044	.0320	.0669	.1065
#2	.5406	.0207	.1053	.0297	.0642	.1084
#3	.5402	.0201	.1035	.0324	.0659	.1016
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.051	.1010	.1116	.0336	.0922	.0325
Stddev	.005	.0008	.0005	.0010	.0006	.0012
%RSD	.4878	.7947	.4291	3.052	.6465	3.672
#1	1.049	.1010	.1111	.0346	.0925	.0318
#2	1.057	.1002	.1117	.0336	.0925	.0318
#3	1.047	.1018	.1120	.0326	.0915	.0339
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0399
Stddev	.0001
%RSD	.2559
#1	.0399
#2	.0398
#3	.0400
Check ?	Chk Pass
Value	
Range	

Sample Name: CCVL 3561056 Acquired: 8/30/2023 17:11:37 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4435.6	25785.	10272.	21791.
Stddev	12.4	71.	30.	40.
%RSD	.27893	.27417	.28735	.18499
#1	4448.4	25859.	10242.	21750.
#2	4434.7	25778.	10273.	21792.
#3	4423.7	25718.	10301.	21831.

Sample Name: CCV 3565024 Acquired: 8/30/2023 18:01:28 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9713	99.31	4.917	48.32	4.834	5.084
Stddev	.0029	.09	.031	.20	.016	.006
%RSD	.3025	.0905	.6222	.4040	.3337	.1229
#1	.9747	99.24	4.899	48.17	4.822	5.091
#2	.9700	99.27	4.901	48.25	4.827	5.079
#3	.9693	99.41	4.953	48.54	4.852	5.082
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.650	94.75	4.905	4.835	5.026	4.762
Stddev	.014	.89	.011	.011	.019	.047
%RSD	.2938	.9344	.2174	.2345	.3706	.9858
#1	4.639	94.86	4.899	4.830	5.012	4.757
#2	4.645	93.81	4.898	4.827	5.017	4.718
#3	4.665	95.57	4.917	4.848	5.047	4.811
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	98.20	95.90	4.769	97.28	4.860	5.029
Stddev	.93	.26	.009	1.09	.046	.020
%RSD	.9462	.2694	.1963	1.116	.9450	.3949
#1	98.29	96.11	4.772	97.25	4.867	5.015
#2	97.23	95.99	4.777	96.21	4.810	5.020
#3	99.09	95.61	4.759	98.38	4.901	5.052
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCV 3565024 Acquired: 8/30/2023 18:01:28 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	94.74	4.855	48.35	4.886	4.824	5.008
Stddev	.40	.013	.15	.018	.020	.028
%RSD	.4219	.2679	.3189	.3724	.4159	.5513
#1	94.99	4.847	48.23	4.877	4.813	4.982
#2	94.95	4.849	48.29	4.875	4.812	5.005
#3	94.28	4.870	48.52	4.907	4.847	5.037
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	47.04	4.884	5.119	4.955	4.738	5.058
Stddev	.04	.013	.009	.004	.016	.011
%RSD	.0817	.2750	.1834	.0918	.3287	.2109
#1	47.07	4.879	5.124	4.957	4.729	5.053
#2	47.00	4.875	5.125	4.958	4.729	5.070
#3	47.06	4.900	5.108	4.950	4.756	5.050
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	4.868
Stddev	.007
%RSD	.1413
#1	4.865
#2	4.862
#3	4.875
Check ?	Chk Pass
Value	
Range	

Sample Name: CCV 3565024 Acquired: 8/30/2023 18:01:28 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3874.2	24290.	10005.	21336.
Stddev	12.1	80.	74.	171.
%RSD	.31326	.32735	.73682	.80285
#1	3879.5	24336.	10014.	21368.
#2	3882.7	24336.	9927.3	21151.
#3	3860.3	24198.	10074.	21489.

Sample Name: CCB Acquired: 8/30/2023 18:05:48 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0009	-.0043	.0051	.0399	.0015	.0008
Stddev	.0015	.0303	.0022	.0027	.0006	.0001
%RSD	162.5	702.4	43.88	6.644	38.51	14.41
#1	-.0020	.0257	.0077	.0407	.0012	.0010
#2	-.0016	-.0037	.0038	.0370	.0010	.0007
#3	.0008	-.0350	.0039	.0422	.0021	.0008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0020	.0157	.0016	.0016	.0015	-.0021
Stddev	.0026	.0047	.0003	.0006	.0007	.0012
%RSD	132.8	29.71	16.62	33.91	46.84	60.24
#1	.0040	.0113	.0014	.0011	.0011	-.0028
#2	-.0010	.0152	.0015	.0016	.0010	-.0006
#3	.0029	.0206	.0019	.0022	.0023	-.0028
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0272	.1477	.0066	.0300	.0010	.0051
Stddev	.0008	.0738	.0018	.0290	.0003	.0008
%RSD	2.852	50.00	27.16	96.64	30.72	15.11
#1	.0281	.1472	.0079	.0615	.0012	.0060
#2	.0268	.2217	.0073	.0042	.0012	.0049
#3	.0267	.0740	.0046	.0244	.0007	.0045
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: CCB Acquired: 8/30/2023 18:05:48 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0333	.0006	.0216	.0023	.0025	.0057
Stddev	.0024	.0008	.0042	.0013	.0020	.0035
%RSD	7.159	143.7	19.39	57.89	78.39	61.06
#1	.0355	.0007	.0239	.0033	.0019	.0042
#2	.0336	-.0003	.0168	.0008	.0009	.0032
#3	.0307	.0014	.0242	.0029	.0047	.0096
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0182	.0022	.0008	.0028	-.0021	.0006
Stddev	.0088	.0001	.0001	.0020	.0022	.0021
%RSD	48.35	2.540	18.21	71.42	103.8	337.5
#1	.0282	.0021	.0009	.0036	-.0021	.0028
#2	.0119	.0022	.0008	.0005	-.0043	-.0015
#3	.0144	.0022	.0006	.0043	.0001	.0007
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0003
Stddev	.0004
%RSD	124.0
#1	.0001
#2	.0000
#3	.0007
Check ?	Chk Pass
High Limit	
Low Limit	

Sample Name: CCB Acquired: 8/30/2023 18:05:48 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4551.3	26371.	10358.	22079.
Stddev	10.1	58.	32.	66.
%RSD	.22298	.21839	.30805	.29930
#1	4552.0	26357.	10394.	22155.
#2	4561.0	26435.	10347.	22034.
#3	4540.8	26322.	10333.	22048.

Sample Name: 580-130928-E-3-A Acquired: 8/30/2023 18:12:52 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0028	1.825	.0413	.1226	.0265	.0002
Stddev	.0037	.004	.0026	.0008	.0001	.0000
%RSD	135.0	.2246	6.379	.6299	.2541	12.78
#1	-.0052	1.821	.0389	.1234	.0264	.0002
#2	.0015	1.824	.0410	.1224	.0265	.0002
#3	-.0046	1.829	.0441	.1219	.0265	.0002

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0017	36.05	.0001	.0050	.0064	.0124
Stddev	.0010	.09	.0001	.0001	.0002	.0022
%RSD	61.58	.2576	48.14	2.956	2.420	17.70
#1	.0028	36.14	.0002	.0049	.0062	.0134
#2	.0012	35.96	.0001	.0051	.0065	.0139
#3	.0010	36.06	.0001	.0049	.0065	.0099

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	5.614	4.143	-.0011	49.93	1.898	.0062
Stddev	.008	.063	.0011	.20	.003	.0003
%RSD	.1471	1.514	96.59	.4028	.1710	4.080
#1	5.623	4.089	.0001	50.14	1.902	.0064
#2	5.607	4.212	-.0014	49.89	1.897	.0060
#3	5.612	4.129	-.0020	49.74	1.896	.0063

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	37.26	.0179	.2461	-.0151	-.0003	-.0026
Stddev	.02	.0008	.0023	.0010	.0012	.0023
%RSD	.0476	4.262	.9326	6.877	375.0	89.45
#1	37.26	.0187	.2455	-.0147	.0001	-.0015
#2	37.25	.0173	.2441	-.0163	-.0016	-.0052
#3	37.28	.0176	.2486	-.0144	.0005	-.0010

Sample Name: 580-130928-E-3-A Acquired: 8/30/2023 18:12:52 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	22.42	.0001	.2483	.1127	-.0070	.0060
Stddev	.04	.0004	.0008	.0017	.0030	.0012
%RSD	.1958	409.3	.3270	1.507	43.14	19.78
#1	22.38	.0005	.2475	.1135	-.0035	.0049
#2	22.46	.0001	.2482	.1139	-.0084	.0060
#3	22.42	-.0003	.2491	.1108	-.0091	.0072

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0849
Stddev	.0003
%RSD	.3271
#1	.0847
#2	.0848
#3	.0852

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4300.9	25939.	10485.	22350.
Stddev	6.4	37.	24.	68.
%RSD	.14792	.14195	.23353	.30259
#1	4305.6	25969.	10508.	22428.
#2	4303.4	25951.	10460.	22306.
#3	4293.7	25898.	10486.	22316.

Sample Name: 580-130928-E-3-B DU Acquired: 8/30/2023 18:16:14 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0006	1.736	.0408	.1206	.0255	.0001
Stddev	.0010	.040	.0018	.0003	.0003	.0002
%RSD	156.4	2.291	4.382	.2489	1.186	131.5
#1	.0005	1.702	.0387	.1210	.0255	.0001
#2	-.0010	1.780	.0421	.1204	.0253	.0003
#3	-.0013	1.726	.0415	.1205	.0259	-.0000

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0001	36.08	.0001	.0049	.0066	.0052
Stddev	.0010	.19	.0001	.0000	.0001	.0030
%RSD	1049.	.5248	110.3	.6162	2.276	57.04
#1	-.0006	35.86	.0002	.0049	.0064	.0037
#2	-.0004	36.19	.0001	.0049	.0066	.0033
#3	.0013	36.19	.0000	.0049	.0067	.0087

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	5.622	4.214	-.0010	50.08	1.903	.0056
Stddev	.034	.053	.0012	.30	.012	.0002
%RSD	.6005	1.255	130.3	.5952	.6146	3.229
#1	5.583	4.173	-.0023	49.74	1.889	.0054
#2	5.642	4.195	.0002	50.21	1.910	.0057
#3	5.642	4.274	-.0007	50.30	1.909	.0057

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	37.44	.0184	.2519	-.0143	.0019	-.0044
Stddev	.12	.0002	.0029	.0006	.0016	.0004
%RSD	.3243	1.273	1.161	4.154	84.28	9.631
#1	37.38	.0186	.2544	-.0143	.0034	-.0044
#2	37.37	.0182	.2487	-.0149	.0002	-.0048
#3	37.58	.0182	.2528	-.0138	.0020	-.0040

Sample Name: 580-130928-E-3-B DU Acquired: 8/30/2023 18:16:14 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	22.18	-.0001	.2498	.1112	-.0091	.0043
Stddev	.08	.0003	.0007	.0007	.0014	.0029
%RSD	.3665	244.5	.2705	.5983	14.91	67.46
#1	22.09	.0001	.2491	.1119	-.0090	.0010
#2	22.20	-.0005	.2498	.1110	-.0105	.0053
#3	22.25	-.0000	.2504	.1106	-.0078	.0066

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0874
Stddev	.0015
%RSD	1.737
#1	.0891
#2	.0862
#3	.0868

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4278.6	25818.	10394.	22171.
Stddev	4.0	30.	31.	51.
%RSD	.09424	.11435	.29895	.22839
#1	4281.9	25838.	10373.	22125.
#2	4274.1	25784.	10430.	22225.
#3	4279.8	25831.	10379.	22163.

Sample Name: 580-130928-E-3-C MS Acquired: 8/30/2023 18:19:36 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.011	23.15	1.061	10.51	1.042	1.062
Stddev	.004	.06	.003	.04	.004	.003
%RSD	.4247	.2391	.2848	.3660	.4308	.3209
#1	1.012	23.11	1.058	10.49	1.039	1.060
#2	1.014	23.13	1.061	10.48	1.040	1.060
#3	1.006	23.22	1.064	10.56	1.048	1.066

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0034	54.53	1.021	.9975	1.066	.9639
Stddev	.0004	.30	.003	.0026	.004	.0070
%RSD	11.85	.5467	.3019	.2657	.3553	.7277
#1	-.0038	54.18	1.019	.9961	1.063	.9613
#2	-.0032	54.72	1.020	.9958	1.064	.9718
#3	-.0031	54.67	1.025	1.001	1.070	.9585

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	25.77	23.21	.9819	68.58	2.838	1.060
Stddev	.15	.05	.0023	.27	.015	.005
%RSD	.5742	.2333	.2324	.3991	.5346	.5210
#1	25.60	23.22	.9793	68.28	2.821	1.055
#2	25.86	23.16	.9828	68.82	2.841	1.058
#3	25.85	23.26	.9836	68.63	2.850	1.066

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	55.64	1.017	5.456	1.009	1.051	1.051
Stddev	.13	.004	.011	.002	.002	.007
%RSD	.2320	.3745	.2013	.2151	.2264	.6679
#1	55.77	1.013	5.454	1.007	1.048	1.047
#2	55.52	1.017	5.446	1.010	1.052	1.047
#3	55.62	1.021	5.468	1.011	1.051	1.060

Sample Name: 580-130928-E-3-C MS Acquired: 8/30/2023 18:19:36 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	32.61	1.021	1.300	1.145	.9937	1.041
Stddev	.03	.004	.002	.004	.0209	.004
%RSD	.0854	.3825	.1564	.3422	2.103	.3718
#1	32.61	1.019	1.298	1.144	.9709	1.037
#2	32.58	1.019	1.301	1.142	.9986	1.045
#3	32.64	1.026	1.302	1.149	1.012	1.040

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	1.091
Stddev	.003
%RSD	.2420
#1	1.089
#2	1.091
#3	1.094

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4197.5	25857.	10489.	22404.
Stddev	12.0	64.	33.	47.
%RSD	.28555	.24794	.31662	.21148
#1	4210.2	25923.	10451.	22351.
#2	4186.4	25795.	10512.	22444.
#3	4195.9	25854.	10505.	22416.

Sample Name: 580-130928-E-3-D MSD Acquired: 8/30/2023 18:22:37 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.009	23.04	1.061	10.52	1.047	1.065
Stddev	.002	.08	.004	.03	.003	.004
%RSD	.2134	.3505	.4036	.3057	.3031	.3419
#1	1.008	22.98	1.056	10.50	1.047	1.061
#2	1.008	23.01	1.063	10.50	1.044	1.065
#3	1.011	23.13	1.064	10.55	1.051	1.068

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0029	54.38	1.024	1.001	1.067	.9679
Stddev	.0007	.02	.004	.003	.003	.0090
%RSD	25.28	.0390	.3415	.3059	.2396	.9350
#1	-.0037	54.36	1.024	1.000	1.066	.9673
#2	-.0024	54.37	1.020	.9989	1.066	.9591
#3	-.0026	54.40	1.027	1.005	1.070	.9772

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	25.66	23.13	.9878	68.19	2.834	1.064
Stddev	.02	.03	.0011	.01	.005	.003
%RSD	.0855	.1213	.1063	.0129	.1746	.2905
#1	25.64	23.16	.9883	68.20	2.834	1.063
#2	25.68	23.12	.9885	68.18	2.830	1.062
#3	25.65	23.11	.9866	68.18	2.840	1.067

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	55.53	1.021	5.467	1.012	1.053	1.047
Stddev	.03	.004	.010	.004	.003	.006
%RSD	.0484	.3697	.1763	.4134	.2512	.6212
#1	55.51	1.019	5.477	1.008	1.051	1.043
#2	55.52	1.018	5.458	1.011	1.054	1.044
#3	55.56	1.025	5.467	1.016	1.056	1.055

Sample Name: 580-130928-E-3-D MSD Acquired: 8/30/2023 18:22:37 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	33.02	1.025	1.306	1.154	1.022	1.048
Stddev	.03	.006	.000	.004	.012	.004
%RSD	.0817	.6125	.0148	.3397	1.176	.3683
#1	33.04	1.025	1.306	1.150	1.014	1.043
#2	33.01	1.020	1.306	1.155	1.015	1.050
#3	32.99	1.032	1.306	1.157	1.035	1.050

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	1.093
Stddev	.004
%RSD	.3620
#1	1.092
#2	1.090
#3	1.098

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4203.2	25880.	10475.	22348.
Stddev	7.4	21.	13.	25.
%RSD	.17692	.08133	.12025	.11057
#1	4203.8	25885.	10482.	22360.
#2	4210.3	25898.	10483.	22365.
#3	4195.5	25857.	10461.	22320.

Sample Name: 580-130928-E-3-A PDS Acquired: 8/30/2023 18:25:38 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9644	21.68	1.014	10.12	.9919	1.018
Stddev	.0044	.03	.003	.02	.0024	.001
%RSD	.4533	.1454	.2470	.2421	.2377	.0496
#1	.9682	21.71	1.017	10.11	.9913	1.018
#2	.9596	21.68	1.012	10.11	.9899	1.018
#3	.9653	21.64	1.014	10.15	.9945	1.017

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0044	53.21	.9745	.9521	1.016	.9143
Stddev	.0022	.41	.0004	.0007	.003	.0113
%RSD	50.05	.7787	.0450	.0692	.2977	1.238
#1	-.0038	52.77	.9744	.9519	1.015	.9041
#2	-.0026	53.29	.9741	.9515	1.013	.9265
#3	-.0069	53.58	.9750	.9528	1.019	.9124

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	24.59	22.15	.9417	67.04	2.775	1.015
Stddev	.18	.02	.0007	.54	.021	.004
%RSD	.7321	.0802	.0746	.8123	.7413	.3567
#1	24.39	22.15	.9416	66.44	2.753	1.012
#2	24.61	22.17	.9411	67.19	2.780	1.013
#3	24.75	22.14	.9425	67.50	2.793	1.019

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	54.54	.9737	5.213	.9611	1.010	1.003
Stddev	.17	.0006	.020	.0012	.002	.006
%RSD	.3081	.0568	.3778	.1214	.1500	.6040
#1	54.73	.9733	5.211	.9599	1.010	.9970
#2	54.41	.9735	5.194	.9613	1.008	1.003
#3	54.47	.9743	5.233	.9622	1.011	1.009

Sample Name: 580-130928-E-3-A PDS Acquired: 8/30/2023 18:25:38 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	31.43	.9741	1.254	1.102	.9695	1.008
Stddev	.04	.0027	.001	.003	.0197	.004
%RSD	.1225	.2769	.1001	.3061	2.036	.4200
#1	31.48	.9713	1.253	1.101	.9467	1.004
#2	31.41	.9766	1.254	1.106	.9803	1.012
#3	31.41	.9742	1.255	1.099	.9814	1.008

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	1.055
Stddev	.000
%RSD	.0232
#1	1.055
#2	1.054
#3	1.055

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4184.8	25684.	10334.	22018.
Stddev	2.0	39.	60.	98.
%RSD	.04792	.15304	.57895	.44496
#1	4187.1	25711.	10268.	21909.
#2	4183.6	25701.	10350.	22047.
#3	4183.7	25639.	10384.	22098.

Sample Name: 580-130928-E-3A SD@5 Acquired: 8/30/2023 18:28:40 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0020	.4257	.0128	.0417	.0064	.0004
Stddev	.0028	.0156	.0014	.0029	.0002	.0002
%RSD	139.7	3.665	10.70	6.846	3.001	43.91
#1	-.0040	.4077	.0119	.0443	.0065	.0006
#2	.0012	.4335	.0122	.0421	.0065	.0003
#3	-.0031	.4358	.0144	.0387	.0061	.0003

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0009	7.099	.0005	.0013	.0018	.0022
Stddev	.0010	.021	.0001	.0002	.0002	.0045
%RSD	111.2	.2912	25.92	15.87	8.275	201.7
#1	-.0007	7.087	.0007	.0015	.0020	.0019
#2	-.0019	7.087	.0005	.0011	.0018	-.0021
#3	-.0000	7.123	.0004	.0013	.0017	.0069

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.118	.9321	.0081	9.806	.3763	.0063
Stddev	.006	.0334	.0018	.059	.0012	.0014
%RSD	.5174	3.588	22.00	.5998	.3175	22.08
#1	1.123	.9534	.0093	9.780	.3755	.0078
#2	1.111	.9493	.0089	9.764	.3758	.0060
#3	1.120	.8935	.0060	9.873	.3777	.0051

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	7.326	.0041	.0542	-.0006	-.0003	.0013
Stddev	.012	.0003	.0033	.0008	.0010	.0058
%RSD	.1642	7.030	6.107	122.1	294.8	436.8
#1	7.339	.0042	.0573	-.0008	.0007	.0054
#2	7.316	.0043	.0507	.0002	-.0004	.0039
#3	7.324	.0037	.0545	-.0013	-.0013	-.0053

Sample Name: 580-130928-E-3A SD@5 Acquired: 8/30/2023 18:28:40 Type: Unk
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.647	.0004	.0501	.0261	.0075	.0026
Stddev	.035	.0005	.0001	.0017	.0074	.0029
%RSD	.7522	123.1	.1937	6.352	99.40	109.4
#1	4.607	.0002	.0500	.0258	.0160	.0026
#2	4.674	.0011	.0500	.0246	.0042	.0055
#3	4.659	.0001	.0502	.0279	.0023	-.0002

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0157
Stddev	.0002
%RSD	1.057
#1	.0158
#2	.0155
#3	.0158

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4482.4	26367.	10534.	22393.
Stddev	22.3	128.	18.	59.
%RSD	.49794	.48427	.17032	.26462
#1	4501.0	26480.	10555.	22458.
#2	4488.6	26391.	10523.	22380.
#3	4457.7	26229.	10524.	22342.

Sample Name: CCV 3565024 Acquired: 8/30/2023 18:32:10 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9697	98.61	4.899	48.21	4.823	5.067
Stddev	.0022	.19	.021	.17	.023	.010
%RSD	.2282	.1953	.4186	.3520	.4826	.1924
#1	.9698	98.84	4.884	48.13	4.810	5.078
#2	.9674	98.50	4.891	48.09	4.808	5.060
#3	.9719	98.51	4.922	48.40	4.850	5.063
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.641	94.33	4.910	4.832	5.020	4.738
Stddev	.020	.52	.023	.021	.020	.025
%RSD	.4325	.5540	.4740	.4343	.3905	.5211
#1	4.629	93.86	4.895	4.820	5.010	4.726
#2	4.630	94.24	4.899	4.821	5.007	4.723
#3	4.664	94.90	4.937	4.857	5.043	4.767
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	97.81	95.03	4.748	97.03	4.837	5.015
Stddev	.50	.30	.016	.57	.027	.020
%RSD	.5110	.3105	.3273	.5889	.5653	.3979
#1	97.43	95.37	4.766	96.81	4.810	5.002
#2	97.62	94.82	4.737	96.60	4.837	5.005
#3	98.38	94.92	4.742	97.68	4.865	5.038
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCV 3565024 Acquired: 8/30/2023 18:32:10 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	94.05	4.855	48.10	4.884	4.825	4.999
Stddev	.32	.022	.27	.019	.014	.022
%RSD	.3385	.4499	.5535	.3874	.2990	.4328
#1	94.41	4.838	47.87	4.875	4.813	4.991
#2	93.83	4.847	48.05	4.872	4.821	4.983
#3	93.90	4.879	48.39	4.906	4.841	5.024
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	47.04	4.889	5.096	4.926	4.755	5.031
Stddev	.07	.023	.013	.007	.046	.017
%RSD	.1492	.4780	.2609	.1502	.9651	.3427
#1	47.06	4.874	5.111	4.930	4.726	5.050
#2	46.96	4.877	5.092	4.918	4.732	5.017
#3	47.10	4.916	5.086	4.931	4.808	5.027
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	4.882
Stddev	.026
%RSD	.5297
#1	4.865
#2	4.870
#3	4.912
Check ?	Chk Pass
Value	
Range	

Sample Name: CCV 3565024 Acquired: 8/30/2023 18:32:10 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3889.8	24367.	10013.	21343.
Stddev	16.4	118.	29.	76.
%RSD	.42050	.48494	.29349	.35547
#1	3901.1	24443.	9987.5	21257.
#2	3897.2	24427.	10045.	21401.
#3	3871.0	24231.	10007.	21372.

Sample Name: CCB Acquired: 8/30/2023 18:36:29 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0003	-.0009	.0041	.0360	.0011	.0007
Stddev	.0031	.0169	.0012	.0031	.0005	.0002
%RSD	976.5	1807.	29.34	8.662	46.04	29.01
#1	.0001	-.0184	.0028	.0357	.0010	.0008
#2	.0025	.0153	.0052	.0331	.0006	.0005
#3	-.0037	.0003	.0043	.0393	.0016	.0009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0008	.0136	.0009	.0010	.0009	.0015
Stddev	.0005	.0046	.0005	.0004	.0005	.0047
%RSD	64.22	34.17	49.06	35.30	55.03	312.4
#1	.0010	.0182	.0007	.0009	.0004	-.0009
#2	.0002	.0089	.0006	.0007	.0008	-.0016
#3	.0013	.0136	.0015	.0014	.0014	.0070
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0192	.1812	.0070	.0267	.0009	.0049
Stddev	.0035	.0333	.0013	.0148	.0007	.0006
%RSD	18.34	18.39	17.92	55.16	79.09	11.80
#1	.0202	.2140	.0084	.0097	.0002	.0055
#2	.0221	.1474	.0067	.0356	.0016	.0043
#3	.0153	.1821	.0060	.0349	.0009	.0049
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: CCB Acquired: 8/30/2023 18:36:29 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0405	.0009	.0109	.0005	.0019	.0048
Stddev	.0111	.0002	.0058	.0012	.0013	.0036
%RSD	27.39	23.65	53.85	249.3	68.06	75.03
#1	.0532	.0010	.0057	-.0009	.0010	.0053
#2	.0333	.0007	.0097	.0009	.0013	.0010
#3	.0349	.0012	.0172	.0014	.0033	.0082
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0153	.0010	.0008	.0016	-.0026	.0004
Stddev	.0096	.0006	.0001	.0015	.0065	.0080
%RSD	62.55	59.06	16.12	93.43	254.8	2196.
#1	.0250	.0003	.0009	.0013	.0047	.0080
#2	.0152	.0013	.0009	.0032	-.0046	-.0080
#3	.0058	.0013	.0006	.0003	-.0078	.0012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0004
Stddev	.0005
%RSD	108.4
#1	-.0007
#2	-.0007
#3	.0001
Check ?	Chk Pass
High Limit	
Low Limit	

Sample Name: CCB Acquired: 8/30/2023 18:36:29 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4543.1	26186.	10245.	21875.
Stddev	25.0	131.	55.	111.
%RSD	.55092	.50061	.53368	.50906
#1	4561.8	26280.	10182.	21748.
#2	4552.9	26241.	10283.	21921.
#3	4514.7	26036.	10269.	21956.

Sample Name: CCV 3565024 Acquired: 8/30/2023 19:00:31 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.030	105.6	5.169	50.73	5.091	5.426
Stddev	.010	.9	.020	.19	.018	.058
%RSD	.9519	.8303	.3922	.3686	.3516	1.073
#1	1.041	106.6	5.157	50.61	5.081	5.492
#2	1.027	105.2	5.157	50.63	5.080	5.403
#3	1.023	105.0	5.192	50.94	5.112	5.383
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.910	99.84	5.165	5.087	5.300	4.998
Stddev	.019	.64	.020	.019	.020	.027
%RSD	.3861	.6448	.3927	.3722	.3706	.5355
#1	4.896	99.67	5.152	5.075	5.290	4.984
#2	4.901	99.30	5.155	5.076	5.286	4.981
#3	4.931	100.6	5.189	5.109	5.322	5.028
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	103.5	100.9	5.034	101.9	5.117	5.274
Stddev	.7	1.1	.045	.6	.037	.022
%RSD	.6397	1.107	.8940	.6216	.7199	.4223
#1	103.3	102.1	5.085	101.7	5.113	5.257
#2	102.9	100.6	5.017	101.4	5.081	5.265
#3	104.2	99.92	4.999	102.6	5.155	5.299
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCV 3565024 Acquired: 8/30/2023 19:00:31 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	99.21	5.104	50.56	5.125	5.085	5.258
Stddev	1.33	.021	.23	.023	.012	.028
%RSD	1.337	.4118	.4540	.4564	.2420	.5293
#1	100.7	5.090	50.47	5.113	5.081	5.233
#2	98.86	5.093	50.39	5.110	5.075	5.252
#3	98.10	5.128	50.83	5.152	5.099	5.288
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	51.32	5.145	5.429	5.288	4.979	5.385
Stddev	.46	.026	.048	.043	.030	.054
%RSD	.8925	.5034	.8770	.8119	.6047	.9969
#1	51.84	5.135	5.483	5.336	4.945	5.446
#2	51.15	5.127	5.413	5.277	4.991	5.362
#3	50.97	5.175	5.392	5.252	5.001	5.346
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	5.125
Stddev	.023
%RSD	.4429
#1	5.114
#2	5.110
#3	5.152
Check ?	Chk Pass
Value	
Range	

Sample Name: CCV 3565024 Acquired: 8/30/2023 19:00:31 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3717.2	23239.	9511.4	20218.
Stddev	9.5	68.	107.8	227.
%RSD	.25632	.29101	1.1337	1.1210
#1	3722.5	23263.	9404.2	19997.
#2	3722.8	23291.	9510.0	20209.
#3	3706.2	23163.	9619.9	20450.

Sample Name: CCB Acquired: 8/30/2023 19:04:53 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0006	.0030	.0049	.0311	.0006	.0009
Stddev	.0027	.0482	.0001	.0026	.0000	.0001
%RSD	425.6	1625.	2.798	8.266	2.944	7.967
#1	.0038	-.0440	.0048	.0340	.0006	.0009
#2	-.0012	.0005	.0049	.0303	.0006	.0009
#3	-.0006	.0523	.0050	.0291	.0006	.0008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0006	.0106	.0007	.0008	.0006	-.0020
Stddev	.0017	.0063	.0002	.0001	.0002	.0043
%RSD	286.7	59.90	22.32	11.61	38.07	212.2
#1	-.0006	.0035	.0007	.0008	.0005	.0005
#2	.0025	.0125	.0008	.0008	.0004	.0004
#3	-.0001	.0157	.0005	.0007	.0008	-.0070
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0205	.1062	.0066	.0044	.0013	.0042
Stddev	.0007	.0273	.0016	.0383	.0005	.0010
%RSD	3.318	25.72	24.73	867.5	40.86	24.51
#1	.0210	.1372	.0082	.0253	.0008	.0052
#2	.0208	.0858	.0049	.0278	.0018	.0042
#3	.0197	.0956	.0068	-.0398	.0012	.0032
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: CCB Acquired: 8/30/2023 19:04:53 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0394	.0006	.0090	.0005	.0008	-.0005
Stddev	.0075	.0004	.0019	.0010	.0026	.0009
%RSD	18.99	67.22	21.31	210.6	321.2	158.5
#1	.0327	.0011	.0086	.0001	.0034	.0000
#2	.0381	.0002	.0111	-.0003	-.0018	-.0015
#3	.0475	.0006	.0073	.0016	.0009	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.1397	.0009	.0009	.0032	-.0077	.0010
Stddev	.0134	.0002	.0001	.0008	.0078	.0026
%RSD	9.565	27.68	14.56	26.30	101.4	252.0
#1	.1524	.0007	.0010	.0035	-.0022	.0016
#2	.1408	.0007	.0009	.0022	-.0166	.0033
#3	.1257	.0011	.0007	.0038	-.0042	-.0018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0005
Stddev	.0002
%RSD	27.69
#1	-.0004
#2	-.0007
#3	-.0005
Check ?	Chk Pass
High Limit	
Low Limit	

Sample Name: CCB Acquired: 8/30/2023 19:04:53 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4381.3	25250.	9964.7	21150.
Stddev	24.1	187.	94.3	198.
%RSD	.54938	.73931	.94669	.93823
#1	4398.8	25379.	9861.0	20930.
#2	4391.3	25336.	9987.9	21205.
#3	4353.9	25036.	10045.	21315.

Sample Name: CCVL 3561056 Acquired: 8/30/2023 19:08:30 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0553	.5535	.0638	.5354	.0222	.0230
Stddev	.0015	.0172	.0018	.0033	.0004	.0001
%RSD	2.743	3.108	2.835	.6087	1.605	.2954
#1	.0544	.5657	.0621	.5355	.0220	.0230
#2	.0544	.5338	.0636	.5321	.0220	.0230
#3	.0571	.5610	.0657	.5386	.0226	.0229
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.2880	.5596	.0210	.0207	.0287	.0465
Stddev	.0022	.0019	.0003	.0002	.0004	.0006
%RSD	.7803	.3332	1.284	.8816	1.306	1.310
#1	.2863	.5582	.0207	.0209	.0291	.0472
#2	.2873	.5588	.0211	.0205	.0284	.0463
#3	.2906	.5617	.0212	.0207	.0286	.0460
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.5428	3.232	.1059	.5306	.0227	.0439
Stddev	.0020	.007	.0005	.0214	.0003	.0003
%RSD	.3716	.2040	.4276	4.036	1.201	.5776
#1	.5451	3.228	.1058	.5114	.0230	.0436
#2	.5414	3.240	.1064	.5268	.0226	.0439
#3	.5419	3.230	.1055	.5537	.0226	.0441
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCVL 3561056 Acquired: 8/30/2023 19:08:30 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

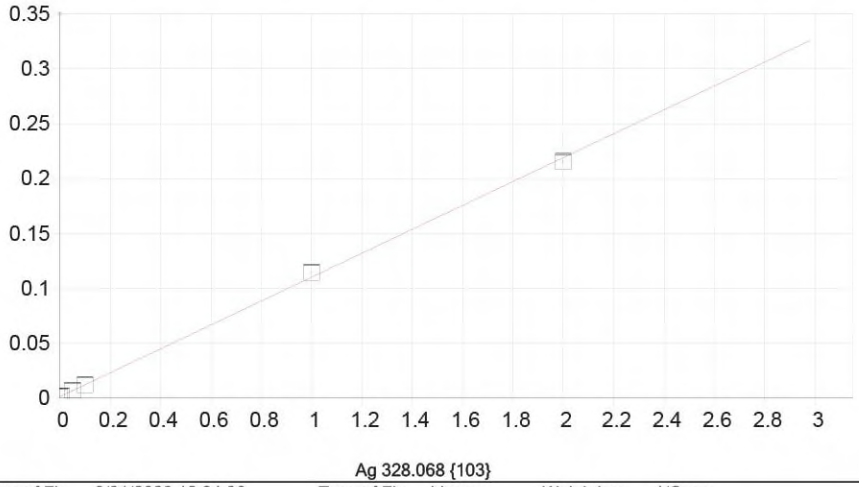
Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.5725	.0204	.1118	.0322	.0646	.1027
Stddev	.0075	.0004	.0026	.0006	.0021	.0029
%RSD	1.312	2.039	2.343	1.878	3.210	2.849
#1	.5641	.0203	.1098	.0315	.0623	.1059
#2	.5747	.0209	.1148	.0325	.0648	.1001
#3	.5786	.0201	.1109	.0326	.0665	.1021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.132	.1016	.1130	.0327	.0915	.0337
Stddev	.004	.0009	.0003	.0007	.0041	.0030
%RSD	.3197	.8449	.2452	2.224	4.495	9.010
#1	1.128	.1008	.1128	.0324	.0867	.0325
#2	1.135	.1025	.1128	.0335	.0936	.0315
#3	1.133	.1017	.1133	.0322	.0941	.0372
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0400
Stddev	.0001
%RSD	.3332
#1	.0399
#2	.0400
#3	.0401
Check ?	Chk Pass
Value	
Range	

Sample Name: CCVL 3561056 Acquired: 8/30/2023 19:08:30 Type: QC
Method: NEW IEC MAY 2023(v61) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4339.7	25192.	9903.0	21076.
Stddev	13.5	74.	47.9	95.
%RSD	.31013	.29559	.48374	.45165
#1	4354.0	25250.	9919.0	21110.
#2	4337.8	25218.	9849.2	20969.
#3	4327.2	25108.	9940.9	21150.

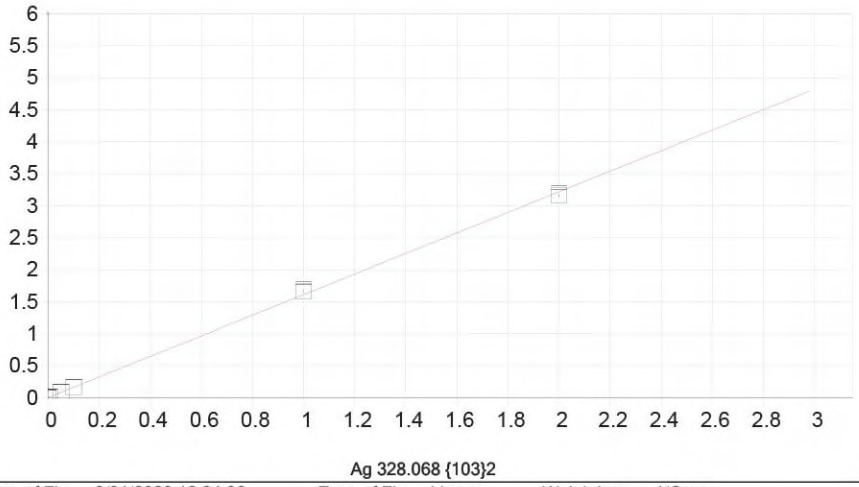


Ag 328.068 {103}

Date of Fit:	8/31/2023 12:24:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001359	Re-Slope:	1.000000
A1 (Gain):	0.108865	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999634	Status:	OK.
Std Error of Est:	0.000014		
Predicted MDL:	0.003447		
Predicted MQL:	0.011491		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00000	.000	.000	.00136	.000	1
STD1 35069	.05000	.05098	.001	1.95	.00691	.000	1
STD2 35280	.10000	.09586	-.004	-4.14	.01180	.000	1
STD3 35650	1.0000	1.0386	.039	3.86	.11443	.001	1
STD4 34010	2.0000	1.9646	-.035	-1.77	.21523	.001	1
STD0.1 3519	.00500	.00499	-.000	-.278	.00190	.000	1

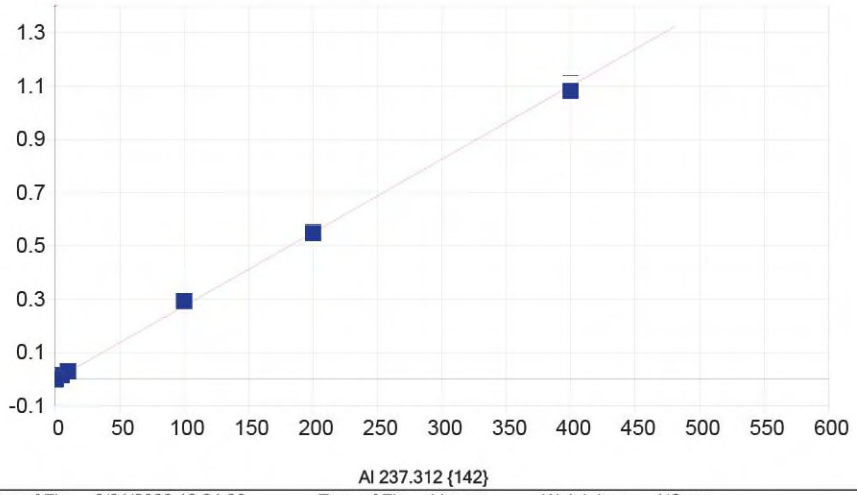


Ag 328.068 {103}2

Date of Fit:	8/31/2023 12:24:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.005503	Re-Slope:	1.000000
A1 (Gain):	1.606707	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999716	Status:	OK.
Std Error of Est:	0.000186		
Predicted MDL:	0.001333		
Predicted MQL:	0.004443		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00000	-.000	.000	.00550	.001	1
STD1 35069	.05000	.05043	.000	.859	.08653	.002	1
STD2 35280	.10000	.10097	.001	.974	.16774	.002	1
STD3 35650	1.0000	1.0339	.034	3.39	1.6667	.021	1
STD4 34010	2.0000	1.9646	-.035	-1.77	3.1621	.032	1
STD0.1 3519	.00500	.00505	.000	.928	.01361	.003	1

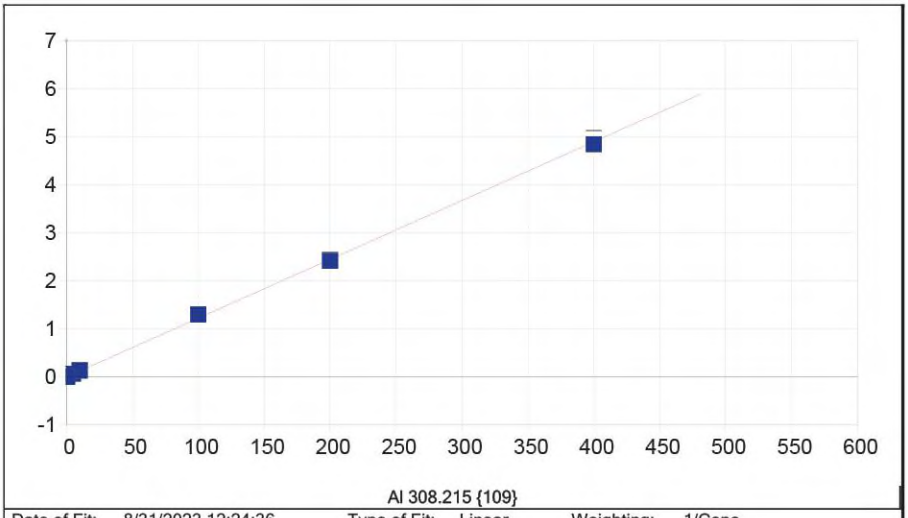


Al 237.312 {142}

Date of Fit:	8/31/2023 12:24:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000733	Re-Slope:	1.000000
A1 (Gain):	0.002753	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999545	Status:	OK.
Std Error of Est:	0.000032		
Predicted MDL:	0.091227		
Predicted MQL:	0.304089		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00007	-.000	.000	-.00073	.000	1
STD1 35069	5.0000	5.4029	.403	8.06	.01414	.000	1
STD2 35280	10.000	10.616	.616	6.16	.02850	.000	1
STD3 35650	100.00	106.65	6.65	6.65	.29292	.001	1
STD4 34010	200.00	199.16	-.845	-.422	.54763	.004	1
STD5 35635	400.00	393.07	-6.93	-1.73	1.0816	.026	1
STD0.1 3519	.50000	.58183	.082	16.4	.00087	.000	1
STD0.03 351	.16000	.17747	.017	10.9	-.00024	.000	1

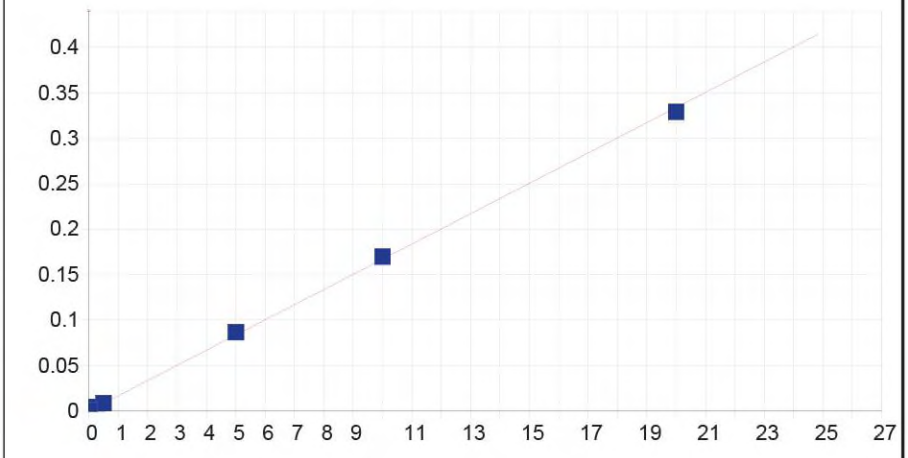


Al 308.215 {109}

Date of Fit:	8/31/2023 12:24:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001185	Re-Slope:	1.000000
A1 (Gain):	0.012254	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999641	Status:	OK.
Std Error of Est:	0.000129		
Predicted MDL:	0.040960		
Predicted MQL:	0.136533		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00007	-.000	.000	-.00119	.000	1
STD1 35069	5.0000	5.4350	.435	8.70	.06568	.001	1
STD2 35280	10.000	10.590	.590	5.90	.12912	.001	1
STD3 35650	100.00	105.93	5.93	5.93	1.3022	.003	1
STD4 34010	200.00	197.46	-2.54	-1.27	2.4292	.017	1
STD5 35635	400.00	395.50	-4.50	-1.12	4.8667	.119	1
STD0.1 3519	.50000	.55665	.057	11.3	.00566	.000	1
STD0.03 351	.16000	.18749	.027	17.2	.00112	.001	1

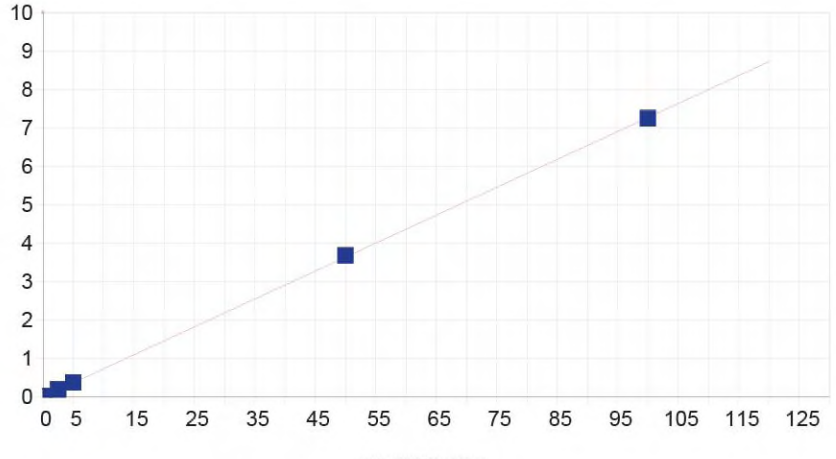


As 189.042 {478}

Date of Fit:	8/31/2023 12:24:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000046	Re-Slope:	1.000000
A1 (Gain):	0.016693	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999794	Status:	OK.
Std Error of Est:	0.000007		
Predicted MDL:	0.002289		
Predicted MQL:	0.007629		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00000	.000	.000	.00005	.000	1
STD1 35069	.25000	.24564	-.004	-1.74	.00411	.000	1
STD2 35280	.50000	.48470	-.015	-3.06	.00807	.000	1
STD3 35650	5.0000	5.1824	.182	3.65	.08587	.000	1
STD4 34010	10.000	10.151	.151	1.51	.16812	.001	1
STD5 35635	20.000	19.686	-.314	-1.57	.32591	.001	1
STD0.1 3519	.02500	.02581	.001	3.22	.00047	.000	1
STD0.03 351	.00800	.00730	-.001	-8.72	.00017	.000	1

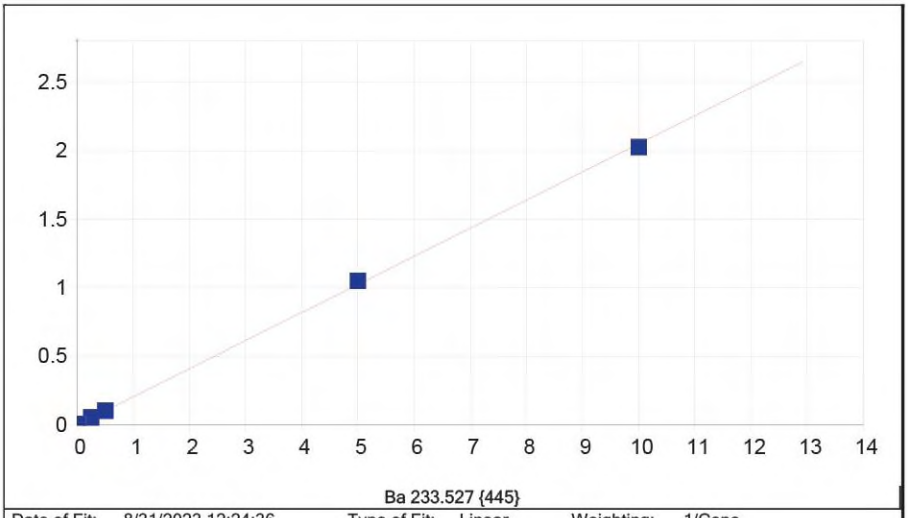


B 208.959 {461}

Date of Fit:	8/31/2023 12:24:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001829	Re-Slope:	1.000000
A1 (Gain):	0.072722	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999981	Status:	OK.
Std Error of Est:	0.000059		
Predicted MDL:	0.000661		
Predicted MQL:	0.002204		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00000	-.000	.000	.00183	.000	1
STD1 35069	2.5000	2.5046	.005	.186	.18443	.001	1
STD2 35280	5.0000	4.9916	-.008	-.167	.36575	.001	1
STD3 35650	50.000	50.442	.442	.884	3.6792	.007	1
STD4 34010	100.00	99.559	-.441	-.441	7.2603	.020	1
STD0.1 3519	.25000	.25192	.002	.769	.02020	.000	1
STD0.03 351	.08000	.08042	.000	.523	.00769	.000	1

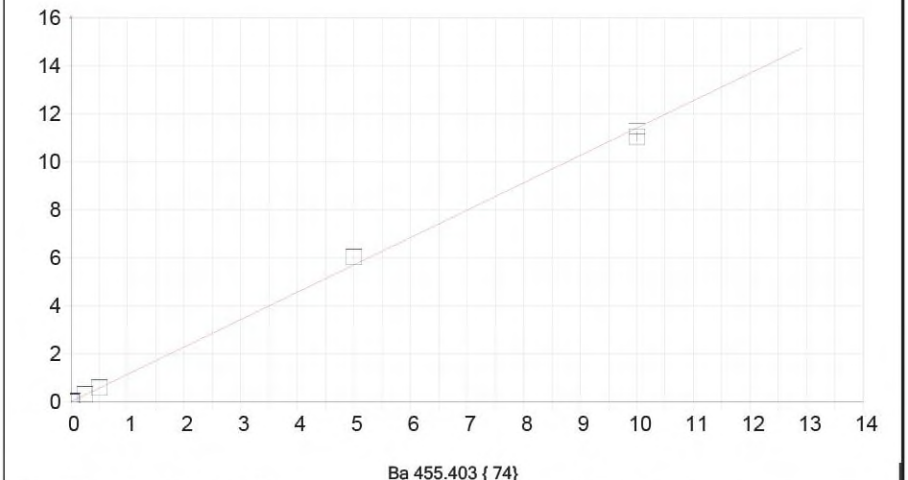


Ba 233.527 {445}

Date of Fit:	8/31/2023 12:24:36	Type of Fit: Linear	Weighting: 1/Conc

A0 (Offset):	0.000038	Re-Slope:	1.000000
A1 (Gain):	0.204939	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999846	Status:	OK.
Std Error of Est:	0.000048		
Predicted MDL:	0.000241		
Predicted MQL:	0.000803		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00000	-.000	.000	.00004	.000	1
STD1 35069	.25000	.25845	.008	3.38	.05286	.000	1
STD2 35280	.50000	.50275	.003	.550	.10277	.000	1
STD3 35650	5.0000	5.1157	.116	2.31	1.0455	.002	1
STD4 34010	10.000	9.8706	-.129	-1.29	2.0169	.005	1
STD0.1 3519	.02500	.02676	.002	7.02	.00551	.000	1
STD0.03 351	.00800	.00872	.001	9.00	.00182	.000	1

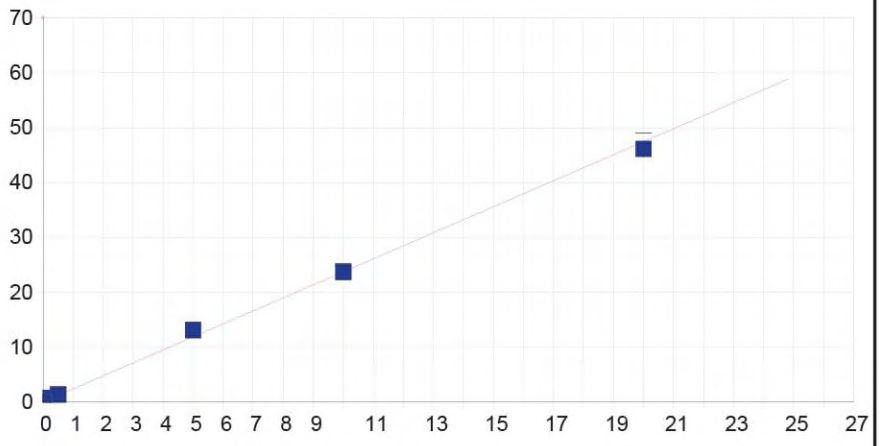


Ba 455.403 { 74}

Date of Fit:	8/31/2023 12:24:36	Type of Fit: Linear	Weighting: 1/Conc

A0 (Offset):	0.006027	Re-Slope:	1.000000
A1 (Gain):	1.140399	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999127	Status:	OK.
Std Error of Est:	0.000634		
Predicted MDL:	0.000349		
Predicted MQL:	0.001162		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00000	-.000	.000	.00602	.000	1
STD1 35069	.25000	.26797	.018	7.19	.31162	.003	1
STD2 35280	.50000	.51089	.011	2.18	.58865	.005	1
STD3 35650	5.0000	5.2814	.281	5.63	6.0289	.011	1
STD4 34010	10.000	9.6861	-.314	-3.14	11.052	.200	1
STD0.1 3519	.02500	.02768	.003	10.7	.03760	.000	1
STD0.03 351	.00800	.00890	.001	11.3	.01618	.000	1

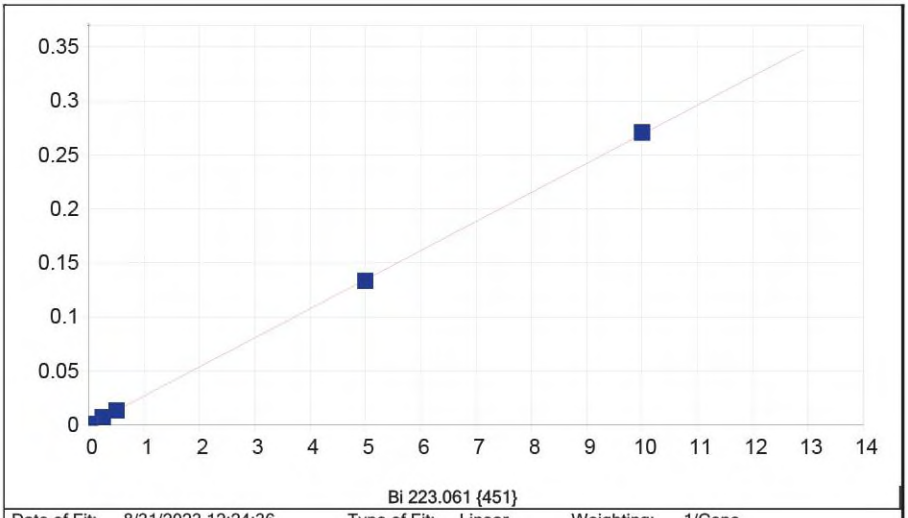


Be 313.042 {108}

Date of Fit:	8/31/2023 12:24:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000653	Re-Slope:	1.000000
A1 (Gain):	2.371984	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998919	Status:	OK.
Std Error of Est:	0.002154		
Predicted MDL:	0.000152		
Predicted MQL:	0.000505		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00000	-.000	.000	.00064	.000	1
STD1 35069	.25000	.28192	.032	12.8	.66916	.008	1
STD2 35280	.50000	.53789	.038	7.58	1.2761	.009	1
STD3 35650	5.0000	5.5163	.516	10.3	13.081	.032	1
STD4 34010	10.000	9.9786	-.021	-.214	23.661	.188	1
STD5 35635	20.000	19.430	-.570	-2.85	46.071	1.51	1
STD0.1 3519	.02500	.02891	.004	15.6	.06921	.000	1
STD0.03 351	.00800	.00942	.001	17.7	.02298	.000	1

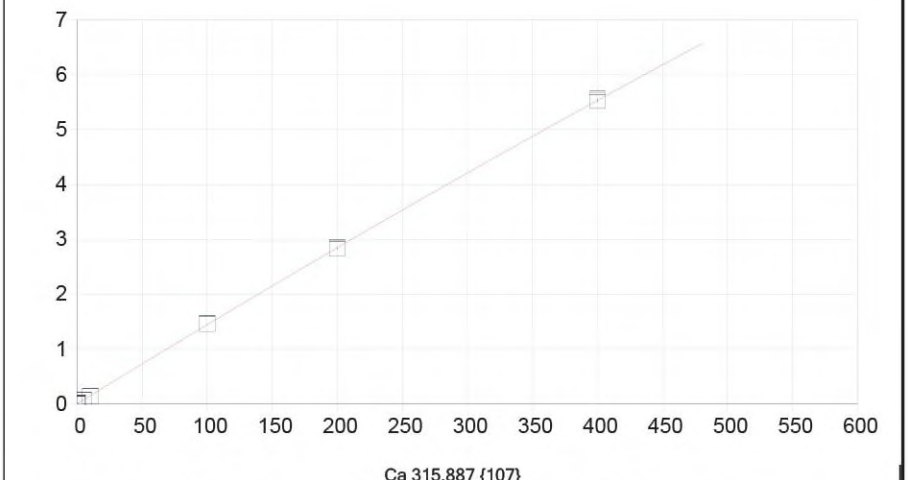


Bi 223.061 {451}

Date of Fit:	8/31/2023 12:24:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000018	Re-Slope:	1.000000
A1 (Gain):	0.026893	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999963	Status:	OK.
Std Error of Est:	0.000003		
Predicted MDL:	0.002200		
Predicted MQL:	0.007332		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00000	-.000	.000	.00002	.000	1
STD1 35069	.25000	.25265	.003	1.06	.00680	.000	1
STD2 35280	.50000	.48959	-.010	-2.08	.01317	.000	1
STD3 35650	5.0000	4.9532	-.047	-.935	.13307	.000	1
STD4 34010	10.000	10.053	.053	.525	.27004	.001	1
STD0.1 3519	.02500	.02583	.001	3.34	.00071	.000	1
STD0.03 351	.00800	.00917	.001	14.7	.00026	.000	1

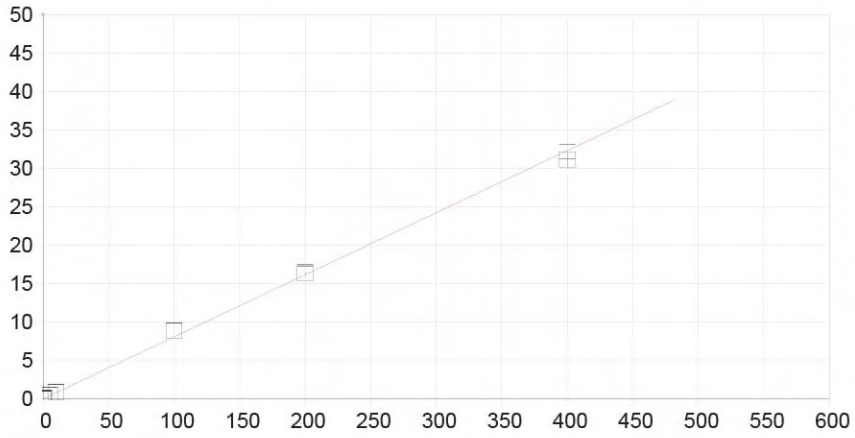


Ca 315.887 {107}

Date of Fit:	8/31/2023 12:24:36	Type of Fit:	Curvilinear	Weighting:	1/Conc

A0 (Offset):	0.000254	Re-Slope:	1.000000
A1 (Gain):	0.014609	Y-int:	0.000000
A2 (Curvature):	-0.000002		
n (Exponent):	1.000000		
Correlation:	0.999973	Status:	OK.
Std Error of Est:	0.000044		
Predicted MDL:	0.007653		
Predicted MQL:	0.025508		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00001	.000	.000	.00025	.000	1
STD1 35069	5.0000	4.8801	-.120	-2.40	.07150	.001	1
STD2 35280	10.000	9.5991	-.401	-4.01	.14031	.001	1
STD3 35650	100.00	101.22	1.22	1.22	1.4589	.005	1
STD4 34010	200.00	199.20	-.798	-.399	2.8326	.017	1
STD5 35635	400.00	400.10	.104	.026	5.5317	.035	1
STD0.1 3519	.50000	.49503	-.005	-.995	.00749	.000	1
STD0.03 351	.16000	.16067	.001	.416	.00260	.000	1

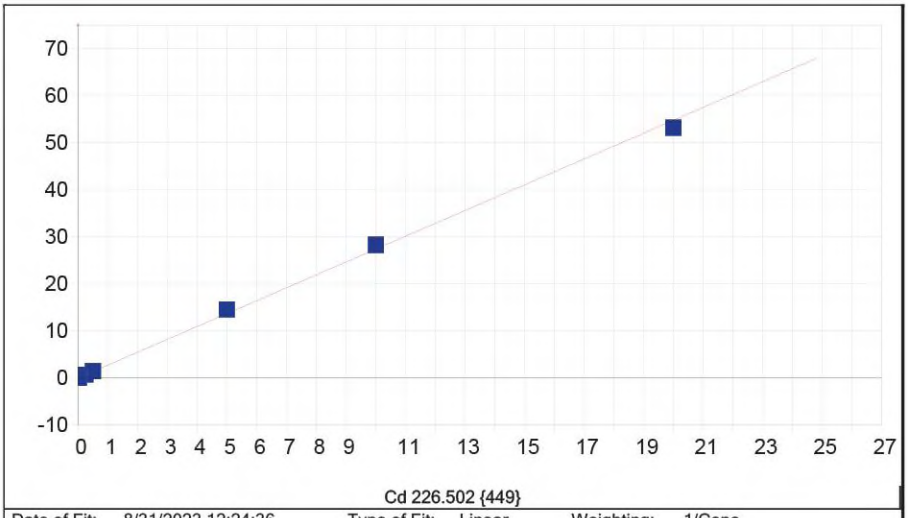


Ca 317.933 {106}

Date of Fit:	8/31/2023 12:24:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.010732	Re-Slope:	1.000000
A1 (Gain):	0.080830	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998752	Status:	OK.
Std Error of Est:	0.001578		
Predicted MDL:	0.004059		
Predicted MQL:	0.013531		

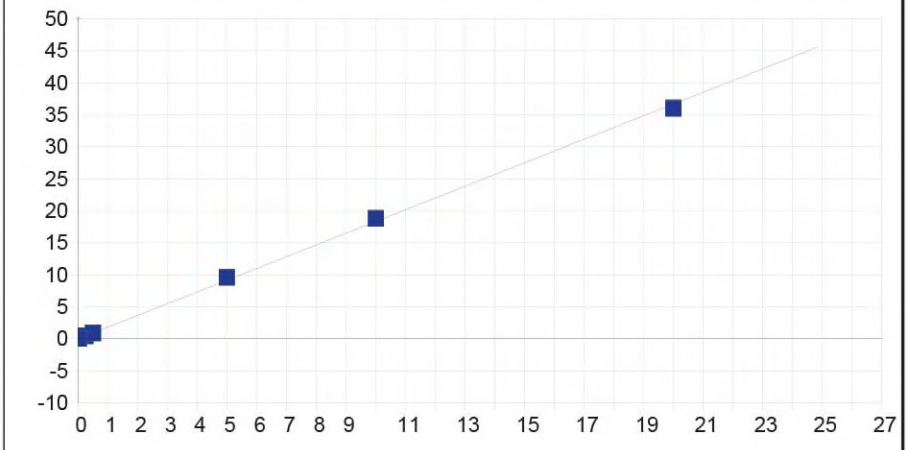
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00010	-.000	.000	.01072	.000	1
STD1 35069	5.0000	5.6446	.645	12.9	.46698	.006	1
STD2 35280	10.000	11.066	1.07	10.7	.90516	.005	1
STD3 35650	100.00	110.14	10.1	10.1	8.9132	.008	1
STD4 34010	200.00	202.48	2.48	1.24	16.377	.114	1
STD5 35635	400.00	385.57	-14.4	-3.61	31.176	.920	1
STD0.1 3519	.50000	.57033	.070	14.1	.05683	.000	1
STD0.03 351	.16000	.18578	.026	16.1	.02575	.000	1



Cd 226.502 {449}

Date of Fit:	8/31/2023 12:24:36	Type of Fit:	Linear
Weighting:	1/Conc		
A0 (Offset):	-0.002038	Re-Slope:	1.000000
A1 (Gain):	2.738096	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999381	Status:	OK.
Std Error of Est:	0.001884		
Predicted MDL:	0.000130		
Predicted MQL:	0.000432		

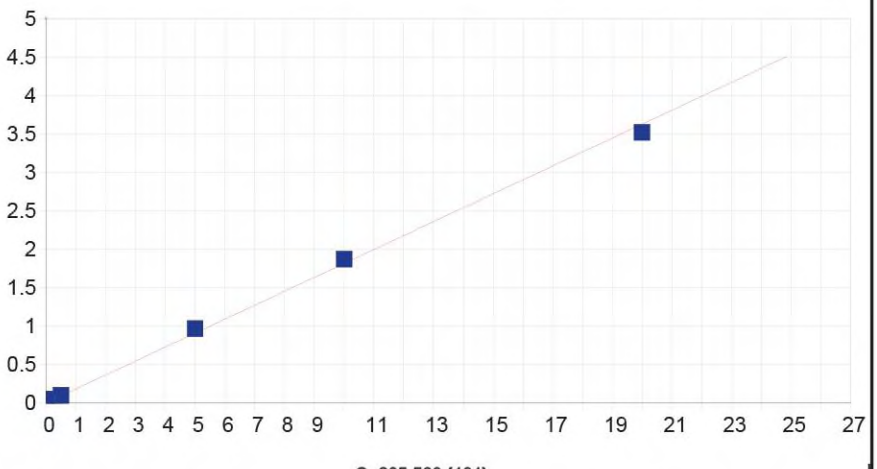
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00000	-.000	.000	-.00204	.000	1
STD1 35069	.25000	.25223	.002	.893	.68931	.001	1
STD2 35280	.50000	.49235	-.008	-1.53	1.3475	.004	1
STD3 35650	5.0000	5.3013	.301	6.03	14.528	.007	1
STD4 34010	10.000	10.294	.294	2.94	28.213	.085	1
STD5 35635	20.000	19.409	-.591	-2.96	53.198	.104	1
STD0.1 3519	.02500	.02567	.001	2.66	.06831	.000	1
STD0.03 351	.00800	.00834	.000	4.20	.02081	.000	1



Co 228.616 {447}

Date of Fit:	8/31/2023 12:24:36	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	-0.000139		Re-Slope:	1.000000	
A1 (Gain):	1.834918		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999705		Status:	OK.	
Std Error of Est:	0.000872				
Predicted MDL:	0.000238				
Predicted MQL:	0.000793				

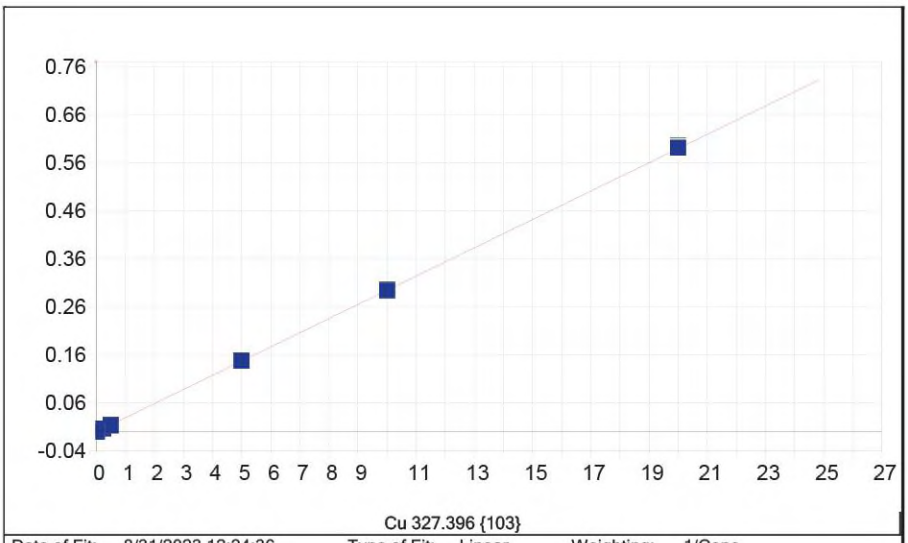
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00000	-.000	.000	-.00014	.000	1
STD1 35069	.25000	.24765	-.002	-.942	.45553	.001	1
STD2 35280	.50000	.48274	-.017	-3.45	.88817	.003	1
STD3 35650	5.0000	5.2000	.200	4.00	9.5666	.008	1
STD4 34010	10.000	10.217	.217	2.17	18.797	.064	1
STD5 35635	20.000	19.602	-.398	-1.99	36.069	.076	1
STD0.1 3519	.02500	.02539	.000	1.57	.04658	.000	1
STD0.03 351	.00800	.00824	.000	2.97	.01502	.000	1



Cr 205.560 {464}

Date of Fit:	8/31/2023 12:24:36	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000063		Re-Slope:	1.000000	
A1 (Gain):	0.181476		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999320		Status:	OK.	
Std Error of Est:	0.000131				
Predicted MDL:	0.000227				
Predicted MQL:	0.000758				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00000	-.000	.000	.00006	.000	1
STD1 35069	.25000	.26600	.016	6.40	.04838	.000	1
STD2 35280	.50000	.51821	.018	3.64	.09419	.000	1
STD3 35650	5.0000	5.3061	.306	6.12	.96383	.001	1
STD4 34010	10.000	10.287	.287	2.87	1.8686	.005	1
STD5 35635	20.000	19.370	-.630	-3.15	3.5186	.007	1
STD0.1 3519	.02500	.02706	.002	8.24	.00498	.000	1
STD0.03 351	.00800	.00885	.001	10.6	.00167	.000	1

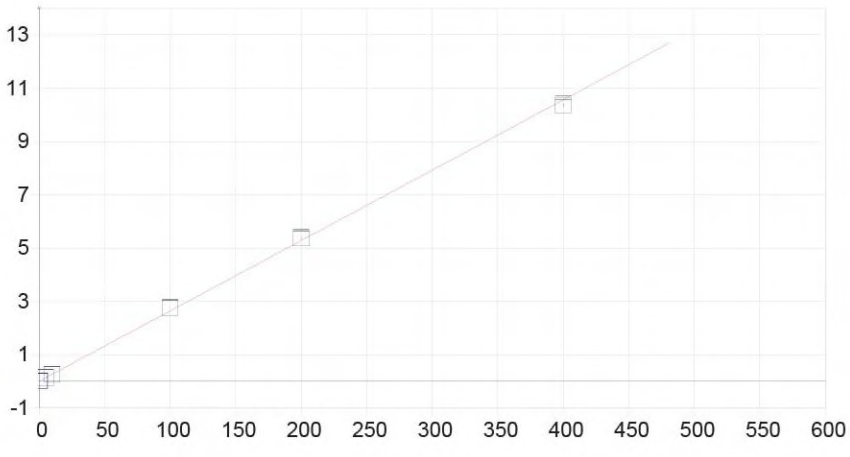


Cu 327.396 {103}

Date of Fit:	8/31/2023 12:24:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000263	Re-Slope:	1.000000
A1 (Gain):	0.029513	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999900	Status:	OK.
Std Error of Est:	0.000008		
Predicted MDL:	0.008139		
Predicted MQL:	0.027129		

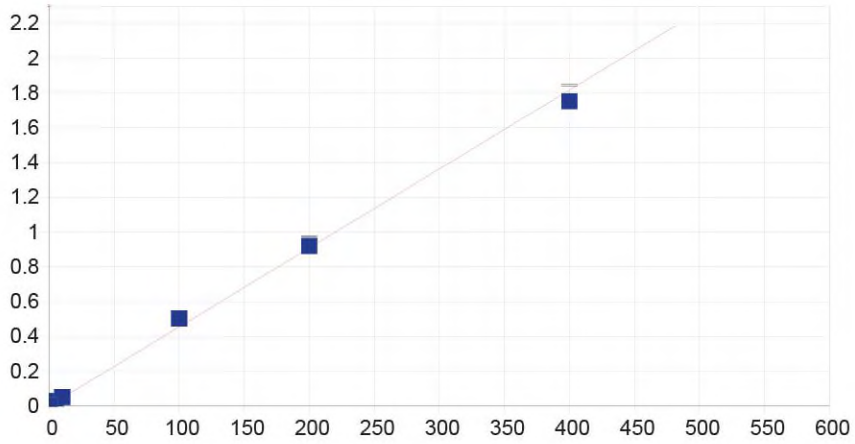
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00001	.000	.000	-.00026	.000	1
STD1 35069	.25000	.23763	-.012	-4.95	.00675	.000	1
STD2 35280	.50000	.46478	-.035	-7.04	.01346	.000	1
STD3 35650	5.0000	5.0209	.021	.417	.14798	.000	1
STD4 34010	10.000	9.9802	-.020	-.198	.29440	.002	1
STD5 35635	20.000	20.057	.057	.286	.59192	.005	1
STD0.1 3519	.02500	.01858	-.006	-25.7	.00029	.000	1
STD0.03 351	.00800	.00384	-.004	-52.0	-.00015	.000	1



Fe 259.940 {130}

Date of Fit:	8/31/2023 12:24:36	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000077		Re-Slope:	1.000000	
A1 (Gain):	0.026394		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999710		Status:	OK.	
Std Error of Est:	0.000248				
Predicted MDL:	0.003342				
Predicted MQL:	0.011139				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00003	-.000	.000	.00008	.000	1
STD1 35069	5.0000	5.0940	.094	1.88	.13453	.001	1
STD2 35280	10.000	10.026	.026	.255	.26469	.002	1
STD3 35650	100.00	104.55	4.55	4.55	2.7595	.009	1
STD4 34010	200.00	203.16	3.16	1.58	5.3623	.037	1
STD5 35635	400.00	392.14	-7.86	-1.97	10.350	.070	1
STD0.1 3519	.50000	.52261	.023	4.52	.01387	.000	1
STD0.03 351	.16000	.17480	.015	9.25	.00469	.000	1

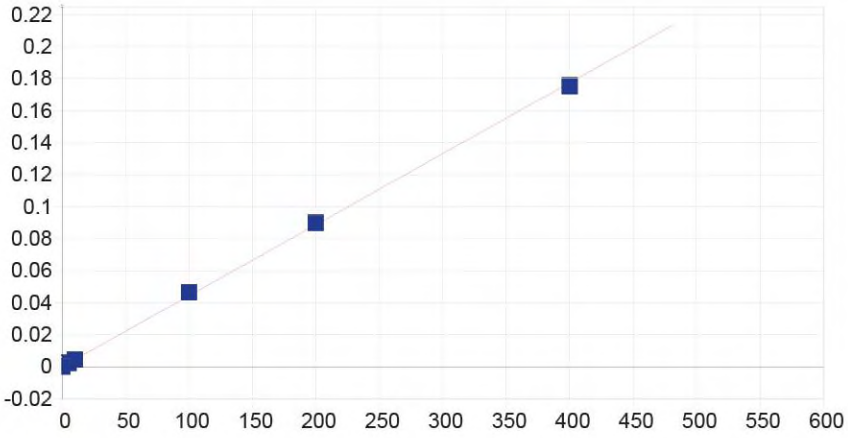


Fe 271.441 {124}

Date of Fit:	8/31/2023 12:24:36	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000156		Re-Slope:	1.000000	
A1 (Gain):	0.004541		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.998825		Status:	OK.	
Std Error of Est:	0.000086				
Predicted MDL:	0.079905				
Predicted MQL:	0.266350				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00008	-.000	.000	.00016	.000	1
STD1 35069	5.0000	5.5213	.521	10.4	.02531	.000	1
STD2 35280	10.000	10.943	.943	9.43	.05002	.001	1
STD3 35650	100.00	110.11	10.1	10.1	.50189	.000	1
STD4 34010	200.00	202.37	2.37	1.18	.92253	.007	1
STD5 35635	400.00	385.97	-14.0	-3.51	1.7597	.043	1
STD0.1 3519	.50000	.57112	.071	14.2	.00276	.000	1

STD0.03 351	.16000	.17447	.014	9.04	.00095	.000	1

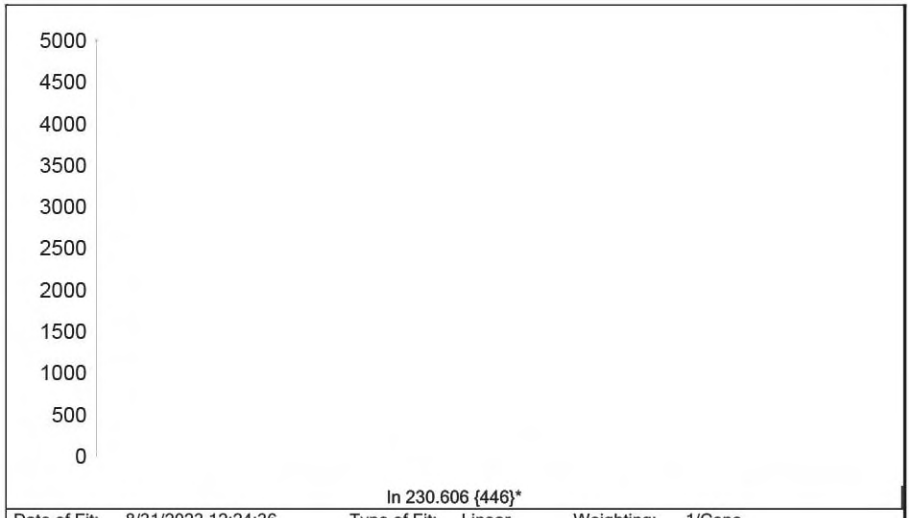


Fe 273.074 {123}

Date of Fit:	8/31/2023 12:24:36	Type of Fit:	Linear
Weighting:	1/Conc		

A0 (Offset):	0.000124	Re-Slope:	1.000000
A1 (Gain):	0.000443	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999234	Status:	OK.
Std Error of Est:	0.000007		
Predicted MDL:	0.253046		
Predicted MQL:	0.843488		

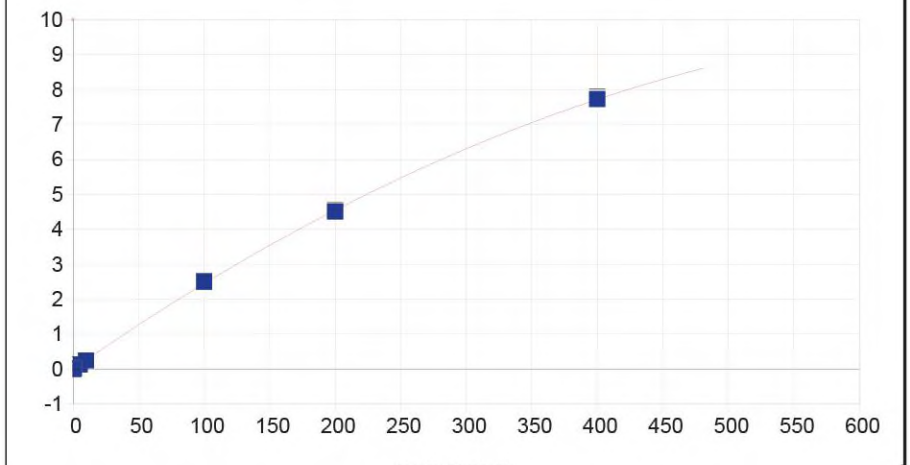
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00041	.000	.000	.00012	.000	1
STD1 35069	5.0000	4.8428	-.157	-3.14	.00227	.000	1
STD2 35280	10.000	9.8323	-.168	-1.68	.00448	.000	1
STD3 35650	100.00	104.35	4.35	4.35	.04634	.000	1
STD4 34010	200.00	202.08	2.08	1.04	.08963	.001	1
STD5 35635	400.00	394.48	-5.52	-1.38	.17484	.001	1
STD0.1 3519	.50000	.24563	-.254	-50.9	.00023	.000	1
STD0.03 351	.16000	-.16747	-.327	-205.	.00005	.000	1



In 230.606 {446}*

Date of Fit:	8/31/2023 12:24:36	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.000000		Status:	Warning	Zero Gain
Std Error of Est:	0.000000				
Predicted MDL:	n/a				
Predicted MQL:	n/a				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00000	.000	.000	4367.4	14.0	1

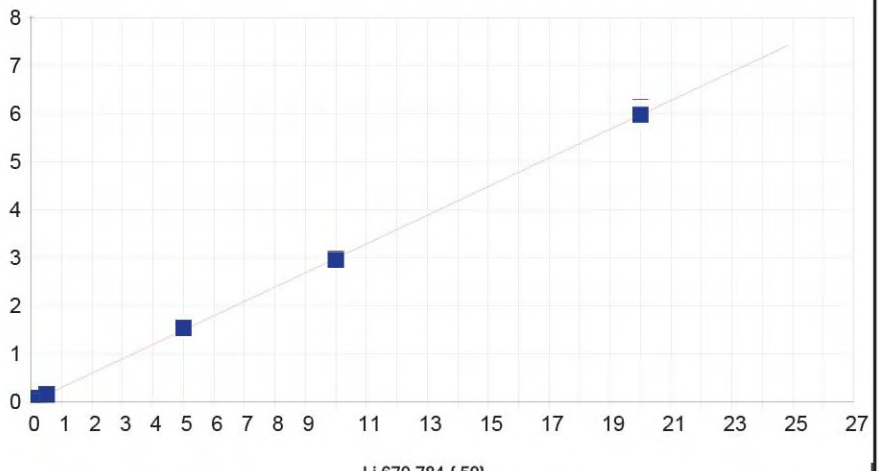


K 766.490 { 44}

Date of Fit:	8/31/2023 12:24:36	Type of Fit:	Curvilinear	Weighting:	1/Conc
A0 (Offset):	-0.002517		Re-Slope:	1.000000	
A1 (Gain):	0.026203		Y-int:	0.000000	
A2 (Curvature):	-0.000017				
n (Exponent):	1.000000				
Correlation:	0.999889		Status:	OK.	

Std Error of Est:	0.000135
Predicted MDL:	0.049671
Predicted MQL:	0.165570

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00001	-.000	.000	-.00252	.001	1
STD1 35069	5.0000	4.7812	-.219	-4.38	.12254	.002	1
STD2 35280	10.000	9.4303	-.570	-5.70	.24339	.002	1
STD3 35650	100.00	102.43	2.43	2.43	2.5042	.006	1
STD4 34010	200.00	197.75	-2.25	-1.12	4.5123	.029	1
STD5 35635	400.00	400.67	.674	.169	7.7446	.066	1
STD0.1 3519	.50000	.48445	-.016	-3.11	.01019	.001	1
STD0.03 351	.16000	.18659	.027	16.6	.00238	.001	1

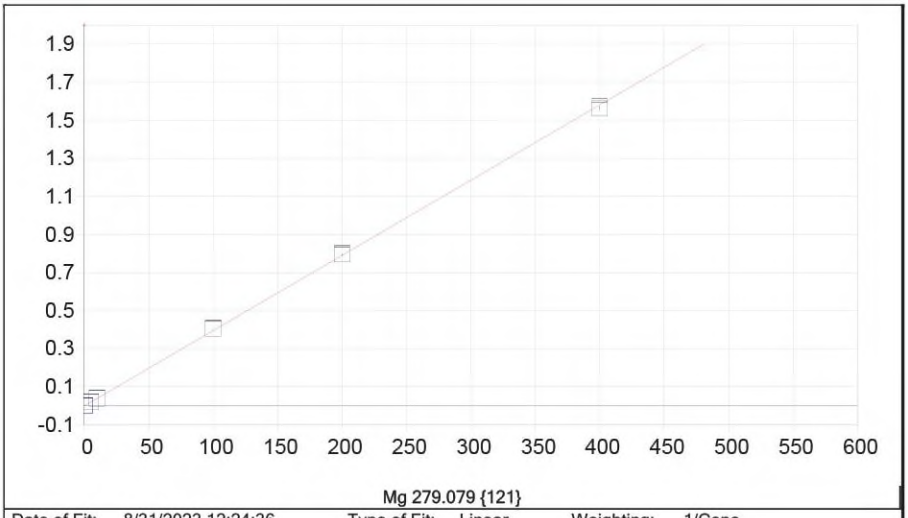


Li 670.784 { 50}

Date of Fit:	8/31/2023 12:24:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002882	Re-Slope:	1.000000
A1 (Gain):	0.298853	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999924	Status:	OK.
Std Error of Est:	0.000072		
Predicted MDL:	0.002087		
Predicted MQL:	0.006956		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00000	-.000	.000	.00288	.000	1
STD1 35069	.25000	.25637	.006	2.55	.07962	.001	1
STD2 35280	.50000	.49343	-.007	-1.31	.15060	.001	1
STD3 35650	5.0000	5.1303	.130	2.61	1.5386	.000	1
STD4 34010	10.000	9.8711	-.129	-1.29	2.9579	.025	1
STD5 35635	20.000	19.997	-.003	-.014	5.9892	.152	1
STD0.1 3519	.02500	.02537	.000	1.49	.01048	.000	1
STD0.03 351	.00800	.00916	.001	14.5	.00562	.001	1

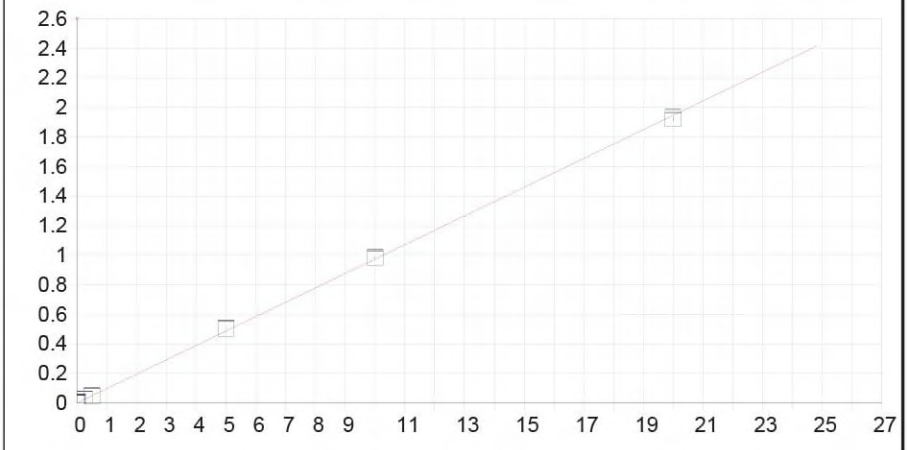


Mg 279.079 {121}

Date of Fit:	8/31/2023 12:24:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000133	Re-Slope:	1.000000
A1 (Gain):	0.003951	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999895	Status:	OK.
Std Error of Est:	0.000022		
Predicted MDL:	0.028401		
Predicted MQL:	0.094671		

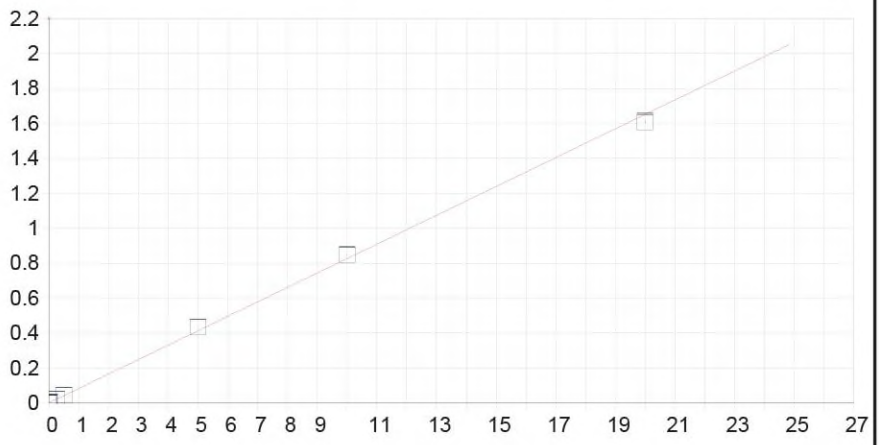
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00002	.000	.000	.00013	.000	1
STD1 35069	5.0000	4.9755	-.025	-.490	.01979	.000	1
STD2 35280	10.000	9.7916	-.208	-2.08	.03882	.000	1
STD3 35650	100.00	102.97	2.97	2.97	.40697	.001	1
STD4 34010	200.00	201.46	1.46	.732	.79609	.005	1
STD5 35635	400.00	395.82	-4.18	-1.05	1.5640	.009	1
STD0.1 3519	.50000	.49774	-.002	-.452	.00210	.000	1
STD0.03 351	.16000	.13833	-.022	-13.5	.00068	.000	1



Mn 257.610 {131}

Date of Fit:	8/31/2023 12:24:36	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000149		Re-Slope:	1.000000	
A1 (Gain):	0.097354		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999841		Status:	OK.	
Std Error of Est:	0.000034				
Predicted MDL:	0.000818				
Predicted MQL:	0.002727				

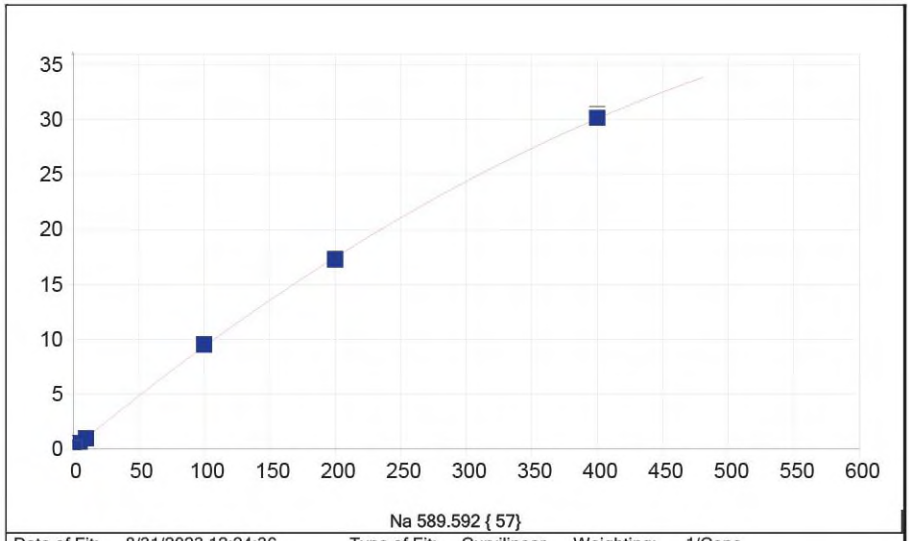
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00000	-.000	.000	.00015	.000	1
STD1 35069	.25000	.25291	.003	1.16	.02477	.000	1
STD2 35280	.50000	.48721	-.013	-2.56	.04758	.000	1
STD3 35650	5.0000	5.1822	.182	3.64	.50466	.001	1
STD4 34010	10.000	10.090	.090	.903	.98247	.006	1
STD5 35635	20.000	19.736	-.264	-1.32	1.9215	.013	1
STD0.1 3519	.02500	.02622	.001	4.90	.00270	.000	1
STD0.03 351	.00800	.00820	.000	2.47	.00095	.000	1



Mo 202.030 {467}

Date of Fit:	8/31/2023 12:24:36	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000179		Re-Slope:	1.000000	
A1 (Gain):	0.082625		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999539		Status:	OK.	
Std Error of Est:	0.000049				
Predicted MDL:	0.000428				
Predicted MQL:	0.001426				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00000	-.000	.000	.00018	.000	1
STD1 35069	.25000	.25593	.006	2.37	.02133	.000	1
STD2 35280	.50000	.50473	.005	.946	.04188	.000	1
STD3 35650	5.0000	5.2499	.250	5.00	.43395	.001	1
STD4 34010	10.000	10.260	.260	2.60	.84788	.002	1
STD5 35635	20.000	19.479	-.521	-2.61	1.6096	.003	1
STD0.1 3519	.02500	.02584	.001	3.36	.00231	.000	1
STD0.03 351	.00800	.00817	.000	2.11	.00085	.000	1

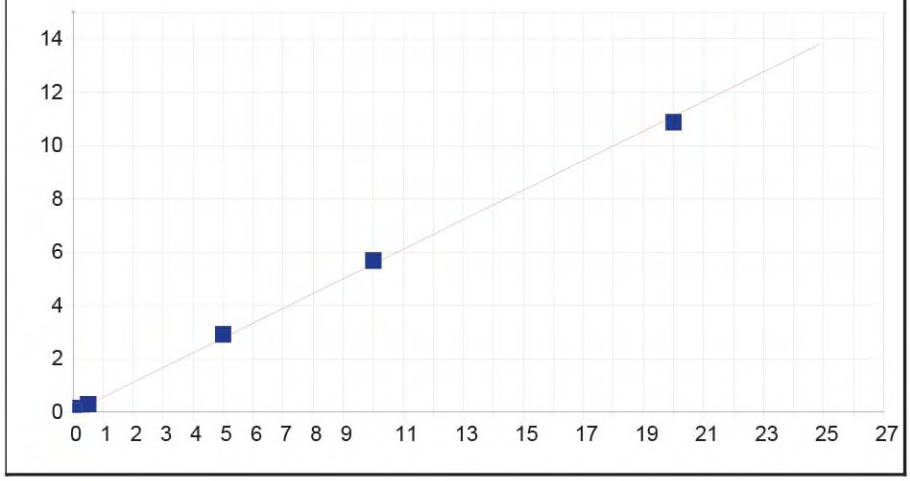


Na 589.592 { 57}

Date of Fit:	8/31/2023 12:24:36	Type of Fit:	Curvilinear	Weighting:	1/Conc

A0 (Offset):	0.004459	Re-Slope:	1.000000
A1 (Gain):	0.099214	Y-int:	0.000000
A2 (Curvature):	-0.000060		
n (Exponent):	1.000000		
Correlation:	0.999934	Status:	OK.
Std Error of Est:	0.000402		
Predicted MDL:	0.013721		
Predicted MQL:	0.045735		

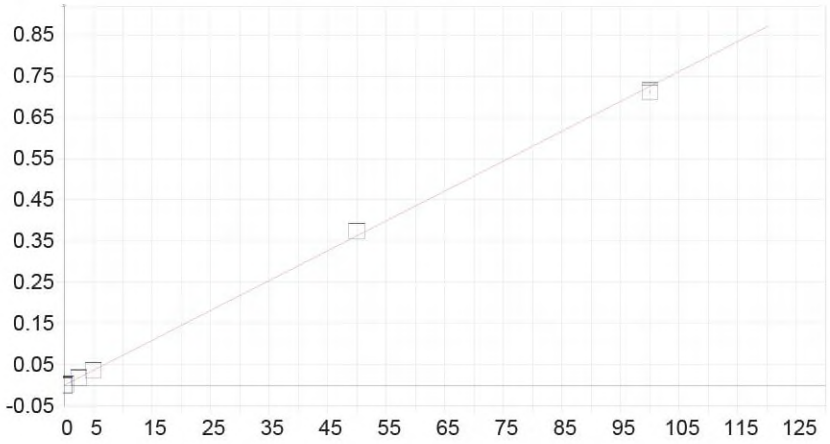
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00002	-.000	.000	.00446	.002	1
STD1 35069	5.0000	4.9527	-.047	-.946	.49481	.007	1
STD2 35280	10.000	9.7254	-.275	-2.75	.96458	.006	1
STD3 35650	100.00	101.99	1.99	1.99	9.5094	.019	1
STD4 34010	200.00	197.25	-2.75	-1.37	17.263	.040	1
STD5 35635	400.00	401.19	1.19	.297	30.208	.289	1
STD0.1 3519	.50000	.52977	.030	5.95	.05705	.002	1
STD0.03 351	.16000	.17534	.015	9.59	.02187	.001	1



Ni 231.604 {446}

Date of Fit:	8/31/2023 12:24:36	Type of Fit:	Linear	Weighting: 1/Conc
A0 (Offset):	0.001385		Re-Slope:	1.000000
A1 (Gain):	0.554626		Y-int:	0.000000
A2 (Curvature):	0.000000			
n (Exponent):	1.000000			
Correlation:	0.999671		Status:	OK.
Std Error of Est:	0.000278			
Predicted MDL:	0.000549			
Predicted MQL:	0.001830			

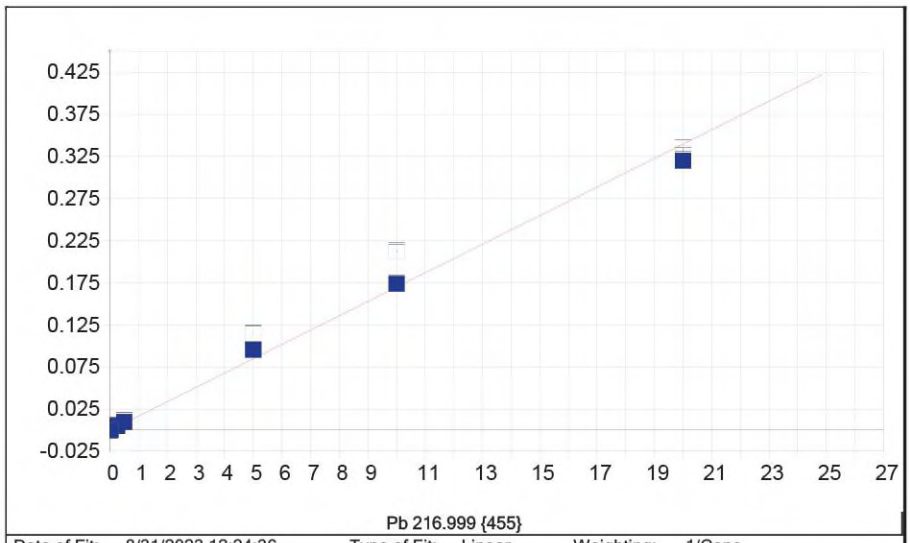
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00000	-.000	.000	.00138	.000	1
STD1 35069	.25000	.25221	.002	.883	.14131	.001	1
STD2 35280	.50000	.49213	-.008	-1.57	.27443	.000	1
STD3 35650	5.0000	5.2227	.223	4.45	2.8990	.001	1
STD4 34010	10.000	10.210	.210	2.10	5.6658	.020	1
STD5 35635	20.000	19.573	-.427	-2.14	10.861	.026	1
STD0.1 3519	.02500	.02565	.001	2.58	.01561	.000	1
STD0.03 351	.00800	.00799	-.000	-.093	.00582	.000	1



P 178.284 {489}

Date of Fit:	8/31/2023 12:24:36	Type of Fit:	Linear	Weighting: 1/Conc
A0 (Offset):	-0.000020		Re-Slope:	1.000000
A1 (Gain):	0.007248		Y-int:	0.000000
A2 (Curvature):	0.000000			
n (Exponent):	1.000000			
Correlation:	0.999737		Status:	OK.
Std Error of Est:	0.000022			
Predicted MDL:	0.003648			
Predicted MQL:	0.012159			

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00001	-.000	.000	-.00002	.000	1
STD1 35069	2.5000	2.5705	.071	2.82	.01861	.000	1
STD2 35280	5.0000	5.0583	.058	1.17	.03664	.000	1
STD3 35650	50.000	51.578	1.58	3.16	.37383	.000	1
STD4 34010	100.00	98.277	-1.72	-1.72	.71232	.004	1
STD0.1 3519	.25000	.26216	.012	4.86	.00188	.000	1
STD0.03 351	.08000	.08339	.003	4.23	.00058	.000	1

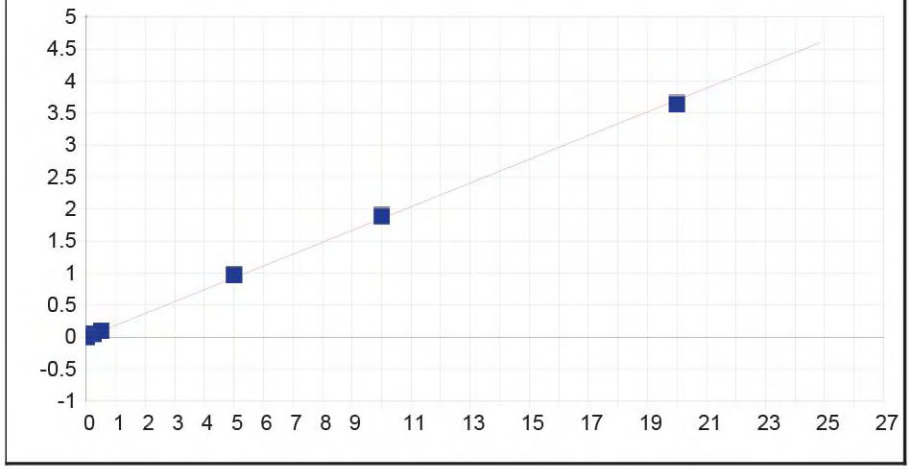


Pb 216.999 {455}

Date of Fit:	8/31/2023 12:24:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000430	Re-Slope:	1.000000
A1 (Gain):	0.017003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998107	Status:	OK.
Std Error of Est:	0.000023		
Predicted MDL:	0.007166		
Predicted MQL:	0.023888		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00000	-.000	.000	-.00043	.000	1
STD1 35069	.25000	.29464	.045	17.9	.00556	.000	1
STD2 35280	.50000	.57067	.071	14.1	.01123	.000	1
STD3 35650	5.0000	5.6227	.623	12.5	.11473	.000	1
STD4 34010	10.000	10.236	.236	2.36	.21273	.001	1
STD5 35635	20.000	18.830	-1.17	-5.85	.32879	.007	1
STD0.1 3519	.02500	.02929	.004	17.2	.00017	.000	1
STD0.03 351	.00800	.00627	-.002	-21.6	-.00029	.000	1

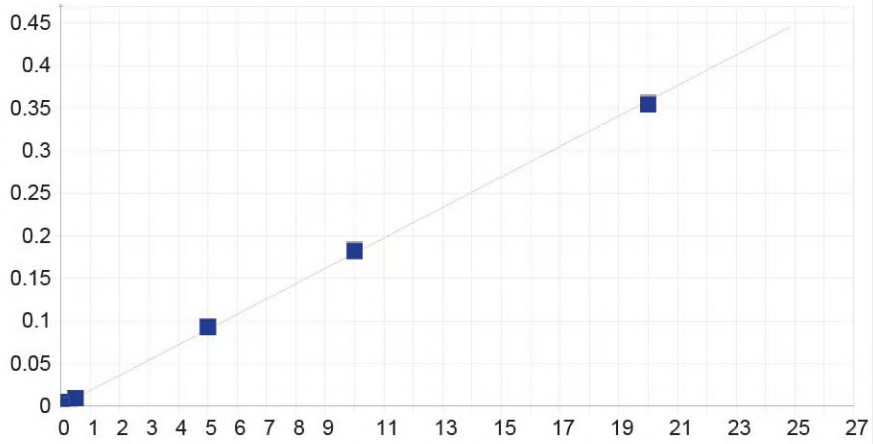


Pb 220.353 {453}

Date of Fit:	8/31/2023 12:24:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001362	Re-Slope:	1.000000
A1 (Gain):	0.185213	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999727	Status:	OK.
Std Error of Est:	0.000085		
Predicted MDL:	0.001769		
Predicted MQL:	0.005896		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00000	-.000	.000	-.00136	.000	1
STD1 35069	.25000	.25327	.003	1.31	.04624	.000	1
STD2 35280	.50000	.49562	-.004	-.876	.09181	.000	1
STD3 35650	5.0000	5.2192	.219	4.38	.97911	.001	1
STD4 34010	10.000	10.160	.160	1.60	1.9080	.006	1
STD5 35635	20.000	19.616	-.384	-1.92	3.6500	.008	1
STD0.1 3519	.02500	.02640	.001	5.61	.00360	.001	1
STD0.03 351	.00800	.00924	.001	15.5	.00037	.000	1



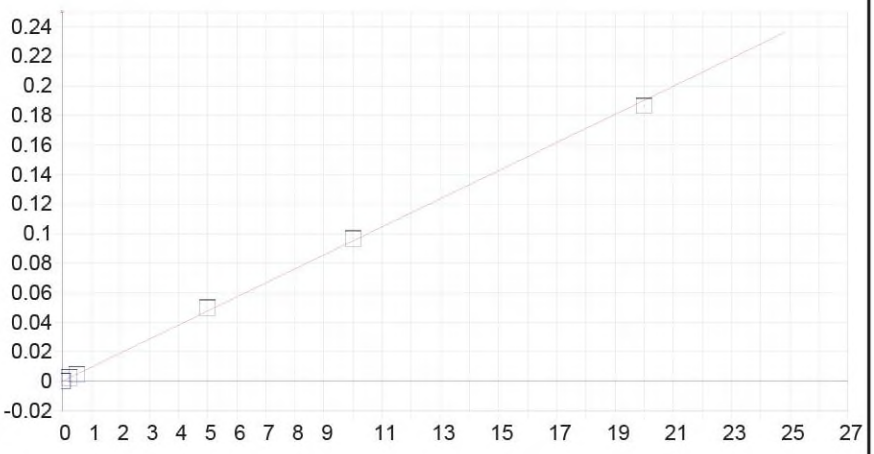
Sb 206.833 {463}

Date of Fit:	8/31/2023 12:24:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000054	Re-Slope:	1.000000
A1 (Gain):	0.017940	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999857	Status:	OK.
Std Error of Est:	0.000006		
Predicted MDL:	0.002871		
Predicted MQL:	0.009569		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00000	-.000	.000	.00005	.000	1
STD1 35069	.25000	.24821	-.002	-.718	.00452	.000	1
STD2 35280	.50000	.48633	-.014	-2.73	.00881	.000	1
STD3 35650	5.0000	5.1403	.140	2.81	.09263	.000	1
STD4 34010	10.000	10.128	.128	1.28	.18246	.001	1
STD5 35635	20.000	19.743	-.257	-1.29	.35566	.001	1
STD0.1 3519	.02500	.02704	.002	8.14	.00054	.000	1

STD0.03 351	.00800	.01064	.003	33.1	.00025	.000	1

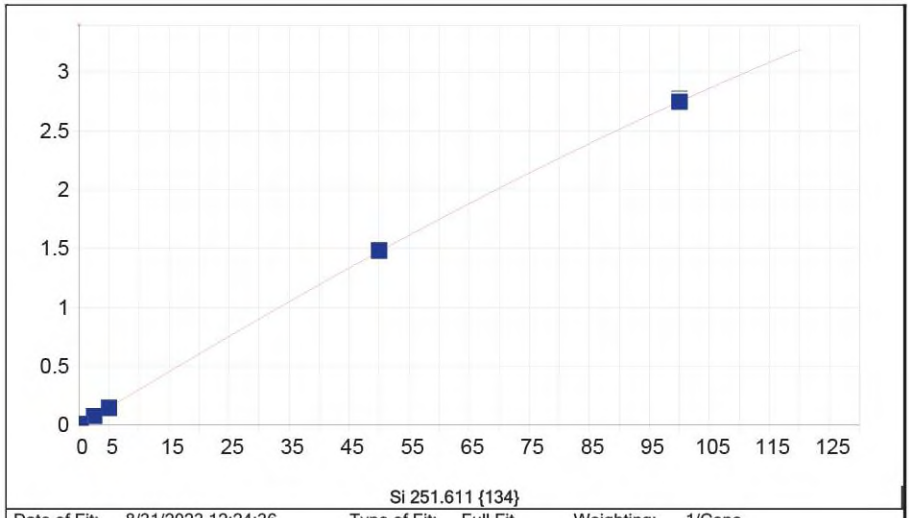


Se 196.090 {472}

Date of Fit:	8/31/2023 12:24:36	Type of Fit:	Linear
Weighting:	1/Conc		

A0 (Offset):	-0.000011	Re-Slope:	1.000000
A1 (Gain):	0.009508	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999689	Status:	OK.
Std Error of Est:	0.000005		
Predicted MDL:	0.004272		
Predicted MQL:	0.014240		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00000	.000	.000	-.00001	.000	1
STD1 35069	.25000	.24630	-.004	-1.48	.00233	.000	1
STD2 35280	.50000	.49451	-.005	-1.10	.00469	.000	1
STD3 35650	5.0000	5.2381	.238	4.76	.04979	.000	1
STD4 34010	10.000	10.167	.167	1.67	.09666	.000	1
STD5 35635	20.000	19.608	-.392	-1.96	.18643	.000	1
STD0.1 3519	.02500	.02200	-.003	-12.0	.00020	.000	1
STD0.03 351	.00800	.00764	-.000	-4.48	.00006	.000	1

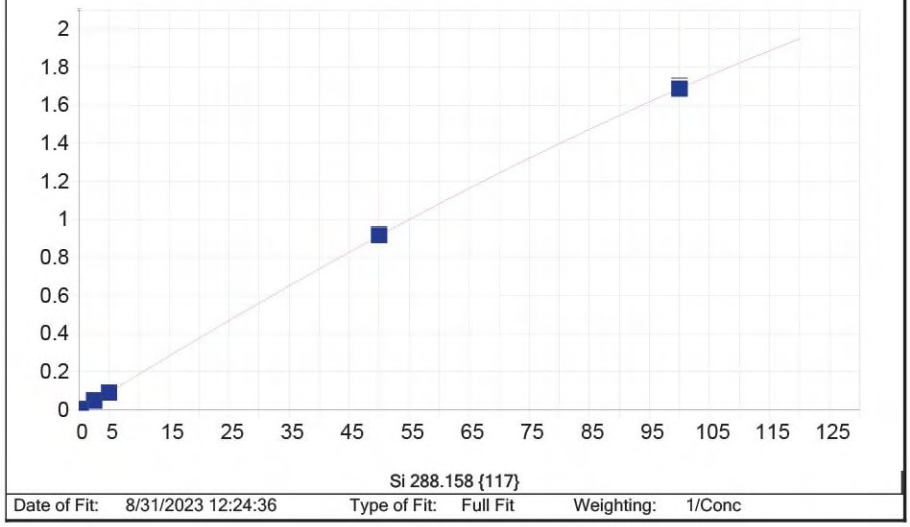


Si 251.611 {134}

Date of Fit:	8/31/2023 12:24:36	Type of Fit:	Full Fit	Weighting:	1/Conc

A0 (Offset):	0.000892	Re-Slope:	1.000000
A1 (Gain):	0.028392	Y-int:	0.000000
A2 (Curvature):	-0.000039		
n (Exponent):	1.030000		
Correlation:	0.999951	Status:	OK.
Std Error of Est:	0.000048		
Predicted MDL:	0.008450		
Predicted MQL:	0.028166		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00000	.000	.000	.00089	.000	1
STD1 35069	2.5000	2.5736	.074	2.94	.07587	.001	1
STD2 35280	5.0000	4.8056	-.194	-3.89	.14309	.001	1
STD3 35650	50.000	50.173	.173	.345	1.4808	.004	1
STD4 34010	100.00	99.909	-.091	-.091	2.7497	.021	1
STD0.1 3519	.25000	.27495	.025	9.98	.00841	.000	1
STD0.03 351	.08000	.09000	.010	12.5	.00327	.000	1

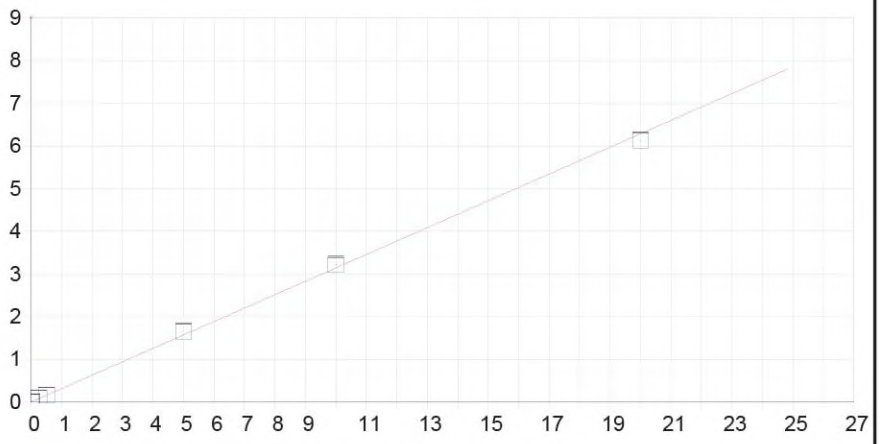


Si 288.158 {117}

Date of Fit:	8/31/2023 12:24:36	Type of Fit:	Full Fit	Weighting:	1/Conc

A0 (Offset):	0.000304	Re-Slope:	1.000000
A1 (Gain):	0.017744	Y-int:	0.000000
A2 (Curvature):	-0.000027		
n (Exponent):	1.030000		
Correlation:	0.999909	Status:	OK.
Std Error of Est:	0.000040		
Predicted MDL:	0.021466		
Predicted MQL:	0.071555		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00000	.000	.000	.00030	.000	1
STD1 35069	2.5000	2.5961	.096	3.84	.04757	.001	1
STD2 35280	5.0000	4.7899	-.210	-4.20	.08881	.001	1
STD3 35650	50.000	50.114	.114	.227	.91682	.003	1
STD4 34010	100.00	99.942	-.058	-.058	1.6881	.014	1
STD0.1 3519	.25000	.28857	.039	15.4	.00524	.000	1
STD0.03 351	.08000	.10581	.026	32.3	.00206	.000	1

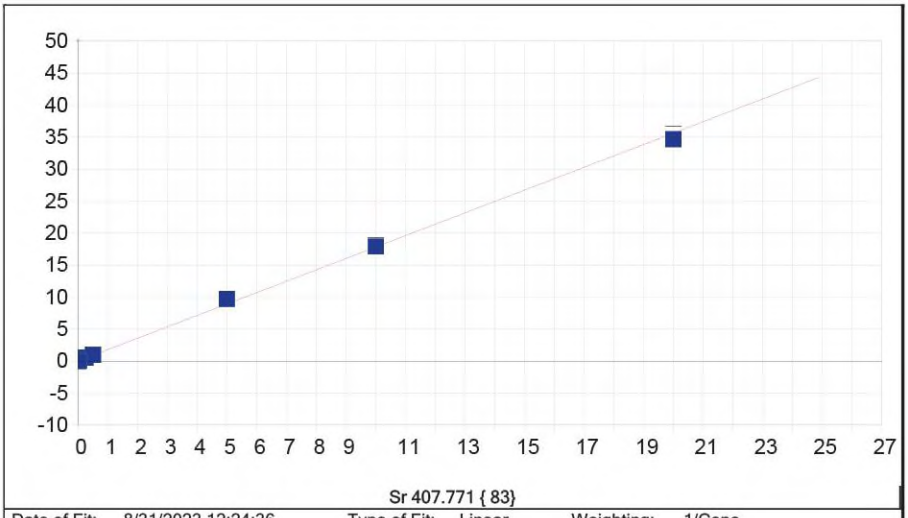


Sn 189.989 {477}

Date of Fit:	8/31/2023 12:24:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000248	Re-Slope:	1.000000
A1 (Gain):	0.314263	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999570	Status:	OK.
Std Error of Est:	0.000180		
Predicted MDL:	0.000530		
Predicted MQL:	0.001768		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00000	-.000	.000	.00025	.000	1
STD1 35069	.25000	.25010	.000	.041	.07885	.000	1
STD2 35280	.50000	.48969	-.010	-2.06	.15414	.000	1
STD3 35650	5.0000	5.2583	.258	5.17	1.6528	.001	1
STD4 34010	10.000	10.235	.235	2.35	3.2166	.010	1
STD5 35635	20.000	19.517	-.483	-2.41	6.1338	.014	1
STD0.1 3519	.02500	.02465	-.000	-1.41	.00799	.000	1
STD0.03 351	.00800	.00851	.001	6.36	.00292	.000	1

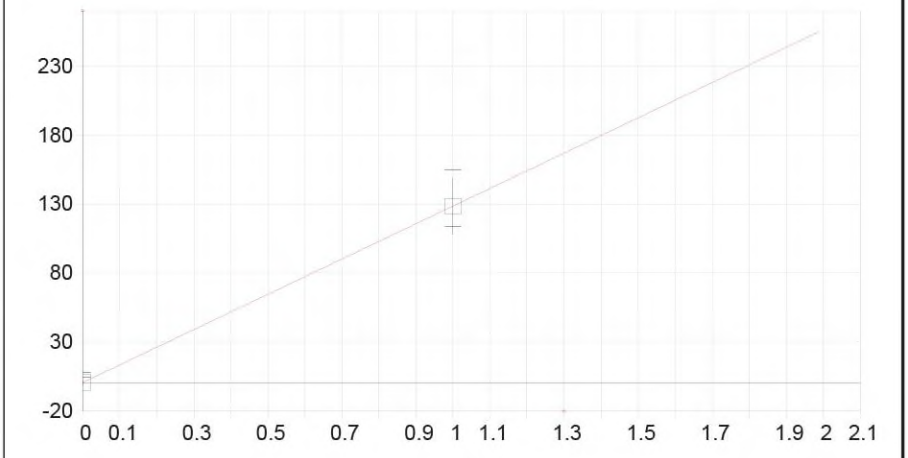


Sr 407.771 { 83}

Date of Fit:	8/31/2023 12:24:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000373	Re-Slope:	1.000000
A1 (Gain):	1.780710	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999193	Status:	OK.
Std Error of Est:	0.001399		
Predicted MDL:	0.000138		
Predicted MQL:	0.000460		

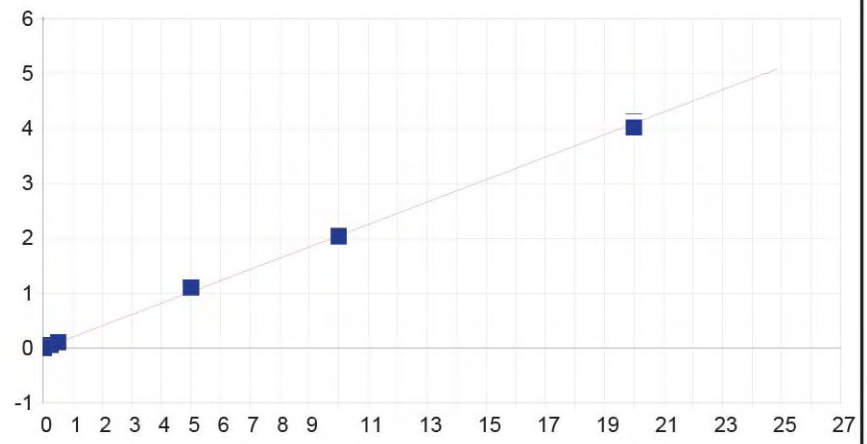
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00000	-.000	.000	-.00038	.000	1
STD1 35069	.25000	.27586	.026	10.3	.49116	.005	1
STD2 35280	.50000	.52799	.028	5.60	.94044	.008	1
STD3 35650	5.0000	5.4379	.438	8.76	9.6890	.011	1
STD4 34010	10.000	10.042	.042	.425	17.895	.118	1
STD5 35635	20.000	19.461	-.539	-2.69	34.679	.776	1
STD0.1 3519	.02500	.02839	.003	13.6	.05022	.000	1
STD0.03 351	.00800	.00921	.001	15.1	.01604	.000	1



Th 318.019 {106}

Date of Fit:	8/31/2023 12:24:36	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.596174		Re-Slope:	1.000000	
A1 (Gain):	127.949266		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	1.000000		Status:	OK.	
Std Error of Est:	0.000000				
Predicted MDL:	0.023059				
Predicted MQL:	0.076864				

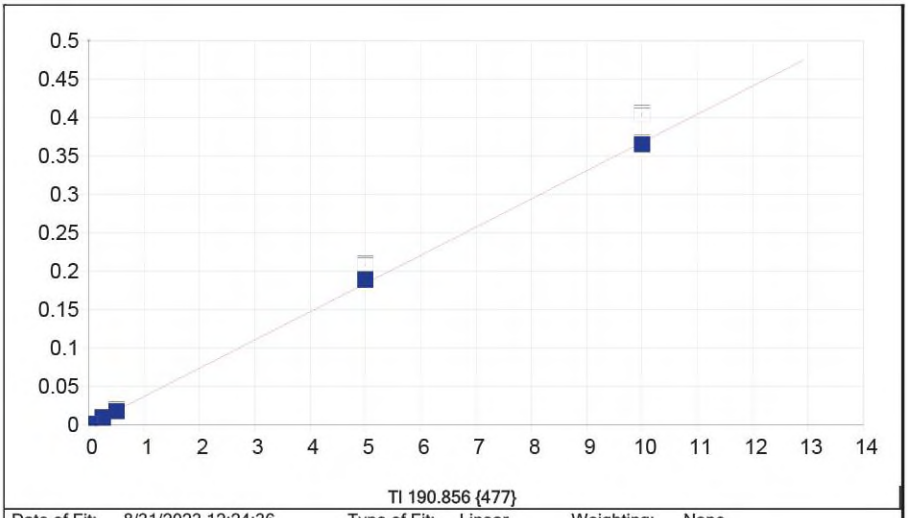
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00000	.000	.000	.59617	1.76	1
STD5 35635	1.0000	1.0000	.000	.000	128.55	20.5	1



Ti 334.941 {101}

Date of Fit:	8/31/2023 12:24:36	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	-0.000123		Re-Slope:	1.000000	
A1 (Gain):	0.204793		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999479		Status:	OK.	
Std Error of Est:	0.000129				
Predicted MDL:	0.001855				
Predicted MQL:	0.006182				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00000	-.000	.000	-.00012	.000	1
STD1 35069	.25000	.27243	.022	8.97	.05568	.001	1
STD2 35280	.50000	.51927	.019	3.85	.10625	.000	1
STD3 35650	5.0000	5.3673	.367	7.35	1.0994	.002	1
STD4 34010	10.000	9.9376	-.062	-.624	2.0357	.016	1
STD5 35635	20.000	19.648	-.352	-1.76	4.0249	.098	1
STD0.1 3519	.02500	.02879	.004	15.2	.00577	.000	1
STD0.03 351	.00800	.00989	.002	23.6	.00190	.000	1

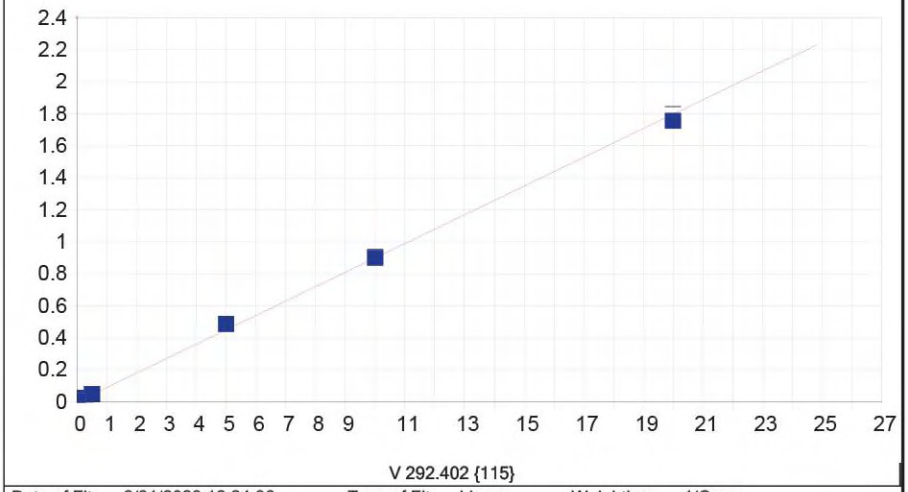


Tl 190.856 {477}

Date of Fit:	8/31/2023 12:24:36	Type of Fit:	Linear	Weighting:	None

A0 (Offset):	0.000436	Re-Slope:	1.000000
A1 (Gain):	0.036743	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999892	Status:	OK.
Std Error of Est:	0.002536		
Predicted MDL:	0.004500		
Predicted MQL:	0.015000		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00825	-.008	.000	.00013	.000	1
STD1 35069	.25000	.23606	-.014	-5.57	.01008	.000	1
STD2 35280	.50000	.47664	-.023	-4.67	.01990	.000	1
STD3 35650	5.0000	5.1354	.135	2.71	.20860	.001	1
STD4 34010	10.000	9.9338	-.066	-.662	.40438	.002	1
STD0.1 3519	.02500	.01184	-.013	-52.6	.00097	.000	1
STD0.03 351	.00800	-.00257	-.011	-132.	.00037	.000	1

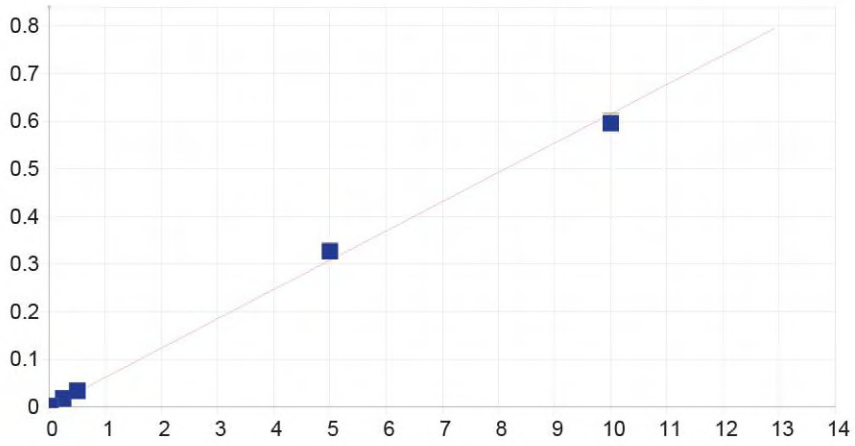


V 292.402 {115}

Date of Fit:	8/31/2023 12:24:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000392	Re-Slope:	1.000000
A1 (Gain):	0.089874	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999336	Status:	OK.
Std Error of Est:	0.000064		
Predicted MDL:	0.004652		
Predicted MQL:	0.015507		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00001	-.000	.000	.00039	.000	1
STD1 35069	.25000	.27228	.022	8.91	.02479	.000	1
STD2 35280	.50000	.51927	.019	3.85	.04691	.001	1
STD3 35650	5.0000	5.4036	.404	8.07	.48450	.000	1
STD4 34010	10.000	10.009	.009	.091	.89687	.007	1
STD5 35635	20.000	19.541	-.459	-2.29	1.7505	.042	1
STD0.1 3519	.02500	.02634	.001	5.34	.00275	.000	1
STD0.03 351	.00800	.01126	.003	40.7	.00140	.000	1

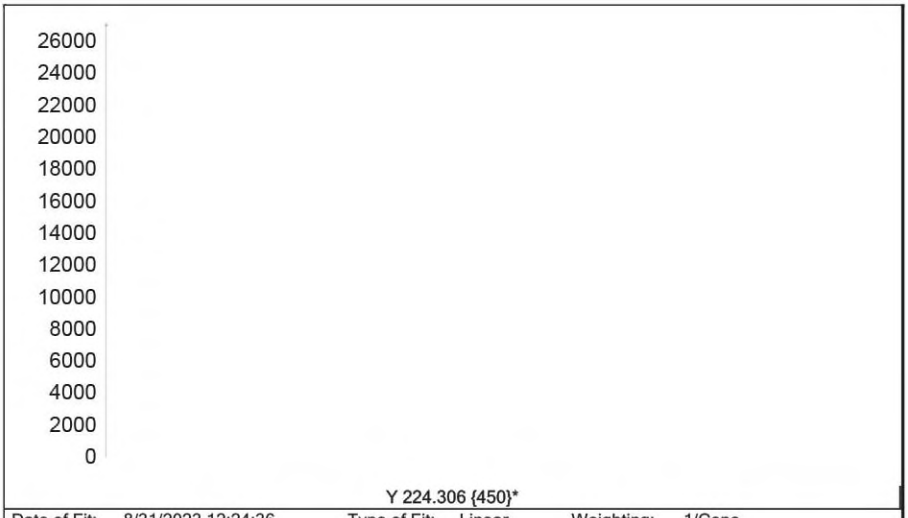


W 239.709 {140}

Date of Fit:	8/31/2023 12:24:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000862	Re-Slope:	1.000000
A1 (Gain):	0.061509	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999004	Status:	OK.
Std Error of Est:	0.000036		
Predicted MDL:	0.011603		
Predicted MQL:	0.038676		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00000	.000	.000	.00086	.000	1
STD1 35069	.25000	.26461	.015	5.85	.01702	.000	1
STD2 35280	.50000	.52661	.027	5.32	.03302	.001	1
STD3 35650	5.0000	5.2906	.291	5.81	.32391	.003	1
STD4 34010	10.000	9.6740	-.326	-3.26	.59114	.006	1
STD0.1 3519	.02500	.02153	-.003	-13.9	.00217	.000	1
STD0.03 351	.00800	.00560	-.002	-30.0	.00120	.000	1



Y 224.306 {450}*

Date of Fit:	8/31/2023 12:24:36	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.000000		Status:	Warning	Zero Gain
Std Error of Est:	0.000000				
Predicted MDL:	n/a				
Predicted MQL:	n/a				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00000	.000	.000	25036.	94.6	1

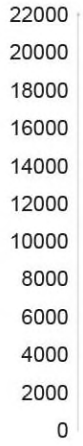


Y 360.073 { 94}*

Date of Fit:	8/31/2023 12:24:36	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.000000		Status:	Warning	Zero Gain

Std Error of Est:	0.000000
Predicted MDL:	n/a
Predicted MQL:	n/a

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00000	.000	.000	9966.0	47.4	1

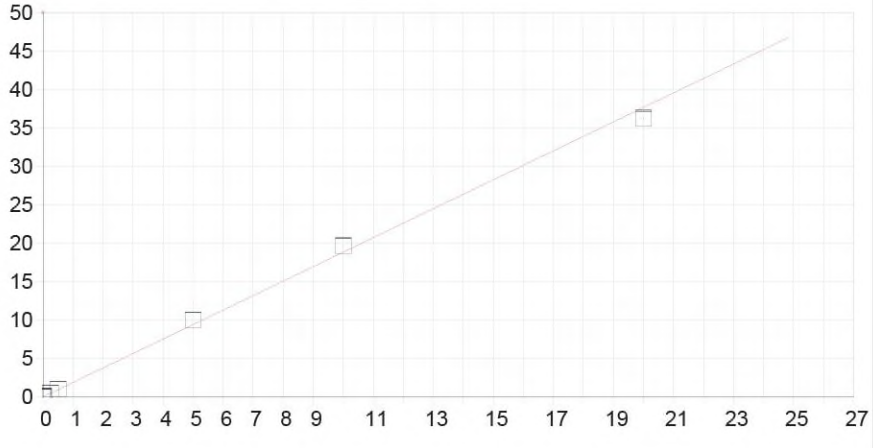


Y 377.433 { 89}*

Date of Fit:	8/31/2023 12:24:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.000000	Status:	Warning Zero Gain
Std Error of Est:	0.000000		
Predicted MDL:	n/a		
Predicted MQL:	n/a		

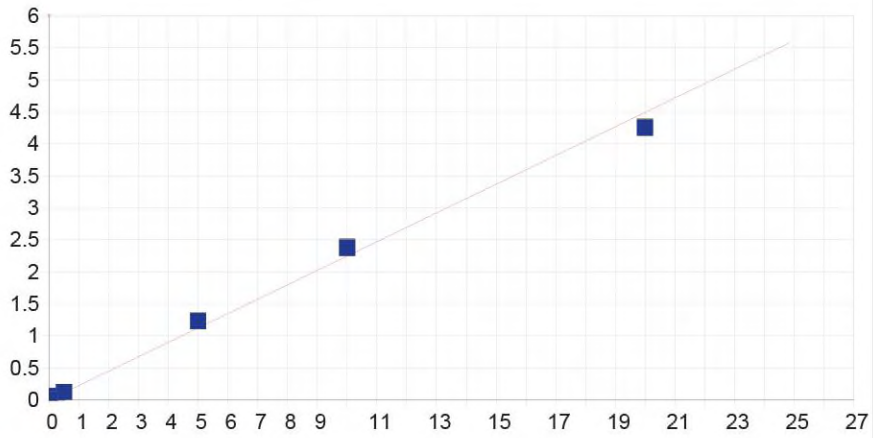
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00000	.000	.000	20762.	116.	1



Zn 206.200 {463}

Date of Fit:	8/31/2023 12:24:36	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.003368		Re-Slope:	1.000000	
A1 (Gain):	1.885029		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999034		Status:	OK.	
Std Error of Est:	0.001619				
Predicted MDL:	0.000124				
Predicted MQL:	0.000412				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00000	-.000	.000	.00337	.000	1
STD1 35069	.25000	.25467	.005	1.87	.48343	.001	1
STD2 35280	.50000	.50829	.008	1.66	.96151	.003	1
STD3 35650	5.0000	5.3191	.319	6.38	10.030	.008	1
STD4 34010	10.000	10.437	.437	4.37	19.677	.059	1
STD5 35635	20.000	19.231	-.769	-3.84	36.255	.079	1
STD0.1 3519	.02500	.02497	-.000	-.133	.05043	.000	1
STD0.03 351	.00800	.00789	-.000	-1.33	.01825	.000	1

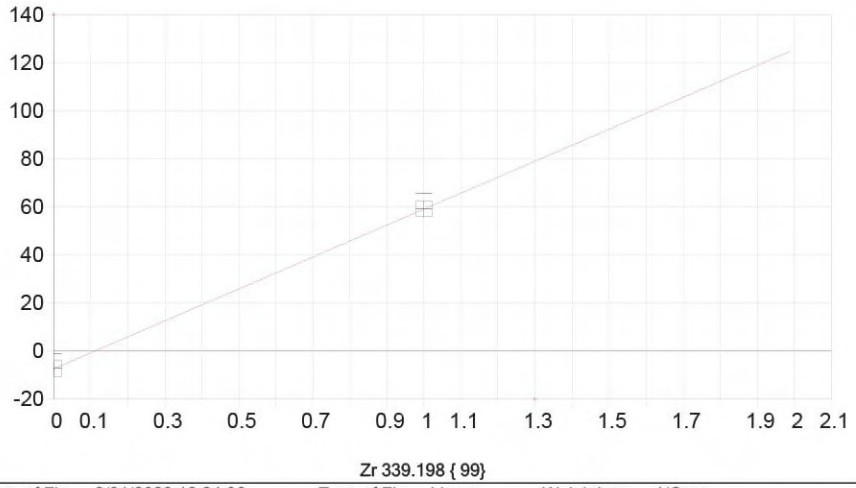


Zn 213.856 {458}

Date of Fit:	8/31/2023 12:24:36	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000561		Re-Slope:	1.000000	
A1 (Gain):	0.224643		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.998066		Status:	OK.	
Std Error of Est:	0.000275				
Predicted MDL:	0.000170				
Predicted MQL:	0.000567				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00000	-.000	.000	.00056	.000	1
STD1 35069	.25000	.27287	.023	9.15	.06215	.000	1
STD2 35280	.50000	.54312	.043	8.62	.12316	.000	1
STD3 35650	5.0000	5.4698	.470	9.40	1.2352	.002	1
STD4 34010	10.000	10.553	.553	5.53	2.3830	.007	1
STD5 35635	20.000	18.909	-1.09	-5.46	4.2719	.009	1
STD0.1 3519	.02500	.02702	.002	8.09	.00666	.000	1

STD0.03 351	.00800	.00862	.001	7.70	.00251	.000	1



Date of Fit:	8/31/2023 12:24:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-7.439888	Re-Slope:	1.000000
A1 (Gain):	66.520014	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.075190		
Predicted MQL:	0.250632		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00000	.000	.000	-7.4399	2.89	1
STD5 35635	1.0000	1.0000	.000	.000	59.080	3.36	1

Sample Name: ICIS 3570190 Acquired: 9/5/2023 14:48:04 Type: Cal
Method: NEW IEC MAY 2023(v66) Mode: IR Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130	Bi2230	Ca3158	Cd2265
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0013	-.0001	.0001	.0101	.0009	.0085	.0001	.0011	.0066
Stddev	.0000	.0007	.0001	.0014	.0004	.0105	.0001	.0015	.0052
%RSD	2.955	506.1	39.82	13.57	43.31	122.9	118.7	141.3	79.17
#1	.0013	-.0006	.0001	.0095	.0006	.0020	-.0000	.0002	.0036
#2	.0013	-.0005	.0001	.0091	.0007	.0030	.0001	.0002	.0035
#3	.0014	.0006	.0002	.0116	.0013	.0206	.0002	.0028	.0126

Elem	Co2286	Cr2055	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0050	.0005	.0006	.0042	-.0004	.0011	.0007	.0006	.0004
Stddev	.0034	.0004	.0004	.0051	.0012	.0014	.0007	.0006	.0002
%RSD	66.70	77.37	59.78	121.8	294.7	133.9	103.3	94.01	51.71
#1	.0032	.0002	.0003	.0011	-.0008	-.0002	.0003	.0002	.0003
#2	.0030	.0003	.0005	.0014	-.0014	.0007	.0002	.0003	.0003
#3	.0089	.0009	.0010	.0100	.0010	.0026	.0014	.0012	.0007

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960	Si2516	Sn1899	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0066	.0030	.0002	-.0008	.0001	.0000	.0018	.0011	.0056
Stddev	.0047	.0009	.0001	.0004	.0000	.0000	.0010	.0005	.0077
%RSD	71.61	31.69	63.61	56.60	29.92	138.6	57.05	43.08	135.8
#1	.0034	.0025	.0001	-.0009	.0001	.0000	.0013	.0009	.0008
#2	.0044	.0024	.0001	-.0011	.0001	-.0000	.0011	.0008	.0017
#3	.0120	.0040	.0003	-.0003	.0002	.0000	.0029	.0017	.0145

Elem	Ti3349	Tl1908	V_2924	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0007	.0002	.0006	.0110
Stddev	.0008	.0001	.0003	.0036
%RSD	108.2	49.03	53.41	32.45
#1	.0003	.0001	.0006	.0093
#2	.0002	.0002	.0003	.0086
#3	.0017	.0003	.0009	.0151

Sample Name: ICIS 3570190 Acquired: 9/5/2023 14:48:04 Type: Cal
Method: NEW IEC MAY 2023(v66) Mode: IR Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4090.8	22327.	12114.	23277.
Stddev	12.9	82.	28.	71.
%RSD	.31515	.36614	.22768	.30676
#1	4089.0	22259.	12083.	23200.
#2	4104.5	22418.	12126.	23292.
#3	4078.9	22305.	12135.	23340.

Sample Name: STD0.03 3519880 Acquired: 9/5/2023 14:51:41 Type: Cal
Method: NEW IEC MAY 2023(v66) Mode: IR Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Al3082	As1890	B_2089	Ba2335	Be3130	Bi2230	Ca3158	Cd2265	Co2286
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0014	.0003	.0146	.0023	.0239	.0003	.0032	.0245	.0171
Stddev	.0002	.0000	.0013	.0004	.0028	.0001	.0004	.0045	.0027
%RSD	14.04	10.24	9.057	18.16	11.71	25.89	13.29	18.21	15.69
#1	.0016	.0003	.0137	.0019	.0271	.0002	.0037	.0212	.0157
#2	.0014	.0003	.0161	.0027	.0221	.0004	.0028	.0296	.0202
#3	.0012	.0002	.0141	.0022	.0225	.0003	.0030	.0227	.0155

Elem	Cr2055	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0017	.0008	.0115	.0000	.0029	.0016	.0013	.0011	.0123
Stddev	.0003	.0004	.0014	.0002	.0001	.0003	.0001	.0002	.0011
%RSD	18.94	44.20	11.89	1859.	3.654	18.78	8.562	17.25	8.618
#1	.0015	.0012	.0131	.0002	.0030	.0020	.0014	.0009	.0135
#2	.0021	.0006	.0108	-.0002	.0027	.0014	.0012	.0013	.0114
#3	.0016	.0007	.0107	-.0000	.0029	.0015	.0013	.0010	.0120

Elem	Ni2316	P_1782	Pb2203	Sb2068	Se1960	Si2516	Sn1899	Sr4077	Ti3349
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0068	.0006	.0005	.0002	.0001	.0028	.0029	.0169	.0020
Stddev	.0011	.0001	.0003	.0000	.0000	.0003	.0005	.0020	.0004
%RSD	15.36	17.34	50.66	15.70	21.23	9.323	15.91	12.01	19.77
#1	.0061	.0006	.0003	.0002	.0001	.0031	.0025	.0192	.0022
#2	.0080	.0008	.0008	.0002	.0001	.0028	.0035	.0156	.0022
#3	.0064	.0006	.0005	.0003	.0001	.0026	.0029	.0158	.0015

Elem	Tl1908	V_2924	Zn2062
Units	Cts/S	Cts/S	Cts/S
Avg	.0006	.0013	.0222
Stddev	.0001	.0001	.0034
%RSD	23.71	7.961	15.46
#1	.0004	.0013	.0195
#2	.0007	.0013	.0260
#3	.0006	.0015	.0210

Sample Name: STD0.03 3519880 Acquired: 9/5/2023 14:51:41 Type: Cal
Method: NEW IEC MAY 2023(v66) Mode: IR Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4045.3	22175.	12230.	23631.
Stddev	64.9	381.	77.	178.
%RSD	1.6034	1.7169	.62759	.75196
#1	4081.7	22392.	12309.	23819.
#2	4083.8	22397.	12224.	23609.
#3	3970.5	21735.	12156.	23465.

Sample Name: STD1 3506908 Acquired: 9/5/2023 14:58:55 Type: Cal
Method: NEW IEC MAY 2023(v66) Mode: IR Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130	Bi2230	Ca3158	Cd2265
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0062	.0536	.0040	.2224	.0518	.6393	.0072	.0912	.7021
Stddev	.0003	.0002	.0000	.0010	.0002	.0037	.0000	.0012	.0016
%RSD	4.026	.3451	.5845	.4621	.4605	.5817	.6534	1.327	.2314
#1	.0061	.0537	.0040	.2220	.0517	.6361	.0071	.0908	.7010
#2	.0065	.0536	.0040	.2217	.0516	.6383	.0072	.0903	.7014
#3	.0060	.0534	.0040	.2236	.0520	.6434	.0072	.0926	.7040

Elem	Co2286	Cr2055	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.4585	.0450	.0163	.3009	.0485	.0719	.0414	.0298	.0241
Stddev	.0015	.0004	.0004	.0012	.0001	.0004	.0002	.0004	.0002
%RSD	.3280	.7979	2.444	.3829	.1066	.5276	.5711	1.357	.8310
#1	.4583	.0447	.0159	.2996	.0484	.0719	.0411	.0296	.0239
#2	.4572	.0449	.0165	.3018	.0485	.0716	.0415	.0296	.0240
#3	.4601	.0454	.0166	.3012	.0485	.0723	.0416	.0303	.0243

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960	Si2516	Sn1899	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.2779	.1426	.0171	.0448	.0050	.0027	.0600	.0755	.4703
Stddev	.0040	.0006	.0002	.0005	.0001	.0001	.0003	.0004	.0012
%RSD	1.451	.4052	.9451	1.014	1.221	2.253	.4944	.4702	.2616
#1	.2757	.1421	.0169	.0453	.0050	.0027	.0597	.0753	.4706
#2	.2754	.1424	.0171	.0444	.0049	.0026	.0601	.0753	.4689
#3	.2826	.1432	.0172	.0447	.0050	.0027	.0603	.0759	.4713

Elem	Ti3349	Tl1908	V_2924	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0546	.0098	.0214	.5041
Stddev	.0002	.0002	.0004	.0016
%RSD	.4422	1.868	2.031	.3243
#1	.0544	.0097	.0213	.5030
#2	.0545	.0098	.0219	.5033
#3	.0548	.0100	.0211	.5060

Sample Name: STD1 3506908 Acquired: 9/5/2023 14:58:55 Type: Cal
Method: NEW IEC MAY 2023(v66) Mode: IR Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3981.9	22125.	12161.	23607.
Stddev	13.8	82.	118.	237.
%RSD	.34779	.37148	.97185	1.0058
#1	3991.4	22170.	12139.	23526.
#2	3988.3	22175.	12055.	23422.
#3	3966.0	22030.	12289.	23875.

Sample Name: STD0.1 3519881 Acquired: 9/5/2023 14:55:25 Type: Cal
Method: NEW IEC MAY 2023(v66) Mode: IR Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130	Bi2230	Ca3158	Cd2265
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0014	.0051	.0005	.0283	.0058	.0672	.0007	.0092	.0710
Stddev	.0001	.0003	.0000	.0005	.0001	.0035	.0001	.0006	.0013
%RSD	7.930	5.378	6.204	1.765	2.426	5.165	8.801	6.031	1.767
#1	.0013	.0048	.0005	.0282	.0057	.0654	.0007	.0089	.0703
#2	.0015	.0051	.0005	.0288	.0059	.0712	.0008	.0099	.0724
#3	.0014	.0053	.0005	.0279	.0057	.0650	.0007	.0089	.0703

Elem	Co2286	Cr2055	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0469	.0048	.0017	.0315	.0037	.0071	.0045	.0032	.0026
Stddev	.0006	.0001	.0001	.0017	.0001	.0004	.0002	.0001	.0001
%RSD	1.321	1.902	5.468	5.534	2.886	5.334	3.644	3.504	2.839
#1	.0467	.0047	.0018	.0306	.0038	.0066	.0043	.0031	.0026
#2	.0476	.0049	.0016	.0335	.0036	.0074	.0046	.0034	.0027
#3	.0464	.0047	.0017	.0304	.0038	.0072	.0045	.0032	.0026

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960	Si2516	Sn1899	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0308	.0161	.0018	.0032	.0006	.0003	.0070	.0079	.0490
Stddev	.0018	.0001	.0000	.0004	.0000	.0000	.0006	.0002	.0024
%RSD	5.918	.7920	1.046	11.66	6.528	4.371	8.399	3.036	4.916
#1	.0292	.0161	.0018	.0032	.0006	.0003	.0064	.0077	.0478
#2	.0328	.0162	.0018	.0035	.0006	.0003	.0076	.0082	.0518
#3	.0304	.0160	.0018	.0028	.0006	.0003	.0069	.0078	.0475

Elem	Ti3349	Tl1908	V_2924	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0059	.0011	.0025	.0540
Stddev	.0006	.0001	.0003	.0010
%RSD	9.895	10.07	10.72	1.767
#1	.0059	.0010	.0022	.0532
#2	.0065	.0013	.0026	.0550
#3	.0053	.0011	.0027	.0537

Sample Name: STD0.1 3519881 Acquired: 9/5/2023 14:55:25 Type: Cal
Method: NEW IEC MAY 2023(v66) Mode: IR Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4012.0	22122.	12120.	23451.
Stddev	13.7	80.	19.	62.
%RSD	.34072	.36023	.15482	.26524
#1	4023.6	22194.	12116.	23405.
#2	4015.5	22136.	12103.	23427.
#3	3996.9	22037.	12140.	23522.

Sample Name: STD2 3528066 Acquired: 9/5/2023 15:02:09 Type: Cal
Method: NEW IEC MAY 2023(v66) Mode: IR Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130	Bi2230	Ca3158	Cd2265
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0115	.1066	.0077	.4358	.1005	1.239	.0139	.1812	1.370
Stddev	.0004	.0005	.0000	.0010	.0002	.005	.0001	.0020	.002
%RSD	3.305	.4432	.1784	.2273	.2309	.4252	1.020	1.131	.1329
#1	.0118	.1071	.0078	.4366	.1006	1.244	.0139	.1788	1.368
#2	.0117	.1065	.0077	.4347	.1002	1.233	.0138	.1827	1.369
#3	.0111	.1061	.0078	.4361	.1006	1.239	.0141	.1820	1.372

Elem	Co2286	Cr2055	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.8949	.0870	.0323	.5952	.0969	.1405	.0809	.0574	.0467
Stddev	.0023	.0004	.0003	.0026	.0001	.0012	.0002	.0006	.0002
%RSD	.2554	.4061	1.070	.4354	.1163	.8286	.2769	1.003	.4217
#1	.8935	.0873	.0322	.5981	.0970	.1414	.0811	.0568	.0469
#2	.8937	.0866	.0327	.5932	.0968	.1408	.0807	.0578	.0465
#3	.8976	.0871	.0321	.5944	.0971	.1392	.0811	.0577	.0467

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960	Si2516	Sn1899	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.5502	.2769	.0334	.0883	.0097	.0053	.1132	.1464	.9118
Stddev	.0063	.0010	.0001	.0006	.0000	.0001	.0002	.0004	.0025
%RSD	1.149	.3465	.3611	.6251	.3632	1.842	.1394	.2957	.2720
#1	.5433	.2763	.0336	.0889	.0097	.0054	.1131	.1466	.9147
#2	.5556	.2764	.0334	.0878	.0096	.0053	.1131	.1459	.9101
#3	.5517	.2780	.0334	.0882	.0097	.0052	.1134	.1466	.9107

Elem	Ti3349	Tl1908	V_2924	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.1069	.0189	.0410	.9997
Stddev	.0006	.0005	.0004	.0021
%RSD	.5363	2.885	.8861	.2114
#1	.1072	.0195	.0413	1.001
#2	.1062	.0184	.0410	.9973
#3	.1073	.0188	.0406	1.000

Sample Name: STD2 3528066 Acquired: 9/5/2023 15:02:09 Type: Cal
Method: NEW IEC MAY 2023(v66) Mode: IR Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3950.8	22041.	12119.	23529.
Stddev	21.6	134.	105.	191.
%RSD	.54615	.60943	.86637	.81172
#1	3974.0	22188.	12017.	23334.
#2	3947.0	22011.	12227.	23716.
#3	3931.3	21924.	12112.	23538.

Sample Name: STD3 3565025 Acquired: 9/5/2023 15:05:17 Type: Cal
Method: NEW IEC MAY 2023(v66) Mode: IR Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130	Bi2230	Ca3158	Cd2265
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.1062	1.045	.0806	4.311	.9952	12.41	.1389	1.788	14.29
Stddev	.0003	.005	.0012	.067	.0162	.05	.0023	.023	.25
%RSD	.3057	.4845	1.531	1.564	1.626	.4239	1.626	1.276	1.752
#1	.1065	1.050	.0821	4.389	1.014	12.46	.1415	1.814	14.58
#2	.1060	1.046	.0799	4.274	.9842	12.43	.1376	1.773	14.14
#3	.1059	1.040	.0800	4.270	.9876	12.36	.1377	1.777	14.14

Elem	Co2286	Cr2055	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	9.333	.8750	.3253	5.772	.9831	1.427	.7899	.5792	.4765
Stddev	.157	.0148	.0013	.018	.0020	.002	.0032	.0075	.0080
%RSD	1.683	1.686	.4116	.3105	.2071	.1246	.4091	1.295	1.672
#1	9.515	.8920	.3267	5.782	.9837	1.426	.7920	.5878	.4857
#2	9.244	.8663	.3249	5.783	.9848	1.429	.7916	.5737	.4721
#3	9.242	.8667	.3242	5.752	.9808	1.426	.7862	.5763	.4718

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960	Si2516	Sn1899	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5.494	2.839	.3343	.9202	.1000	.0549	1.145	1.531	9.160
Stddev	.064	.049	.0060	.0164	.0016	.0010	.003	.027	.017
%RSD	1.158	1.710	1.798	1.786	1.559	1.757	.2464	1.737	.1814
#1	5.567	2.895	.3411	.9392	.1018	.0560	1.144	1.561	9.169
#2	5.450	2.811	.3320	.9107	.0992	.0545	1.149	1.517	9.170
#3	5.464	2.811	.3298	.9108	.0991	.0542	1.144	1.514	9.140

Elem	Ti3349	Tl1908	V_2924	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.076	.1972	.4133	10.07
Stddev	.004	.0043	.0018	.18
%RSD	.3853	2.168	.4384	1.817
#1	1.081	.2022	.4145	10.28
#2	1.076	.1949	.4142	9.974
#3	1.073	.1946	.4112	9.955

Sample Name: STD3 3565025 Acquired: 9/5/2023 15:05:17 Type: Cal
Method: NEW IEC MAY 2023(v66) Mode: IR Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3512.5	20611.	11589.	22568.
Stddev	48.5	277.	42.	61.
%RSD	1.3815	1.3427	.36045	.27070
#1	3457.0	20294.	11552.	22512.
#2	3546.9	20807.	11582.	22558.
#3	3533.5	20731.	11634.	22633.

Sample Name: STD4 3574515 Acquired: 9/5/2023 15:08:11 Type: Cal
Method: NEW IEC MAY 2023(v66) Mode: IR Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130	Bi2230	Ca3158	Cd2265
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.2111	2.086	.1617	8.695	1.959	23.97	.2820	3.608	28.45
Stddev	.0012	.006	.0016	.079	.019	.15	.0027	.051	.35
%RSD	.5534	.3086	.9766	.9043	.9612	.6143	.9437	1.421	1.223
#1	.2111	2.092	.1635	8.785	1.981	23.91	.2851	3.665	28.85
#2	.2123	2.086	.1606	8.641	1.947	23.85	.2803	3.567	28.20
#3	.2100	2.080	.1610	8.659	1.950	24.13	.2807	3.591	28.29

Elem	Co2286	Cr2055	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	18.79	1.732	.6459	11.25	1.949	2.901	1.553	1.183	.9415
Stddev	.22	.017	.0008	.03	.007	.006	.003	.015	.0092
%RSD	1.190	.9798	.1308	.2351	.3828	.2230	.2097	1.299	.9765
#1	19.05	1.752	.6450	11.26	1.953	2.898	1.554	1.200	.9519
#2	18.63	1.721	.6467	11.27	1.953	2.909	1.556	1.171	.9345
#3	18.70	1.724	.6458	11.22	1.940	2.897	1.549	1.179	.9381

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960	Si2516	Sn1899	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	11.12	5.686	.6488	1.834	.2003	.1085	2.273	3.063	17.94
Stddev	.17	.068	.0070	.022	.0018	.0011	.007	.037	.12
%RSD	1.517	1.200	1.081	1.215	.9020	.9989	.3149	1.226	.6511
#1	11.31	5.765	.6564	1.860	.2024	.1098	2.266	3.105	17.85
#2	10.98	5.640	.6427	1.818	.1993	.1077	2.281	3.035	18.07
#3	11.07	5.655	.6471	1.824	.1991	.1081	2.272	3.048	17.90

Elem	Ti3349	Tl1908	V_2924	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2.138	.3945	.8158	20.19
Stddev	.008	.0039	.0019	.26
%RSD	.3950	.9968	.2341	1.287
#1	2.145	.3988	.8160	20.49
#2	2.141	.3910	.8177	20.00
#3	2.129	.3937	.8139	20.09

Sample Name: STD4 3574515 Acquired: 9/5/2023 15:08:11 Type: Cal
Method: NEW IEC MAY 2023(v66) Mode: IR Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3275.2	19736.	11514.	22461.
Stddev	41.4	224.	48.	104.
%RSD	1.2638	1.1335	.41572	.46116
#1	3228.2	19483.	11529.	22471.
#2	3306.2	19908.	11461.	22353.
#3	3291.2	19818.	11554.	22559.

Sample Name: STD5 3563555 Acquired: 9/5/2023 15:11:31 Type: Cal
Method: NEW IEC MAY 2023(v66) Mode: IR Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Al3082	As1890	Be3130	Ca3158	Cd2265	Co2286	Cr2055	Cu3273	Fe2599
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4.309	.3265	46.79	7.277	55.31	37.32	3.431	1.306	22.06
Stddev	.036	.0064	1.07	.152	1.06	.71	.067	.010	.18
%RSD	.8471	1.953	2.295	2.095	1.919	1.914	1.938	.7987	.8188
#1	4.348	.3338	47.85	7.453	56.53	38.15	3.506	1.317	22.25
#2	4.276	.3237	45.71	7.188	54.77	36.96	3.404	1.296	21.89
#3	4.303	.3220	46.81	7.189	54.63	36.87	3.382	1.305	22.05

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3.792	6.034	3.102	2.409	1.861	21.62	11.28	3.632	.4066
Stddev	.050	.052	.029	.040	.039	.85	.21	.070	.0078
%RSD	1.318	.8624	.9461	1.664	2.071	3.916	1.849	1.921	1.924
#1	3.849	6.091	3.131	2.455	1.905	22.60	11.52	3.712	.4155
#2	3.763	5.988	3.072	2.379	1.845	21.13	11.17	3.596	.4034
#3	3.763	6.022	3.101	2.395	1.833	21.14	11.15	3.588	.4009

Elem	Se1960	Sn1899	Sr4077	Ti3349	V_2924	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.2123	6.044	35.90	4.275	1.634	38.27
Stddev	.0048	.125	.23	.048	.015	.80
%RSD	2.241	2.064	.6294	1.118	.8974	2.097
#1	.2177	6.187	36.13	4.330	1.650	39.20
#2	.2100	5.985	35.89	4.246	1.621	37.88
#3	.2091	5.960	35.68	4.249	1.631	37.74

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3088.0	18947.	11279.	22125.
Stddev	56.2	347.	74.	192.
%RSD	1.8202	1.8340	.65616	.86830
#1	3023.4	18551.	11194.	21909.
#2	3114.9	19092.	11314.	22190.
#3	3125.7	19200.	11329.	22276.

Sample Name: CCV 3565024 Acquired: 9/5/2023 15:53:09 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9820	95.71	4.872	48.00	4.989	4.979
Stddev	.0029	.10	.033	.27	.035	.007
%RSD	.3002	.1056	.6696	.5624	.6930	.1464
#1	.9842	95.81	4.899	48.19	5.017	4.970
#2	.9787	95.70	4.882	48.12	5.000	4.984
#3	.9831	95.61	4.836	47.69	4.951	4.981
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.863	96.25	4.875	4.805	5.018	5.014
Stddev	.026	.87	.042	.040	.038	.007
%RSD	.5399	.9023	.8664	.8363	.7491	.1440
#1	4.884	96.75	4.911	4.841	5.044	5.012
#2	4.870	96.75	4.885	4.812	5.036	5.022
#3	4.833	95.24	4.828	4.761	4.975	5.008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	102.6	98.80	4.795	101.6	4.808	4.943
Stddev	.2	.14	.002	.2	.060	.031
%RSD	.1861	.1377	.0352	.2119	1.241	.6213
#1	102.9	98.95	4.795	101.9	4.859	4.959
#2	102.6	98.69	4.793	101.5	4.823	4.963
#3	102.5	98.74	4.797	101.5	4.743	4.908
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCV 3565024 Acquired: 9/5/2023 15:53:09 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	99.11	4.850	48.31	4.819	4.864	4.862
Stddev	1.08	.043	.32	.037	.029	.029
%RSD	1.088	.8924	.6646	.7709	.5957	.5891
#1	99.92	4.884	48.59	4.850	4.885	4.878
#2	99.52	4.865	48.39	4.828	4.876	4.879
#3	97.88	4.802	47.96	4.778	4.831	4.829
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	50.08	4.832	4.996	4.766	4.728	4.850
Stddev	.06	.046	.021	.014	.043	.007
%RSD	.1139	.9577	.4288	.2959	.9138	.1554
#1	50.10	4.864	5.020	4.750	4.735	4.858
#2	50.01	4.854	4.985	4.778	4.767	4.844
#3	50.12	4.779	4.982	4.769	4.682	4.848
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	4.842
Stddev	.045
%RSD	.9249
#1	4.879
#2	4.854
#3	4.792
Check ?	Chk Pass
Value	
Range	

Sample Name: CCV 3565024 Acquired: 9/5/2023 15:53:09 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3633.2	21145.	11640.	23065.
Stddev	36.4	178.	32.	62.
%RSD	1.0006	.84357	.27743	.26976
#1	3602.8	20997.	11614.	23030.
#2	3623.5	21095.	11676.	23137.
#3	3673.5	21343.	11629.	23028.

Sample Name: ICV 3561908 Acquired: 9/5/2023 15:23:36 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9813	38.37	1.942	19.94	1.914	2.040
Stddev	.0048	.09	.013	.04	.009	.008
%RSD	.4861	.2252	.6775	.2165	.4537	.4127
#1	.9862	38.45	1.932	19.93	1.908	2.049
#2	.9766	38.28	1.938	19.91	1.909	2.037
#3	.9810	38.37	1.957	19.99	1.924	2.033
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	W 1.872	39.48	1.993	1.926	2.023	1.958
Stddev	.006	.07	.006	.006	.007	.010
%RSD	.3482	.1817	.3114	.3010	.3504	.4991
#1	1.869	39.54	1.992	1.925	2.016	1.967
#2	1.869	39.40	1.988	1.921	2.022	1.959
#3	1.880	39.50	2.000	1.932	2.030	1.948
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	2.000					
Range	-5.000%					

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	41.04	38.49	W 1.899	39.83	1.950	2.044
Stddev	.04	.19	.001	.14	.005	.001
%RSD	.0890	.4935	.0746	.3515	.2430	.0568
#1	41.08	38.71	1.901	39.94	1.950	2.044
#2	41.01	38.37	1.898	39.88	1.945	2.043
#3	41.03	38.39	1.898	39.67	1.955	2.046
Check ?	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass
Value			2.000			
Range			-5.000%			

Sample Name: ICV 3561908 Acquired: 9/5/2023 15:23:36 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	38.64	1.974	19.97	1.975	2.073	2.017
Stddev	.09	.008	.07	.004	.007	.008
%RSD	.2357	.4154	.3261	.2105	.3412	.3991
#1	38.68	1.970	19.94	1.977	2.069	2.019
#2	38.54	1.969	19.91	1.970	2.069	2.009
#3	38.70	1.984	20.04	1.978	2.081	2.024
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	20.26	1.954	2.016	1.979	1.943	1.991
Stddev	.08	.005	.006	.008	.002	.004
%RSD	.4049	.2345	.2936	.4099	.1199	.2015
#1	20.26	1.952	2.023	1.988	1.943	1.993
#2	20.17	1.951	2.014	1.977	1.945	1.986
#3	20.34	1.959	2.012	1.973	1.941	1.993
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	2.005
Stddev	.003
%RSD	.1425
#1	2.006
#2	2.002
#3	2.007
Check ?	Chk Pass
Value	
Range	

Sample Name: ICV 3561908 Acquired: 9/5/2023 15:23:36 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3782.3	21525.	12058.	23501.
Stddev	9.3	59.	34.	49.
%RSD	.24551	.27319	.27938	.20809
#1	3789.8	21586.	12097.	23555.
#2	3785.3	21519.	12036.	23459.
#3	3771.9	21469.	12042.	23489.

Sample Name: ICB Acquired: 9/5/2023 15:33:32 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0007	.0590	.0035	-.0177	.0042	.0014
Stddev	.0034	.1317	.0065	.0265	.0065	.0061
%RSD	506.2	223.3	184.3	150.0	153.6	429.0
#1	.0022	-.0538	.0109	.0120	.0114	-.0027
#2	-.0044	.0270	-.0012	-.0392	-.0013	-.0015
#3	.0001	.2038	.0008	-.0258	.0026	.0085
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0001	.0302	.0036	.0036	.0046	-.0035
Stddev	.0036	.1252	.0062	.0059	.0067	.0086
%RSD	3360.	415.4	169.8	165.5	146.4	247.2
#1	.0040	-.0546	.0104	.0101	.0120	-.0038
#2	-.0031	-.0290	-.0017	-.0014	-.0010	-.0119
#3	-.0005	.1740	.0021	.0021	.0027	.0053
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0302	.0868	.0049	.0447	.0018	.0044
Stddev	.1269	.0968	.0058	.1472	.0063	.0066
%RSD	419.8	111.6	119.8	329.5	350.4	149.9
#1	-.0527	.0059	.0014	-.0437	-.0027	.0118
#2	-.0329	.0604	.0016	-.0368	-.0009	-.0008
#3	.1763	.1941	.0116	.2146	.0090	.0022
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: ICB Acquired: 9/5/2023 15:33:32 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0473	.0036	.0015	.0026	.0055	.0049
Stddev	.1135	.0061	.0279	.0051	.0081	.0056
%RSD	240.1	171.8	1830.	193.3	146.5	113.0
#1	-.0323	.0104	.0329	.0084	.0139	.0110
#2	-.0031	-.0015	-.0207	-.0011	-.0024	.0001
#3	.1773	.0018	-.0076	.0006	.0051	.0036
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0223	.0038	.0016	.0014	.0128	.0009
Stddev	.0688	.0063	.0061	.0040	.0086	.0090
%RSD	308.2	166.3	387.5	287.2	66.96	959.1
#1	-.0258	.0108	-.0024	-.0009	.0220	-.0067
#2	-.0084	-.0014	-.0015	-.0009	.0050	-.0014
#3	.1011	.0020	.0087	.0060	.0114	.0108
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0035
Stddev	.0062
%RSD	175.1
#1	.0103
#2	-.0016
#3	.0018
Check ?	Chk Pass
High Limit	
Low Limit	

Sample Name: ICB Acquired: 9/5/2023 15:33:32 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4148.3	22470.	12289.	24109.
Stddev	23.8	90.	84.	181.
%RSD	.57405	.40066	.68350	.75052
#1	4125.8	22398.	12206.	23942.
#2	4173.3	22571.	12288.	24084.
#3	4145.7	22440.	12374.	24301.

Sample Name: ICVL 3561056 Acquired: 9/5/2023 15:42:17 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0528	.4586	.0557	.4218	.0183	.0179
Stddev	.0003	.0234	.0025	.0016	.0002	.0001
%RSD	.5482	5.094	4.433	.3676	.8451	.3589
#1	.0527	.4319	.0530	.4222	.0185	.0179
#2	.0532	.4684	.0560	.4201	.0182	.0178
#3	.0526	.4754	.0579	.4231	.0183	.0179
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.2787	.4837	.0170	.0167	.0243	.0467
Stddev	.0017	.0021	.0002	.0001	.0002	.0013
%RSD	.6000	.4344	1.203	.5639	.8040	2.834
#1	.2789	.4814	.0172	.0166	.0244	.0478
#2	.2769	.4856	.0168	.0167	.0240	.0452
#3	.2802	.4839	.0171	.0168	.0244	.0471
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.4844	3.184	.1000	.5191	.0168	.0367
Stddev	.0011	.058	.0005	.0213	.0006	.0002
%RSD	.2248	1.806	.5238	4.100	3.568	.6151
#1	.4854	3.137	.1005	.5237	.0169	.0365
#2	.4833	3.166	.1002	.5376	.0162	.0369
#3	.4846	3.248	.0995	.4958	.0173	.0368
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: ICVL 3561056 Acquired: 9/5/2023 15:42:17 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.5228	.0167	W .0737	.0267	.0594	.0937
Stddev	.0045	.0000	.0012	.0012	.0014	.0031
%RSD	.8616	.0251	1.656	4.407	2.396	3.280
#1	.5233	.0167	.0750	.0280	.0584	.0903
#2	.5181	.0167	.0728	.0262	.0610	.0944
#3	.5270	.0167	.0732	.0258	.0589	.0963
Check ?	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass
Value			.1000			
Range			-20.00%			

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.032	.0939	.1015	.0268	.1001	.0257
Stddev	.003	.0002	.0004	.0010	.0034	.0015
%RSD	.2757	.2221	.3784	3.562	3.377	6.020
#1	1.031	.0938	.1011	.0265	.1038	.0254
#2	1.029	.0937	.1015	.0279	.0993	.0274
#3	1.035	.0941	.1019	.0260	.0972	.0244
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0346
Stddev	.0001
%RSD	.2847
#1	.0345
#2	.0346
#3	.0347
Check ?	Chk Pass
Value	
Range	

Sample Name: ICVL 3561056 Acquired: 9/5/2023 15:42:17 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4209.8	22937.	12201.	24023.
Stddev	10.7	49.	43.	54.
%RSD	.25368	.21281	.34879	.22419
#1	4218.5	22959.	12200.	24012.
#2	4213.0	22972.	12245.	24081.
#3	4197.9	22882.	12160.	23975.

Sample Name: ICSA 3536663 Acquired: 9/5/2023 15:46:19 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0053	491.6	-.0055	-.0701	.0084	-.0033
Stddev	.0030	1.5	.0045	.0002	.0000	.0001
%RSD	57.53	.3061	81.47	.3203	.5444	1.715
#1	-.0078	489.9	-.0090	-.0699	.0084	-.0033
#2	-.0019	492.0	-.0004	-.0702	.0084	-.0033
#3	-.0061	492.8	-.0072	-.0703	.0084	-.0034
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0431	474.2	.0004	-.0052	-.0037	-.0028
Stddev	.0033	1.0	.0001	.0001	.0004	.0011
%RSD	7.557	.2170	37.06	2.577	11.45	40.81
#1	.0394	473.4	.0005	-.0053	-.0032	-.0039
#2	.0446	473.9	.0004	-.0051	-.0038	-.0016
#3	.0454	475.3	.0002	-.0052	-.0040	-.0028
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	483.1	.1850	.0169	490.1	.0001	-.0035
Stddev	3.3	.0435	.0015	1.9	.0007	.0004
%RSD	.6930	23.54	8.932	.3905	1324.	12.29
#1	479.3	.1428	.0152	488.1	.0007	-.0031
#2	484.4	.1824	.0172	490.3	-.0007	-.0040
#3	485.6	.2297	.0182	491.9	.0002	-.0034
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: ICSA 3536663 Acquired: 9/5/2023 15:46:19 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0537	-.0004	-.0480	-.0091	.0027	-.0144
Stddev	.0102	.0005	.0009	.0040	.0032	.0034
%RSD	18.96	111.8	1.933	43.56	114.7	23.42
#1	-.0628	-.0006	-.0487	-.0127	.0057	-.0112
#2	-.0427	.0001	-.0484	-.0097	.0032	-.0180
#3	-.0555	-.0008	-.0469	-.0049	-.0006	-.0141
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0566	-.0006	-.0089	.0057	F .0624	-.0059
Stddev	.0156	.0007	.0001	.0020	.0093	.0029
%RSD	27.61	116.9	.8382	35.37	14.83	49.51
#1	-.0405	.0001	-.0088	.0039	.0561	-.0030
#2	-.0576	-.0014	-.0089	.0079	.0580	-.0089
#3	-.0717	-.0006	-.0090	.0054	.0730	-.0059
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit					.0500	
Low Limit					-.0500	

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0038
Stddev	.0003
%RSD	8.143
#1	-.0040
#2	-.0035
#3	-.0040
Check ?	Chk Pass
High Limit	
Low Limit	

Sample Name: ICSA 3536663 Acquired: 9/5/2023 15:46:19 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3448.3	19838.	11422.	22645.
Stddev	4.1	20.	9.	53.
%RSD	.11810	.10217	.07943	.23287
#1	3449.9	19843.	11430.	22660.
#2	3443.6	19855.	11412.	22587.
#3	3451.3	19816.	11424.	22689.

Sample Name: ICSAB 3496533 Acquired: 9/5/2023 15:49:54 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9857	493.6	.9650	9.723	1.001	.4919
Stddev	.0064	.9	.0028	.051	.007	.0011
%RSD	.6532	.1771	.2916	.5281	.6975	.2213
#1	.9787	492.9	.9634	9.717	.9974	.4906
#2	.9913	494.6	.9633	9.675	.9966	.4924
#3	.9872	493.4	.9682	9.777	1.009	.4926
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F .0391	477.7	.9372	.9192	.9924	1.002
Stddev	.0029	1.6	.0046	.0046	.0045	.004
%RSD	7.487	.3442	.4896	.4981	.4558	.4331
#1	.0364	476.7	.9335	.9158	.9917	.9982
#2	.0386	476.7	.9357	.9173	.9883	1.007
#3	.0422	479.6	.9423	.9244	.9972	1.000
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	.0000					
Range	20.00%					

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	491.5	10.39	F .0129	497.7	.9779	.9913
Stddev	4.9	.04	.0008	.4	.0016	.0045
%RSD	1.002	.3592	6.080	.0752	.1657	.4589
#1	493.4	10.35	.0129	498.0	.9760	.9914
#2	485.9	10.38	.0122	497.9	.9788	.9867
#3	495.2	10.43	.0137	497.3	.9789	.9958
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
Value			1.000			
Range			-20.00%			

Sample Name: ICSAB 3496533 Acquired: 9/5/2023 15:49:54 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	10.88	.9348	9.894	.9171	1.042	.9471
Stddev	.04	.0053	.028	.0035	.009	.0112
%RSD	.3598	.5709	.2784	.3819	.8327	1.177
#1	10.86	.9322	9.888	.9131	1.043	.9600
#2	10.85	.9312	9.870	.9187	1.033	.9404
#3	10.92	.9409	9.924	.9195	1.051	.9409
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	9.861	.9338	.9873	.9467	.9949	.9503
Stddev	.010	.0024	.0008	.0001	.0105	.0030
%RSD	.1012	.2584	.0841	.0116	1.055	.3176
#1	9.869	.9315	.9882	.9466	1.002	.9469
#2	9.863	.9336	.9867	.9468	1.000	.9526
#3	9.850	.9363	.9870	.9468	.9828	.9514
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.9265
Stddev	.0036
%RSD	.3903
#1	.9248
#2	.9240
#3	.9306
Check ?	Chk Pass
Value	
Range	

Sample Name: ICSAB 3496533 Acquired: 9/5/2023 15:49:54 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3417.6	19771.	11395.	22657.
Stddev	21.2	147.	45.	105.
%RSD	.61899	.74275	.39736	.46376
#1	3436.7	19876.	11434.	22710.
#2	3421.4	19835.	11406.	22726.
#3	3394.9	19603.	11345.	22536.

Sample Name: CCB Acquired: 9/5/2023 15:57:35 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0026	.1588	.0005	.0053	-.0012	-.0010
Stddev	.0017	.1372	.0010	.0130	.0007	.0012
%RSD	67.22	86.41	205.8	246.9	57.21	125.5
#1	-.0040	.0621	.0003	.0174	-.0008	-.0020
#2	-.0006	.3159	.0016	.0069	-.0009	.0003
#3	-.0031	.0985	-.0004	-.0085	-.0020	-.0012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0018	.1510	-.0014	-.0013	-.0012	-.0062
Stddev	.0022	.1275	.0006	.0005	.0007	.0033
%RSD	123.4	84.46	44.95	39.84	61.27	53.77
#1	.0007	.0596	-.0010	-.0009	-.0005	-.0082
#2	-.0027	.2966	-.0011	-.0011	-.0012	-.0024
#3	-.0033	.0967	-.0021	-.0019	-.0020	-.0081
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.1602	.0335	.0067	.1405	-.0008	.0015
Stddev	.1478	.0436	.0014	.1443	.0010	.0012
%RSD	92.24	130.1	21.32	102.7	122.7	79.07
#1	.0485	.0301	.0052	.0202	-.0011	.0028
#2	.3278	.0786	.0081	.3005	.0003	.0014
#3	.1044	-.0083	.0067	.1008	-.0017	.0004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: CCB Acquired: 9/5/2023 15:57:35 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0150	-.0011	-.0120	-.0019	-.0010	.0003
Stddev	.0319	.0012	.0042	.0013	.0022	.0026
%RSD	213.2	107.1	35.28	70.77	222.3	792.1
#1	-.0076	.0002	-.0073	-.0012	.0015	.0028
#2	.0515	-.0013	-.0132	-.0010	-.0019	.0005
#3	.0010	-.0021	-.0155	-.0035	-.0025	-.0024
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0018	-.0009	-.0006	-.0011	.0106	-.0011
Stddev	.0149	.0009	.0013	.0019	.0015	.0008
%RSD	833.9	99.73	214.2	166.1	13.99	74.48
#1	-.0178	-.0003	-.0018	-.0031	.0115	-.0021
#2	.0115	-.0004	.0008	.0006	.0089	-.0007
#3	.0010	-.0019	-.0009	-.0009	.0114	-.0005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0017
Stddev	.0007
%RSD	40.80
#1	-.0011
#2	-.0014
#3	-.0024
Check ?	Chk Pass
High Limit	
Low Limit	

Sample Name: CCB Acquired: 9/5/2023 15:57:35 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4217.3	22702.	12051.	23859.
Stddev	3.6	42.	20.	76.
%RSD	.08652	.18363	.16358	.31986
#1	4216.6	22721.	12034.	23813.
#2	4221.2	22730.	12072.	23947.
#3	4214.0	22654.	12047.	23817.

Sample Name: CCVL 3561056 Acquired: 9/5/2023 16:01:11 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0505	.4755	.0574	.4495	.0188	.0170
Stddev	.0024	.0131	.0018	.0008	.0003	.0002
%RSD	4.660	2.748	3.158	.1771	1.442	.9771
#1	.0501	.4906	.0555	.4498	.0185	.0168
#2	.0531	.4680	.0578	.4486	.0189	.0171
#3	.0485	.4680	.0590	.4501	.0190	.0170
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.2805	.5052	.0172	.0170	.0248	.0497
Stddev	.0013	.0072	.0001	.0002	.0001	.0040
%RSD	.4512	1.427	.7829	.9449	.2034	8.097
#1	.2819	.5093	.0171	.0169	.0247	.0455
#2	.2795	.4968	.0171	.0169	.0248	.0502
#3	.2801	.5094	.0173	.0172	.0248	.0535
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.5001	3.130	.0980	.5155	.0171	.0380
Stddev	.0031	.030	.0005	.0081	.0004	.0002
%RSD	.6135	.9684	.5363	1.571	2.598	.6079
#1	.5002	3.132	.0982	.5245	.0174	.0378
#2	.5032	3.098	.0974	.5089	.0166	.0382
#3	.4970	3.159	.0983	.5129	.0173	.0379
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCVL 3561056 Acquired: 9/5/2023 16:01:11 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.5282	.0171	.0788	.0263	.0605	.0946
Stddev	.0052	.0000	.0022	.0021	.0009	.0010
%RSD	.9894	.0067	2.841	7.929	1.456	1.101
#1	.5292	.0171	.0769	.0264	.0596	.0950
#2	.5225	.0171	.0813	.0241	.0613	.0954
#3	.5328	.0171	.0783	.0283	.0607	.0934
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.028	.0931	.0993	.0251	.1053	.0275
Stddev	.009	.0001	.0007	.0010	.0043	.0045
%RSD	.8337	.1239	.7128	3.998	4.088	16.51
#1	1.018	.0930	.0985	.0249	.1040	.0293
#2	1.035	.0932	.0996	.0262	.1018	.0308
#3	1.031	.0931	.0998	.0242	.1101	.0223
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0342
Stddev	.0001
%RSD	.2167
#1	.0342
#2	.0342
#3	.0343
Check ?	Chk Pass
Value	
Range	

Sample Name: CCVL 3561056 Acquired: 9/5/2023 16:01:11 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4195.7	22822.	12285.	24433.
Stddev	22.7	128.	67.	144.
%RSD	.54070	.56157	.54570	.58751
#1	4203.7	22861.	12339.	24538.
#2	4213.3	22926.	12210.	24270.
#3	4170.1	22679.	12306.	24491.

Sample Name: MB 580-436476/26-A Acquired: 9/5/2023 16:05:05 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0020	-.0326	-.0020	-.0621	-.0029	-.0032
Stddev	.0025	.0266	.0014	.0003	.0003	.0001
%RSD	127.8	81.59	69.05	.4314	9.130	2.380
#1	-.0003	-.0553	-.0006	-.0624	-.0031	-.0033
#2	-.0049	-.0033	-.0019	-.0619	-.0029	-.0032
#3	-.0007	-.0392	-.0034	-.0620	-.0026	-.0031

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0032	-.0479	-.0028	-.0027	-.0028	-.0131
Stddev	.0007	.0099	.0002	.0002	.0001	.0039
%RSD	22.76	20.78	7.669	8.344	4.708	29.69
#1	-.0025	-.0591	-.0031	-.0029	-.0026	-.0086
#2	-.0031	-.0443	-.0028	-.0026	-.0029	-.0147
#3	-.0039	-.0402	-.0026	-.0025	-.0028	-.0159

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0329	-.1324	-.0027	-.0261	-.0030	-.0025
Stddev	.0125	.0168	.0011	.0128	.0003	.0003
%RSD	37.88	12.68	41.33	49.11	10.55	10.52
#1	-.0459	-.1167	-.0036	-.0345	-.0032	-.0023
#2	-.0318	-.1501	-.0015	-.0324	-.0030	-.0028
#3	-.0211	-.1305	-.0031	-.0113	-.0026	-.0024

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0467	-.0024	-.0279	-.0019	-.0029	-.0025
Stddev	.0090	.0004	.0010	.0021	.0018	.0035
%RSD	19.18	18.58	3.666	107.2	61.60	138.9
#1	-.0463	-.0023	-.0288	-.0032	-.0032	-.0014
#2	-.0559	-.0029	-.0281	.0005	-.0010	.0003
#3	-.0380	-.0021	-.0268	-.0031	-.0045	-.0064

Sample Name: MB 580-436476/26-A Acquired: 9/5/2023 16:05:05 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0421	-.0028	-.0031	-.0030	.0078	-.0019
Stddev	.0014	.0004	.0001	.0004	.0022	.0010
%RSD	3.289	13.05	3.633	13.01	27.94	52.64
#1	-.0420	-.0025	-.0032	-.0034	.0099	-.0030
#2	-.0435	-.0027	-.0032	-.0030	.0081	-.0014
#3	-.0407	-.0032	-.0030	-.0026	.0055	-.0012

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0045
Stddev	.0000
%RSD	.4966
#1	-.0045
#2	-.0045
#3	-.0045

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4292.8	23131.	12524.	24825.
Stddev	17.7	33.	2.	30.
%RSD	.41168	.14250	.01727	.12137
#1	4300.3	23137.	12525.	24793.
#2	4305.5	23161.	12521.	24829.
#3	4272.6	23096.	12525.	24853.

Sample Name: CCVL 3561056 Acquired: 9/5/2023 16:42:18 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0496	.4548	.0565	.4394	.0188	.0166
Stddev	.0016	.0196	.0010	.0015	.0002	.0000
%RSD	3.132	4.299	1.809	.3388	.9455	.1272
#1	.0511	.4382	.0562	.4401	.0188	.0166
#2	.0480	.4499	.0556	.4404	.0190	.0166
#3	.0497	.4764	.0576	.4377	.0186	.0166
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.2794	.4745	.0168	.0165	.0250	.0408
Stddev	.0014	.0070	.0002	.0005	.0003	.0052
%RSD	.5019	1.480	.9821	3.047	1.100	12.84
#1	.2795	.4802	.0166	.0161	.0247	.0468
#2	.2780	.4767	.0169	.0171	.0251	.0369
#3	.2808	.4667	.0169	.0164	.0252	.0388
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.4794	3.245	.1034	.4930	.0181	.0372
Stddev	.0011	.020	.0006	.0111	.0002	.0002
%RSD	.2387	.6091	.5907	2.256	.8830	.6042
#1	.4802	3.241	.1040	.4832	.0180	.0371
#2	.4799	3.266	.1028	.4907	.0180	.0370
#3	.4781	3.227	.1034	.5051	.0183	.0374
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCVL 3561056 Acquired: 9/5/2023 16:42:18 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.5248	.0168	.0768	.0272	.0610	.0933
Stddev	.0099	.0003	.0016	.0012	.0003	.0013
%RSD	1.884	1.770	2.149	4.343	.4831	1.353
#1	.5144	.0171	.0758	.0267	.0609	.0918
#2	.5340	.0168	.0787	.0263	.0613	.0941
#3	.5261	.0165	.0758	.0285	.0607	.0939
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.108	.0923	.1002	.0255	.0984	.0254
Stddev	.011	.0013	.0001	.0012	.0022	.0026
%RSD	.9931	1.449	.1369	4.892	2.230	10.35
#1	1.121	.0908	.1003	.0246	.0990	.0231
#2	1.105	.0935	.1000	.0250	.0960	.0282
#3	1.099	.0925	.1002	.0269	.1003	.0248
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0335
Stddev	.0001
%RSD	.3045
#1	.0334
#2	.0336
#3	.0334
Check ?	Chk Pass
Value	
Range	

Sample Name: CCVL 3561056 Acquired: 9/5/2023 16:42:18 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4209.1	22969.	12191.	24555.
Stddev	13.6	52.	21.	22.
%RSD	.32274	.22720	.17575	.09114
#1	4224.8	23019.	12191.	24551.
#2	4201.7	22974.	12170.	24535.
#3	4200.8	22915.	12213.	24579.

Sample Name: LCS 580-436476/27-A Acquired: 9/5/2023 16:08:40 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9824	19.07	.9663	9.808	1.010	.9770
Stddev	.0025	.06	.0051	.045	.002	.0020
%RSD	.2534	.3298	.5268	.4622	.2018	.2006
#1	.9853	19.02	.9617	9.773	1.010	.9747
#2	.9811	19.14	.9653	9.791	1.009	.9783
#3	.9809	19.05	.9718	9.859	1.012	.9779

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0061	19.14	.9569	.9361	1.029	.9888
Stddev	.0013	.09	.0011	.0024	.003	.0009
%RSD	20.79	.4594	.1167	.2528	.3283	.0952
#1	-.0075	19.23	.9568	.9347	1.026	.9895
#2	-.0050	19.13	.9559	.9347	1.028	.9892
#3	-.0059	19.06	.9581	.9388	1.033	.9878

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	20.75	19.29	.9338	20.55	.9721	.9864
Stddev	.06	.08	.0015	.11	.0060	.0053
%RSD	.2962	.3938	.1651	.5235	.6163	.5339
#1	20.71	19.22	.9322	20.48	.9790	.9830
#2	20.82	19.37	.9352	20.68	.9696	.9837
#3	20.72	19.28	.9340	20.51	.9678	.9924

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	19.37	.9466	4.982	.9625	1.032	.9791
Stddev	.12	.0011	.005	.0022	.006	.0054
%RSD	.6182	.1198	.1082	.2286	.5393	.5502
#1	19.51	.9467	4.978	.9602	1.029	.9782
#2	19.31	.9454	4.980	.9628	1.029	.9742
#3	19.29	.9476	4.988	.9645	1.039	.9848

Sample Name: LCS 580-436476/27-A Acquired: 9/5/2023 16:08:40 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	9.915	.9540	.9872	.9323	.9811	.9486
Stddev	.010	.0016	.0017	.0018	.0181	.0018
%RSD	.0989	.1666	.1744	.1950	1.841	.1882
#1	9.915	.9539	.9854	.9302	.9625	.9476
#2	9.924	.9525	.9888	.9336	.9824	.9507
#3	9.905	.9557	.9874	.9331	.9986	.9476

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.9686
Stddev	.0010
%RSD	.1069
#1	.9694
#2	.9674
#3	.9690

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4046.0	22612.	12243.	24371.
Stddev	15.8	104.	29.	57.
%RSD	.39157	.46002	.23950	.23400
#1	4027.8	22495.	12277.	24436.
#2	4055.8	22694.	12225.	24332.
#3	4054.6	22647.	12227.	24345.

Sample Name: LCSD 580-436476/28-A Acquired: 9/5/2023 16:11:41 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9711	18.63	.9708	9.833	1.013	.9603
Stddev	.0232	.44	.0072	.029	.003	.0221
%RSD	2.385	2.366	.7389	.2917	.2750	2.305
#1	.9444	18.12	.9654	9.809	1.012	.9348
#2	.9855	18.85	.9681	9.826	1.011	.9709
#3	.9833	18.91	.9789	9.865	1.016	.9751

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0080	19.30	.9590	.9373	1.029	.9681
Stddev	.0014	.04	.0021	.0013	.003	.0279
%RSD	17.25	.2195	.2231	.1336	.3306	2.878
#1	-.0067	19.25	.9602	.9384	1.026	.9362
#2	-.0094	19.32	.9565	.9359	1.028	.9875
#3	-.0078	19.33	.9602	.9377	1.033	.9806

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	20.46	18.96	.9245	20.23	.9903	.9924
Stddev	.47	.51	.0219	.48	.0050	.0050
%RSD	2.278	2.675	2.364	2.364	.5006	.5048
#1	19.92	18.38	.8993	19.68	.9914	.9877
#2	20.76	19.28	.9375	20.50	.9947	.9919
#3	20.70	19.23	.9367	20.52	.9849	.9977

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	19.65	.9488	4.962	.9597	1.034	.9861
Stddev	.07	.0013	.015	.0021	.006	.0026
%RSD	.3330	.1383	.3095	.2207	.6035	.2587
#1	19.61	.9489	4.948	.9587	1.029	.9848
#2	19.73	.9474	4.979	.9583	1.031	.9845
#3	19.63	.9500	4.959	.9621	1.041	.9890

Sample Name: LCSD 580-436476/28-A Acquired: 9/5/2023 16:11:41 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	9.776	.9533	.9742	.9137	.9779	.9327
Stddev	.242	.0025	.0235	.0215	.0129	.0214
%RSD	2.480	.2612	2.413	2.352	1.320	2.292
#1	9.497	.9505	.9471	.8889	.9656	.9080
#2	9.933	.9547	.9891	.9257	.9767	.9460
#3	9.898	.9548	.9863	.9265	.9913	.9440

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.9679
Stddev	.0030
%RSD	.3104
#1	.9667
#2	.9657
#3	.9713

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4066.6	22672.	12597.	25125.
Stddev	7.7	38.	281.	554.
%RSD	.18855	.16729	2.2275	2.2042
#1	4062.1	22656.	12919.	25757.
#2	4075.5	22715.	12470.	24887.
#3	4062.3	22644.	12402.	24729.

Sample Name: 580-131059-F-1-A Acquired: 9/5/2023 16:14:42 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0024	.0087	.0004	-.0380	.1152	-.0020
Stddev	.0032	.0379	.0013	.0077	.0010	.0005
%RSD	133.4	435.8	342.1	20.29	.8895	24.77
#1	-.0051	-.0347	.0013	-.0294	.1161	-.0026
#2	-.0032	.0354	-.0011	-.0403	.1141	-.0017
#3	.0011	.0254	.0009	-.0444	.1154	-.0018

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0043	23.00	-.0026	-.0013	-.0024	-.0006
Stddev	.0008	.04	.0003	.0003	.0003	.0044
%RSD	19.43	.1826	9.776	22.06	10.65	691.7
#1	-.0052	22.96	-.0023	-.0010	-.0022	-.0046
#2	-.0041	23.03	-.0027	-.0016	-.0024	.0041
#3	-.0036	23.03	-.0027	-.0015	-.0027	-.0014

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0588	10.49	.0033	9.137	.0636	.0050
Stddev	.0247	.09	.0013	.085	.0010	.0016
%RSD	42.04	.8211	40.46	.9255	1.564	32.36
#1	.0305	10.39	.0034	9.039	.0628	.0067
#2	.0701	10.52	.0045	9.185	.0632	.0046
#3	.0759	10.55	.0019	9.186	.0647	.0036

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	15.08	-.0022	.0044	-.0156	-.0029	.0022
Stddev	.03	.0004	.0035	.0025	.0030	.0020
%RSD	.1776	17.72	81.19	16.27	104.5	91.63
#1	15.06	-.0020	.0083	-.0128	-.0015	.0045
#2	15.11	-.0021	.0015	-.0161	-.0064	.0007
#3	15.09	-.0027	.0033	-.0178	-.0008	.0014

Sample Name: 580-131059-F-1-A Acquired: 9/5/2023 16:14:42 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	16.45	-.0029	.2069	.0003	.0150	.0031
Stddev	.36	.0007	.0028	.0008	.0064	.0010
%RSD	2.193	25.50	1.365	249.3	42.40	32.32
#1	16.07	-.0021	.2036	-.0006	.0219	.0021
#2	16.49	-.0031	.2082	.0006	.0093	.0033
#3	16.78	-.0035	.2088	.0010	.0138	.0041

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0046
Stddev	.0004
%RSD	7.699
#1	-.0042
#2	-.0048
#3	-.0049

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4150.5	22752.	12382.	24690.
Stddev	7.9	63.	112.	263.
%RSD	.19095	.27610	.90541	1.0656
#1	4150.2	22740.	12498.	24947.
#2	4158.5	22819.	12372.	24702.
#3	4142.7	22695.	12275.	24421.

Sample Name: 580-131059-F-1-B DU Acquired: 9/5/2023 16:18:10 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0048	-.0207	.0005	-.0568	.1162	-.0031
Stddev	.0021	.0445	.0014	.0024	.0000	.0001
%RSD	43.26	214.9	271.8	4.283	.0284	3.626
#1	-.0024	.0099	.0021	-.0548	.1162	-.0030
#2	-.0059	-.0717	-.0003	-.0561	.1162	-.0032
#3	-.0060	-.0003	-.0003	-.0595	.1162	-.0031

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0019	22.95	-.0027	-.0016	-.0023	-.0114
Stddev	.0019	.09	.0002	.0003	.0003	.0034
%RSD	99.18	.3934	6.405	16.49	12.09	29.36
#1	-.0017	22.84	-.0025	-.0014	-.0021	-.0125
#2	-.0040	23.00	-.0028	-.0015	-.0021	-.0077
#3	-.0002	23.00	-.0029	-.0019	-.0026	-.0141

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0115	10.44	.0008	9.137	.0619	.0013
Stddev	.0044	.03	.0004	.035	.0003	.0001
%RSD	38.76	.2945	51.15	.3836	.4780	8.169
#1	.0146	10.41	.0006	9.099	.0617	.0014
#2	.0064	10.43	.0006	9.168	.0623	.0012
#3	.0134	10.47	.0013	9.142	.0618	.0012

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	15.05	-.0028	.0083	-.0210	-.0013	-.0034
Stddev	.04	.0006	.0028	.0013	.0003	.0051
%RSD	.2913	20.56	33.79	6.166	21.05	149.8
#1	15.00	-.0021	.0087	-.0216	-.0016	-.0085
#2	15.08	-.0033	.0053	-.0195	-.0013	.0017
#3	15.07	-.0028	.0109	-.0219	-.0010	-.0034

Sample Name: 580-131059-F-1-B DU Acquired: 9/5/2023 16:18:10 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	21.83	-.0027	.2067	-.0023	.0034	.0050
Stddev	.04	.0008	.0002	.0017	.0018	.0032
%RSD	.2031	28.56	.0730	73.86	54.68	63.55
#1	21.88	-.0029	.2066	-.0007	.0041	.0031
#2	21.82	-.0018	.2068	-.0020	.0013	.0087
#3	21.79	-.0033	.2068	-.0041	.0047	.0033

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0047
Stddev	.0002
%RSD	3.316
#1	-.0046
#2	-.0047
#3	-.0049

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4146.1	22530.	12208.	24317.
Stddev	11.1	91.	17.	20.
%RSD	.26791	.40550	.13813	.08197
#1	4158.8	22633.	12222.	24340.
#2	4141.5	22460.	12189.	24303.
#3	4138.1	22497.	12213.	24308.

Sample Name: CCV 3565024 Acquired: 9/5/2023 17:12:41 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9553	91.67	4.844	46.94	4.951	4.750
Stddev	.0107	.67	.038	.28	.026	.033
%RSD	1.115	.7318	.7844	.6020	.5223	.6874
#1	.9675	92.44	4.851	46.85	4.937	4.786
#2	.9476	91.30	4.804	46.70	4.935	4.724
#3	.9509	91.26	4.879	47.25	4.981	4.739
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.821	94.62	4.729	4.675	4.991	4.987
Stddev	.022	.54	.025	.025	.024	.037
%RSD	.4536	.5717	.5182	.5361	.4895	.7385
#1	4.808	94.49	4.715	4.660	4.989	5.025
#2	4.810	94.16	4.715	4.662	4.967	4.952
#3	4.847	95.22	4.758	4.704	5.016	4.984
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	101.3	96.58	4.710	100.2	4.846	4.836
Stddev	.7	.46	.021	.4	.027	.029
%RSD	.6521	.4721	.4345	.3683	.5513	.6070
#1	102.0	97.11	4.730	100.6	4.847	4.831
#2	100.7	96.34	4.690	99.84	4.819	4.810
#3	101.1	96.30	4.711	100.1	4.872	4.868
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCV 3565024 Acquired: 9/5/2023 17:12:41 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	99.96	4.736	46.82	4.707	4.828	4.731
Stddev	.52	.027	.27	.022	.018	.031
%RSD	.5173	.5774	.5681	.4685	.3800	.6620
#1	100.0	4.719	46.80	4.697	4.833	4.732
#2	99.41	4.722	46.56	4.692	4.808	4.699
#3	100.4	4.768	47.09	4.733	4.844	4.762
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	53.45	4.692	4.883	4.513	4.546	4.628
Stddev	.22	.019	.041	.039	.045	.035
%RSD	.4056	.4007	.8294	.8538	.9968	.7664
#1	53.69	4.693	4.925	4.556	4.579	4.668
#2	53.29	4.672	4.844	4.482	4.494	4.602
#3	53.36	4.710	4.881	4.500	4.565	4.613
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	4.660
Stddev	.024
%RSD	.5052
#1	4.656
#2	4.639
#3	4.685
Check ?	Chk Pass
Value	
Range	

Sample Name: CCV 3565024 Acquired: 9/5/2023 17:12:41 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3672.4	21245.	11747.	23601.
Stddev	18.6	126.	29.	41.
%RSD	.50680	.59391	.24748	.17370
#1	3684.7	21330.	11715.	23567.
#2	3681.5	21305.	11773.	23647.
#3	3651.0	21100.	11753.	23588.

Sample Name: CCVL 3561056 Acquired: 9/5/2023 17:20:40 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0504	.4404	.0584	.4383	.0199	.0181
Stddev	.0012	.0066	.0028	.0032	.0005	.0004
%RSD	2.464	1.490	4.847	.7400	2.468	2.090
#1	.0517	.4430	.0561	.4346	.0193	.0186
#2	.0504	.4329	.0576	.4405	.0203	.0179
#3	.0492	.4453	.0616	.4399	.0201	.0179
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.2777	.5478	.0177	.0174	.0259	.0576
Stddev	.0021	.0180	.0006	.0005	.0006	.0024
%RSD	.7674	3.282	3.174	2.638	2.263	4.093
#1	.2760	.5325	.0171	.0169	.0252	.0548
#2	.2769	.5433	.0182	.0177	.0263	.0588
#3	.2801	.5676	.0178	.0176	.0261	.0590
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.5164	3.218	.1031	.5552	.0189	.0379
Stddev	.0101	.065	.0026	.0137	.0006	.0005
%RSD	1.952	2.020	2.539	2.468	3.366	1.288
#1	.5279	3.293	.1060	.5497	.0184	.0374
#2	.5122	3.183	.1025	.5452	.0196	.0382
#3	.5091	3.177	.1008	.5708	.0187	.0383
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCVL 3561056 Acquired: 9/5/2023 17:20:40 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.5685	.0177	.0822	.0268	.0591	.0904
Stddev	.0165	.0010	.0051	.0013	.0034	.0021
%RSD	2.899	5.784	6.191	4.792	5.777	2.319
#1	.5495	.0167	.0774	.0262	.0555	.0924
#2	.5771	.0179	.0876	.0283	.0623	.0882
#3	.5790	.0187	.0816	.0260	.0596	.0905
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.298	.0915	.1027	.0263	.0973	.0278
Stddev	.030	.0007	.0021	.0013	.0031	.0018
%RSD	2.284	.7875	2.085	4.949	3.176	6.618
#1	1.328	.0907	.1051	.0277	.0938	.0298
#2	1.295	.0919	.1017	.0252	.0996	.0275
#3	1.269	.0920	.1011	.0259	.0985	.0262
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0339
Stddev	.0005
%RSD	1.538
#1	.0333
#2	.0343
#3	.0342
Check ?	Chk Pass
Value	
Range	

Sample Name: CCVL 3561056 Acquired: 9/5/2023 17:20:40 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4205.2	22859.	11753.	23666.
Stddev	27.6	151.	391.	810.
%RSD	.65742	.66263	3.3230	3.4234
#1	4223.8	22969.	11303.	22733.
#2	4218.3	22920.	11961.	24072.
#3	4173.4	22686.	11996.	24193.

Sample Name: 580-131059-F-1-C MS Acquired: 9/5/2023 16:21:37 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9643	18.55	.9716	9.677	1.124	.9660
Stddev	.0032	.06	.0064	.041	.004	.0029
%RSD	.3295	.3142	.6624	.4260	.3765	.3054
#1	.9667	18.56	.9682	9.658	1.122	.9641
#2	.9655	18.60	.9676	9.648	1.121	.9694
#3	.9607	18.49	.9791	9.724	1.129	.9644

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0072	41.71	.9557	.9361	1.029	.9802
Stddev	.0010	.13	.0050	.0051	.005	.0041
%RSD	13.64	.3232	.5284	.5477	.4889	.4153
#1	-.0064	41.56	.9527	.9325	1.026	.9817
#2	-.0083	41.74	.9528	.9339	1.027	.9756
#3	-.0070	41.83	.9615	.9420	1.035	.9833

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	20.47	29.40	.9345	29.10	1.035	.9917
Stddev	.05	.04	.0016	.11	.004	.0052
%RSD	.2275	.1391	.1729	.3715	.3925	.5258
#1	20.47	29.36	.9359	28.98	1.034	.9881
#2	20.52	29.39	.9347	29.11	1.032	.9894
#3	20.43	29.44	.9327	29.20	1.040	.9977

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	34.53	.9465	4.922	.9411	1.031	.9635
Stddev	.14	.0047	.024	.0055	.007	.0050
%RSD	.4127	.4914	.4774	.5859	.7233	.5220
#1	34.39	.9440	4.905	.9363	1.024	.9591
#2	34.53	.9437	4.912	.9400	1.031	.9625
#3	34.68	.9519	4.949	.9472	1.039	.9690

Sample Name: 580-131059-F-1-C MS Acquired: 9/5/2023 16:21:37 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	29.79	.9579	1.184	.9219	.9753	.9334
Stddev	.05	.0054	.003	.0041	.0176	.0072
%RSD	.1612	.5682	.2607	.4427	1.803	.7757
#1	29.77	.9546	1.182	.9186	.9553	.9297
#2	29.84	.9550	1.188	.9265	.9821	.9287
#3	29.75	.9642	1.183	.9207	.9885	.9417

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.9543
Stddev	.0060
%RSD	.6273
#1	.9501
#2	.9517
#3	.9611

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3986.6	22444.	12300.	24499.
Stddev	23.8	102.	31.	49.
%RSD	.59703	.45472	.25483	.19818
#1	4003.2	22497.	12315.	24544.
#2	3997.3	22510.	12320.	24506.
#3	3959.4	22327.	12263.	24447.

Sample Name: 580-131038-F-3-A Acquired: 9/5/2023 17:31:02 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0053	-.0299	.0007	-.0645	.1311	-.0024
Stddev	.0044	.0072	.0024	.0050	.0005	.0003
%RSD	82.17	24.02	328.3	7.713	.3841	12.44
#1	-.0066	-.0277	.0024	-.0588	.1316	-.0027
#2	-.0005	-.0241	.0019	-.0680	.1306	-.0024
#3	-.0090	-.0379	-.0021	-.0668	.1313	-.0021

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0022	20.11	-.0022	-.0019	-.0015	-.0033
Stddev	.0013	.27	.0004	.0003	.0004	.0038
%RSD	60.37	1.363	18.72	16.34	28.12	114.2
#1	-.0008	19.81	-.0017	-.0016	-.0010	.0008
#2	-.0034	20.16	-.0025	-.0022	-.0018	-.0042
#3	-.0023	20.35	-.0024	-.0019	-.0018	-.0066

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0435	12.08	.0003	8.084	-.0001	-.0020
Stddev	.0066	.47	.0015	.267	.0013	.0005
%RSD	15.10	3.863	592.9	3.303	873.0	23.45
#1	-.0502	11.55	.0004	7.776	.0002	-.0014
#2	-.0431	12.36	.0017	8.224	-.0016	-.0022
#3	-.0371	12.35	-.0013	8.252	.0010	-.0023

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	14.47	-.0022	.0285	-.0243	-.0019	-.0029
Stddev	.20	.0008	.0042	.0016	.0027	.0024
%RSD	1.395	37.40	14.88	6.442	142.3	82.72
#1	14.25	-.0017	.0331	-.0225	-.0011	-.0020
#2	14.51	-.0031	.0248	-.0256	.0003	-.0056
#3	14.65	-.0017	.0275	-.0246	-.0048	-.0011

Sample Name: 580-131038-F-3-A Acquired: 9/5/2023 17:31:02 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	26.86	-.0025	.1950	-.0010	.0093	.0268
Stddev	.97	.0009	.0066	.0005	.0018	.0013
%RSD	3.612	37.12	3.367	53.37	18.85	4.727
#1	25.74	-.0015	.1874	-.0008	.0108	.0265
#2	27.37	-.0026	.1982	-.0017	.0098	.0282
#3	27.46	-.0033	.1993	-.0006	.0074	.0257

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0035
Stddev	.0003
%RSD	9.561
#1	-.0031
#2	-.0037
#3	-.0036

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4187.2	22869.	12512.	25205.
Stddev	17.2	98.	234.	438.
%RSD	.41129	.42690	1.8722	1.7368
#1	4175.7	22796.	12782.	25710.
#2	4207.0	22980.	12364.	24924.
#3	4178.8	22831.	12390.	24983.

Sample Name: 580-131059-F-1-D MSD Acquired: 9/5/2023 16:24:38 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9735	18.85	.9719	9.724	1.127	.9667
Stddev	.0042	.05	.0035	.028	.002	.0015
%RSD	.4339	.2584	.3604	.2857	.2091	.1555
#1	.9765	18.81	.9726	9.739	1.125	.9669
#2	.9754	18.90	.9750	9.741	1.129	.9651
#3	.9687	18.82	.9681	9.692	1.127	.9681

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0048	42.40	.9524	.9338	1.029	.9880
Stddev	.0007	.20	.0025	.0015	.004	.0024
%RSD	15.20	.4760	.2666	.1555	.3822	.2472
#1	-.0048	42.21	.9550	.9349	1.029	.9852
#2	-.0056	42.61	.9522	.9343	1.032	.9896
#3	-.0041	42.39	.9500	.9321	1.024	.9893

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	20.76	30.09	.9425	29.64	1.055	.9852
Stddev	.01	.03	.0011	.09	.005	.0046
%RSD	.0241	.0930	.1195	.2983	.4394	.4630
#1	20.76	30.09	.9416	29.73	1.051	.9864
#2	20.76	30.06	.9438	29.55	1.053	.9891
#3	20.76	30.12	.9421	29.64	1.060	.9802

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	35.15	.9449	4.924	.9337	1.030	.9573
Stddev	.13	.0029	.033	.0023	.002	.0086
%RSD	.3637	.3106	.6628	.2512	.1825	.8931
#1	35.02	.9471	4.944	.9364	1.031	.9634
#2	35.27	.9460	4.941	.9325	1.032	.9610
#3	35.17	.9416	4.886	.9321	1.028	.9475

Sample Name: 580-131059-F-1-D MSD Acquired: 9/5/2023 16:24:38 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	34.54	.9634	1.198	.9225	.9721	.9442
Stddev	.08	.0052	.002	.0014	.0107	.0053
%RSD	.2340	.5366	.1454	.1469	1.099	.5609
#1	34.61	.9674	1.197	.9238	.9744	.9454
#2	34.45	.9653	1.196	.9226	.9814	.9384
#3	34.56	.9576	1.200	.9211	.9604	.9488

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.9558
Stddev	.0054
%RSD	.5601
#1	.9602
#2	.9574
#3	.9498

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3963.4	22328.	12217.	24441.
Stddev	7.2	9.	61.	100.
%RSD	.18228	.04039	.50182	.40802
#1	3956.0	22318.	12154.	24349.
#2	3963.5	22331.	12277.	24547.
#3	3970.5	22336.	12221.	24427.

Sample Name: 580-131059-F-1-A PDS Acquired: 9/5/2023 16:27:40 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9590	18.67	.9700	9.607	1.114	.9529
Stddev	.0048	.11	.0097	.048	.005	.0037
%RSD	.4985	.5851	.9989	.4992	.4435	.3856
#1	.9627	18.56	.9668	9.576	1.111	.9488
#2	.9606	18.78	.9622	9.582	1.112	.9559
#3	.9536	18.66	.9808	9.662	1.120	.9540

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0045	41.02	.9430	.9236	1.021	.9780
Stddev	.0022	.14	.0026	.0027	.005	.0067
%RSD	48.08	.3442	.2742	.2872	.5141	.6883
#1	-.0034	40.86	.9413	.9221	1.017	.9772
#2	-.0031	41.12	.9417	.9220	1.019	.9851
#3	-.0070	41.08	.9460	.9267	1.027	.9717

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	20.50	29.60	.9327	29.18	1.035	.9703
Stddev	.06	.02	.0013	.08	.003	.0047
%RSD	.2869	.0511	.1447	.2657	.2487	.4810
#1	20.45	29.59	.9327	29.10	1.033	.9659
#2	20.57	29.61	.9340	29.26	1.035	.9697
#3	20.50	29.59	.9313	29.19	1.038	.9752

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	34.18	.9340	4.869	.9278	.9996	.9486
Stddev	.10	.0029	.029	.0040	.0125	.0096
%RSD	.2949	.3119	.5872	.4281	1.248	1.015
#1	34.08	.9311	4.858	.9241	.9890	.9408
#2	34.17	.9340	4.848	.9273	.9966	.9457
#3	34.28	.9369	4.902	.9320	1.013	.9594

Sample Name: 580-131059-F-1-A PDS Acquired: 9/5/2023 16:27:40 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	33.06	.9467	1.181	.9103	.9712	.9397
Stddev	.10	.0029	.001	.0040	.0048	.0015
%RSD	.2985	.3066	.1124	.4376	.4964	.1591
#1	32.94	.9440	1.179	.9068	.9659	.9381
#2	33.12	.9464	1.182	.9146	.9725	.9401
#3	33.11	.9498	1.181	.9094	.9753	.9410

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.9471
Stddev	.0028
%RSD	.2906
#1	.9447
#2	.9465
#3	.9501

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3955.8	22311.	12084.	24183.
Stddev	3.1	35.	9.	39.
%RSD	.07935	.15522	.07779	.16275
#1	3954.8	22319.	12080.	24139.
#2	3959.3	22340.	12077.	24215.
#3	3953.3	22272.	12094.	24195.

Sample Name: 580-131059-F-1A SD@5 Acquired: 9/5/2023 16:30:41 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0039	-.0276	.0003	-.0312	.0221	-.0022
Stddev	.0008	.0048	.0011	.0022	.0006	.0001
%RSD	21.31	17.51	356.9	6.936	2.508	3.071
#1	-.0035	-.0244	.0011	-.0292	.0216	-.0022
#2	-.0049	-.0332	.0008	-.0335	.0219	-.0022
#3	-.0034	-.0252	-.0010	-.0310	.0227	-.0023

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0026	4.627	-.0019	-.0015	-.0018	-.0041
Stddev	.0028	.043	.0005	.0003	.0004	.0036
%RSD	107.1	.9309	24.93	21.06	25.08	89.21
#1	-.0057	4.613	-.0023	-.0017	-.0022	-.0082
#2	-.0003	4.592	-.0020	-.0016	-.0018	-.0029
#3	-.0018	4.675	-.0014	-.0011	-.0013	-.0012

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0173	2.221	.0080	1.845	.0125	.0033
Stddev	.0034	.060	.0013	.014	.0004	.0007
%RSD	19.42	2.699	15.88	.7735	2.817	20.27
#1	-.0143	2.163	.0093	1.829	.0123	.0040
#2	-.0168	2.283	.0078	1.857	.0123	.0033
#3	-.0210	2.219	.0068	1.848	.0129	.0026

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	3.095	-.0017	-.0173	-.0045	.0007	.0020
Stddev	.019	.0003	.0002	.0015	.0015	.0034
%RSD	.6007	15.16	1.066	34.58	224.7	167.4
#1	3.109	-.0020	-.0175	-.0040	.0006	.0051
#2	3.074	-.0016	-.0171	-.0062	.0021	.0025
#3	3.102	-.0016	-.0172	-.0032	-.0008	-.0016

Sample Name: 580-131059-F-1A SD@5 Acquired: 9/5/2023 16:30:41 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	3.786	-.0015	.0411	-.0025	.0085	-.0020
Stddev	.029	.0005	.0001	.0007	.0038	.0010
%RSD	.7627	34.21	.2657	27.71	44.97	52.91
#1	3.755	-.0014	.0412	-.0018	.0054	-.0019
#2	3.811	-.0021	.0410	-.0032	.0073	-.0030
#3	3.793	-.0011	.0410	-.0025	.0127	-.0009

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0040
Stddev	.0005
%RSD	11.70
#1	-.0043
#2	-.0041
#3	-.0035

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4205.5	22838.	12239.	24516.
Stddev	11.2	70.	85.	150.
%RSD	.26541	.30857	.69831	.61162
#1	4202.2	22821.	12210.	24431.
#2	4218.0	22916.	12172.	24428.
#3	4196.4	22778.	12335.	24689.

Sample Name: CCV 3565024 Acquired: 9/5/2023 16:34:13 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9855	94.93	4.895	47.28	4.960	4.892
Stddev	.0312	3.12	.014	.28	.013	.154
%RSD	3.166	3.286	.2888	.6014	.2548	3.149
#1	.9679	93.51	4.879	46.96	4.945	4.826
#2	.9670	92.77	4.901	47.39	4.964	4.783
#3	1.021	98.51	4.906	47.49	4.969	5.069
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.824	93.96	4.751	4.694	5.042	5.128
Stddev	.016	.23	.019	.019	.019	.147
%RSD	.3281	.2486	.3995	.3999	.3836	2.863
#1	4.805	93.70	4.730	4.673	5.020	5.061
#2	4.832	94.16	4.755	4.699	5.051	5.027
#3	4.834	94.03	4.767	4.709	5.055	5.297
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	104.3	99.70	4.842	103.4	4.830	4.887
Stddev	3.3	3.22	.153	3.4	.001	.038
%RSD	3.205	3.225	3.167	3.266	.0216	.7765
#1	102.8	98.17	4.761	101.7	4.829	4.844
#2	102.0	97.54	4.746	101.2	4.831	4.902
#3	108.2	103.4	5.019	107.3	4.829	4.916
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCV 3565024 Acquired: 9/5/2023 16:34:13 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	99.18	4.756	47.64	4.734	4.872	4.798
Stddev	.29	.018	.33	.013	.030	.032
%RSD	.2893	.3678	.6926	.2756	.6164	.6599
#1	98.99	4.736	47.28	4.720	4.837	4.764
#2	99.51	4.764	47.70	4.745	4.884	4.803
#3	99.05	4.768	47.94	4.738	4.893	4.826
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	52.99	4.760	5.015	4.645	4.752	4.799
Stddev	1.84	.022	.123	.148	.040	.148
%RSD	3.468	.4594	2.454	3.177	.8462	3.081
#1	52.03	4.736	4.963	4.574	4.706	4.743
#2	51.84	4.765	4.926	4.545	4.768	4.688
#3	55.11	4.779	5.155	4.814	4.782	4.967
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	4.720
Stddev	.027
%RSD	.5811
#1	4.690
#2	4.730
#3	4.742
Check ?	Chk Pass
Value	
Range	

Sample Name: CCV 3565024 Acquired: 9/5/2023 16:34:13 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3672.7	21294.	11387.	22851.
Stddev	12.4	74.	390.	765.
%RSD	.33698	.34575	3.4249	3.3488
#1	3685.3	21373.	11572.	23213.
#2	3672.1	21283.	11651.	23368.
#3	3660.6	21227.	10939.	21972.

Sample Name: 580-131051-E-1-B DU Acquired: 9/5/2023 18:03:52 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0039	216.8	.1410	.0233	1.248	.0023
Stddev	.0006	2.6	.0064	.0161	.002	.0007
%RSD	15.22	1.177	4.520	69.15	.1400	30.32
#1	-.0038	213.9	.1361	.0201	1.247	.0017
#2	-.0034	218.3	.1387	.0090	1.250	.0031
#3	-.0045	218.2	.1482	.0407	1.247	.0022

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0151	139.1	.0208	.1460	1.596	16.56
Stddev	.0031	.6	.0015	.0007	.006	.23
%RSD	20.79	.4633	7.287	.4674	.3481	1.385
#1	-.0149	139.4	.0205	.1455	1.591	16.30
#2	-.0183	139.5	.0195	.1458	1.602	16.71
#3	-.0120	138.3	.0225	.1468	1.596	16.69

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	424.1	14.43	.1647	111.9	7.014	.0192
Stddev	9.5	.19	.0040	1.2	.023	.0015
%RSD	2.229	1.313	2.439	1.072	.3327	7.708
#1	414.0	14.22	.1605	110.5	7.025	.0187
#2	425.4	14.59	.1685	112.4	7.030	.0181
#3	432.8	14.49	.1652	112.7	6.987	.0209

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	11.09	1.195	9.111	6.232	.1598	.0041
Stddev	.07	.004	.035	.028	.0026	.0008
%RSD	.6632	.2896	.3849	.4428	1.627	18.63
#1	11.08	1.195	9.123	6.230	.1582	.0041
#2	11.17	1.199	9.139	6.261	.1583	.0033
#3	11.02	1.192	9.072	6.206	.1628	.0049

Sample Name: 580-131051-E-1-B DU Acquired: 9/5/2023 18:03:52 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.280	.4410	.5851	15.44	.0322	1.246
Stddev	.036	.0015	.0082	.18	.0024	.014
%RSD	.8337	.3325	1.395	1.171	7.436	1.107
#1	4.241	.4409	.5756	15.23	.0341	1.230
#2	4.310	.4425	.5899	15.54	.0295	1.253
#3	4.290	.4396	.5897	15.55	.0331	1.255

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	10.48
Stddev	.07
%RSD	.6460
#1	10.49
#2	10.54
#3	10.41

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3943.0	22709.	12861.	25993.
Stddev	13.1	69.	191.	378.
%RSD	.33231	.30462	1.4812	1.4536
#1	3947.4	22735.	13080.	26428.
#2	3928.2	22630.	12776.	25804.
#3	3953.2	22761.	12729.	25747.

Sample Name: 580-131051-E-1-D MSD Acquired: 9/5/2023 18:13:11 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.7745	244.0	.9282	7.884	3.004	.7417
Stddev	.0034	.2	.0027	.032	.009	.0007
%RSD	.4398	.0893	.2934	.4107	.3140	.0955
#1	.7766	244.2	.9257	7.850	2.993	.7421
#2	.7706	243.8	.9279	7.888	3.005	.7422
#3	.7763	243.8	.9311	7.915	3.012	.7409

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0277	163.1	.7962	.8958	3.153	22.44
Stddev	.0029	1.0	.0013	.0017	.009	.03
%RSD	10.29	.5920	.1611	.1892	.3002	.1200
#1	-.0271	163.9	.7965	.8944	3.144	22.48
#2	-.0252	163.2	.7948	.8954	3.153	22.43
#3	-.0308	162.0	.7973	.8977	3.163	22.43

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	510.4	32.72	.9677	135.3	8.444	.7803
Stddev	2.2	.06	.0026	.6	.051	.0017
%RSD	.4219	.1924	.2728	.4591	.6096	.2242
#1	510.3	32.78	.9706	136.0	8.487	.7786
#2	508.3	32.66	.9655	134.9	8.457	.7803
#3	512.6	32.72	.9669	135.0	8.387	.7821

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	31.05	2.489	12.03	18.45	.9345	.7827
Stddev	.16	.007	.03	.05	.0034	.0067
%RSD	.5173	.2724	.2210	.2592	.3639	.8584
#1	31.20	2.482	12.05	18.40	.9307	.7750
#2	31.07	2.489	12.05	18.45	.9356	.7853
#3	30.88	2.496	12.00	18.49	.9372	.7876

Sample Name: 580-131051-E-1-D MSD Acquired: 9/5/2023 18:13:11 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	5.447	1.923	1.542	17.95	.8521	2.046
Stddev	.021	.004	.001	.01	.0093	.002
%RSD	.3952	.2131	.0573	.0412	1.097	.1142
#1	5.462	1.918	1.543	17.95	.8461	2.043
#2	5.457	1.923	1.541	17.94	.8473	2.047
#3	5.422	1.926	1.543	17.96	.8629	2.047

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	19.78
Stddev	.03
%RSD	.1696
#1	19.81
#2	19.75
#3	19.77

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3912.5	22729.	12890.	26214.
Stddev	21.8	132.	72.	144.
%RSD	.55776	.57895	.55565	.55077
#1	3887.5	22578.	12840.	26111.
#2	3927.7	22821.	12972.	26379.
#3	3922.3	22787.	12858.	26151.

Sample Name: CCB Acquired: 9/5/2023 16:38:40 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0026	-.0381	.0013	.0093	-.0009	-.0019
Stddev	.0021	.0108	.0024	.0128	.0009	.0006
%RSD	79.98	28.28	188.8	137.9	102.5	28.47
#1	-.0030	-.0266	.0024	.0241	-.0001	-.0013
#2	-.0045	-.0480	-.0015	.0013	-.0018	-.0023
#3	-.0004	-.0396	.0029	.0025	-.0007	-.0022
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0015	-.0343	-.0011	-.0010	-.0007	-.0069
Stddev	.0012	.0180	.0008	.0007	.0007	.0018
%RSD	81.79	52.62	73.10	66.96	106.8	26.04
#1	-.0010	-.0136	-.0003	-.0004	.0000	-.0072
#2	-.0029	-.0426	-.0018	-.0017	-.0014	-.0050
#3	-.0006	-.0466	-.0012	-.0009	-.0007	-.0086
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0348	.1125	.0083	-.0282	-.0018	.0020
Stddev	.0169	.0090	.0017	.0305	.0006	.0015
%RSD	48.52	8.029	21.08	108.2	32.13	73.28
#1	-.0155	.1229	.0101	-.0009	-.0011	.0038
#2	-.0417	.1074	.0066	-.0225	-.0022	.0011
#3	-.0471	.1072	.0080	-.0610	-.0020	.0013
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: CCB Acquired: 9/5/2023 16:38:40 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0074	-.0008	-.0098	-.0005	-.0018	.0002
Stddev	.0205	.0010	.0060	.0007	.0002	.0046
%RSD	278.7	137.6	61.16	144.5	11.41	2427.
#1	.0163	.0004	-.0031	.0003	-.0016	.0039
#2	-.0207	-.0015	-.0117	-.0008	-.0020	.0016
#3	-.0177	-.0012	-.0147	-.0010	-.0018	-.0049
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0875	-.0005	-.0016	-.0020	.0063	-.0017
Stddev	.0206	.0010	.0008	.0009	.0014	.0010
%RSD	23.55	205.9	48.35	42.13	22.40	61.81
#1	.1059	.0005	-.0007	-.0020	.0051	-.0028
#2	.0914	-.0015	-.0021	-.0029	.0059	-.0014
#3	.0653	-.0005	-.0021	-.0012	.0078	-.0008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0029
Stddev	.0007
%RSD	23.37
#1	-.0023
#2	-.0036
#3	-.0028
Check ?	Chk Pass
High Limit	
Low Limit	

Sample Name: CCB Acquired: 9/5/2023 16:38:40 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4217.3	22783.	11863.	23772.
Stddev	29.0	136.	214.	393.
%RSD	.68760	.59668	1.8025	1.6548
#1	4235.1	22845.	11941.	23899.
#2	4232.9	22876.	11621.	23331.
#3	4183.8	22627.	12026.	24087.

Sample Name: 580-131059-F-2-A Acquired: 9/5/2023 16:45:45 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0001	-.0409	-.0002	-.0514	.1211	-.0027
Stddev	.0025	.0241	.0017	.0047	.0005	.0007
%RSD	1963.	58.81	1042.	9.089	.4288	26.77
#1	-.0005	-.0568	.0013	-.0504	.1205	-.0032
#2	-.0019	-.0132	.0002	-.0473	.1212	-.0019
#3	.0028	-.0528	-.0020	-.0565	.1215	-.0030

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0027	18.40	-.0025	.0002	-.0021	-.0027
Stddev	.0023	.09	.0004	.0004	.0006	.0075
%RSD	85.94	.4849	15.84	241.4	28.80	275.6
#1	-.0013	18.30	-.0026	-.0002	-.0022	-.0100
#2	-.0014	18.42	-.0021	.0007	-.0014	-.0030
#3	-.0053	18.48	-.0028	.0001	-.0026	.0049

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0475	13.00	.0005	7.697	.1866	-.0018
Stddev	.0173	.16	.0006	.090	.0016	.0005
%RSD	36.37	1.264	132.1	1.174	.8523	27.02
#1	-.0615	12.82	.0012	7.594	.1852	-.0019
#2	-.0282	13.05	.0001	7.765	.1863	-.0013
#3	-.0528	13.14	.0002	7.732	.1883	-.0022

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	14.31	-.0020	.0228	-.0229	-.0030	.0008
Stddev	.08	.0004	.0065	.0010	.0022	.0016
%RSD	.5700	20.98	28.64	4.238	72.37	196.9
#1	14.22	-.0023	.0188	-.0219	-.0055	-.0006
#2	14.32	-.0015	.0303	-.0238	-.0014	.0025
#3	14.39	-.0022	.0193	-.0231	-.0021	.0005

Sample Name: 580-131059-F-2-A Acquired: 9/5/2023 16:45:45 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	24.52	-.0032	.1883	-.0031	.0105	.0229
Stddev	.59	.0002	.0028	.0016	.0011	.0042
%RSD	2.403	7.388	1.513	51.37	10.16	18.25
#1	23.88	-.0033	.1850	-.0030	.0112	.0182
#2	24.66	-.0029	.1903	-.0016	.0111	.0261
#3	25.03	-.0034	.1895	-.0048	.0093	.0245

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0043
Stddev	.0003
%RSD	7.553
#1	-.0044
#2	-.0039
#3	-.0046

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4187.8	23067.	12263.	24725.
Stddev	13.7	64.	109.	242.
%RSD	.32810	.27667	.88566	.97747
#1	4197.1	23095.	12384.	24995.
#2	4194.4	23112.	12232.	24651.
#3	4172.1	22994.	12174.	24529.

Sample Name: 580-131059-F-2-B MS Acquired: 9/5/2023 16:49:14 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9602	18.82	.9752	9.583	1.136	.9513
Stddev	.0032	.02	.0039	.061	.004	.0016
%RSD	.3344	.1061	.4047	.6383	.3707	.1654
#1	.9572	18.82	.9708	9.524	1.133	.9520
#2	.9599	18.80	.9782	9.579	1.134	.9494
#3	.9636	18.83	.9767	9.646	1.141	.9523

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0059	37.61	.9473	.9322	1.033	.9855
Stddev	.0021	.22	.0032	.0039	.003	.0045
%RSD	35.98	.5957	.3332	.4149	.3300	.4601
#1	-.0081	37.43	.9444	.9301	1.030	.9848
#2	-.0039	37.54	.9468	.9298	1.033	.9813
#3	-.0056	37.86	.9506	.9366	1.037	.9903

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	20.75	32.35	.9369	28.27	1.199	.9664
Stddev	.04	.01	.0009	.14	.008	.0073
%RSD	.1743	.0418	.0945	.5015	.6960	.7533
#1	20.75	32.34	.9360	28.39	1.190	.9586
#2	20.71	32.34	.9370	28.11	1.201	.9677
#3	20.78	32.36	.9378	28.32	1.206	.9730

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	34.63	.9427	4.862	.9284	1.025	.9476
Stddev	.24	.0032	.028	.0042	.004	.0081
%RSD	.7029	.3392	.5686	.4500	.4310	.8582
#1	34.39	.9407	4.833	.9295	1.022	.9419
#2	34.61	.9409	4.865	.9238	1.023	.9439
#3	34.88	.9464	4.888	.9319	1.030	.9569

Sample Name: 580-131059-F-2-B MS Acquired: 9/5/2023 16:49:14 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	42.26	.9514	1.173	.8997	.9604	.9605
Stddev	.12	.0032	.002	.0017	.0172	.0016
%RSD	.2721	.3363	.2028	.1923	1.791	.1699
#1	42.39	.9477	1.170	.8991	.9413	.9617
#2	42.18	.9532	1.173	.8983	.9652	.9586
#3	42.20	.9533	1.175	.9017	.9747	.9611

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.9402
Stddev	.0055
%RSD	.5807
#1	.9343
#2	.9410
#3	.9452

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4035.8	22765.	12432.	25129.
Stddev	16.5	115.	31.	67.
%RSD	.40867	.50303	.25108	.26729
#1	4044.9	22843.	12401.	25058.
#2	4045.7	22817.	12464.	25192.
#3	4016.7	22633.	12431.	25139.

Sample Name: 580-131059-F-2-C MSD Acquired: 9/5/2023 16:52:16 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9685	18.72	.9867	9.666	1.144	.9632
Stddev	.0034	.08	.0005	.026	.003	.0035
%RSD	.3553	.4110	.0512	.2692	.2872	.3618
#1	.9652	18.65	.9863	9.650	1.144	.9607
#2	.9721	18.81	.9873	9.652	1.141	.9672
#3	.9681	18.71	.9866	9.696	1.148	.9617

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0059	37.85	.9532	.9369	1.043	.9947
Stddev	.0029	.19	.0022	.0026	.003	.0052
%RSD	49.51	.4908	.2267	.2773	.2811	.5242
#1	-.0091	38.06	.9524	.9358	1.042	.9891
#2	-.0035	37.72	.9516	.9351	1.041	.9957
#3	-.0049	37.76	.9557	.9399	1.046	.9994

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	20.79	32.38	.9444	28.23	1.191	.9842
Stddev	.09	.11	.0038	.13	.002	.0010
%RSD	.4179	.3419	.4011	.4585	.1525	.1054
#1	20.70	32.26	.9401	28.08	1.193	.9830
#2	20.88	32.39	.9458	28.31	1.190	.9844
#3	20.80	32.48	.9473	28.30	1.191	.9851

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	34.55	.9468	4.887	.9336	1.037	.9625
Stddev	.16	.0025	.016	.0025	.004	.0030
%RSD	.4486	.2625	.3362	.2706	.3507	.3168
#1	34.73	.9453	4.871	.9343	1.035	.9625
#2	34.43	.9454	4.886	.9308	1.036	.9594
#3	34.49	.9497	4.904	.9357	1.041	.9655

Sample Name: 580-131059-F-2-C MSD Acquired: 9/5/2023 16:52:16 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	40.34	.9577	1.180	.9139	.9791	.9583
Stddev	.12	.0025	.002	.0021	.0055	.0044
%RSD	.2877	.2649	.1839	.2341	.5640	.4577
#1	40.21	.9558	1.178	.9160	.9732	.9582
#2	40.44	.9568	1.181	.9139	.9798	.9627
#3	40.36	.9606	1.182	.9117	.9842	.9540

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.9446
Stddev	.0017
%RSD	.1810
#1	.9429
#2	.9445
#3	.9463

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4019.9	22614.	12333.	24832.
Stddev	15.9	82.	129.	242.
%RSD	.39490	.36421	1.0425	.97610
#1	4028.3	22663.	12479.	25099.
#2	4029.9	22661.	12287.	24774.
#3	4001.6	22519.	12235.	24625.

Sample Name: 580-131059-F-3-A Acquired: 9/5/2023 16:55:17 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0028	.0069	.0044	-.0116	.1901	.0001
Stddev	.0009	.0363	.0008	.0121	.0014	.0010
%RSD	33.16	529.2	17.84	104.8	.7259	1823.
#1	.0037	-.0308	.0048	-.0047	.1914	-.0009
#2	.0019	.0415	.0035	-.0256	.1886	.0010
#3	.0028	.0099	.0049	-.0044	.1902	-.0000

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0025	101.9	-.0002	.0008	.0022	-.0028
Stddev	.0014	.4	.0011	.0012	.0014	.0049
%RSD	54.91	.4252	508.3	156.6	63.85	172.3
#1	-.0010	102.4	-.0001	.0011	.0028	-.0070
#2	-.0031	101.8	-.0014	-.0006	.0006	.0025
#3	-.0036	101.6	.0008	.0019	.0032	-.0040

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0174	9.592	.0113	38.48	.0019	.0069
Stddev	.0227	.017	.0009	.10	.0002	.0020
%RSD	130.3	.1760	8.047	.2558	9.778	28.90
#1	-.0055	9.572	.0113	38.53	.0018	.0085
#2	.0399	9.603	.0104	38.54	.0020	.0047
#3	.0179	9.600	.0122	38.37	.0017	.0074

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	43.13	.0127	.0234	-.0155	.0012	.0042
Stddev	.19	.0016	.0101	.0013	.0017	.0047
%RSD	.4316	12.72	43.19	8.115	141.7	112.3
#1	43.34	.0132	.0212	-.0148	.0021	.0096
#2	43.07	.0108	.0146	-.0170	-.0008	.0012
#3	42.99	.0139	.0345	-.0148	.0022	.0017

Sample Name: 580-131059-F-3-A Acquired: 9/5/2023 16:55:17 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	18.32	-.0004	.5990	.0032	.0192	.0054
Stddev	.20	.0015	.0011	.0001	.0049	.0022
%RSD	1.110	436.5	.1899	2.986	25.74	40.94
#1	18.10	.0002	.5978	.0032	.0248	.0037
#2	18.37	-.0021	.5995	.0033	.0171	.0079
#3	18.50	.0009	.5999	.0032	.0156	.0046

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0012
Stddev	.0011
%RSD	88.99
#1	-.0010
#2	-.0024
#3	-.0003

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4033.0	22516.	12323.	24858.
Stddev	4.0	37.	46.	98.
%RSD	.09912	.16352	.37481	.39291
#1	4029.9	22496.	12373.	24969.
#2	4031.6	22494.	12282.	24789.
#3	4037.5	22559.	12312.	24815.

Sample Name: 580-131041-F-1-A Acquired: 9/5/2023 16:58:43 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0039	-.0291	-.0007	-.0497	.1626	-.0023
Stddev	.0011	.0132	.0025	.0032	.0019	.0004
%RSD	27.33	45.54	362.8	6.367	1.155	16.94
#1	-.0051	-.0142	-.0009	-.0497	.1617	-.0024
#2	-.0031	-.0336	-.0032	-.0529	.1613	-.0026
#3	-.0035	-.0395	.0019	-.0465	.1648	-.0018

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0029	21.25	-.0018	-.0015	-.0015	-.0019
Stddev	.0018	.21	.0004	.0005	.0006	.0002
%RSD	62.64	.9651	22.49	32.48	43.07	12.91
#1	-.0040	21.12	-.0019	-.0016	-.0018	-.0018
#2	-.0040	21.14	-.0021	-.0019	-.0019	-.0017
#3	-.0008	21.49	-.0013	-.0010	-.0007	-.0022

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0311	10.32	.0040	8.463	.0174	-.0002
Stddev	.0041	.10	.0015	.007	.0013	.0004
%RSD	13.35	.9754	36.35	.0842	7.391	196.4
#1	-.0340	10.29	.0024	8.457	.0161	-.0004
#2	-.0328	10.24	.0044	8.461	.0176	-.0005
#3	-.0263	10.44	.0052	8.471	.0186	.0002

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	14.48	-.0016	.0281	-.0214	-.0018	.0010
Stddev	.14	.0001	.0047	.0019	.0031	.0035
%RSD	.9918	8.925	16.67	9.007	175.4	347.5
#1	14.39	-.0016	.0312	-.0236	-.0050	.0048
#2	14.40	-.0018	.0227	-.0202	.0013	-.0021
#3	14.64	-.0015	.0304	-.0203	-.0016	.0003

Sample Name: 580-131041-F-1-A Acquired: 9/5/2023 16:58:43 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	23.24	-.0016	.2146	-.0013	.0110	.0265
Stddev	.18	.0005	.0004	.0002	.0054	.0025
%RSD	.7579	32.60	.1675	14.59	49.38	9.557
#1	23.06	-.0019	.2145	-.0016	.0154	.0250
#2	23.25	-.0019	.2142	-.0012	.0049	.0294
#3	23.41	-.0010	.2149	-.0013	.0127	.0250

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0040
Stddev	.0005
%RSD	13.40
#1	-.0042
#2	-.0044
#3	-.0034

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4221.6	23205.	12454.	25089.
Stddev	29.6	170.	22.	37.
%RSD	.70172	.73359	.17886	.14549
#1	4235.0	23299.	12440.	25053.
#2	4242.2	23307.	12443.	25089.
#3	4187.7	23008.	12480.	25126.

Sample Name: 580-131041-F-2-A Acquired: 9/5/2023 17:02:11 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0027	-.0403	-.0012	-.0537	.1130	-.0025
Stddev	.0020	.0189	.0004	.0039	.0004	.0004
%RSD	72.74	46.80	36.49	7.184	.3885	16.26
#1	-.0049	-.0233	-.0009	-.0537	.1127	-.0021
#2	-.0011	-.0370	-.0009	-.0499	.1135	-.0024
#3	-.0021	-.0606	-.0017	-.0576	.1128	-.0029

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0036	131.4	-.0021	.0088	.0003	-.0044
Stddev	.0017	3.0	.0004	.0001	.0002	.0028
%RSD	46.98	2.276	18.37	1.503	88.30	64.25
#1	-.0039	128.0	-.0022	.0087	.0002	-.0068
#2	-.0052	133.7	-.0016	.0089	.0005	-.0013
#3	-.0018	132.5	-.0023	.0088	.0001	-.0050

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0393	2.911	.0054	44.12	-.0017	-.0008
Stddev	.0090	.115	.0025	2.44	.0007	.0002
%RSD	22.84	3.959	46.79	5.527	40.14	32.62
#1	-.0341	2.780	.0026	41.31	-.0012	-.0006
#2	-.0342	2.995	.0059	45.45	-.0015	-.0006
#3	-.0497	2.958	.0076	45.61	-.0025	-.0011

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	40.87	.0052	.0275	-.0238	-.0005	.0023
Stddev	.91	.0006	.0027	.0019	.0014	.0009
%RSD	2.217	11.95	9.642	8.189	262.7	38.58
#1	39.85	.0047	.0245	-.0215	-.0020	.0021
#2	41.58	.0050	.0297	-.0251	-.0003	.0016
#3	41.18	.0058	.0283	-.0246	.0008	.0033

Sample Name: 580-131041-F-2-A Acquired: 9/5/2023 17:02:11 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	25.32	-.0027	.5850	.0022	.0061	.0271
Stddev	1.26	.0008	.0326	.0014	.0042	.0047
%RSD	4.977	29.29	5.567	63.92	69.32	17.14
#1	23.87	-.0036	.5474	.0032	.0034	.0220
#2	26.09	-.0020	.6036	.0030	.0110	.0285
#3	26.00	-.0027	.6039	.0006	.0039	.0309

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0035
Stddev	.0002
%RSD	6.757
#1	-.0035
#2	-.0033
#3	-.0037

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4021.3	22488.	12677.	25610.
Stddev	13.7	66.	459.	911.
%RSD	.33950	.29295	3.6209	3.5561
#1	4018.1	22514.	13205.	26660.
#2	4009.6	22413.	12453.	25133.
#3	4036.3	22537.	12373.	25037.

Sample Name: 580-131041-F-3-A Acquired: 9/5/2023 17:05:37 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0031	-.0148	-.0020	-.0637	-.0019	-.0031
Stddev	.0010	.0202	.0014	.0021	.0006	.0003
%RSD	31.36	137.2	70.90	3.276	28.57	9.206
#1	-.0020	-.0380	-.0005	-.0655	-.0025	-.0031
#2	-.0038	-.0011	-.0033	-.0642	-.0019	-.0028
#3	-.0036	-.0052	-.0023	-.0614	-.0014	-.0034

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0046	.0431	-.0021	-.0020	-.0022	-.0059
Stddev	.0009	.0599	.0005	.0003	.0004	.0063
%RSD	19.56	139.1	21.26	17.21	19.09	107.9
#1	-.0041	.0339	-.0026	-.0023	-.0026	-.0001
#2	-.0040	.1070	-.0021	-.0020	-.0024	-.0049
#3	-.0056	-.0117	-.0017	-.0016	-.0018	-.0126

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0642	-.0318	.0002	-.0252	-.0027	-.0019
Stddev	.0047	.0247	.0010	.0367	.0003	.0005
%RSD	7.362	77.81	522.1	145.6	9.873	25.83
#1	-.0632	-.0491	-.0008	-.0052	-.0028	-.0025
#2	-.0601	-.0035	.0012	-.0029	-.0024	-.0018
#3	-.0694	-.0428	.0001	-.0676	-.0029	-.0015

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.5192	-.0022	-.0240	-.0028	-.0025	-.0038
Stddev	.0354	.0004	.0069	.0014	.0013	.0034
%RSD	6.816	16.97	28.69	51.04	50.35	88.88
#1	.5333	-.0024	-.0292	-.0032	-.0039	-.0000
#2	.5454	-.0023	-.0267	-.0039	-.0023	-.0065
#3	.4789	-.0018	-.0162	-.0012	-.0014	-.0048

Sample Name: 580-131041-F-3-A Acquired: 9/5/2023 17:05:37 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.6082	-.0026	-.0024	-.0028	.0024	-.0024
Stddev	.0458	.0004	.0006	.0016	.0042	.0026
%RSD	7.523	16.08	27.17	57.68	175.1	105.4
#1	.6380	-.0027	-.0025	-.0042	.0066	-.0005
#2	.6311	-.0029	-.0017	-.0032	-.0018	-.0015
#3	.5556	-.0021	-.0029	-.0010	.0024	-.0054

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0045
Stddev	.0004
%RSD	8.470
#1	-.0050
#2	-.0045
#3	-.0042

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4314.7	23320.	12224.	24646.
Stddev	29.7	180.	5.	2.
%RSD	.68931	.77107	.03871	.00776
#1	4289.3	23149.	12229.	24648.
#2	4307.2	23304.	12225.	24645.
#3	4347.4	23508.	12219.	24645.

Sample Name: CCV 3565024 Acquired: 9/5/2023 19:19:51 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9789	94.93	4.875	45.65	4.923	4.801
Stddev	.0563	5.70	.029	.32	.032	.292
%RSD	5.747	6.009	.6051	.7062	.6489	6.092
#1	1.044	101.5	4.859	45.46	4.908	5.137
#2	.9481	91.91	4.857	45.47	4.902	4.655
#3	.9449	91.37	4.909	46.02	4.960	4.610
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.740	90.82	4.632	4.597	5.043	5.136
Stddev	.038	.39	.030	.030	.035	.284
%RSD	.7989	.4294	.6499	.6514	.7040	5.521
#1	4.724	90.56	4.610	4.577	5.025	5.462
#2	4.712	90.64	4.620	4.583	5.021	4.995
#3	4.783	91.27	4.666	4.632	5.084	4.950
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	104.4	100.1	4.797	104.3	4.797	4.715
Stddev	6.3	5.9	.278	6.5	.021	.036
%RSD	6.053	5.945	5.796	6.207	.4486	.7685
#1	111.7	106.9	5.117	111.8	4.775	4.691
#2	101.2	97.06	4.656	100.9	4.796	4.698
#3	100.3	96.22	4.618	100.2	4.818	4.757
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCV 3565024 Acquired: 9/5/2023 19:19:51 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	97.54	4.664	47.30	4.655	4.777	4.608
Stddev	.48	.032	.31	.036	.036	.029
%RSD	.4945	.6869	.6649	.7806	.7597	.6293
#1	97.09	4.642	47.10	4.625	4.755	4.596
#2	97.49	4.649	47.15	4.644	4.757	4.587
#3	98.05	4.701	47.66	4.695	4.819	4.641
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	54.28	4.687	5.037	4.554	4.682	4.779
Stddev	3.12	.034	.298	.280	.057	.297
%RSD	5.747	.7279	5.913	6.142	1.215	6.220
#1	57.88	4.660	5.380	4.875	4.627	5.121
#2	52.69	4.675	4.890	4.421	4.677	4.626
#3	52.28	4.725	4.842	4.365	4.741	4.589
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	4.563
Stddev	.032
%RSD	.7073
#1	4.540
#2	4.550
#3	4.600
Check ?	Chk Pass
Value	
Range	

Sample Name: CCV 3565024 Acquired: 9/5/2023 19:19:51 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3707.9	21612.	11244.	22835.
Stddev	20.0	127.	662.	1351.
%RSD	.53834	.58584	5.8882	5.9147
#1	3719.2	21677.	10480.	21276.
#2	3719.7	21693.	11594.	23573.
#3	3684.9	21466.	11658.	23656.

Sample Name: 580-131041-F-4-A Acquired: 9/5/2023 17:09:11 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0038	-.0799	-.0020	-.0666	.1157	-.0031
Stddev	.0002	.0220	.0009	.0005	.0001	.0003
%RSD	5.280	27.59	46.13	.8101	.0879	10.07
#1	-.0039	-.0863	-.0030	-.0671	.1157	-.0027
#2	-.0039	-.0554	-.0012	-.0667	.1158	-.0032
#3	-.0035	-.0980	-.0017	-.0661	.1156	-.0033

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0010	136.7	-.0026	.0061	.0001	.0022
Stddev	.0019	.6	.0000	.0001	.0003	.0051
%RSD	191.6	.4702	1.644	2.372	422.0	233.2
#1	-.0030	136.1	-.0026	.0062	-.0002	-.0027
#2	-.0008	137.4	-.0026	.0059	.0004	.0076
#3	.0008	136.8	-.0027	.0060	.0000	.0017

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0464	3.056	.0040	47.48	-.0028	-.0018
Stddev	.0109	.032	.0015	.19	.0004	.0003
%RSD	23.40	1.052	38.09	.3990	15.79	16.00
#1	-.0340	3.038	.0058	47.42	-.0027	-.0018
#2	-.0511	3.036	.0029	47.34	-.0023	-.0020
#3	-.0541	3.093	.0034	47.70	-.0032	-.0015

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	42.28	.0041	.0250	-.0204	-.0046	.0016
Stddev	.22	.0005	.0075	.0012	.0039	.0023
%RSD	.5190	12.80	30.02	6.006	83.64	141.7
#1	42.04	.0040	.0205	-.0200	-.0007	.0008
#2	42.46	.0047	.0208	-.0194	-.0085	.0042
#3	42.35	.0037	.0337	-.0217	-.0047	-.0001

Sample Name: 580-131041-F-4-A Acquired: 9/5/2023 17:09:11 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	22.35	-.0028	.6283	.0020	.0064	.0297
Stddev	.37	.0003	.0016	.0005	.0016	.0016
%RSD	1.658	11.75	.2577	23.14	25.41	5.418
#1	21.96	-.0024	.6270	.0015	.0083	.0291
#2	22.39	-.0030	.6277	.0024	.0052	.0285
#3	22.70	-.0028	.6301	.0021	.0059	.0315

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0038
Stddev	.0001
%RSD	3.604
#1	-.0039
#2	-.0036
#3	-.0038

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3941.3	22058.	11988.	24149.
Stddev	10.7	45.	69.	147.
%RSD	.27043	.20350	.57804	.60716
#1	3935.6	22049.	11949.	24069.
#2	3953.6	22107.	12068.	24319.
#3	3934.7	22019.	11947.	24060.

Sample Name: CCB Acquired: 9/5/2023 17:17:04 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0022	.0324	.0023	.0076	.0001	-.0002
Stddev	.0032	.0795	.0023	.0033	.0005	.0016
%RSD	142.0	245.1	102.5	43.40	323.6	672.1
#1	-.0014	.1239	.0006	.0100	-.0003	.0016
#2	.0004	-.0066	.0049	.0089	.0002	-.0013
#3	-.0057	-.0200	.0013	.0038	.0005	-.0010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0003	.1230	-.0003	-.0001	.0000	-.0035
Stddev	.0018	.1026	.0004	.0005	.0001	.0047
%RSD	580.6	83.44	154.2	927.6	9160.	135.2
#1	-.0020	.2413	-.0007	-.0004	-.0001	.0019
#2	-.0004	.0600	-.0002	-.0003	.0000	-.0070
#3	.0015	.0675	.0001	.0005	.0001	-.0054
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0030	.1061	.0087	.0494	-.0005	.0029
Stddev	.0353	.0753	.0038	.0546	.0017	.0002
%RSD	1167.	70.96	43.86	110.5	316.8	7.887
#1	.0373	.1903	.0125	.1124	.0014	.0031
#2	-.0287	.0450	.0049	.0154	-.0017	.0027
#3	-.0177	.0831	.0085	.0204	-.0013	.0028
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: CCB Acquired: 9/5/2023 17:17:04 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0919	-.0007	-.0013	.0000	-.0002	.0034
Stddev	.0557	.0004	.0045	.0001	.0019	.0010
%RSD	60.61	54.44	337.8	592.4	953.0	28.26
#1	.1558	-.0011	-.0058	.0000	.0002	.0036
#2	.0662	-.0007	-.0015	-.0001	-.0022	.0024
#3	.0536	-.0003	.0033	.0001	.0015	.0043
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.3285	.0002	.0007	-.0000	.0098	.0004
Stddev	.0636	.0004	.0021	.0012	.0014	.0038
%RSD	19.37	177.1	296.1	3888.	14.06	895.6
#1	.4020	.0004	.0032	.0014	.0114	.0025
#2	.2912	-.0002	-.0006	-.0007	.0089	.0026
#3	.2922	.0006	-.0004	-.0008	.0091	-.0039
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0022
Stddev	.0003
%RSD	12.17
#1	-.0024
#2	-.0021
#3	-.0019
Check ?	Chk Pass
High Limit	
Low Limit	

Sample Name: CCB Acquired: 9/5/2023 17:17:04 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4219.3	22746.	12120.	24336.
Stddev	36.4	197.	66.	154.
%RSD	.86186	.86529	.54552	.63465
#1	4251.2	22937.	12096.	24302.
#2	4179.7	22543.	12194.	24504.
#3	4226.9	22757.	12069.	24201.

Sample Name: 580-131038-F-1-A Acquired: 9/5/2023 17:24:06 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0033	-.0572	-.0016	-.0500	.0938	-.0033
Stddev	.0046	.0240	.0015	.0011	.0007	.0000
%RSD	141.3	41.97	98.09	2.206	.7272	.9148
#1	-.0071	-.0788	-.0022	-.0488	.0944	-.0034
#2	.0019	-.0313	-.0027	-.0502	.0939	-.0034
#3	-.0046	-.0616	.0002	-.0510	.0931	-.0033

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0023	127.5	-.0028	-.0018	-.0004	.0012
Stddev	.0006	.4	.0001	.0001	.0003	.0024
%RSD	25.87	.3007	3.655	5.234	77.44	201.8
#1	-.0028	127.6	-.0028	-.0019	-.0007	.0039
#2	-.0023	127.8	-.0027	-.0018	-.0003	.0003
#3	-.0017	127.0	-.0029	-.0017	-.0001	-.0006

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0470	3.309	.0021	42.11	.0002	-.0013
Stddev	.0046	.074	.0000	.66	.0004	.0004
%RSD	9.695	2.251	.2449	1.571	160.9	28.53
#1	-.0495	3.231	.0021	41.35	.0005	-.0015
#2	-.0497	3.319	.0021	42.36	-.0002	-.0009
#3	-.0417	3.379	.0021	42.60	.0004	-.0014

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	31.88	.0063	.0281	-.0207	-.0022	.0031
Stddev	.09	.0005	.0018	.0025	.0015	.0024
%RSD	.2746	8.585	6.462	11.88	66.05	77.93
#1	31.86	.0067	.0263	-.0179	-.0038	.0018
#2	31.98	.0065	.0279	-.0219	-.0019	.0017
#3	31.81	.0057	.0300	-.0223	-.0009	.0060

Sample Name: 580-131038-F-1-A Acquired: 9/5/2023 17:24:06 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	22.17	-.0031	.6219	.0015	.0105	.0268
Stddev	.40	.0002	.0099	.0008	.0042	.0050
%RSD	1.824	5.888	1.594	54.95	39.59	18.54
#1	21.72	-.0029	.6106	.0008	.0150	.0211
#2	22.27	-.0032	.6261	.0013	.0096	.0292
#3	22.51	-.0031	.6291	.0024	.0069	.0302

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0030
Stddev	.0001
%RSD	2.615
#1	-.0031
#2	-.0031
#3	-.0029

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4023.8	22435.	12398.	24970.
Stddev	14.3	108.	150.	337.
%RSD	.35588	.48286	1.2078	1.3486
#1	4010.6	22355.	12567.	25359.
#2	4021.8	22393.	12344.	24792.
#3	4039.0	22558.	12283.	24760.

Sample Name: 580-131038-F-2-A Acquired: 9/5/2023 17:27:34 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0022	-.0126	.0006	-.0602	.0968	-.0020
Stddev	.0003	.0260	.0005	.0023	.0004	.0003
%RSD	13.24	207.3	88.75	3.772	.4171	12.50
#1	-.0025	-.0390	.0000	-.0609	.0964	-.0019
#2	-.0021	-.0116	.0011	-.0576	.0970	-.0018
#3	-.0019	.0130	.0008	-.0620	.0971	-.0023

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0016	19.56	-.0020	-.0017	-.0016	-.0083
Stddev	.0009	.11	.0002	.0001	.0003	.0029
%RSD	56.02	.5577	7.544	3.886	21.03	35.56
#1	-.0024	19.66	-.0022	-.0018	-.0020	-.0057
#2	-.0007	19.58	-.0019	-.0017	-.0013	-.0076
#3	-.0016	19.44	-.0020	-.0017	-.0016	-.0115

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0338	12.44	.0017	8.197	.0463	-.0017
Stddev	.0063	.04	.0010	.016	.0005	.0002
%RSD	18.52	.3312	59.20	.1944	1.026	14.17
#1	-.0304	12.39	.0020	8.188	.0466	-.0020
#2	-.0300	12.47	.0026	8.215	.0466	-.0015
#3	-.0410	12.45	.0006	8.188	.0458	-.0016

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	15.00	-.0018	.0254	-.0229	-.0043	-.0005
Stddev	.03	.0004	.0038	.0013	.0017	.0025
%RSD	.2180	20.81	15.11	5.733	39.25	502.4
#1	15.04	-.0022	.0213	-.0244	-.0058	-.0033
#2	15.00	-.0018	.0288	-.0224	-.0046	.0000
#3	14.97	-.0015	.0261	-.0220	-.0025	.0017

Sample Name: 580-131038-F-2-A Acquired: 9/5/2023 17:27:34 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	25.28	-.0026	.1967	-.0023	.0061	-.0001
Stddev	.22	.0001	.0003	.0016	.0065	.0010
%RSD	.8541	2.540	.1557	69.71	105.0	795.9
#1	25.06	-.0027	.1968	-.0041	.0068	-.0013
#2	25.28	-.0026	.1970	-.0009	.0122	.0002
#3	25.49	-.0027	.1964	-.0020	-.0006	.0007

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0040
Stddev	.0003
%RSD	7.508
#1	-.0044
#2	-.0038
#3	-.0040

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4233.3	23187.	12535.	25251.
Stddev	9.3	49.	37.	86.
%RSD	.21872	.20928	.29758	.34184
#1	4225.2	23141.	12555.	25329.
#2	4243.4	23238.	12558.	25265.
#3	4231.3	23184.	12492.	25159.

Sample Name: 580-131038-F-4-A Acquired: 9/5/2023 17:34:30 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0019	-.0449	.0004	-.0670	.0853	-.0025
Stddev	.0022	.0253	.0003	.0024	.0003	.0006
%RSD	112.7	56.41	65.62	3.581	.3791	23.23
#1	-.0014	-.0489	.0006	-.0678	.0851	-.0026
#2	-.0001	-.0681	.0006	-.0643	.0856	-.0018
#3	-.0043	-.0178	.0001	-.0689	.0850	-.0030

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0008	61.35	-.0025	.0082	-.0017	-.0044
Stddev	.0018	.33	.0002	.0003	.0001	.0027
%RSD	232.1	.5439	9.843	3.769	3.490	60.53
#1	-.0027	61.67	-.0026	.0084	-.0017	-.0036
#2	-.0004	61.36	-.0022	.0083	-.0016	-.0022
#3	.0008	61.01	-.0026	.0078	-.0017	-.0074

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0404	9.218	.0019	21.93	-.0013	-.0022
Stddev	.0121	.056	.0018	.02	.0004	.0000
%RSD	29.88	.6027	91.52	.0949	27.27	1.507
#1	-.0447	9.156	.0005	21.94	-.0009	-.0022
#2	-.0268	9.261	.0039	21.91	-.0013	-.0022
#3	-.0498	9.238	.0014	21.94	-.0016	-.0022

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	20.54	-.0011	.0203	-.0224	-.0028	.0004
Stddev	.10	.0007	.0047	.0024	.0012	.0015
%RSD	.5041	57.17	23.30	10.58	43.36	418.7
#1	20.58	-.0015	.0201	-.0223	-.0042	-.0014
#2	20.61	-.0004	.0250	-.0248	-.0018	.0014
#3	20.42	-.0015	.0156	-.0201	-.0025	.0012

Sample Name: 580-131038-F-4-A Acquired: 9/5/2023 17:34:30 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	24.14	-.0030	.3582	-.0012	.0083	.0246
Stddev	.03	.0007	.0010	.0011	.0060	.0015
%RSD	.1436	23.24	.2800	94.40	72.89	5.980
#1	24.11	-.0038	.3571	-.0023	.0074	.0250
#2	24.14	-.0024	.3591	-.0001	.0028	.0229
#3	24.18	-.0030	.3585	-.0010	.0147	.0257

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0041
Stddev	.0002
%RSD	5.204
#1	-.0042
#2	-.0038
#3	-.0042

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4090.3	22685.	12426.	25025.
Stddev	19.3	69.	125.	280.
%RSD	.47152	.30439	1.0078	1.1179
#1	4103.5	22716.	12511.	25229.
#2	4099.2	22734.	12484.	25139.
#3	4068.2	22606.	12282.	24706.

Sample Name: CCV 3565024 Acquired: 9/5/2023 17:37:59 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9831	94.55	4.890	47.13	4.984	4.875
Stddev	.0281	2.78	.060	.58	.069	.138
%RSD	2.860	2.938	1.230	1.241	1.380	2.834
#1	.9759	93.87	4.821	46.46	4.905	4.827
#2	1.014	97.60	4.919	47.44	5.017	5.031
#3	.9593	92.17	4.931	47.50	5.030	4.767
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.838	95.22	4.756	4.704	5.045	5.146
Stddev	.058	1.47	.060	.062	.066	.166
%RSD	1.190	1.542	1.270	1.309	1.311	3.226
#1	4.772	93.54	4.686	4.634	4.969	5.104
#2	4.878	96.23	4.785	4.733	5.076	5.328
#3	4.864	95.90	4.795	4.746	5.089	5.004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	104.1	99.33	4.830	103.3	4.897	4.857
Stddev	3.2	3.11	.148	3.0	.079	.061
%RSD	3.059	3.128	3.061	2.917	1.618	1.264
#1	103.4	98.60	4.786	102.4	4.812	4.786
#2	107.7	102.7	4.995	106.6	4.969	4.884
#3	101.4	96.65	4.709	100.8	4.909	4.899
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCV 3565024 Acquired: 9/5/2023 17:37:59 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	100.6	4.765	47.36	4.741	4.866	4.758
Stddev	1.5	.063	.56	.066	.065	.059
%RSD	1.498	1.318	1.184	1.397	1.345	1.236
#1	99.03	4.693	46.72	4.664	4.791	4.690
#2	102.0	4.796	47.70	4.774	4.897	4.793
#3	100.9	4.806	47.68	4.784	4.910	4.791
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F 55.72	4.740	5.030	4.630	4.616	4.766
Stddev	1.69	.061	.156	.138	.077	.140
%RSD	3.024	1.280	3.110	2.977	1.662	2.941
#1	55.17	4.671	4.993	4.590	4.533	4.720
#2	57.61	4.766	5.201	4.783	4.629	4.923
#3	54.38	4.784	4.895	4.516	4.685	4.655
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	50.00					
Range	10.00%					

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	4.697
Stddev	.058
%RSD	1.232
#1	4.631
#2	4.726
#3	4.735
Check ?	Chk Pass
Value	
Range	

Sample Name: CCV 3565024 Acquired: 9/5/2023 17:37:59 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3627.8	21022.	11388.	22889.
Stddev	26.0	143.	305.	573.
%RSD	.71675	.67844	2.6795	2.5031
#1	3657.8	21186.	11357.	22847.
#2	3613.4	20929.	11100.	22338.
#3	3612.1	20950.	11708.	23481.

Sample Name: CCB Acquired: 9/5/2023 17:42:22 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0044	-.0171	.0028	.0101	.0005	-.0002
Stddev	.0021	.0241	.0022	.0093	.0006	.0008
%RSD	48.39	140.9	78.14	92.40	103.4	436.5
#1	-.0021	-.0177	.0013	.0192	.0008	.0001
#2	-.0049	-.0410	.0052	.0106	.0010	.0004
#3	-.0063	.0073	.0018	.0005	-.0001	-.0011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0013	.0802	.0001	.0001	.0005	.0034
Stddev	.0017	.0401	.0004	.0004	.0005	.0045
%RSD	122.6	50.06	363.4	303.3	104.5	131.1
#1	.0012	.0890	.0004	.0005	.0009	-.0016
#2	.0031	.1151	.0003	.0003	.0006	.0050
#3	-.0002	.0363	-.0003	-.0004	-.0001	.0069
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0007	.1011	.0091	.0505	-.0002	.0030
Stddev	.0164	.0676	.0018	.0098	.0006	.0006
%RSD	2305.	66.84	19.78	19.44	358.9	21.06
#1	.0032	.1333	.0112	.0595	-.0004	.0036
#2	.0157	.1465	.0082	.0400	.0005	.0029
#3	-.0168	.0234	.0079	.0520	-.0007	.0024
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: CCB Acquired: 9/5/2023 17:42:22 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0741	.0003	.0028	-.0000	.0012	.0039
Stddev	.0238	.0003	.0032	.0005	.0022	.0002
%RSD	32.12	92.56	114.3	4433.	186.1	4.508
#1	.0806	.0007	.0008	-.0004	-.0003	.0037
#2	.0940	.0001	.0065	.0005	.0036	.0041
#3	.0477	.0002	.0011	-.0002	.0001	.0038
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.3980	.0011	.0008	.0013	.0077	-.0013
Stddev	.0419	.0006	.0010	.0011	.0015	.0032
%RSD	10.52	53.96	113.9	82.40	19.85	242.6
#1	.4307	.0019	.0011	.0017	.0083	.0023
#2	.4126	.0007	.0017	.0023	.0089	-.0028
#3	.3508	.0008	-.0002	.0001	.0060	-.0035
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0019
Stddev	.0002
%RSD	8.590
#1	-.0018
#2	-.0019
#3	-.0021
Check ?	Chk Pass
High Limit	
Low Limit	

Sample Name: CCB Acquired: 9/5/2023 17:42:22 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4185.3	22493.	11957.	24062.
Stddev	51.1	273.	57.	129.
%RSD	1.2205	1.2129	.47760	.53521
#1	4207.4	22623.	11892.	23914.
#2	4221.5	22677.	11983.	24124.
#3	4126.9	22180.	11997.	24148.

Sample Name: CCVL 3561056 Acquired: 9/5/2023 17:46:00 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0494	.4548	.0609	.4555	.0216	.0173
Stddev	.0013	.0053	.0015	.0166	.0018	.0005
%RSD	2.658	1.163	2.400	3.647	8.341	3.113
#1	.0501	.4563	.0623	.4746	.0237	.0172
#2	.0503	.4490	.0594	.4448	.0203	.0179
#3	.0479	.4593	.0611	.4470	.0209	.0168
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.2836	.5196	.0192	.0191	.0276	.0424
Stddev	.0006	.0280	.0017	.0015	.0017	.0015
%RSD	.2271	5.398	8.970	7.881	5.991	3.623
#1	.2829	.5134	.0212	.0208	.0295	.0411
#2	.2842	.5502	.0181	.0180	.0265	.0441
#3	.2838	.4951	.0183	.0186	.0269	.0421
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.4983	3.188	.0988	.5227	.0179	.0396
Stddev	.0160	.017	.0013	.0275	.0015	.0015
%RSD	3.215	.5409	1.271	5.263	8.153	3.788
#1	.4986	3.170	.0993	.5516	.0170	.0413
#2	.5141	3.205	.0998	.5197	.0196	.0385
#3	.4821	3.189	.0974	.4968	.0171	.0390
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCVL 3561056 Acquired: 9/5/2023 17:46:00 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.5552	.0191	.0999	.0286	.0630	.0957
Stddev	.0226	.0017	.0174	.0015	.0042	.0023
%RSD	4.065	9.141	17.41	5.330	6.710	2.401
#1	.5373	.0212	.1185	.0304	.0666	.0956
#2	.5806	.0181	.0840	.0274	.0640	.0935
#3	.5478	.0181	.0974	.0282	.0583	.0981
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.293	.0934	.0998	.0251	.1037	.0253
Stddev	.008	.0014	.0005	.0005	.0014	.0039
%RSD	.6295	1.446	.5135	1.836	1.314	15.37
#1	1.298	.0950	.0997	.0255	.1031	.0208
#2	1.297	.0927	.1004	.0251	.1026	.0281
#3	1.283	.0926	.0994	.0246	.1052	.0268
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0354
Stddev	.0014
%RSD	3.976
#1	.0370
#2	.0344
#3	.0347
Check ?	Chk Pass
Value	
Range	

Sample Name: CCVL 3561056 Acquired: 9/5/2023 17:46:00 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4244.7	23015.	12179.	24524.
Stddev	8.8	54.	24.	40.
%RSD	.20768	.23582	.19574	.16509
#1	4254.0	23071.	12152.	24479.
#2	4243.4	23011.	12187.	24558.
#3	4236.5	22963.	12197.	24534.

Sample Name: MB 580-436310/17-A Acquired: 9/5/2023 17:49:27 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0055	-.0145	-.0005	-.0494	-.0009	-.0020
Stddev	.0008	.0287	.0015	.0063	.0006	.0007
%RSD	14.71	198.0	296.8	12.79	68.86	33.46
#1	-.0059	.0000	-.0001	-.0485	-.0011	-.0026
#2	-.0046	-.0475	.0007	-.0436	-.0002	-.0022
#3	-.0061	.0040	-.0022	-.0561	-.0015	-.0013

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0003	.0066	-.0010	-.0009	-.0007	-.0061
Stddev	.0004	.0376	.0006	.0007	.0010	.0056
%RSD	107.4	565.7	62.01	76.14	137.8	91.01
#1	.0006	-.0231	-.0010	-.0008	-.0007	-.0098
#2	.0005	-.0059	-.0004	-.0003	.0003	-.0088
#3	-.0001	.0489	-.0017	-.0016	-.0017	.0003

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0318	-.0645	-.0033	-.0182	-.0019	-.0004
Stddev	.0139	.0319	.0006	.0101	.0011	.0009
%RSD	43.59	49.46	17.05	55.74	57.75	240.5
#1	-.0456	-.0887	-.0039	-.0203	-.0028	-.0004
#2	-.0319	-.0283	-.0032	-.0271	-.0023	.0005
#3	-.0179	-.0765	-.0028	-.0071	-.0007	-.0013

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0147	-.0014	.0031	-.0006	.0001	.0004
Stddev	.0191	.0010	.0063	.0018	.0019	.0008
%RSD	130.0	67.24	206.3	298.6	1435.	190.3
#1	-.0335	-.0017	.0048	-.0027	.0015	.0010
#2	-.0150	-.0004	.0084	.0002	.0009	.0007
#3	.0046	-.0022	-.0039	.0007	-.0020	-.0005

Sample Name: MB 580-436310/17-A Acquired: 9/5/2023 17:49:27 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.5978	.0088	-.0013	-.0009	.0096	-.0037
Stddev	.0461	.0005	.0007	.0020	.0035	.0013
%RSD	7.705	5.245	52.93	224.5	36.92	34.26
#1	.6360	.0090	-.0019	-.0031	.0058	-.0044
#2	.6108	.0091	-.0014	.0004	.0102	-.0023
#3	.5467	.0083	-.0005	.0001	.0128	-.0046

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0033
Stddev	.0006
%RSD	17.43
#1	-.0033
#2	-.0027
#3	-.0038

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4371.2	23549.	12841.	25816.
Stddev	69.2	380.	265.	539.
%RSD	1.5828	1.6139	2.0657	2.0882
#1	4410.2	23747.	12923.	25959.
#2	4412.2	23788.	12544.	25221.
#3	4291.3	23110.	13055.	26270.

Sample Name: LCS 580-436310/18-A Acquired: 9/5/2023 17:53:03 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.3642	18.58	.9833	9.334	1.042	.9535
Stddev	.0149	.50	.0042	.022	.004	.0279
%RSD	4.104	2.706	.4248	.2335	.3341	2.931
#1	.3799	18.89	.9787	9.331	1.042	.9693
#2	.3626	18.84	.9842	9.314	1.039	.9698
#3	.3501	18.00	.9869	9.357	1.046	.9212

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0070	19.41	.9571	.9455	1.061	.9856
Stddev	.0029	.31	.0035	.0031	.003	.0352
%RSD	41.83	1.623	.3640	.3310	.2496	3.571
#1	-.0090	19.63	.9570	.9455	1.060	1.004
#2	-.0036	19.55	.9536	.9423	1.058	1.008
#3	-.0083	19.05	.9606	.9486	1.064	.9450

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	20.64	19.01	.9150	20.50	1.001	1.000
Stddev	.58	.53	.0275	.54	.020	.004
%RSD	2.813	2.792	3.003	2.639	1.993	.3984
#1	20.99	19.37	.9303	20.93	1.016	.9983
#2	20.95	19.27	.9314	20.69	1.009	.9975
#3	19.97	18.40	.8833	19.89	.9786	1.005

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	20.04	.9575	4.924	.9747	1.047	.9402
Stddev	.36	.0036	.004	.0030	.003	.0056
%RSD	1.786	.3789	.0769	.3121	.2964	.5992
#1	20.31	.9571	4.926	.9746	1.049	.9342
#2	20.17	.9541	4.920	.9716	1.044	.9454
#3	19.63	.9613	4.926	.9777	1.049	.9410

Sample Name: LCS 580-436310/18-A Acquired: 9/5/2023 17:53:03 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	2.892	.9635	.9804	.9053	.9650	.9140
Stddev	.084	.0032	.0299	.0256	.0107	.0288
%RSD	2.915	.3331	3.046	2.833	1.107	3.148
#1	2.957	.9620	.9986	.9198	.9555	.9334
#2	2.922	.9614	.9967	.9204	.9630	.9277
#3	2.797	.9672	.9460	.8757	.9766	.8810

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.9494
Stddev	.0031
%RSD	.3279
#1	.9492
#2	.9464
#3	.9526

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4136.7	22861.	12653.	25429.
Stddev	8.9	38.	152.	280.
%RSD	.21578	.16744	1.1988	1.1008
#1	4133.4	22836.	12570.	25279.
#2	4146.8	22905.	12561.	25256.
#3	4129.9	22843.	12828.	25752.

Sample Name: LCSD 580-436310/19-A Acquired: 9/5/2023 17:56:07 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.5122	19.02	.9934	9.382	1.051	.9783
Stddev	.0188	.31	.0044	.037	.003	.0115
%RSD	3.662	1.624	.4427	.3904	.2961	1.173
#1	.4949	18.67	.9885	9.364	1.048	.9650
#2	.5321	19.23	.9948	9.359	1.050	.9849
#3	.5097	19.17	.9969	9.425	1.054	.9848

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0038	19.73	.9608	.9521	1.070	1.015
Stddev	.0005	.06	.0028	.0032	.004	.017
%RSD	13.50	.2805	.2904	.3411	.3991	1.628
#1	-.0038	19.67	.9585	.9501	1.067	.9965
#2	-.0043	19.75	.9600	.9503	1.067	1.028
#3	-.0033	19.78	.9639	.9558	1.075	1.022

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	21.14	19.46	.9462	20.91	1.024	1.015
Stddev	.26	.33	.0126	.29	.010	.006
%RSD	1.223	1.704	1.334	1.365	.9680	.6350
#1	20.84	19.08	.9317	20.59	1.013	1.011
#2	21.25	19.68	.9543	21.12	1.026	1.011
#3	21.32	19.63	.9527	21.03	1.033	1.022

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	20.39	.9625	4.978	.9763	1.052	.9401
Stddev	.09	.0024	.038	.0044	.005	.0052
%RSD	.4367	.2496	.7683	.4505	.4483	.5554
#1	20.29	.9604	4.977	.9733	1.048	.9351
#2	20.41	.9620	4.940	.9742	1.052	.9397
#3	20.46	.9651	5.017	.9813	1.057	.9455

Sample Name: LCSD 580-436310/19-A Acquired: 9/5/2023 17:56:07 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	5.020	.9701	1.010	.9293	.9807	.9424
Stddev	.071	.0045	.014	.0117	.0100	.0123
%RSD	1.414	.4604	1.381	1.256	1.023	1.310
#1	4.939	.9667	.9937	.9159	.9780	.9282
#2	5.070	.9683	1.018	.9346	.9722	.9506
#3	5.051	.9751	1.018	.9374	.9917	.9484

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.9460
Stddev	.0036
%RSD	.3770
#1	.9433
#2	.9447
#3	.9501

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4158.7	23017.	12639.	25422.
Stddev	19.1	98.	169.	319.
%RSD	.45993	.42656	1.3400	1.2537
#1	4178.2	23115.	12834.	25790.
#2	4158.0	23016.	12553.	25242.
#3	4139.9	22919.	12531.	25234.

Sample Name: 580-131051-E-1-A Acquired: 9/5/2023 17:59:10 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0023	238.9	.1412	.0287	1.500	.0037
Stddev	.0010	.7	.0036	.0251	.004	.0005
%RSD	41.36	.2997	2.554	87.41	.2616	12.25
#1	-.0030	239.7	.1434	.0577	1.496	.0032
#2	-.0028	238.4	.1371	.0133	1.502	.0041
#3	-.0012	238.5	.1433	.0151	1.503	.0039

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0236	132.6	.0241	.1548	1.719	19.74
Stddev	.0008	.3	.0018	.0011	.006	.05
%RSD	3.342	.2198	7.329	.7288	.3628	.2666
#1	-.0245	132.7	.0261	.1561	1.713	19.80
#2	-.0229	132.3	.0227	.1540	1.720	19.72
#3	-.0234	132.8	.0236	.1543	1.725	19.70

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	447.3	14.26	.1871	119.9	6.750	.0442
Stddev	2.0	.01	.0017	.3	.012	.0029
%RSD	.4377	.0644	.9254	.2400	.1726	6.667
#1	448.6	14.26	.1854	120.2	6.761	.0475
#2	448.2	14.26	.1889	120.0	6.738	.0429
#3	445.0	14.28	.1870	119.6	6.751	.0421

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	12.72	1.424	7.722	6.872	.1198	.0075
Stddev	.01	.004	.016	.039	.0049	.0039
%RSD	.0927	.3191	.2015	.5599	4.115	51.47
#1	12.71	1.419	7.713	6.828	.1208	.0102
#2	12.73	1.425	7.713	6.890	.1145	.0093
#3	12.71	1.428	7.740	6.898	.1242	.0031

Sample Name: 580-131051-E-1-A Acquired: 9/5/2023 17:59:10 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	5.429	.2355	.6044	17.53	.0433	1.539
Stddev	.035	.0011	.0008	.04	.0113	.007
%RSD	.6467	.4881	.1256	.2112	26.02	.4266
#1	5.454	.2365	.6047	17.55	.0561	1.546
#2	5.444	.2342	.6035	17.49	.0388	1.533
#3	5.389	.2356	.6049	17.54	.0349	1.538

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	10.73
Stddev	.06
%RSD	.5172
#1	10.66
#2	10.75
#3	10.76

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3967.0	22815.	12979.	26175.
Stddev	14.9	71.	69.	97.
%RSD	.37670	.31094	.52872	.37154
#1	3978.9	22849.	12971.	26202.
#2	3950.2	22734.	12915.	26067.
#3	3971.9	22864.	13051.	26255.

Sample Name: 580-131051-E-1-C MS Acquired: 9/5/2023 18:08:34 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.8143	293.8	.9498	8.241	2.636	.7604
Stddev	.0110	2.5	.0109	.028	.010	.0081
%RSD	1.350	.8443	1.145	.3350	.3949	1.063
#1	.8026	291.6	.9437	8.224	2.631	.7534
#2	.8158	293.3	.9434	8.225	2.629	.7584
#3	.8245	296.5	.9624	8.273	2.648	.7692

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0317	187.3	.8187	.9535	2.598	22.92
Stddev	.0002	3.8	.0033	.0042	.010	.19
%RSD	.7616	2.026	.4027	.4395	.3898	.8209
#1	-.0315	184.3	.8179	.9532	2.593	22.76
#2	-.0318	185.9	.8160	.9494	2.591	22.87
#3	-.0320	191.6	.8224	.9578	2.609	23.13

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	527.1	34.47	1.033	158.7	9.077	.8045
Stddev	8.1	.31	.013	1.0	.183	.0045
%RSD	1.536	.9130	1.219	.6338	2.019	.5543
#1	518.2	34.27	1.023	157.9	8.936	.8023
#2	529.1	34.31	1.029	158.3	9.011	.8015
#3	534.0	34.83	1.047	159.8	9.284	.8096

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	36.24	2.340	14.22	13.47	.9391	.7925
Stddev	.74	.010	.09	.07	.0023	.0015
%RSD	2.049	.4435	.6322	.4975	.2424	.1922
#1	35.66	2.334	14.17	13.44	.9379	.7909
#2	35.98	2.333	14.16	13.42	.9377	.7939
#3	37.08	2.352	14.32	13.54	.9417	.7926

Sample Name: 580-131051-E-1-C MS Acquired: 9/5/2023 18:08:34 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	6.211	1.056	1.568	20.87	.8963	2.490
Stddev	.019	.005	.016	.24	.0169	.025
%RSD	.3074	.5051	1.024	1.148	1.884	.9960
#1	6.196	1.053	1.556	20.66	.8880	2.469
#2	6.204	1.053	1.563	20.83	.8851	2.484
#3	6.232	1.062	1.586	21.13	.9157	2.517

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	18.51
Stddev	.07
%RSD	.3841
#1	18.50
#2	18.45
#3	18.59

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3828.4	22500.	12778.	25911.
Stddev	20.7	89.	121.	222.
%RSD	.54042	.39738	.94608	.85485
#1	3830.3	22516.	12674.	25699.
#2	3848.1	22581.	12749.	25894.
#3	3806.9	22404.	12911.	26141.

Sample Name: 580-131010-B-2-A Acquired: 9/5/2023 20:44:57 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0004	-.0514	.0041	.1076	-.0028	-.0035
Stddev	.0026	.0188	.0030	.0002	.0001	.0001
%RSD	702.7	36.60	72.86	.1691	2.283	1.954
#1	.0025	-.0308	.0074	.1075	-.0027	-.0035
#2	-.0009	-.0676	.0032	.1074	-.0028	-.0035
#3	-.0027	-.0558	.0016	.1078	-.0028	-.0036

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0157	-.0666	-.0014	-.0002	.0027	-.0024
Stddev	.0025	.0025	.0000	.0001	.0002	.0015
%RSD	15.99	3.818	3.487	47.10	6.645	63.79
#1	-.0149	-.0644	-.0013	-.0004	.0026	-.0007
#2	-.0137	-.0694	-.0013	-.0002	.0027	-.0028
#3	-.0185	-.0660	-.0014	-.0002	.0029	-.0037

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0267	38.88	.0027	-.0655	-.0008	.1831
Stddev	.0020	.70	.0011	.0067	.0003	.0007
%RSD	7.396	1.789	42.27	10.22	36.74	.3906
#1	-.0262	39.44	.0033	-.0732	-.0009	.1823
#2	-.0288	38.10	.0014	-.0617	-.0005	.1836
#3	-.0250	39.10	.0034	-.0615	-.0010	.1835

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	254.8	.0103	7.488	-.0436	-.0013	.0340
Stddev	11.3	.0005	.034	.0025	.0021	.0014
%RSD	4.435	4.844	.4502	5.703	157.5	4.105
#1	261.9	.0101	7.485	-.0461	.0005	.0356
#2	241.8	.0100	7.456	-.0412	-.0036	.0330
#3	260.8	.0109	7.523	-.0434	-.0009	.0334

Sample Name: 580-131010-B-2-A Acquired: 9/5/2023 20:44:57 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	52.05	-.0034	-.0033	.0034	-.1040	.0023
Stddev	1.03	.0005	.0001	.0008	.0045	.0048
%RSD	1.984	13.84	1.772	24.45	4.325	209.8
#1	53.08	-.0034	-.0033	.0034	-.1088	.0055
#2	51.02	-.0039	-.0032	.0025	-.0998	-.0032
#3	52.06	-.0029	-.0033	.0041	-.1035	.0046

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0437
Stddev	.0001
%RSD	.3337
#1	.0435
#2	.0437
#3	.0438

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4035.4	23445.	12692.	25642.
Stddev	14.5	97.	157.	320.
%RSD	.35973	.41233	1.2361	1.2473
#1	4043.6	23500.	12607.	25449.
#2	4043.9	23502.	12873.	26011.
#3	4018.6	23334.	12596.	25465.

Sample Name: 580-131051-E-1-A PDS Acquired: 9/5/2023 18:17:47 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.7737	240.1	1.071	8.906	2.367	.8803
Stddev	.0121	.4	.005	.004	.003	.0009
%RSD	1.562	.1756	.4930	.0495	.1313	.0978
#1	.7874	240.1	1.070	8.901	2.364	.8807
#2	.7693	240.6	1.077	8.908	2.366	.8793
#3	.7645	239.7	1.067	8.908	2.370	.8809

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0288	140.9	.9047	1.026	2.617	19.54
Stddev	.0013	.4	.0008	.002	.001	.02
%RSD	4.611	.3118	.0919	.1887	.0476	.1021
#1	-.0303	140.5	.9041	1.024	2.618	19.56
#2	-.0282	140.7	.9057	1.028	2.618	19.53
#3	-.0279	141.4	.9045	1.026	2.616	19.52

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	438.8	32.38	1.073	133.2	7.376	.9425
Stddev	2.8	.02	.003	.0	.015	.0019
%RSD	.6370	.0616	.3188	.0289	.1959	.2022
#1	435.7	32.36	1.076	133.1	7.365	.9414
#2	439.8	32.40	1.074	133.2	7.370	.9414
#3	441.0	32.39	1.069	133.2	7.392	.9447

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	31.99	2.230	12.05	7.506	1.008	.8712
Stddev	.08	.003	.04	.007	.012	.0041
%RSD	.2432	.1126	.3396	.0973	1.224	.4672
#1	31.92	2.228	12.09	7.499	.9953	.8680
#2	32.00	2.229	12.06	7.506	1.009	.8698
#3	32.07	2.232	12.01	7.514	1.020	.8758

Sample Name: 580-131051-E-1-A PDS Acquired: 9/5/2023 18:17:47 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	13.47	1.132	1.500	16.73	.9512	2.301
Stddev	.03	.002	.003	.01	.0039	.006
%RSD	.2319	.1535	.1782	.0396	.4139	.2819
#1	13.50	1.130	1.497	16.72	.9539	2.309
#2	13.44	1.133	1.503	16.73	.9529	2.296
#3	13.49	1.132	1.499	16.73	.9467	2.299

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	11.04
Stddev	.01
%RSD	.1174
#1	11.03
#2	11.05
#3	11.05

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3863.9	22571.	12722.	25920.
Stddev	13.4	86.	22.	19.
%RSD	.34565	.38107	.17593	.07513
#1	3877.2	22644.	12719.	25925.
#2	3864.0	22593.	12746.	25937.
#3	3850.5	22476.	12701.	25899.

Sample Name: 580-131051-E-1A SD@5 Acquired: 9/5/2023 18:22:22 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0032	51.28	.0281	-.0469	.3303	-.0022
Stddev	.0018	.20	.0015	.0026	.0023	.0000
%RSD	54.42	.3937	5.483	5.509	.7078	2.115
#1	-.0013	51.07	.0265	-.0469	.3280	-.0022
#2	-.0048	51.32	.0296	-.0443	.3301	-.0021
#3	-.0036	51.46	.0283	-.0495	.3327	-.0021

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0118	27.38	.0019	.0314	.3856	4.214
Stddev	.0019	.32	.0003	.0004	.0023	.017
%RSD	16.14	1.160	17.50	1.314	.6007	.3934
#1	-.0113	27.15	.0015	.0309	.3836	4.198
#2	-.0139	27.24	.0021	.0316	.3850	4.211
#3	-.0102	27.74	.0019	.0316	.3881	4.231

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	102.5	2.940	.0412	26.64	1.434	.0083
Stddev	.5	.036	.0025	.18	.018	.0005
%RSD	.5356	1.239	6.010	.6716	1.261	5.693
#1	102.0	2.975	.0419	26.56	1.421	.0084
#2	102.5	2.902	.0434	26.51	1.427	.0087
#3	103.1	2.942	.0385	26.84	1.455	.0078

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	2.412	.3055	1.690	1.494	.0269	-.0017
Stddev	.038	.0016	.009	.012	.0017	.0023
%RSD	1.564	.5399	.5616	.7959	6.498	131.9
#1	2.389	.3040	1.682	1.482	.0286	.0009
#2	2.391	.3052	1.688	1.494	.0270	-.0030
#3	2.455	.3073	1.700	1.506	.0251	-.0030

Sample Name: 580-131051-E-1A SD@5 Acquired: 9/5/2023 18:22:22 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.777	.0474	.1269	3.688	.0080	.3258
Stddev	.023	.0007	.0008	.013	.0043	.0049
%RSD	1.279	1.468	.5923	.3400	53.37	1.511
#1	1.763	.0466	.1261	3.675	.0110	.3201
#2	1.803	.0478	.1271	3.688	.0098	.3291
#3	1.764	.0478	.1275	3.700	.0031	.3281

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	2.353
Stddev	.023
%RSD	.9942
#1	2.332
#2	2.348
#3	2.378

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4107.3	22933.	12291.	25027.
Stddev	33.5	182.	15.	20.
%RSD	.81581	.79552	.11992	.07819
#1	4118.3	23014.	12308.	25042.
#2	4133.9	23061.	12284.	25035.
#3	4069.6	22724.	12281.	25005.

Sample Name: CCV 3565024 Acquired: 9/5/2023 18:26:19 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9713	92.33	4.913	46.39	4.962	4.696
Stddev	.0393	3.65	.020	.13	.012	.178
%RSD	4.046	3.952	.4142	.2718	.2370	3.786
#1	.9452	89.87	4.892	46.26	4.951	4.580
#2	1.017	96.52	4.933	46.51	4.974	4.901
#3	.9523	90.60	4.913	46.40	4.960	4.608
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.794	91.42	4.660	4.628	5.080	5.125
Stddev	.012	.92	.012	.013	.009	.208
%RSD	.2454	1.003	.2661	.2840	.1834	4.050
#1	4.782	91.98	4.646	4.615	5.073	4.986
#2	4.806	90.36	4.671	4.641	5.091	5.363
#3	4.794	91.91	4.663	4.628	5.077	5.024
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	103.6	98.02	4.723	102.7	4.827	4.798
Stddev	4.2	3.88	.183	4.1	.049	.011
%RSD	4.071	3.957	3.880	3.972	1.005	.2384
#1	100.7	95.36	4.593	100.3	4.861	4.787
#2	108.4	102.5	4.933	107.5	4.771	4.810
#3	101.6	96.23	4.644	100.5	4.849	4.798
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCV 3565024 Acquired: 9/5/2023 18:26:19 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	98.63	4.700	47.52	4.701	4.853	4.680
Stddev	.96	.015	.10	.014	.012	.011
%RSD	.9766	.3080	.2156	.2919	.2400	.2267
#1	99.38	4.684	47.57	4.685	4.841	4.670
#2	97.55	4.712	47.59	4.708	4.864	4.691
#3	98.98	4.704	47.40	4.710	4.855	4.677
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	53.91	4.709	4.948	F 4.454	4.729	4.644
Stddev	2.15	.013	.188	.175	.025	.187
%RSD	3.996	.2826	3.794	3.939	.5322	4.031
#1	52.33	4.695	4.814	4.330	4.706	4.524
#2	56.36	4.720	5.162	4.655	4.724	4.860
#3	53.04	4.713	4.867	4.378	4.756	4.550
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
Value				5.000		
Range				-10.00%		

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	4.622
Stddev	.020
%RSD	.4337
#1	4.599
#2	4.635
#3	4.633
Check ?	Chk Pass
Value	
Range	

Sample Name: CCV 3565024 Acquired: 9/5/2023 18:26:19 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3694.0	21425.	11362.	23129.
Stddev	5.3	37.	559.	1133.
%RSD	.14437	.17439	4.9168	4.8983
#1	3694.4	21410.	11704.	23858.
#2	3688.5	21398.	10717.	21823.
#3	3699.1	21468.	11665.	23704.

Sample Name: CCVL 3561056 Acquired: 9/5/2023 21:11:09 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0523	.4887	.0569	.4143	.0195	.0193
Stddev	.0010	.0201	.0008	.0050	.0007	.0006
%RSD	1.930	4.106	1.394	1.204	3.711	2.934
#1	.0513	.5093	.0578	.4170	.0198	.0194
#2	.0525	.4692	.0567	.4175	.0201	.0187
#3	.0533	.4876	.0563	.4086	.0187	.0198
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.2679	.5028	.0177	.0177	.0260	.0481
Stddev	.0014	.0157	.0006	.0006	.0006	.0025
%RSD	.5330	3.115	3.471	3.399	2.146	5.283
#1	.2667	.4997	.0179	.0179	.0262	.0488
#2	.2675	.4890	.0182	.0182	.0264	.0453
#3	.2695	.5198	.0170	.0170	.0253	.0502
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.5273	3.478	.0967	.5532	.0191	.0360
Stddev	.0131	.007	.0015	.0106	.0003	.0006
%RSD	2.480	.1939	1.572	1.912	1.454	1.766
#1	.5270	3.484	.0951	.5440	.0192	.0362
#2	.5143	3.471	.0982	.5647	.0188	.0365
#3	.5405	3.479	.0969	.5508	.0193	.0353
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCVL 3561056 Acquired: 9/5/2023 21:11:09 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F 1.155	.0174	.0962	.0277	.0588	.0871
Stddev	.115	.0007	.0072	.0017	.0019	.0022
%RSD	9.921	4.209	7.491	5.990	3.258	2.507
#1	1.164	.0174	.1007	.0258	.0597	.0887
#2	1.037	.0182	.1000	.0287	.0601	.0846
#3	1.265	.0167	.0879	.0286	.0566	.0880
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	.5000					
Range	30.00%					

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.186	.0928	.1017	.0285	.1008	.0296
Stddev	.011	.0009	.0005	.0008	.0039	.0042
%RSD	.9594	.9606	.5099	2.675	3.838	14.18
#1	1.199	.0927	.1018	.0277	.0980	.0340
#2	1.177	.0937	.1011	.0292	.1052	.0257
#3	1.183	.0919	.1022	.0285	.0991	.0292
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0337
Stddev	.0004
%RSD	1.231
#1	.0336
#2	.0342
#3	.0334
Check ?	Chk Pass
Value	
Range	

Sample Name: CCVL 3561056 Acquired: 9/5/2023 21:11:09 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4346.0	24162.	12479.	25160.
Stddev	28.1	161.	38.	73.
%RSD	.64638	.66711	.30156	.29138
#1	4377.1	24335.	12436.	25077.
#2	4338.4	24133.	12498.	25215.
#3	4322.5	24017.	12504.	25187.

Sample Name: CCB Acquired: 9/5/2023 18:30:01 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0022	.0814	.0015	.0185	.0014	-.0017
Stddev	.0026	.0712	.0030	.0151	.0015	.0009
%RSD	117.9	87.55	198.2	81.61	105.9	51.14
#1	-.0035	.0781	-.0013	.0267	.0012	-.0017
#2	.0008	.0118	.0046	.0276	.0031	-.0025
#3	-.0040	.1542	.0012	.0011	.0001	-.0008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0004	.0177	.0001	.0002	.0019	.0083
Stddev	.0015	.0464	.0011	.0008	.0015	.0060
%RSD	401.5	262.5	1052.	436.5	76.24	73.16
#1	.0013	.0121	-.0002	-.0002	.0020	.0027
#2	-.0010	-.0257	.0013	.0011	.0034	.0074
#3	-.0014	.0667	-.0008	-.0004	.0004	.0147
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.1850	.1472	.0093	.0366	.0013	.0044
Stddev	.1408	.0457	.0013	.0248	.0024	.0013
%RSD	76.07	31.07	13.97	67.93	189.1	28.32
#1	.1799	.1998	.0107	.0323	.0009	.0054
#2	.0469	.1167	.0081	.0141	-.0009	.0049
#3	.3283	.1251	.0091	.0633	.0038	.0030
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: CCB Acquired: 9/5/2023 18:30:01 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0046	.0009	.0079	.0083	.0013	.0035
Stddev	.0213	.0017	.0108	.0032	.0015	.0022
%RSD	459.1	189.9	136.8	37.98	114.9	63.57
#1	-.0012	.0007	.0037	.0080	-.0001	.0034
#2	-.0275	.0027	.0201	.0117	.0011	.0058
#3	.0147	-.0007	-.0002	.0053	.0029	.0013
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0955	.0010	-.0009	.0071	.0100	.0013
Stddev	.0079	.0008	.0011	.0038	.0043	.0025
%RSD	8.288	78.70	125.9	54.27	43.10	186.3
#1	.1046	.0006	-.0008	.0065	.0140	-.0014
#2	.0902	.0019	-.0021	.0035	.0104	.0018
#3	.0917	.0004	.0002	.0112	.0054	.0035
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0072
Stddev	.0039
%RSD	53.57
#1	.0076
#2	.0109
#3	.0032
Check ?	Chk Pass
High Limit	
Low Limit	

Sample Name: CCB Acquired: 9/5/2023 18:30:01 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4235.8	22967.	11986.	24400.
Stddev	23.5	155.	73.	180.
%RSD	.55366	.67384	.61094	.73666
#1	4208.7	22790.	11991.	24384.
#2	4250.0	23079.	11910.	24228.
#3	4248.5	23031.	12056.	24587.

Sample Name: 580-130995-H-1-A Acquired: 9/5/2023 18:33:33 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0003	.2937	-.0016	-.0325	.0261	.0006
Stddev	.0006	.2378	.0027	.0248	.0033	.0029
%RSD	189.7	80.97	167.1	76.31	12.69	484.9
#1	-.0003	.0193	.0014	-.0039	.0299	-.0028
#2	.0003	.4408	-.0036	-.0452	.0242	.0023
#3	-.0009	.4208	-.0026	-.0484	.0241	.0022

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0025	15.92	-.0015	-.0014	-.0003	.0186
Stddev	.0027	.16	.0022	.0023	.0035	.0253
%RSD	108.9	1.015	149.1	162.9	1074.	136.0
#1	-.0001	15.73	.0011	.0012	.0037	-.0105
#2	-.0054	15.98	-.0028	-.0027	-.0024	.0313
#3	-.0020	16.04	-.0027	-.0027	-.0024	.0351

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.5637	1.032	.0045	4.723	.0123	.0007
Stddev	.4576	.104	.0030	.178	.0082	.0024
%RSD	81.18	10.04	66.04	3.779	67.11	360.6
#1	.0355	.9149	.0011	4.518	.0028	.0034
#2	.8414	1.069	.0060	4.844	.0181	-.0004
#3	.8141	1.112	.0064	4.807	.0159	-.0010

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	3.955	-.0009	.0073	.0004	-.0002	-.0010
Stddev	.063	.0025	.0256	.0079	.0012	.0050
%RSD	1.596	283.8	353.1	1798.	744.2	483.1
#1	3.883	.0020	.0367	.0095	.0009	.0031
#2	3.984	-.0022	-.0057	-.0046	-.0015	-.0065
#3	3.999	-.0024	-.0093	-.0036	.0002	.0003

Sample Name: 580-130995-H-1-A Acquired: 9/5/2023 18:33:33 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	3.497	-.0014	.1015	.0194	.0058	.0066
Stddev	.029	.0026	.0036	.0157	.0039	.0041
%RSD	.8432	187.1	3.533	80.93	68.54	62.14
#1	3.466	.0016	.0974	.0013	.0101	.0021
#2	3.525	-.0026	.1038	.0282	.0047	.0101
#3	3.499	-.0031	.1034	.0287	.0024	.0074

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0024
Stddev	.0106
%RSD	447.2
#1	.0146
#2	-.0034
#3	-.0041

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4376.1	23785.	12533.	25525.
Stddev	14.4	110.	39.	72.
%RSD	.32936	.46184	.31350	.28106
#1	4389.3	23886.	12577.	25607.
#2	4378.2	23802.	12518.	25493.
#3	4360.7	23668.	12503.	25475.

Sample Name: 580-131051-C-2-A Acquired: 9/5/2023 18:37:02 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0081	169.8	.0738	.0311	.4464	.0012
Stddev	.0019	.5	.0012	.0016	.0018	.0001
%RSD	23.15	.2780	1.661	5.082	.4139	6.743
#1	-.0060	169.8	.0735	.0326	.4452	.0012
#2	-.0085	170.2	.0752	.0311	.4454	.0013
#3	-.0096	169.3	.0728	.0295	.4485	.0012

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0061	178.1	.0003	.1190	.5691	2.849
Stddev	.0033	1.0	.0001	.0006	.0015	.025
%RSD	53.82	.5739	18.85	.4648	.2636	.8834
#1	.0025	177.4	.0003	.1186	.5698	2.847
#2	.0090	179.3	.0003	.1188	.5673	2.875
#3	.0068	177.6	.0004	.1196	.5700	2.825

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	336.4	13.74	.1955	104.3	5.156	.0339
Stddev	1.7	.07	.0012	.8	.043	.0005
%RSD	.5110	.5420	.5970	.7452	.8266	1.551
#1	337.6	13.72	.1963	104.8	5.128	.0334
#2	337.2	13.82	.1961	104.6	5.205	.0337
#3	334.4	13.68	.1942	103.4	5.135	.0344

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	35.30	1.114	6.918	2.641	.0064	-.0033
Stddev	.26	.003	.044	.008	.0020	.0076
%RSD	.7323	.2722	.6305	.3005	31.52	230.0
#1	35.11	1.113	6.939	2.636	.0064	-.0121
#2	35.59	1.112	6.867	2.638	.0044	.0009
#3	35.19	1.118	6.946	2.651	.0084	.0012

Sample Name: 580-131051-C-2-A Acquired: 9/5/2023 18:37:02 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	3.316	.0919	.8745	13.98	.0265	.8031
Stddev	.007	.0009	.0040	.03	.0052	.0009
%RSD	.2132	.9648	.4578	.2235	19.43	.1138
#1	3.317	.0909	.8747	13.99	.0208	.8020
#2	3.322	.0925	.8785	14.01	.0279	.8034
#3	3.308	.0924	.8705	13.95	.0308	.8038

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	2.643
Stddev	.007
%RSD	.2562
#1	2.640
#2	2.638
#3	2.650

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3946.9	22851.	12627.	25699.
Stddev	19.1	109.	73.	108.
%RSD	.48515	.47677	.57987	.41968
#1	3963.2	22930.	12570.	25616.
#2	3951.8	22896.	12710.	25821.
#3	3925.8	22726.	12602.	25660.

Sample Name: 580-130928-D-3-D MSD Acquired: 9/5/2023 21:34:04 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9528	19.46	.9919	9.370	.9989	.9733
Stddev	.0017	.04	.0041	.038	.0031	.0025
%RSD	.1818	.2184	.4105	.4064	.3120	.2567
#1	.9509	19.43	.9874	9.348	.9969	.9714
#2	.9535	19.44	.9952	9.348	.9974	.9724
#3	.9541	19.51	.9933	9.414	1.003	.9761

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0051	51.53	.9491	.9273	1.015	.9472
Stddev	.0012	.39	.0044	.0039	.003	.0092
%RSD	24.40	.7656	.4588	.4165	.2733	.9673
#1	-.0037	51.11	.9463	.9244	1.012	.9436
#2	-.0059	51.60	.9468	.9258	1.015	.9403
#3	-.0056	51.89	.9541	.9317	1.018	.9576

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	22.39	23.58	.9116	69.07	2.619	.9406
Stddev	.06	.06	.0044	.15	.026	.0038
%RSD	.2772	.2665	.4849	.2101	1.009	.4058
#1	22.32	23.52	.9069	69.06	2.590	.9384
#2	22.39	23.58	.9157	68.93	2.623	.9383
#3	22.45	23.64	.9121	69.22	2.643	.9450

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	53.97	.9387	5.211	.9452	.9915	.9293
Stddev	.47	.0030	.029	.0033	.0027	.0052
%RSD	.8718	.3206	.5655	.3498	.2715	.5585
#1	53.48	.9362	5.184	.9419	.9903	.9244
#2	54.04	.9378	5.207	.9452	.9896	.9287
#3	54.41	.9420	5.242	.9485	.9946	.9348

Sample Name: 580-130928-D-3-D MSD Acquired: 9/5/2023 21:34:04 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	24.52	.9714	1.195	.9298	.9891	.9673
Stddev	.06	.0042	.004	.0024	.0136	.0034
%RSD	.2575	.4370	.3457	.2579	1.371	.3555
#1	24.47	.9685	1.190	.9276	.9785	.9643
#2	24.50	.9694	1.198	.9323	.9844	.9664
#3	24.59	.9763	1.197	.9294	1.004	.9710

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.9863
Stddev	.0041
%RSD	.4115
#1	.9836
#2	.9844
#3	.9910

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3960.6	23116.	12309.	24699.
Stddev	13.4	68.	35.	74.
%RSD	.33727	.29564	.28605	.30017
#1	3971.3	23182.	12268.	24629.
#2	3965.0	23120.	12331.	24693.
#3	3945.6	23045.	12327.	24776.

Sample Name: 580-130928-D-3A SD@5 Acquired: 9/5/2023 21:40:07 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0014	.0072	.0026	-.0102	.0016	-.0004
Stddev	.0033	.0290	.0009	.0094	.0006	.0014
%RSD	236.8	402.3	35.86	92.20	37.62	306.2
#1	.0017	.0217	.0030	.0006	.0023	-.0005
#2	.0045	.0262	.0032	-.0144	.0014	.0009
#3	-.0020	-.0262	.0015	-.0167	.0012	-.0018

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0028	6.814	-.0014	-.0005	-.0013	-.0069
Stddev	.0021	.127	.0006	.0008	.0006	.0110
%RSD	75.31	1.864	44.16	158.4	49.50	158.6
#1	-.0010	6.846	-.0007	.0004	-.0005	-.0003
#2	-.0024	6.922	-.0017	-.0007	-.0016	-.0008
#3	-.0051	6.674	-.0018	-.0011	-.0017	-.0196

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.4984	1.029	.0061	10.21	.3418	.0037
Stddev	.0457	.074	.0020	.47	.0060	.0020
%RSD	9.159	7.196	31.94	4.586	1.749	54.41
#1	.5046	1.057	.0077	10.40	.3450	.0059
#2	.5407	1.086	.0067	10.55	.3456	.0031
#3	.4500	.9455	.0039	9.678	.3349	.0020

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	7.254	-.0001	.0037	-.0046	-.0009	.0018
Stddev	.158	.0009	.0052	.0005	.0028	.0021
%RSD	2.179	836.6	140.2	10.23	319.8	117.8
#1	7.335	.0008	.0094	-.0045	.0023	.0041
#2	7.355	-.0000	.0025	-.0051	-.0026	.0001
#3	7.072	-.0010	-.0008	-.0042	-.0023	.0011

Sample Name: 580-130928-D-3A SD@5 Acquired: 9/5/2023 21:40:07 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	3.050	-.0011	.0451	.0015	.0152	-.0003
Stddev	.133	.0008	.0033	.0008	.0049	.0035
%RSD	4.355	77.65	7.404	54.86	31.98	1160.
#1	3.112	-.0001	.0462	.0020	.0182	.0029
#2	3.140	-.0015	.0477	.0020	.0178	.0001
#3	2.897	-.0016	.0413	.0005	.0096	-.0040

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0046
Stddev	.0006
%RSD	12.78
#1	.0053
#2	.0043
#3	.0043

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4181.7	23483.	12247.	24561.
Stddev	21.3	122.	286.	557.
%RSD	.51016	.52125	2.3357	2.2662
#1	4204.2	23603.	12135.	24358.
#2	4179.0	23486.	12033.	24134.
#3	4161.8	23358.	12572.	25191.

Sample Name: 580-131051-C-3-A Acquired: 9/5/2023 18:40:09 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0055	178.7	.0636	.0190	.5292	.0020
Stddev	.0013	3.2	.0042	.0004	.0021	.0002
%RSD	24.57	1.780	6.677	2.238	.4025	7.888
#1	-.0045	181.1	.0683	.0187	.5269	.0019
#2	-.0070	175.1	.0626	.0195	.5294	.0019
#3	-.0049	179.9	.0599	.0189	.5312	.0022

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0074	152.6	.0015	.1146	.4418	1.081
Stddev	.0007	1.5	.0004	.0012	.0014	.017
%RSD	10.04	1.007	24.69	1.085	.3206	1.548
#1	.0075	150.8	.0011	.1132	.4404	1.094
#2	.0067	153.4	.0018	.1157	.4418	1.062
#3	.0082	153.5	.0017	.1148	.4432	1.088

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	333.4	14.73	.2033	107.1	7.315	.0056
Stddev	6.2	.27	.0029	1.9	.069	.0001
%RSD	1.850	1.858	1.421	1.753	.9377	1.231
#1	339.0	14.94	.2046	108.7	7.237	.0056
#2	326.8	14.42	.2000	105.0	7.368	.0055
#3	334.5	14.83	.2054	107.4	7.339	.0055

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	27.33	.8049	23.72	.8257	.0001	-.0030
Stddev	.32	.0040	.03	.0079	.0014	.0053
%RSD	1.158	.5027	.1450	.9566	1067.	174.7
#1	26.97	.8002	23.68	.8168	-.0012	.0000
#2	27.46	.8074	23.75	.8319	-.0001	-.0091
#3	27.56	.8071	23.74	.8284	.0016	.0000

Sample Name: 580-131051-C-3-A Acquired: 9/5/2023 18:40:09 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	3.798	.0422	.6528	14.91	.0231	.8023
Stddev	.074	.0013	.0110	.27	.0092	.0114
%RSD	1.961	3.142	1.687	1.840	39.65	1.421
#1	3.860	.0407	.6622	15.14	.0304	.8089
#2	3.716	.0432	.6407	14.61	.0260	.7891
#3	3.819	.0426	.6554	14.99	.0128	.8088

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	1.752
Stddev	.008
%RSD	.4429
#1	1.743
#2	1.757
#3	1.756

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3940.3	23118.	12889.	26156.
Stddev	13.2	69.	314.	628.
%RSD	.33529	.29770	2.4349	2.4005
#1	3955.0	23185.	12594.	25568.
#2	3936.1	23120.	13218.	26817.
#3	3929.6	23048.	12855.	26084.

Sample Name: 580-131051-C-4-A Acquired: 9/5/2023 18:43:17 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0059	250.8	.0812	.0484	.5653	.0035
Stddev	.0005	1.1	.0026	.0000	.0024	.0001
%RSD	8.225	.4358	3.155	.0967	.4325	3.621
#1	-.0058	251.9	.0841	.0483	.5637	.0035
#2	-.0055	250.6	.0802	.0483	.5642	.0034
#3	-.0065	249.8	.0793	.0484	.5681	.0037

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0106	210.2	.0017	.1339	.6530	1.667
Stddev	.0016	2.3	.0003	.0006	.0037	.003
%RSD	14.91	1.114	18.96	.4204	.5612	.1828
#1	.0116	208.3	.0018	.1332	.6505	1.668
#2	.0088	209.6	.0013	.1341	.6513	1.669
#3	.0115	212.8	.0020	.1343	.6572	1.663

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	414.4	16.52	.2424	142.7	6.745	.0069
Stddev	1.1	.04	.0022	.7	.075	.0004
%RSD	.2772	.2351	.9050	.4822	1.116	5.378
#1	415.5	16.54	.2439	143.3	6.690	.0071
#2	414.7	16.54	.2399	142.7	6.715	.0071
#3	413.2	16.47	.2434	142.0	6.831	.0065

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	40.78	.9734	9.224	2.060	.0029	-.0052
Stddev	.52	.0051	.050	.012	.0005	.0042
%RSD	1.281	.5272	.5391	.5758	16.65	79.75
#1	40.40	.9704	9.181	2.049	.0025	-.0094
#2	40.58	.9706	9.212	2.058	.0034	-.0011
#3	41.38	.9794	9.279	2.072	.0027	-.0052

Sample Name: 580-131051-C-4-A Acquired: 9/5/2023 18:43:17 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	8.138	.0521	.8111	21.99	.0391	1.076
Stddev	.034	.0002	.0017	.05	.0096	.003
%RSD	.4216	.3173	.2091	.2247	24.64	.3145
#1	8.169	.0519	.8130	22.02	.0315	1.080
#2	8.101	.0520	.8107	22.01	.0359	1.074
#3	8.145	.0523	.8097	21.93	.0500	1.074

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	3.034
Stddev	.016
%RSD	.5197
#1	3.020
#2	3.032
#3	3.051

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3840.8	22514.	12718.	25798.
Stddev	36.7	209.	90.	187.
%RSD	.95490	.92615	.70961	.72419
#1	3881.2	22741.	12689.	25753.
#2	3831.6	22467.	12646.	25638.
#3	3809.6	22332.	12820.	26003.

Sample Name: 580-131051-D-5-A Acquired: 9/5/2023 18:46:24 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0012	189.6	.0758	.0006	.9280	.0014
Stddev	.0012	3.6	.0036	.0005	.0020	.0002
%RSD	98.54	1.916	4.747	73.27	.2141	12.29
#1	-.0025	186.0	.0721	.0001	.9271	.0012
#2	-.0008	189.6	.0761	.0008	.9265	.0015
#3	-.0002	193.3	.0793	.0010	.9302	.0015

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0160	128.3	.0129	.1456	1.241	13.86
Stddev	.0021	2.4	.0003	.0005	.009	.28
%RSD	13.18	1.878	2.679	.3285	.7119	2.045
#1	-.0166	125.6	.0132	.1460	1.234	13.56
#2	-.0137	129.6	.0126	.1450	1.238	13.88
#3	-.0179	129.8	.0128	.1457	1.251	14.12

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	369.2	11.86	.1825	113.2	6.631	.0076
Stddev	6.5	.19	.0036	1.7	.133	.0007
%RSD	1.756	1.600	1.967	1.473	2.009	9.206
#1	362.5	11.66	.1791	111.6	6.477	.0070
#2	369.7	11.89	.1821	113.1	6.706	.0075
#3	375.4	12.04	.1862	114.9	6.710	.0084

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	16.83	1.067	8.063	4.619	.0410	-.0041
Stddev	.36	.003	.113	.011	.0037	.0019
%RSD	2.124	.2341	1.397	.2340	9.072	45.69
#1	16.42	1.067	7.953	4.615	.0370	-.0021
#2	17.04	1.064	8.057	4.612	.0415	-.0058
#3	17.03	1.069	8.178	4.632	.0444	-.0044

Sample Name: 580-131051-D-5-A Acquired: 9/5/2023 18:46:24 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	3.340	.1254	.4870	14.40	.0222	1.188
Stddev	.053	.0011	.0095	.28	.0033	.029
%RSD	1.596	.8588	1.960	1.947	14.94	2.446
#1	3.288	.1250	.4773	14.12	.0251	1.160
#2	3.339	.1245	.4874	14.41	.0186	1.185
#3	3.394	.1266	.4964	14.68	.0230	1.218

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	7.353
Stddev	.041
%RSD	.5628
#1	7.326
#2	7.332
#3	7.401

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3932.8	22593.	12625.	25580.
Stddev	6.6	53.	111.	247.
%RSD	.16768	.23606	.87814	.96720
#1	3936.4	22644.	12593.	25479.
#2	3936.8	22596.	12748.	25862.
#3	3925.2	22538.	12533.	25399.

Sample Name: 580-131051-C-6-A Acquired: 9/5/2023 18:51:00 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0235	255.9	.1254	-.0108	2.975	.0031
Stddev	.0011	.5	.0019	.0007	.006	.0001
%RSD	4.521	.2147	1.548	6.817	.2059	4.456
#1	.0246	255.3	.1251	-.0099	2.975	.0029
#2	.0225	256.3	.1236	-.0113	2.970	.0032
#3	.0233	256.2	.1275	-.0111	2.982	.0032

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0211	174.2	.0276	.1718	1.599	18.76
Stddev	.0011	1.3	.0002	.0006	.004	.05
%RSD	5.330	.7489	.8432	.3679	.2360	.2796
#1	-.0220	175.6	.0275	.1714	1.598	18.70
#2	-.0198	173.1	.0274	.1713	1.597	18.79
#3	-.0214	173.8	.0279	.1725	1.604	18.79

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	495.2	16.34	.1955	137.7	7.314	.0249
Stddev	7.9	.07	.0020	.6	.051	.0006
%RSD	1.589	.4286	1.003	.4142	.6956	2.484
#1	487.7	16.26	.1933	137.6	7.368	.0244
#2	503.4	16.40	.1968	138.3	7.266	.0256
#3	494.6	16.36	.1966	137.1	7.309	.0247

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	17.40	1.327	9.276	7.770	.1567	-.0055
Stddev	.14	.003	.023	.017	.0025	.0040
%RSD	.7998	.2576	.2516	.2130	1.587	71.43
#1	17.50	1.325	9.249	7.763	.1595	-.0100
#2	17.24	1.326	9.289	7.759	.1548	-.0040
#3	17.46	1.331	9.290	7.789	.1559	-.0025

Sample Name: 580-131051-C-6-A Acquired: 9/5/2023 18:51:00 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.482	.2267	.9741	18.22	.0279	1.952
Stddev	.017	.0002	.0036	.01	.0085	.008
%RSD	.3882	.0933	.3649	.0805	30.40	.3992
#1	4.462	.2267	.9702	18.21	.0333	1.947
#2	4.491	.2264	.9751	18.24	.0321	1.961
#3	4.493	.2268	.9771	18.21	.0181	1.948

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	11.98
Stddev	.02
%RSD	.1860
#1	12.00
#2	11.96
#3	12.00

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3927.8	22927.	12785.	25958.
Stddev	8.9	36.	112.	247.
%RSD	.22757	.15872	.87526	.95091
#1	3933.4	22918.	12911.	26238.
#2	3932.4	22967.	12699.	25771.
#3	3917.4	22896.	12743.	25866.

Sample Name: 580-131051-F-7-A Acquired: 9/5/2023 18:55:45 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0004	242.0	.1607	-.0019	1.374	.0032
Stddev	.0003	.5	.0041	.0008	.023	.0003
%RSD	79.86	.1958	2.567	44.15	1.704	10.65
#1	-.0002	241.8	.1560	-.0028	1.347	.0036
#2	-.0008	242.5	.1635	-.0014	1.383	.0030
#3	-.0003	241.6	.1627	-.0014	1.392	.0029

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0085	132.8	.0299	.2014	1.629	22.52
Stddev	.0020	1.0	.0010	.0040	.027	.02
%RSD	23.26	.7330	3.355	1.997	1.653	.0988
#1	-.0077	132.0	.0287	.1969	1.599	22.51
#2	-.0070	132.6	.0304	.2028	1.638	22.55
#3	-.0107	133.9	.0305	.2046	1.650	22.51

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	562.9	18.12	.2053	136.7	7.650	.0115
Stddev	6.7	.06	.0008	.3	.054	.0002
%RSD	1.197	.3346	.3844	.2452	.7081	2.050
#1	569.6	18.12	.2056	136.6	7.607	.0113
#2	562.9	18.17	.2058	137.1	7.632	.0116
#3	556.1	18.05	.2044	136.5	7.711	.0117

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	14.48	1.206	8.073	43.60	.0810	-.0008
Stddev	.08	.018	.129	.70	.0016	.0042
%RSD	.5191	1.525	1.600	1.610	1.998	549.7
#1	14.45	1.185	7.925	42.82	.0794	.0003
#2	14.42	1.215	8.129	43.83	.0808	.0028
#3	14.56	1.218	8.164	44.16	.0827	-.0054

Sample Name: 580-131051-F-7-A Acquired: 9/5/2023 18:55:45 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.368	.2999	.5985	20.90	.0277	1.940
Stddev	.021	.0047	.0009	.03	.0056	.012
%RSD	.4867	1.584	.1463	.1247	20.26	.6340
#1	4.383	.2949	.5995	20.88	.0220	1.937
#2	4.377	.3005	.5982	20.93	.0280	1.954
#3	4.343	.3043	.5978	20.90	.0332	1.930

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	13.30
Stddev	.19
%RSD	1.394
#1	13.09
#2	13.37
#3	13.44

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3880.1	22427.	12515.	25363.
Stddev	38.3	208.	52.	137.
%RSD	.98672	.92722	.41560	.53973
#1	3921.6	22657.	12556.	25467.
#2	3872.6	22373.	12456.	25208.
#3	3846.2	22252.	12532.	25414.

Sample Name: CCV 3565024 Acquired: 9/5/2023 19:00:31 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9326	90.66	4.933	46.11	4.973	4.580
Stddev	.0263	2.55	.020	.21	.016	.124
%RSD	2.818	2.809	.4108	.4452	.3240	2.703
#1	.9585	92.97	4.928	46.04	4.969	4.695
#2	.9059	87.93	4.916	45.94	4.959	4.449
#3	.9334	91.09	4.956	46.34	4.990	4.596
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.783	92.07	4.687	4.652	5.101	4.903
Stddev	.021	.23	.017	.019	.016	.131
%RSD	.4436	.2449	.3663	.4099	.3136	2.680
#1	4.779	92.23	4.688	4.654	5.098	5.018
#2	4.764	91.81	4.669	4.633	5.087	4.760
#3	4.806	92.16	4.703	4.671	5.118	4.931
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	99.57	95.67	4.565	99.49	4.869	4.759
Stddev	2.71	2.60	.121	2.68	.009	.025
%RSD	2.720	2.716	2.639	2.693	.1801	.5304
#1	102.1	98.11	4.676	102.0	4.877	4.747
#2	96.70	92.94	4.437	96.70	4.860	4.742
#3	99.94	95.97	4.583	99.72	4.870	4.788
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCV 3565024 Acquired: 9/5/2023 19:00:31 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	99.19	4.717	48.00	4.714	4.835	4.654
Stddev	.17	.020	.12	.015	.023	.020
%RSD	.1692	.4147	.2553	.3268	.4840	.4197
#1	99.34	4.715	47.99	4.717	4.835	4.653
#2	99.01	4.698	47.88	4.698	4.812	4.635
#3	99.22	4.737	48.12	4.728	4.858	4.674
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	51.74	4.745	4.807	F 4.343	4.772	4.562
Stddev	1.32	.020	.131	.116	.029	.125
%RSD	2.559	.4259	2.728	2.662	.6098	2.742
#1	52.88	4.750	4.931	4.444	4.758	4.676
#2	50.29	4.724	4.670	4.217	4.753	4.428
#3	52.06	4.763	4.819	4.369	4.806	4.580
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
Value				5.000		
Range				-10.00%		

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	4.621
Stddev	.017
%RSD	.3668
#1	4.624
#2	4.603
#3	4.636
Check ?	Chk Pass
Value	
Range	

Sample Name: CCV 3565024 Acquired: 9/5/2023 19:00:31 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3682.8	21488.	11866.	24082.
Stddev	4.4	27.	284.	594.
%RSD	.11857	.12640	2.3927	2.4663
#1	3684.7	21518.	11612.	23544.
#2	3685.9	21481.	12172.	24719.
#3	3677.8	21464.	11812.	23983.

Sample Name: CCB Acquired: 9/5/2023 19:04:52 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0021	-.0537	.0011	-.0215	-.0012	-.0029
Stddev	.0029	.0209	.0003	.0061	.0004	.0001
%RSD	136.8	38.95	24.58	28.28	35.25	3.565
#1	-.0029	-.0336	.0013	-.0145	-.0011	-.0030
#2	-.0046	-.0521	.0012	-.0244	-.0016	-.0028
#3	.0011	-.0753	.0008	-.0256	-.0008	-.0028
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0019	-.0618	-.0015	-.0014	-.0012	-.0035
Stddev	.0023	.0064	.0002	.0003	.0000	.0075
%RSD	123.1	10.29	15.42	19.99	3.266	211.9
#1	-.0015	-.0669	-.0014	-.0014	-.0012	-.0060
#2	.0002	-.0637	-.0018	-.0017	-.0012	.0049
#3	-.0043	-.0546	-.0014	-.0011	-.0011	-.0094
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0447	.0779	.0077	-.0424	-.0022	.0012
Stddev	.0011	.0387	.0013	.0130	.0004	.0006
%RSD	2.519	49.77	16.62	30.73	19.74	49.14
#1	-.0434	.0928	.0075	-.0527	-.0027	.0018
#2	-.0453	.0339	.0066	-.0466	-.0021	.0010
#3	-.0454	.1069	.0091	-.0277	-.0018	.0007
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: CCB Acquired: 9/5/2023 19:04:52 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0552	-.0016	-.0134	.0035	.0012	.0001
Stddev	.0065	.0003	.0050	.0020	.0014	.0018
%RSD	11.86	20.04	37.46	58.04	119.9	3470.
#1	-.0627	-.0018	-.0161	.0052	.0014	-.0016
#2	-.0522	-.0017	-.0166	.0013	.0024	.0019
#3	-.0506	-.0012	-.0076	.0040	-.0003	-.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0305	-.0009	-.0026	-.0018	.0086	-.0019
Stddev	.0092	.0007	.0001	.0013	.0024	.0022
%RSD	30.14	71.85	3.902	75.11	28.31	113.9
#1	.0408	-.0006	-.0027	-.0019	.0113	-.0037
#2	.0231	-.0017	-.0026	-.0030	.0071	-.0025
#3	.0277	-.0005	-.0026	-.0004	.0072	.0005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0019
Stddev	.0011
%RSD	57.76
#1	-.0020
#2	-.0028
#3	-.0007
Check ?	Chk Pass
High Limit	
Low Limit	

Sample Name: CCB Acquired: 9/5/2023 19:04:52 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4284.0	23178.	11981.	24284.
Stddev	27.3	172.	51.	100.
%RSD	.63622	.74405	.42692	.41215
#1	4315.5	23376.	11971.	24291.
#2	4268.2	23062.	11936.	24181.
#3	4268.4	23096.	12037.	24381.

Sample Name: MB 580-436332/11-B Acquired: 9/5/2023 22:23:48 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0030	.3600	-.0003	.4108	.0037	-.0018
Stddev	.0025	.0594	.0006	.0209	.0025	.0029
%RSD	83.88	16.51	173.5	5.087	68.83	164.9
#1	-.0031	.3327	-.0005	.3997	.0023	-.0034
#2	-.0054	.3192	-.0008	.3978	.0021	-.0035
#3	-.0004	.4282	.0003	.4349	.0066	.0016

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0004	1.711	-.0019	-.0018	-.0011	-.0027
Stddev	.0015	.117	.0022	.0023	.0024	.0070
%RSD	380.8	6.850	116.1	130.8	217.6	255.7
#1	-.0003	1.648	-.0031	-.0031	-.0023	-.0046
#2	-.0006	1.639	-.0032	-.0031	-.0026	-.0086
#3	.0021	1.846	.0006	.0009	.0016	.0050

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0078	.9046	.0178	.8735	-.0003	-.0021
Stddev	.0620	.0744	.0012	.1049	.0038	.0022
%RSD	799.3	8.228	6.993	12.01	1277.	105.3
#1	-.0422	.9314	.0193	.8329	-.0025	-.0033
#2	-.0449	.8205	.0173	.7949	-.0025	-.0033
#3	.0638	.9619	.0170	.9926	.0041	.0004

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	14.77	-.0019	-.0131	-.0019	-.0005	.0031
Stddev	1.64	.0020	.0230	.0017	.0034	.0033
%RSD	11.13	103.3	175.7	89.05	702.2	105.2
#1	13.84	-.0033	-.0251	-.0023	-.0010	.0010
#2	13.80	-.0028	-.0277	-.0033	-.0036	.0015
#3	16.66	.0003	.0134	-.0000	.0031	.0069

Sample Name: MB 580-436332/11-B Acquired: 9/5/2023 22:23:48 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.7551	-.0018	.0021	.0060	.0070	-.0012
Stddev	.0710	.0027	.0035	.0048	.0052	.0073
%RSD	9.404	151.5	162.0	79.22	75.26	607.4
#1	.7368	-.0032	.0002	.0047	.0044	-.0052
#2	.6950	-.0034	.0001	.0021	.0035	-.0056
#3	.8335	.0013	.0062	.0114	.0130	.0072

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0023
Stddev	.0023
%RSD	101.3
#1	.0009
#2	.0010
#3	.0049

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4289.5	23932.	12126.	24332.
Stddev	7.3	44.	318.	649.
%RSD	.16981	.18471	2.6218	2.6680
#1	4297.7	23977.	11789.	23634.
#2	4283.9	23889.	12167.	24444.
#3	4286.8	23928.	12421.	24918.

Sample Name: CCVL 3561056 Acquired: 9/5/2023 19:08:30 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0518	.4803	.0574	.4061	.0184	.0165
Stddev	.0027	.0350	.0009	.0016	.0002	.0001
%RSD	5.231	7.294	1.481	.3865	1.084	.8865
#1	.0546	.4606	.0569	.4049	.0182	.0166
#2	.0517	.4596	.0584	.4056	.0185	.0165
#3	.0492	.5208	.0570	.4079	.0186	.0163
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.2754	.4752	.0162	.0161	.0249	.0488
Stddev	.0030	.0161	.0001	.0002	.0002	.0042
%RSD	1.085	3.386	.8089	1.423	.6191	8.512
#1	.2720	.4580	.0160	.0160	.0247	.0531
#2	.2768	.4778	.0162	.0159	.0249	.0486
#3	.2774	.4899	.0163	.0163	.0250	.0448
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.5728	3.284	.1002	.5472	.0189	.0359
Stddev	.0375	.022	.0015	.0176	.0012	.0005
%RSD	6.547	.6583	1.523	3.218	6.419	1.414
#1	.5298	3.259	.0994	.5385	.0179	.0356
#2	.5901	3.301	.1019	.5357	.0187	.0356
#3	.5986	3.290	.0992	.5675	.0203	.0365
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCVL 3561056 Acquired: 9/5/2023 19:08:30 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.4850	.0156	.0709	.0261	.0603	.0899
Stddev	.0130	.0004	.0033	.0018	.0021	.0039
%RSD	2.672	2.816	4.617	6.936	3.451	4.384
#1	.4706	.0153	.0680	.0254	.0590	.0928
#2	.4957	.0161	.0745	.0281	.0592	.0854
#3	.4887	.0153	.0704	.0247	.0627	.0917
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.124	.0905	.1001	.0278	.0987	.0242
Stddev	.016	.0011	.0003	.0015	.0029	.0006
%RSD	1.375	1.180	.3012	5.363	2.978	2.396
#1	1.142	.0895	.1005	.0261	.0957	.0238
#2	1.117	.0904	.1000	.0288	.0987	.0249
#3	1.114	.0916	.0999	.0285	.1016	.0240
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0325
Stddev	.0004
%RSD	1.095
#1	.0321
#2	.0325
#3	.0328
Check ?	Chk Pass
Value	
Range	

Sample Name: CCVL 3561056 Acquired: 9/5/2023 19:08:30 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4290.4	23423.	11975.	24306.
Stddev	34.1	176.	59.	119.
%RSD	.79576	.75194	.48974	.48973
#1	4319.8	23562.	11918.	24191.
#2	4298.5	23481.	11971.	24298.
#3	4253.0	23225.	12035.	24428.

Sample Name: CCB Acquired: 9/5/2023 19:24:13 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0004	.0046	.0006	-.0101	-.0014	-.0018
Stddev	.0011	.0444	.0009	.0101	.0001	.0005
%RSD	285.4	965.0	140.6	100.8	7.572	30.95
#1	.0003	-.0150	.0001	.0008	-.0013	-.0024
#2	.0016	.0555	.0016	-.0118	-.0015	-.0015
#3	-.0007	-.0267	.0001	-.0192	-.0014	-.0014
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0024	-.0068	-.0015	-.0014	-.0012	.0012
Stddev	.0012	.0409	.0002	.0003	.0004	.0088
%RSD	51.55	604.1	13.87	20.68	36.17	745.6
#1	-.0034	-.0534	-.0012	-.0011	-.0007	-.0085
#2	-.0010	.0230	-.0016	-.0013	-.0015	.0034
#3	-.0028	.0101	-.0016	-.0017	-.0014	.0087
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0732	.1851	.0106	-.0067	.0001	.0014
Stddev	.0948	.0262	.0017	.0244	.0017	.0009
%RSD	129.5	14.14	16.32	364.1	2683.	69.27
#1	-.0288	.2139	.0102	-.0328	-.0012	.0024
#2	.1585	.1627	.0091	.0155	.0020	.0009
#3	.0899	.1787	.0124	-.0027	-.0006	.0007
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: CCB Acquired: 9/5/2023 19:24:13 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0073	-.0014	-.0096	-.0007	-.0012	-.0007
Stddev	.0129	.0003	.0012	.0007	.0039	.0034
%RSD	177.5	24.61	12.20	106.6	316.4	506.9
#1	-.0187	-.0010	-.0083	-.0013	-.0011	-.0029
#2	.0067	-.0017	-.0102	-.0008	.0026	-.0024
#3	-.0098	-.0015	-.0104	.0001	-.0052	.0033
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0469	-.0012	-.0014	.0021	.0041	-.0012
Stddev	.0062	.0003	.0007	.0024	.0022	.0008
%RSD	13.14	27.86	54.80	117.7	55.15	63.91
#1	.0472	-.0009	-.0022	-.0007	.0063	-.0021
#2	.0529	-.0016	-.0009	.0040	.0018	-.0010
#3	.0406	-.0012	-.0009	.0029	.0041	-.0006
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0027
Stddev	.0005
%RSD	18.40
#1	-.0022
#2	-.0031
#3	-.0029
Check ?	Chk Pass
High Limit	
Low Limit	

Sample Name: CCB Acquired: 9/5/2023 19:24:13 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4256.7	23041.	11929.	24188.
Stddev	55.7	266.	47.	114.
%RSD	1.3093	1.1542	.39674	.47200
#1	4205.2	22796.	11875.	24062.
#2	4315.9	23324.	11965.	24284.
#3	4249.1	23004.	11947.	24218.

Sample Name: CCVL 3561056 Acquired: 9/5/2023 19:27:50 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0516	.4302	.0555	.4144	.0185	.0159
Stddev	.0035	.0254	.0021	.0037	.0004	.0004
%RSD	6.790	5.912	3.732	.9004	1.904	2.230
#1	.0490	.4534	.0576	.4182	.0187	.0155
#2	.0556	.4342	.0555	.4108	.0181	.0161
#3	.0502	.4030	.0535	.4142	.0188	.0161
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.2736	.4511	.0162	.0161	.0249	.0516
Stddev	.0019	.0062	.0001	.0002	.0003	.0059
%RSD	.6958	1.381	.4445	1.005	1.026	11.52
#1	.2734	.4475	.0163	.0161	.0250	.0482
#2	.2718	.4474	.0162	.0162	.0246	.0481
#3	.2756	.4583	.0162	.0159	.0251	.0585
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.4961	3.265	.0993	.5000	.0170	.0360
Stddev	.0222	.058	.0038	.0133	.0004	.0005
%RSD	4.468	1.763	3.824	2.656	2.494	1.425
#1	.4783	3.209	.0953	.4920	.0169	.0359
#2	.4891	3.324	.1000	.5153	.0166	.0366
#3	.5209	3.264	.1028	.4927	.0175	.0355
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCVL 3561056 Acquired: 9/5/2023 19:27:50 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.4845	.0163	.0753	.0279	.0580	.0913
Stddev	.0202	.0005	.0026	.0010	.0012	.0029
%RSD	4.179	3.043	3.435	3.618	2.047	3.215
#1	.4651	.0168	.0774	.0281	.0591	.0908
#2	.4830	.0162	.0724	.0288	.0567	.0944
#3	.5055	.0158	.0761	.0268	.0581	.0886
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.099	.0907	.0982	.0248	.0976	.0265
Stddev	.019	.0007	.0019	.0005	.0023	.0016
%RSD	1.758	.7676	1.898	1.881	2.371	6.186
#1	1.094	.0912	.0961	.0244	.1000	.0271
#2	1.083	.0899	.0989	.0248	.0973	.0277
#3	1.121	.0910	.0996	.0253	.0954	.0246
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0325
Stddev	.0005
%RSD	1.392
#1	.0330
#2	.0321
#3	.0325
Check ?	Chk Pass
Value	
Range	

Sample Name: CCVL 3561056 Acquired: 9/5/2023 19:27:50 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4271.2	23349.	12067.	24412.
Stddev	17.3	91.	131.	251.
%RSD	.40494	.39114	1.0858	1.0300
#1	4272.0	23352.	12219.	24703.
#2	4288.1	23438.	11985.	24262.
#3	4253.6	23255.	11999.	24272.

Sample Name: 580-131058-A-3-A@4 Acquired: 9/5/2023 19:31:16 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0032	111.1	.6798	-.0148	.7416	-.0011
Stddev	.0041	6.6	.0045	.0017	.0017	.0002
%RSD	129.0	5.955	.6570	11.25	.2346	16.85
#1	.0015	118.8	.6770	-.0143	.7401	-.0009
#2	-.0060	106.9	.6849	-.0166	.7435	-.0011
#3	-.0051	107.7	.6774	-.0134	.7412	-.0012

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0112	47.33	-.0020	.1289	.8466	.3802
Stddev	.0005	.62	.0006	.0005	.0025	.0218
%RSD	4.520	1.306	31.80	.3924	.2971	5.735
#1	.0107	48.04	-.0028	.1283	.8455	.4053
#2	.0112	46.89	-.0018	.1290	.8495	.3673
#3	.0117	47.07	-.0015	.1293	.8448	.3679

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	248.9	10.86	.0721	87.34	4.490	-.0019
Stddev	14.2	.66	.0037	5.02	.057	.0003
%RSD	5.704	6.099	5.162	5.753	1.271	16.31
#1	265.3	11.63	.0763	93.14	4.553	-.0016
#2	239.8	10.48	.0692	84.40	4.443	-.0022
#3	241.7	10.48	.0708	84.47	4.473	-.0019

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	6.703	1.178	5.009	.3945	-.0007	.0001
Stddev	.077	.002	.008	.0015	.0010	.0012
%RSD	1.145	.1340	.1580	.3820	140.4	997.2
#1	6.792	1.177	5.018	.3931	-.0003	-.0008
#2	6.655	1.180	5.003	.3944	.0000	-.0003
#3	6.662	1.179	5.006	.3961	-.0019	.0015

Sample Name: 580-131058-A-3-A@4 Acquired: 9/5/2023 19:31:16 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	2.331	.0145	.3361	3.585	.0190	.4725
Stddev	.143	.0003	.0198	.207	.0031	.0304
%RSD	6.135	2.051	5.892	5.767	16.14	6.435
#1	2.496	.0147	.3589	3.824	.0170	.5075
#2	2.243	.0142	.3227	3.451	.0226	.4522
#3	2.254	.0147	.3268	3.482	.0176	.4579

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.5405
Stddev	.0013
%RSD	.2330
#1	.5393
#2	.5403
#3	.5418

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3967.9	22632.	11983.	24307.
Stddev	10.7	69.	493.	998.
%RSD	.27056	.30590	4.1166	4.1042
#1	3976.1	22690.	11416.	23162.
#2	3971.9	22652.	12311.	24993.
#3	3955.7	22555.	12223.	24765.

Sample Name: 580-131058-A-4-A@4 Acquired: 9/5/2023 19:34:26 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0036	119.4	3.029	-.0191	.5220	-.0011
Stddev	.0016	.5	.018	.0007	.0032	.0001
%RSD	44.78	.3849	.5976	3.611	.6076	5.264
#1	-.0024	118.9	3.014	-.0183	.5200	-.0012
#2	-.0054	119.7	3.024	-.0195	.5203	-.0011
#3	-.0029	119.6	3.049	-.0194	.5257	-.0011

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0135	29.42	-.0017	.2530	1.468	.4157
Stddev	.0005	.08	.0001	.0012	.007	.0034
%RSD	4.045	.2787	6.860	.4561	.4621	.8273
#1	.0129	29.44	-.0017	.2520	1.462	.4137
#2	.0140	29.33	-.0015	.2527	1.467	.4137
#3	.0136	29.49	-.0017	.2543	1.475	.4196

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	306.3	6.152	.0723	199.7	5.491	-.0032
Stddev	1.3	.024	.0015	1.1	.028	.0002
%RSD	.4319	.3860	2.110	.5545	.5114	7.169
#1	304.8	6.133	.0731	198.4	5.508	-.0031
#2	307.0	6.145	.0706	200.4	5.459	-.0030
#3	307.2	6.179	.0734	200.2	5.506	-.0035

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.377	2.305	4.185	.0703	-.0047	.0022
Stddev	.003	.012	.011	.0011	.0019	.0024
%RSD	.2041	.4997	.2702	1.603	41.34	108.7
#1	1.376	2.295	4.179	.0699	-.0048	-.0004
#2	1.374	2.302	4.178	.0694	-.0065	.0043
#3	1.380	2.317	4.198	.0716	-.0027	.0026

Sample Name: 580-131058-A-4-A@4 Acquired: 9/5/2023 19:34:26 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	3.477	.0036	.1631	3.261	.0139	.4682
Stddev	.014	.0005	.0007	.020	.0135	.0020
%RSD	.4057	13.99	.4195	.6157	97.52	.4238
#1	3.464	.0041	.1623	3.239	-.0017	.4697
#2	3.492	.0031	.1635	3.278	.0205	.4660
#3	3.475	.0036	.1634	3.266	.0228	.4689

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.3931
Stddev	.0012
%RSD	.2976
#1	.3922
#2	.3928
#3	.3944

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3919.5	22479.	11985.	24366.
Stddev	19.0	104.	113.	208.
%RSD	.48384	.46199	.94010	.85516
#1	3937.7	22570.	12114.	24606.
#2	3921.0	22503.	11927.	24255.
#3	3899.8	22366.	11912.	24236.

Sample Name: 580-131058-A-8-A@4 Acquired: 9/5/2023 19:38:17 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0038	135.2	3.222	.0384	.2847	-.0016
Stddev	.0017	.5	.011	.0003	.0017	.0001
%RSD	45.37	.3445	.3489	.8713	.5979	4.884
#1	-.0035	135.3	3.214	.0387	.2847	-.0017
#2	-.0056	135.6	3.217	.0383	.2830	-.0016
#3	-.0022	134.7	3.235	.0381	.2864	-.0015

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0269	33.93	.0007	.4616	3.673	.7471
Stddev	.0027	.26	.0002	.0019	.015	.0047
%RSD	9.934	.7645	37.42	.4161	.4189	.6239
#1	.0247	33.78	.0009	.4608	3.665	.7465
#2	.0299	33.77	.0006	.4602	3.662	.7520
#3	.0261	34.23	.0004	.4638	3.690	.7428

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	454.1	5.111	.0793	506.7	7.737	-.0043
Stddev	3.9	.053	.0016	.9	.046	.0003
%RSD	.8622	1.039	2.015	.1690	.5983	6.123
#1	449.6	5.050	.0795	507.4	7.711	-.0043
#2	456.1	5.136	.0776	507.0	7.710	-.0040
#3	456.6	5.146	.0808	505.7	7.791	-.0045

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.7261	5.381	2.574	.1937	-.0093	.0015
Stddev	.0085	.022	.008	.0036	.0018	.0040
%RSD	1.165	.4093	.3189	1.870	18.99	261.1
#1	.7242	5.363	2.566	.1914	-.0083	-.0022
#2	.7187	5.376	2.582	.1917	-.0113	.0010
#3	.7353	5.406	2.573	.1978	-.0082	.0057

Sample Name: 580-131058-A-8-A@4 Acquired: 9/5/2023 19:38:17 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.909	.0077	.1039	2.788	.0256	.6317
Stddev	.015	.0007	.0002	.001	.0009	.0032
%RSD	.7856	8.651	.2103	.0454	3.682	.5008
#1	1.893	.0084	.1041	2.787	.0247	.6352
#2	1.922	.0070	.1040	2.788	.0255	.6309
#3	1.913	.0077	.1037	2.789	.0266	.6290

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.5720
Stddev	.0011
%RSD	.2010
#1	.5707
#2	.5722
#3	.5729

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3809.6	21894.	11984.	24430.
Stddev	13.5	104.	49.	75.
%RSD	.35371	.47502	.40653	.30579
#1	3822.0	21976.	11949.	24418.
#2	3811.4	21930.	11963.	24362.
#3	3795.3	21777.	12039.	24510.

Sample Name: CCV 3565024 Acquired: 9/5/2023 19:42:16 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9599	93.73	4.904	45.47	4.940	4.715
Stddev	.0046	.47	.043	.30	.035	.028
%RSD	.4810	.5052	.8765	.6664	.7184	.5836
#1	.9641	94.28	4.867	45.21	4.908	4.740
#2	.9606	93.47	4.893	45.41	4.933	4.719
#3	.9550	93.44	4.951	45.80	4.978	4.686
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.735	90.44	4.647	4.615	5.065	5.025
Stddev	.035	.39	.034	.035	.040	.035
%RSD	.7442	.4281	.7236	.7620	.7789	.7062
#1	4.706	90.00	4.613	4.580	5.032	5.062
#2	4.726	90.55	4.648	4.615	5.054	5.023
#3	4.774	90.75	4.680	4.651	5.108	4.991
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	102.4	98.73	4.686	102.8	4.791	4.693
Stddev	.5	.61	.029	.5	.017	.028
%RSD	.4768	.6180	.6078	.5247	.3578	.5972
#1	102.8	99.38	4.715	103.3	4.774	4.668
#2	102.5	98.64	4.684	102.8	4.789	4.688
#3	101.9	98.17	4.658	102.2	4.809	4.724
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCV 3565024 Acquired: 9/5/2023 19:42:16 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	97.46	4.676	48.04	4.683	4.777	4.583
Stddev	.32	.034	.13	.038	.032	.025
%RSD	.3326	.7258	.2681	.8154	.6649	.5549
#1	97.09	4.641	47.90	4.646	4.751	4.559
#2	97.64	4.679	48.15	4.680	4.766	4.579
#3	97.66	4.709	48.07	4.722	4.812	4.610
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	53.00	4.711	4.941	F 4.465	4.722	4.715
Stddev	.08	.030	.034	.018	.055	.025
%RSD	.1551	.6420	.6924	.3938	1.173	.5323
#1	53.03	4.681	4.977	4.480	4.663	4.742
#2	53.06	4.712	4.938	4.470	4.729	4.711
#3	52.91	4.741	4.909	4.446	4.773	4.692
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
Value				5.000		
Range				-10.00%		

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	4.577
Stddev	.029
%RSD	.6412
#1	4.547
#2	4.579
#3	4.605
Check ?	Chk Pass
Value	
Range	

Sample Name: CCV 3565024 Acquired: 9/5/2023 19:42:16 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3727.6	21807.	11480.	23311.
Stddev	22.8	110.	52.	138.
%RSD	.61223	.50230	.44942	.59172
#1	3749.4	21897.	11420.	23152.
#2	3729.7	21838.	11507.	23395.
#3	3703.9	21685.	11512.	23386.

Sample Name: CCB Acquired: 9/5/2023 19:46:38 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0013	-.0209	.0006	-.0189	-.0017	-.0024
Stddev	.0020	.0397	.0006	.0063	.0005	.0002
%RSD	156.6	190.0	92.41	33.08	28.17	7.170
#1	-.0016	-.0624	.0013	-.0149	-.0019	-.0026
#2	.0009	-.0171	.0006	-.0158	-.0012	-.0024
#3	-.0030	.0168	.0001	-.0261	-.0021	-.0022
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0029	-.0501	-.0015	-.0016	-.0014	-.0065
Stddev	.0006	.0021	.0003	.0003	.0005	.0025
%RSD	19.83	4.274	17.24	18.54	32.47	39.40
#1	-.0024	-.0507	-.0017	-.0018	-.0018	-.0042
#2	-.0036	-.0519	-.0012	-.0013	-.0009	-.0060
#3	-.0028	-.0478	-.0017	-.0018	-.0015	-.0092
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0100	.1672	.0068	-.0275	-.0028	.0010
Stddev	.0130	.0173	.0002	.0326	.0005	.0006
%RSD	130.4	10.36	2.791	118.4	17.49	57.60
#1	-.0015	.1477	.0069	.0043	-.0026	.0014
#2	-.0249	.1809	.0066	-.0608	-.0033	.0012
#3	-.0035	.1731	.0069	-.0261	-.0024	.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: CCB Acquired: 9/5/2023 19:46:38 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0530	-.0014	-.0103	-.0004	-.0015	.0010
Stddev	.0034	.0003	.0035	.0010	.0012	.0016
%RSD	6.451	22.22	33.54	262.2	78.68	166.4
#1	-.0506	-.0011	-.0142	-.0015	-.0002	-.0006
#2	-.0516	-.0015	-.0095	.0002	-.0020	.0010
#3	-.0569	-.0017	-.0074	.0002	-.0024	.0026
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0338	-.0011	-.0021	-.0017	.0068	-.0022
Stddev	.0045	.0003	.0002	.0013	.0037	.0007
%RSD	13.27	25.02	9.051	75.93	53.78	29.66
#1	.0388	-.0014	-.0021	-.0005	.0088	-.0029
#2	.0324	-.0009	-.0022	-.0031	.0090	-.0017
#3	.0302	-.0010	-.0019	-.0016	.0026	-.0020
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0035
Stddev	.0003
%RSD	9.313
#1	-.0037
#2	-.0031
#3	-.0037
Check ?	Chk Pass
High Limit	
Low Limit	

Sample Name: CCB Acquired: 9/5/2023 19:46:38 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4277.6	23332.	11899.	24162.
Stddev	18.4	92.	125.	265.
%RSD	.43038	.39416	1.0515	1.0961
#1	4279.0	23343.	11781.	23889.
#2	4258.5	23235.	11885.	24178.
#3	4295.2	23418.	12030.	24418.

Sample Name: CCVL 3561056 Acquired: 9/5/2023 19:50:15 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0502	.4434	.0570	.4070	.0186	.0164
Stddev	.0015	.0513	.0014	.0009	.0000	.0001
%RSD	3.022	11.57	2.472	.2165	.2659	.4691
#1	.0503	.4882	.0555	.4080	.0186	.0163
#2	.0517	.4547	.0573	.4066	.0186	.0164
#3	.0487	.3874	.0583	.4063	.0187	.0164
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.2742	.4454	.0163	.0164	.0251	.0477
Stddev	.0014	.0059	.0001	.0001	.0002	.0094
%RSD	.5005	1.322	.4575	.7377	.7014	19.78
#1	.2738	.4513	.0164	.0165	.0250	.0407
#2	.2731	.4453	.0162	.0164	.0253	.0584
#3	.2757	.4395	.0163	.0162	.0250	.0440
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.4921	3.308	.0981	.5019	.0173	.0356
Stddev	.0035	.048	.0024	.0359	.0012	.0002
%RSD	.7093	1.456	2.395	7.148	6.861	.4983
#1	.4961	3.323	.1009	.5395	.0181	.0354
#2	.4901	3.254	.0968	.4680	.0160	.0357
#3	.4899	3.346	.0967	.4981	.0179	.0357
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCVL 3561056 Acquired: 9/5/2023 19:50:15 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.4798	.0162	.0781	.0260	.0603	.0870
Stddev	.0078	.0003	.0016	.0015	.0017	.0041
%RSD	1.616	1.597	2.051	5.953	2.756	4.736
#1	.4880	.0165	.0765	.0272	.0622	.0830
#2	.4789	.0160	.0781	.0264	.0591	.0913
#3	.4725	.0161	.0797	.0243	.0597	.0867
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.117	.0914	.1002	.0243	.1007	.0284
Stddev	.005	.0002	.0004	.0009	.0050	.0026
%RSD	.4377	.2290	.4006	3.767	4.977	9.316
#1	1.121	.0917	.1007	.0233	.1045	.0287
#2	1.111	.0913	.0999	.0252	.1026	.0309
#3	1.118	.0913	.1002	.0243	.0950	.0256
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0325
Stddev	.0001
%RSD	.4440
#1	.0326
#2	.0324
#3	.0325
Check ?	Chk Pass
Value	
Range	

Sample Name: CCVL 3561056 Acquired: 9/5/2023 19:50:15 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4267.4	23465.	12019.	24418.
Stddev	12.9	67.	33.	39.
%RSD	.30177	.28371	.27606	.15854
#1	4256.5	23409.	12055.	24447.
#2	4281.6	23539.	12011.	24432.
#3	4263.9	23448.	11990.	24374.

Sample Name: MB 580-436475/18-A Acquired: 9/5/2023 19:53:43 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0033	-.0033	-.0025	-.0717	-.0027	-.0031
Stddev	.0029	.0319	.0019	.0020	.0001	.0002
%RSD	87.22	954.8	76.02	2.787	5.382	6.564
#1	-.0066	-.0377	-.0008	-.0695	-.0028	-.0031
#2	-.0016	.0023	-.0046	-.0723	-.0027	-.0029
#3	-.0017	.0253	-.0022	-.0733	-.0026	-.0033

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0039	-.0654	-.0028	-.0025	-.0026	-.0081
Stddev	.0008	.0127	.0001	.0002	.0002	.0055
%RSD	19.69	19.40	3.543	6.944	6.467	67.45
#1	-.0037	-.0702	-.0026	-.0023	-.0025	-.0057
#2	-.0032	-.0511	-.0028	-.0026	-.0028	-.0043
#3	-.0047	-.0751	-.0028	-.0027	-.0025	-.0144

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0303	-.0395	-.0044	-.0212	-.0013	-.0026
Stddev	.0458	.0253	.0013	.0383	.0007	.0004
%RSD	150.8	64.16	29.80	180.7	49.58	15.98
#1	-.0569	-.0408	-.0030	-.0565	-.0017	-.0021
#2	.0225	-.0135	-.0057	.0195	-.0006	-.0029
#3	-.0566	-.0642	-.0046	-.0265	-.0017	-.0028

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.1027	-.0027	-.0270	-.0017	-.0034	-.0024
Stddev	.0097	.0004	.0039	.0018	.0011	.0023
%RSD	9.411	15.41	14.36	110.5	33.13	96.75
#1	-.1086	-.0022	-.0226	-.0030	-.0026	-.0023
#2	-.0916	-.0031	-.0298	-.0023	-.0029	-.0001
#3	-.1079	-.0027	-.0286	.0004	-.0047	-.0047

Sample Name: MB 580-436475/18-A Acquired: 9/5/2023 19:53:43 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0044	-.0030	-.0028	-.0017	.0047	-.0021
Stddev	.0068	.0001	.0003	.0002	.0029	.0026
%RSD	152.3	3.946	10.70	13.39	61.46	121.9
#1	-.0122	-.0031	-.0029	-.0015	.0065	.0008
#2	-.0017	-.0029	-.0025	-.0017	.0014	-.0030
#3	.0005	-.0030	-.0031	-.0019	.0063	-.0041

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0049
Stddev	.0001
%RSD	1.422
#1	-.0048
#2	-.0049
#3	-.0049

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4443.8	24227.	12490.	25383.
Stddev	18.1	93.	102.	223.
%RSD	.40772	.38214	.81611	.87851
#1	4461.8	24309.	12583.	25603.
#2	4444.2	24244.	12381.	25157.
#3	4425.6	24127.	12507.	25389.

Sample Name: LCS 580-436475/19-A Acquired: 9/5/2023 19:57:19 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9582	18.91	.9630	9.245	1.001	.9401
Stddev	.0056	.04	.0238	.201	.021	.0045
%RSD	.5888	.2348	2.467	2.176	2.052	.4770
#1	.9535	18.87	.9709	9.306	1.006	.9367
#2	.9645	18.96	.9363	9.020	.9789	.9452
#3	.9567	18.92	.9818	9.408	1.019	.9383

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0070	18.23	.9234	.9087	1.033	.9900
Stddev	.0014	.30	.0200	.0191	.022	.0096
%RSD	19.56	1.650	2.165	2.104	2.135	.9649
#1	-.0076	18.18	.9270	.9133	1.039	.9976
#2	-.0055	17.96	.9018	.8877	1.008	.9931
#3	-.0080	18.56	.9413	.9250	1.051	.9792

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	20.70	19.46	.9244	20.88	.9763	.9353
Stddev	.09	.09	.0031	.11	.0160	.0194
%RSD	.4508	.4404	.3327	.5070	1.641	2.070
#1	20.67	19.38	.9245	20.87	.9749	.9383
#2	20.81	19.55	.9275	20.99	.9610	.9146
#3	20.63	19.46	.9213	20.78	.9930	.9530

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	19.10	.9216	4.933	.9424	1.004	.9200
Stddev	.33	.0204	.111	.0212	.024	.0193
%RSD	1.725	2.212	2.247	2.253	2.435	2.096
#1	19.06	.9255	4.945	.9451	1.010	.9214
#2	18.80	.8996	4.817	.9200	.9767	.9000
#3	19.45	.9398	5.038	.9622	1.024	.9385

Sample Name: LCS 580-436475/19-A Acquired: 9/5/2023 19:57:19 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	10.38	.9373	.9864	.8876	.9658	.9413
Stddev	.03	.0197	.0034	.0024	.0202	.0025
%RSD	.2947	2.107	.3398	.2679	2.095	.2678
#1	10.35	.9406	.9840	.8850	.9588	.9406
#2	10.41	.9161	.9902	.8896	.9500	.9441
#3	10.37	.9551	.9850	.8882	.9886	.9393

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.9187
Stddev	.0191
%RSD	2.078
#1	.9210
#2	.8986
#3	.9366

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4200.4	23687.	12362.	25075.
Stddev	67.7	366.	64.	159.
%RSD	1.6117	1.5448	.51963	.63485
#1	4193.0	23621.	12325.	24989.
#2	4271.5	24082.	12325.	24976.
#3	4136.8	23359.	12436.	25258.

Sample Name: LCSD 580-436475/20-A Acquired: 9/5/2023 20:00:20 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9569	18.86	.9702	9.341	1.008	.9379
Stddev	.0043	.09	.0045	.042	.006	.0054
%RSD	.4531	.4639	.4636	.4542	.5509	.5745
#1	.9520	18.77	.9658	9.315	1.004	.9317
#2	.9602	18.95	.9698	9.317	1.005	.9402
#3	.9585	18.86	.9748	9.389	1.014	.9417

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0069	18.17	.9295	.9144	1.040	.9810
Stddev	.0002	.17	.0056	.0058	.004	.0075
%RSD	2.920	.9484	.5992	.6388	.3927	.7681
#1	-.0066	18.12	.9269	.9107	1.039	.9726
#2	-.0070	18.03	.9256	.9114	1.037	.9833
#3	-.0070	18.37	.9359	.9211	1.044	.9872

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	20.60	19.40	.9229	20.75	.9755	.9457
Stddev	.09	.11	.0043	.11	.0083	.0050
%RSD	.4335	.5665	.4661	.5084	.8517	.5262
#1	20.50	19.28	.9180	20.66	.9736	.9425
#2	20.67	19.50	.9244	20.86	.9684	.9433
#3	20.64	19.43	.9262	20.71	.9846	.9515

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	19.04	.9273	4.961	.9467	1.012	.9283
Stddev	.17	.0057	.018	.0056	.006	.0061
%RSD	.9126	.6165	.3546	.5935	.6064	.6590
#1	18.98	.9246	4.962	.9420	1.009	.9281
#2	18.90	.9234	4.943	.9453	1.007	.9223
#3	19.24	.9338	4.978	.9529	1.019	.9346

Sample Name: LCSD 580-436475/20-A Acquired: 9/5/2023 20:00:20 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	10.38	.9408	.9805	.8890	.9798	.9373
Stddev	.03	.0056	.0034	.0038	.0114	.0087
%RSD	.2583	.5968	.3465	.4240	1.160	.9259
#1	10.35	.9378	.9766	.8847	.9718	.9273
#2	10.39	.9374	.9821	.8913	.9747	.9416
#3	10.40	.9473	.9828	.8911	.9928	.9430

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.9250
Stddev	.0057
%RSD	.6216
#1	.9225
#2	.9208
#3	.9315

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4147.0	23375.	12246.	24857.
Stddev	21.1	75.	81.	185.
%RSD	.50852	.32180	.66347	.74242
#1	4158.9	23426.	12281.	24913.
#2	4159.5	23410.	12153.	24652.
#3	4122.7	23288.	12304.	25008.

Sample Name: CCB Acquired: 9/5/2023 23:44:05 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0043	-.0172	-.0007	-.0171	-.0014	-.0022
Stddev	.0018	.0050	.0008	.0067	.0005	.0002
%RSD	40.59	29.03	118.3	39.09	32.85	8.591
#1	-.0062	-.0226	-.0015	-.0155	-.0017	-.0020
#2	-.0028	-.0127	.0001	-.0113	-.0009	-.0023
#3	-.0040	-.0164	-.0006	-.0244	-.0016	-.0022
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0001	-.0458	-.0012	-.0013	-.0009	-.0079
Stddev	.0017	.0043	.0006	.0004	.0004	.0045
%RSD	1302.	9.327	55.80	32.33	48.98	57.26
#1	-.0002	-.0478	-.0017	-.0016	-.0011	-.0033
#2	.0020	-.0409	-.0004	-.0008	-.0004	-.0082
#3	-.0014	-.0488	-.0014	-.0014	-.0011	-.0123
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0451	.1791	.0010	-.0616	-.0029	.0029
Stddev	.0028	.0244	.0016	.0012	.0003	.0010
%RSD	6.173	13.63	154.3	1.870	9.191	33.59
#1	-.0424	.1824	.0024	-.0603	-.0026	.0038
#2	-.0449	.1533	-.0007	-.0623	-.0030	.0030
#3	-.0480	.2017	.0014	-.0622	-.0030	.0019
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: CCB Acquired: 9/5/2023 23:44:05 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.3465	-.0018	-.0083	.0006	.0004	.0042
Stddev	.0140	.0004	.0053	.0013	.0009	.0017
%RSD	4.043	23.09	64.03	226.2	205.9	39.76
#1	.3625	-.0022	-.0104	-.0007	-.0003	.0058
#2	.3364	-.0014	-.0023	.0019	.0001	.0025
#3	.3405	-.0020	-.0123	.0006	.0015	.0044
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0204	-.0005	-.0020	-.0020	.0116	-.0017
Stddev	.0126	.0004	.0001	.0004	.0060	.0011
%RSD	61.73	75.53	5.129	19.46	51.65	67.27
#1	.0349	-.0005	-.0019	-.0019	.0185	-.0015
#2	.0139	-.0001	-.0019	-.0017	.0073	-.0007
#3	.0124	-.0008	-.0021	-.0025	.0091	-.0030
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0032
Stddev	.0006
%RSD	17.71
#1	-.0036
#2	-.0025
#3	-.0033
Check ?	Chk Pass
High Limit	
Low Limit	

Sample Name: CCB Acquired: 9/5/2023 23:44:05 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4622.2	25672.	13560.	27045.
Stddev	18.2	114.	129.	289.
%RSD	.39292	.44517	.95247	1.0686
#1	4631.1	25698.	13708.	27377.
#2	4634.2	25772.	13468.	26850.
#3	4601.3	25548.	13505.	26908.

Sample Name: 580-131050-I-1-A Acquired: 9/5/2023 20:03:22 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0029	.0149	.0013	-.0401	.0147	-.0026
Stddev	.0031	.0175	.0003	.0035	.0002	.0003
%RSD	109.2	117.9	24.61	8.738	1.232	12.37
#1	-.0039	.0351	.0011	-.0368	.0145	-.0023
#2	-.0053	.0037	.0011	-.0396	.0149	-.0026
#3	.0006	.0058	.0017	-.0438	.0148	-.0029

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0030	19.68	-.0028	-.0023	.0005	.0079
Stddev	.0017	.24	.0002	.0001	.0000	.0032
%RSD	55.72	1.216	5.456	4.526	7.477	40.82
#1	-.0039	19.94	-.0029	-.0024	.0005	.0115
#2	-.0040	19.47	-.0026	-.0022	.0004	.0066
#3	-.0011	19.63	-.0029	-.0023	.0005	.0055

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9391	61.40	.0030	15.49	.1253	.0059
Stddev	.0353	1.02	.0007	.24	.0016	.0010
%RSD	3.756	1.661	23.69	1.575	1.293	16.95
#1	.9795	62.15	.0027	15.64	.1269	.0070
#2	.9142	60.24	.0038	15.21	.1237	.0057
#3	.9237	61.82	.0026	15.61	.1251	.0050

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	25.71	.0010	16.70	-.0131	-.0028	.0054
Stddev	.30	.0002	.09	.0004	.0026	.0034
%RSD	1.153	17.89	.5131	3.211	91.81	63.30
#1	26.04	.0009	16.64	-.0129	-.0026	.0052
#2	25.46	.0011	16.66	-.0129	-.0004	.0088
#3	25.63	.0008	16.80	-.0136	-.0056	.0020

Sample Name: 580-131050-I-1-A Acquired: 9/5/2023 20:03:22 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	12.44	-.0021	.1171	.0020	.0229	.0037
Stddev	.21	.0001	.0024	.0012	.0079	.0044
%RSD	1.659	6.822	2.039	58.30	34.69	117.7
#1	12.45	-.0020	.1193	.0034	.0313	.0085
#2	12.23	-.0022	.1146	.0017	.0217	.0030
#3	12.64	-.0021	.1173	.0011	.0156	-.0002

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.1413
Stddev	.0006
%RSD	.3938
#1	.1410
#2	.1409
#3	.1419

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4216.5	23724.	12668.	25707.
Stddev	1.0	32.	134.	254.
%RSD	.02467	.13485	1.0566	.98736
#1	4215.3	23726.	12680.	25706.
#2	4217.0	23691.	12796.	25961.
#3	4217.1	23755.	12529.	25453.

Sample Name: 580-131050-I-1-B DU Acquired: 9/5/2023 20:06:47 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0004	.1551	.0035	-.0162	.0175	-.0007
Stddev	.0019	.2847	.0071	.0506	.0060	.0049
%RSD	427.5	183.6	203.9	311.5	34.21	739.2
#1	-.0018	.0174	.0116	.0422	.0244	-.0036
#2	.0017	-.0346	-.0013	-.0447	.0139	-.0034
#3	.0014	.4825	.0001	-.0462	.0142	.0050

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0006	19.29	.0000	.0004	.0049	.0103
Stddev	.0018	.13	.0050	.0054	.0077	.0090
%RSD	301.8	.6816	15670.	1274.	158.3	87.90
#1	.0003	19.44	.0058	.0066	.0138	.0033
#2	.0005	19.22	-.0029	-.0027	.0004	.0071
#3	-.0026	19.20	-.0028	-.0026	.0005	.0205

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.154	61.53	.0061	15.75	.1267	.0052
Stddev	.454	.60	.0045	.22	.0089	.0051
%RSD	39.35	.9744	74.10	1.393	7.046	97.93
#1	.8916	61.73	.0041	15.56	.1221	.0110
#2	.8916	62.01	.0029	15.70	.1211	.0023
#3	1.678	60.86	.0112	15.99	.1370	.0022

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	25.18	.0054	16.47	-.0092	.0017	.0058
Stddev	.25	.0076	.12	.0081	.0059	.0037
%RSD	.9930	141.2	.7556	87.43	350.3	63.34
#1	25.44	.0141	16.33	.0001	.0080	.0101
#2	25.18	.0006	16.54	-.0140	-.0036	.0039
#3	24.94	.0014	16.55	-.0137	.0006	.0035

Sample Name: 580-131050-I-1-B DU Acquired: 9/5/2023 20:06:47 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	14.68	.0002	.1194	.0089	.0136	.0082
Stddev	.18	.0053	.0042	.0101	.0041	.0050
%RSD	1.204	2561.	3.516	113.7	30.09	60.39
#1	14.77	.0062	.1168	.0044	.0183	.0085
#2	14.79	-.0023	.1171	.0018	.0108	.0031
#3	14.48	-.0033	.1242	.0204	.0116	.0131

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.1420
Stddev	.0067
%RSD	4.692
#1	.1497
#2	.1377
#3	.1386

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4223.9	23788.	12436.	25255.
Stddev	26.5	119.	26.	51.
%RSD	.62653	.50040	.21059	.20183
#1	4194.0	23652.	12450.	25283.
#2	4244.0	23871.	12406.	25196.
#3	4233.8	23842.	12453.	25285.

Sample Name: CCB Acquired: 9/6/2023 0:16:39 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0032	-.0058	.0012	-.0191	-.0006	-.0016
Stddev	.0004	.0249	.0010	.0090	.0007	.0000
%RSD	14.11	427.2	82.64	47.27	110.6	1.830
#1	-.0029	.0227	.0024	-.0146	-.0007	-.0016
#2	-.0037	-.0229	.0008	-.0132	.0001	-.0016
#3	-.0029	-.0173	.0005	-.0295	-.0013	-.0015
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0010	-.0304	-.0005	-.0002	-.0000	-.0144
Stddev	.0008	.0079	.0006	.0006	.0008	.0051
%RSD	77.52	26.17	116.1	225.5	2930.	35.60
#1	.0005	-.0254	-.0007	-.0007	-.0001	-.0118
#2	.0020	-.0395	.0002	.0004	.0008	-.0203
#3	.0006	-.0262	-.0010	-.0005	-.0008	-.0111
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0347	.1152	.0004	-.0452	-.0014	.0036
Stddev	.0043	.0004	.0012	.0059	.0006	.0010
%RSD	12.28	.3406	306.3	13.04	38.84	27.57
#1	-.0318	.1149	.0010	-.0401	-.0021	.0042
#2	-.0396	.1156	.0012	-.0517	-.0012	.0041
#3	-.0327	.1150	-.0010	-.0438	-.0010	.0024
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: CCB Acquired: 9/6/2023 0:16:39 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0939	-.0007	-.0017	.0011	.0003	.0035
Stddev	.0036	.0004	.0079	.0012	.0035	.0012
%RSD	3.865	61.12	464.1	108.1	1213.	34.99
#1	.0976	-.0006	-.0034	.0010	.0022	.0022
#2	.0904	-.0003	.0069	.0024	.0025	.0046
#3	.0937	-.0012	-.0086	-.0000	-.0038	.0037
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0153	.0004	-.0015	-.0004	.0124	.0001
Stddev	.0042	.0004	.0002	.0010	.0025	.0024
%RSD	27.75	103.3	14.19	261.2	20.06	1656.
#1	.0188	.0005	-.0013	-.0000	.0107	-.0023
#2	.0106	.0008	-.0017	.0004	.0113	.0025
#3	.0165	-.0001	-.0015	-.0015	.0153	.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0026
Stddev	.0008
%RSD	29.41
#1	-.0028
#2	-.0017
#3	-.0032
Check ?	Chk Pass
High Limit	
Low Limit	

Sample Name: CCB Acquired: 9/6/2023 0:16:39 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4595.0	25780.	13221.	26476.
Stddev	2.6	32.	127.	272.
%RSD	.05564	.12343	.96216	1.0288
#1	4595.3	25794.	13074.	26161.
#2	4597.3	25803.	13301.	26622.
#3	4592.2	25744.	13288.	26644.

Sample Name: 580-131050-I-1-C MS Acquired: 9/5/2023 20:10:12 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9720	19.54	1.017	9.433	1.042	.9854
Stddev	.0038	.07	.007	.045	.006	.0005
%RSD	.3911	.3764	.7337	.4808	.5778	.0534
#1	.9690	19.58	1.012	9.407	1.037	.9847
#2	.9763	19.46	1.013	9.407	1.040	.9856
#3	.9706	19.59	1.025	9.486	1.048	.9857

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0061	39.20	.9566	.9546	1.072	1.017
Stddev	.0012	.02	.0055	.0054	.006	.002
%RSD	19.51	.0552	.5800	.5669	.5953	.1567
#1	-.0066	39.21	.9528	.9499	1.068	1.015
#2	-.0047	39.17	.9541	.9534	1.069	1.018
#3	-.0069	39.21	.9630	.9605	1.079	1.018

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	21.94	83.67	.9486	36.84	1.148	.9759
Stddev	.04	.13	.0032	.07	.001	.0053
%RSD	.1617	.1503	.3418	.1946	.1203	.5401
#1	21.97	83.54	.9451	36.78	1.147	.9722
#2	21.90	83.79	.9495	36.92	1.147	.9737
#3	21.93	83.70	.9514	36.82	1.149	.9819

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	46.50	.9571	22.15	.9535	1.032	.9832
Stddev	.07	.0056	.15	.0060	.006	.0046
%RSD	.1484	.5882	.6859	.6279	.5864	.4660
#1	46.42	.9523	22.11	.9492	1.032	.9806
#2	46.55	.9557	22.03	.9509	1.027	.9806
#3	46.52	.9633	22.32	.9603	1.039	.9885

Sample Name: 580-131050-I-1-C MS Acquired: 9/5/2023 20:10:12 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	28.62	.9683	1.128	.9222	.8829	.9873
Stddev	.01	.0049	.002	.0032	.0296	.0033
%RSD	.0457	.5076	.1758	.3426	3.357	.3293
#1	28.63	.9633	1.126	.9185	.8553	.9852
#2	28.61	.9686	1.130	.9236	.8792	.9910
#3	28.61	.9731	1.128	.9243	.9142	.9857

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	1.101
Stddev	.007
%RSD	.5955
#1	1.095
#2	1.098
#3	1.108

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4063.9	23332.	12542.	25432.
Stddev	18.8	96.	52.	94.
%RSD	.46283	.41011	.41779	.36932
#1	4082.5	23417.	12586.	25518.
#2	4064.2	23350.	12556.	25446.
#3	4044.9	23228.	12484.	25332.

Sample Name: 580-131050-I-1-D MSD Acquired: 9/5/2023 20:13:13 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9692	19.44	1.006	9.297	1.028	.9741
Stddev	.0026	.09	.006	.075	.008	.0004
%RSD	.2637	.4464	.6085	.8100	.7703	.0391
#1	.9681	19.36	1.007	9.329	1.032	.9745
#2	.9721	19.53	1.011	9.352	1.033	.9738
#3	.9673	19.42	.9990	9.212	1.019	.9741

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0050	38.94	.9455	.9427	1.059	1.027
Stddev	.0037	.57	.0023	.0037	.007	.009
%RSD	73.78	1.454	.2387	.3879	.6865	.8274
#1	-.0063	38.66	.9463	.9443	1.063	1.019
#2	-.0078	38.57	.9471	.9453	1.064	1.036
#3	-.0008	39.59	.9429	.9385	1.051	1.025

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	21.90	82.86	.9490	36.82	1.149	.9623
Stddev	.03	.32	.0020	.20	.015	.0049
%RSD	.1538	.3813	.2130	.5486	1.328	.5066
#1	21.89	82.63	.9467	36.70	1.140	.9641
#2	21.94	83.22	.9498	37.05	1.142	.9660
#3	21.88	82.73	.9505	36.70	1.167	.9568

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	46.40	.9476	21.62	.9416	1.018	.9699
Stddev	.65	.0017	.10	.0018	.011	.0102
%RSD	1.393	.1789	.4526	.1888	1.034	1.047
#1	46.09	.9495	21.57	.9415	1.019	.9745
#2	45.97	.9473	21.73	.9398	1.028	.9769
#3	47.14	.9461	21.56	.9433	1.007	.9582

Sample Name: 580-131050-I-1-D MSD Acquired: 9/5/2023 20:13:13 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	28.45	.9757	1.120	.9115	.8922	.9788
Stddev	.16	.0021	.002	.0005	.0025	.0022
%RSD	.5575	.2118	.1590	.0520	.2768	.2238
#1	28.36	.9765	1.118	.9110	.8903	.9771
#2	28.63	.9773	1.122	.9119	.8912	.9813
#3	28.35	.9734	1.119	.9116	.8950	.9780

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	1.094
Stddev	.004
%RSD	.3164
#1	1.091
#2	1.093
#3	1.098

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4056.1	23336.	12558.	25563.
Stddev	73.8	392.	77.	161.
%RSD	1.8188	1.6777	.61387	.63130
#1	4108.1	23621.	12640.	25743.
#2	4088.6	23498.	12488.	25431.
#3	3971.7	22890.	12545.	25516.

Sample Name: 580-131050-I-1-A PDS Acquired: 9/5/2023 20:16:13 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9358	18.68	.9769	9.111	1.000	.9476
Stddev	.0030	.02	.0064	.018	.001	.0024
%RSD	.3174	.1054	.6516	.1917	.1265	.2499
#1	.9329	18.68	.9718	9.128	1.001	.9455
#2	.9389	18.66	.9749	9.093	.9989	.9472
#3	.9357	18.70	.9841	9.112	1.001	.9502

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0065	36.60	.9166	.9140	1.029	.9869
Stddev	.0015	.21	.0030	.0020	.001	.0032
%RSD	22.96	.5668	.3262	.2238	.1365	.3252
#1	-.0048	36.40	.9184	.9149	1.030	.9897
#2	-.0072	36.61	.9131	.9117	1.028	.9875
#3	-.0074	36.81	.9181	.9154	1.030	.9834

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	21.12	76.46	.9168	34.58	1.098	.9392
Stddev	.02	.16	.0016	.08	.005	.0024
%RSD	.0714	.2133	.1788	.2240	.4478	.2586
#1	21.10	76.63	.9149	34.61	1.094	.9389
#2	21.12	76.30	.9175	34.49	1.097	.9369
#3	21.13	76.46	.9180	34.64	1.104	.9417

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	43.29	.9150	20.33	.9140	.9619	.9491
Stddev	.23	.0024	.04	.0020	.0115	.0057
%RSD	.5421	.2652	.1744	.2212	1.200	.6054
#1	43.04	.9162	20.33	.9161	.9490	.9427
#2	43.32	.9122	20.30	.9121	.9653	.9506
#3	43.51	.9166	20.37	.9138	.9713	.9539

Sample Name: 580-131050-I-1-A PDS Acquired: 9/5/2023 20:16:13 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	25.94	.9262	1.077	.8838	1.012	.9425
Stddev	.08	.0024	.000	.0031	.011	.0057
%RSD	.3179	.2615	.0111	.3495	1.037	.6007
#1	25.97	.9264	1.077	.8803	1.023	.9377
#2	25.85	.9237	1.077	.8849	1.009	.9411
#3	26.01	.9285	1.077	.8861	1.003	.9488

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	1.048
Stddev	.004
%RSD	.3400
#1	1.050
#2	1.044
#3	1.049

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4109.0	23528.	12655.	25710.
Stddev	19.1	99.	55.	124.
%RSD	.46392	.42141	.43646	.48327
#1	4111.7	23545.	12611.	25584.
#2	4126.6	23618.	12717.	25833.
#3	4088.7	23422.	12637.	25712.

Sample Name: 580-131050-I-1A SD@5 Acquired: 9/5/2023 20:19:14 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0022	-.0563	-.0018	-.0570	.0005	-.0034
Stddev	.0011	.0208	.0013	.0029	.0001	.0001
%RSD	49.22	36.97	71.57	5.049	11.61	1.514
#1	-.0020	-.0403	-.0004	-.0542	.0005	-.0033
#2	-.0012	-.0487	-.0030	-.0569	.0006	-.0033
#3	-.0033	-.0798	-.0021	-.0599	.0005	-.0034

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0020	3.897	-.0029	-.0026	-.0022	-.0072
Stddev	.0002	.007	.0000	.0001	.0003	.0069
%RSD	9.421	.1929	1.484	4.523	12.29	95.92
#1	-.0021	3.898	-.0029	-.0026	-.0026	-.0044
#2	-.0018	3.904	-.0029	-.0026	-.0021	-.0022
#3	-.0022	3.889	-.0029	-.0024	-.0021	-.0151

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.1306	12.91	.0129	3.124	.0224	.0023
Stddev	.0027	.01	.0022	.046	.0000	.0010
%RSD	2.046	.1074	17.17	1.460	.1300	44.28
#1	.1337	12.91	.0153	3.077	.0224	.0034
#2	.1291	12.92	.0123	3.129	.0223	.0020
#3	.1291	12.90	.0110	3.168	.0224	.0014

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	5.121	-.0022	3.257	-.0046	.0034	.0011
Stddev	.009	.0002	.019	.0007	.0021	.0025
%RSD	.1699	10.59	.5839	14.65	61.17	216.1
#1	5.125	-.0023	3.270	-.0044	.0057	.0029
#2	5.126	-.0020	3.235	-.0040	.0021	-.0017
#3	5.111	-.0025	3.267	-.0053	.0022	.0022

Sample Name: 580-131050-I-1A SD@5 Acquired: 9/5/2023 20:19:14 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	2.567	-.0025	.0214	-.0021	.0240	-.0023
Stddev	.016	.0007	.0002	.0019	.0053	.0013
%RSD	.6296	29.51	.9421	91.14	21.91	54.99
#1	2.574	-.0017	.0214	-.0006	.0288	-.0008
#2	2.548	-.0027	.0216	-.0015	.0248	-.0028
#3	2.578	-.0031	.0212	-.0043	.0184	-.0032

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0237
Stddev	.0001
%RSD	.5658
#1	.0236
#2	.0236
#3	.0239

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4274.7	23718.	12393.	25124.
Stddev	8.1	42.	63.	135.
%RSD	.18874	.17529	.50760	.53826
#1	4281.2	23749.	12437.	25196.
#2	4277.3	23733.	12421.	25207.
#3	4265.7	23671.	12321.	24968.

Sample Name: CCV 3565024 Acquired: 9/5/2023 20:22:45 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9659	96.05	4.899	45.22	4.986	4.793
Stddev	.0057	.34	.027	.20	.028	.024
%RSD	.5941	.3540	.5574	.4358	.5684	.4931
#1	.9707	96.44	4.892	45.13	4.965	4.820
#2	.9675	95.90	4.876	45.08	4.976	4.784
#3	.9596	95.82	4.929	45.44	5.018	4.775
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.722	91.62	4.723	4.677	5.113	5.018
Stddev	.020	.27	.028	.027	.029	.029
%RSD	.4121	.2979	.5870	.5783	.5687	.5756
#1	4.711	91.33	4.709	4.664	5.096	5.046
#2	4.710	91.88	4.705	4.660	5.096	5.020
#3	4.744	91.66	4.755	4.709	5.146	4.989
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	102.7	99.35	4.719	103.6	4.851	4.680
Stddev	.5	.52	.015	.4	.022	.021
%RSD	.4512	.5196	.3179	.3842	.4601	.4504
#1	103.2	99.92	4.733	104.1	4.826	4.670
#2	102.6	99.20	4.721	103.4	4.869	4.665
#3	102.3	98.92	4.703	103.4	4.857	4.704
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCV 3565024 Acquired: 9/5/2023 20:22:45 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	97.74	4.728	47.48	4.755	4.749	4.546
Stddev	.28	.026	.16	.026	.019	.027
%RSD	.2911	.5420	.3394	.5545	.3979	.5963
#1	97.47	4.717	47.49	4.751	4.738	4.540
#2	98.03	4.710	47.32	4.732	4.738	4.522
#3	97.72	4.757	47.64	4.784	4.771	4.576
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	53.78	4.781	4.964	4.534	4.677	4.826
Stddev	.12	.024	.029	.024	.043	.019
%RSD	.2169	.5070	.5785	.5205	.9285	.3857
#1	53.91	4.769	4.994	4.561	4.659	4.843
#2	53.68	4.765	4.961	4.520	4.645	4.829
#3	53.75	4.809	4.937	4.520	4.726	4.806
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	4.656
Stddev	.025
%RSD	.5435
#1	4.645
#2	4.638
#3	4.685
Check ?	Chk Pass
Value	
Range	

Sample Name: CCV 3565024 Acquired: 9/5/2023 20:22:45 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3638.4	21441.	11358.	23017.
Stddev	12.0	55.	66.	129.
%RSD	.32849	.25426	.57677	.55883
#1	3644.6	21482.	11286.	22871.
#2	3646.0	21462.	11415.	23113.
#3	3624.6	21379.	11372.	23067.

Sample Name: CCB Acquired: 9/5/2023 20:27:07 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0004	-.0027	.0008	-.0037	-.0004	-.0008
Stddev	.0019	.0412	.0023	.0162	.0015	.0009
%RSD	539.9	1497.	297.2	437.3	379.3	108.5
#1	.0018	-.0470	.0008	.0149	.0010	-.0016
#2	-.0008	.0343	-.0015	-.0149	-.0021	.0002
#3	-.0020	.0044	.0030	-.0111	-.0001	-.0011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0004	-.0131	-.0005	-.0004	-.0002	-.0052
Stddev	.0004	.0180	.0012	.0010	.0011	.0073
%RSD	89.97	137.5	253.5	275.4	642.8	140.8
#1	-.0001	-.0247	.0008	.0006	.0011	-.0131
#2	-.0004	.0076	-.0015	-.0015	-.0011	-.0035
#3	-.0009	-.0221	-.0007	-.0003	-.0005	.0011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0112	.4084	.0120	.0034	-.0012	.0024
Stddev	.0211	.0803	.0007	.0200	.0012	.0015
%RSD	188.0	19.66	5.792	580.5	93.12	62.81
#1	-.0266	.4179	.0119	-.0135	-.0020	.0041
#2	.0129	.4834	.0127	.0255	.0001	.0016
#3	-.0200	.3237	.0113	-.0017	-.0018	.0015
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: CCB Acquired: 9/5/2023 20:27:07 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0172	-.0005	.0088	-.0009	.0011	.0036
Stddev	.0273	.0012	.0173	.0014	.0015	.0051
%RSD	158.4	241.8	195.6	160.6	140.4	141.8
#1	.0154	.0005	.0265	-.0001	.0028	.0084
#2	.0453	-.0018	-.0080	-.0025	.0002	-.0017
#3	-.0091	-.0002	.0080	.0000	.0002	.0040
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0897	.0004	-.0004	-.0008	.0289	.0008
Stddev	.0120	.0012	.0010	.0015	.0041	.0012
%RSD	13.41	274.6	237.0	176.4	14.21	146.8
#1	.0796	.0017	-.0012	-.0018	.0330	.0005
#2	.1030	-.0006	.0007	.0008	.0248	.0022
#3	.0865	.0001	-.0008	-.0015	.0289	-.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0022
Stddev	.0012
%RSD	54.99
#1	-.0009
#2	-.0033
#3	-.0024
Check ?	Chk Pass
High Limit	
Low Limit	

Sample Name: CCB Acquired: 9/5/2023 20:27:07 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4245.4	23290.	11754.	23776.
Stddev	13.9	103.	44.	82.
%RSD	.32733	.44185	.37779	.34571
#1	4258.6	23404.	11770.	23803.
#2	4246.7	23258.	11788.	23842.
#3	4230.9	23206.	11704.	23684.

Sample Name: 580-131119-I-1-A Acquired: 9/5/2023 20:30:42 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0060	1.617	-.0005	1.170	.1788	.0174
Stddev	.0058	.258	.0022	.007	.0012	.0126
%RSD	97.55	15.96	413.8	.5678	.6475	72.33
#1	.0098	1.810	-.0029	1.163	.1774	.0263
#2	.0089	1.717	-.0003	1.177	.1795	.0230
#3	-.0007	1.324	.0015	1.170	.1793	.0030

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0010	230.4	-.0011	.0079	.0011	.0188
Stddev	.0013	13.0	.0016	.0012	.0017	.0113
%RSD	128.8	5.642	153.2	14.95	155.7	60.29
#1	-.0015	220.0	-.0028	.0069	-.0007	.0295
#2	.0005	226.3	.0004	.0092	.0028	.0200
#3	-.0020	245.0	-.0008	.0075	.0012	.0069

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.827	193.2	.1371	17.80	.7163	.0175
Stddev	.301	.1	.0076	.27	.0289	.0017
%RSD	16.49	.0363	5.535	1.520	4.035	9.855
#1	2.033	193.2	.1291	17.92	.6931	.0156
#2	1.966	193.1	.1443	17.99	.7072	.0190
#3	1.481	193.1	.1379	17.49	.7487	.0178

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	808.2	.0710	.2084	-.0223	.0014	.0014
Stddev	11.1	.0012	.0248	.0031	.0009	.0054
%RSD	1.378	1.647	11.92	14.06	67.67	375.3
#1	812.3	.0697	.1834	-.0245	.0003	-.0034
#2	795.7	.0719	.2331	-.0187	.0022	.0005
#3	816.8	.0713	.2087	-.0238	.0017	.0072

Sample Name: 580-131119-I-1-A Acquired: 9/5/2023 20:30:42 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	25.18	-.0003	1.629	.0250	.0293	.0235
Stddev	.20	.0011	.015	.0117	.0023	.0121
%RSD	.7860	413.0	.9250	46.75	7.888	51.60
#1	25.06	-.0011	1.614	.0327	.0280	.0317
#2	25.07	.0010	1.627	.0307	.0280	.0293
#3	25.41	-.0007	1.644	.0115	.0320	.0096

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0051
Stddev	.0017
%RSD	34.31
#1	.0033
#2	.0068
#3	.0051

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3567.7	21563.	11703.	23702.
Stddev	46.9	278.	465.	917.
%RSD	1.3134	1.2903	3.9731	3.8682
#1	3621.8	21883.	11437.	23170.
#2	3540.3	21416.	11431.	23175.
#3	3541.0	21389.	12240.	24761.

Sample Name: 580-131121-K-1-B Acquired: 9/5/2023 20:34:15 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0017	1.342	.0015	1.017	.0852	-.0032
Stddev	.0011	.004	.0015	.004	.0005	.0001
%RSD	63.51	.3062	100.3	.4106	.5695	2.328
#1	-.0019	1.344	.0000	1.014	.0848	-.0032
#2	-.0006	1.344	.0015	1.016	.0851	-.0033
#3	-.0028	1.337	.0031	1.022	.0858	-.0033

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0031	69.54	-.0030	.0051	-.0015	.0082
Stddev	.0008	.50	.0000	.0002	.0001	.0022
%RSD	27.21	.7187	1.313	3.915	6.354	26.96
#1	-.0023	68.98	-.0031	.0053	-.0014	.0059
#2	-.0029	69.69	-.0030	.0052	-.0014	.0103
#3	-.0040	69.94	-.0030	.0049	-.0016	.0083

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	2.429	108.7	.1267	19.55	.6967	.0757
Stddev	.002	.2	.0009	.16	.0046	.0006
%RSD	.1007	.1534	.6976	.8275	.6550	.8108
#1	2.430	108.8	.1257	19.47	.6916	.0752
#2	2.426	108.5	.1271	19.44	.6979	.0756
#3	2.431	108.7	.1273	19.74	.7005	.0764

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	544.9	.0533	.2474	-.0266	.0033	.0010
Stddev	3.4	.0000	.0066	.0027	.0019	.0018
%RSD	.6240	.0935	2.674	10.35	56.40	186.7
#1	546.8	.0534	.2512	-.0295	.0054	.0029
#2	546.8	.0533	.2398	-.0240	.0018	.0006
#3	540.9	.0533	.2512	-.0262	.0027	-.0006

Sample Name: 580-131121-K-1-B Acquired: 9/5/2023 20:34:15 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	29.60	-.0023	.6040	.0021	.0163	.0076
Stddev	.12	.0002	.0005	.0007	.0020	.0042
%RSD	.4074	7.296	.0874	32.35	12.56	54.73
#1	29.51	-.0025	.6039	.0014	.0185	.0121
#2	29.55	-.0022	.6035	.0022	.0146	.0040
#3	29.74	-.0023	.6046	.0027	.0157	.0067

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0076
Stddev	.0000
%RSD	.5765
#1	.0076
#2	.0077
#3	.0076

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3784.7	22466.	12429.	25159.
Stddev	10.4	69.	79.	165.
%RSD	.27485	.30586	.63681	.65694
#1	3791.0	22503.	12351.	24984.
#2	3790.4	22509.	12509.	25312.
#3	3772.7	22387.	12427.	25182.

Sample Name: 580-131124-I-1-A Acquired: 9/5/2023 20:37:49 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0019	3.676	-.0030	.8883	.1362	-.0034
Stddev	.0011	.015	.0006	.0027	.0007	.0001
%RSD	57.96	.4025	20.27	.3052	.5356	1.947
#1	-.0029	3.681	-.0030	.8878	.1360	-.0034
#2	-.0022	3.687	-.0025	.8858	.1355	-.0035
#3	-.0007	3.659	-.0037	.8912	.1370	-.0034

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0028	74.39	-.0031	.0080	-.0013	.0574
Stddev	.0010	.04	.0000	.0001	.0001	.0010
%RSD	34.39	.0504	1.401	1.598	6.214	1.679
#1	-.0023	74.35	-.0032	.0079	-.0013	.0565
#2	-.0039	74.42	-.0032	.0080	-.0014	.0584
#3	-.0022	74.39	-.0031	.0081	-.0013	.0574

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	2.325	88.80	.1461	13.08	.4272	.2161
Stddev	.012	.20	.0018	.02	.0010	.0011
%RSD	.4965	.2299	1.240	.1193	.2423	.5315
#1	2.323	88.98	.1441	13.10	.4271	.2154
#2	2.315	88.58	.1477	13.07	.4282	.2155
#3	2.337	88.85	.1466	13.08	.4262	.2174

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	457.2	.0570	.2754	-.0185	.0064	-.0013
Stddev	1.6	.0003	.0020	.0007	.0007	.0016
%RSD	.3438	.5362	.7208	3.549	10.39	126.2
#1	458.5	.0574	.2773	-.0191	.0071	-.0008
#2	457.5	.0568	.2755	-.0178	.0058	.0000
#3	455.5	.0570	.2733	-.0186	.0062	-.0031

Sample Name: 580-131124-I-1-A Acquired: 9/5/2023 20:37:49 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	18.92	-.0030	.6453	.0047	.0207	.0038
Stddev	.01	.0003	.0003	.0015	.0028	.0039
%RSD	.0585	11.14	.0421	32.61	13.45	102.6
#1	18.93	-.0029	.6450	.0039	.0213	-.0007
#2	18.91	-.0027	.6455	.0036	.0177	.0056
#3	18.91	-.0034	.6453	.0064	.0232	.0064

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0411
Stddev	.0002
%RSD	.5356
#1	.0409
#2	.0412
#3	.0413

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3789.5	22427.	12330.	24973.
Stddev	15.4	94.	57.	120.
%RSD	.40580	.41949	.46592	.48110
#1	3797.0	22477.	12352.	25043.
#2	3799.6	22485.	12373.	25042.
#3	3771.8	22318.	12265.	24834.

Sample Name: 580-131010-B-1-A Acquired: 9/5/2023 20:41:19 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0012	-.0205	.0026	.1065	-.0029	-.0035
Stddev	.0021	.0026	.0023	.0020	.0002	.0001
%RSD	174.0	12.93	87.85	1.869	7.402	3.270
#1	.0012	-.0191	.0000	.1087	-.0030	-.0034
#2	-.0024	-.0187	.0034	.1050	-.0030	-.0036
#3	-.0025	-.0235	.0043	.1057	-.0026	-.0036

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0139	-.0350	-.0014	-.0003	.0024	.0044
Stddev	.0009	.0059	.0001	.0001	.0001	.0033
%RSD	6.378	16.93	4.661	33.74	6.002	73.55
#1	-.0130	-.0283	-.0015	-.0003	.0025	.0079
#2	-.0138	-.0396	-.0014	-.0003	.0023	.0041
#3	-.0148	-.0372	-.0014	-.0004	.0025	.0014

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0249	36.67	.0106	-.0641	-.0011	.1711
Stddev	.0014	.11	.0023	.0174	.0007	.0009
%RSD	5.635	.3012	21.88	27.09	67.26	.5225
#1	-.0238	36.74	.0106	-.0790	-.0016	.1702
#2	-.0265	36.72	.0083	-.0450	-.0003	.1711
#3	-.0245	36.54	.0129	-.0682	-.0013	.1720

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	319.4	.0091	7.043	-.0393	-.0002	.0306
Stddev	1.3	.0002	.041	.0013	.0007	.0007
%RSD	.4124	2.460	.5815	3.319	355.8	2.277
#1	319.1	.0093	7.010	-.0398	-.0010	.0309
#2	318.2	.0089	7.031	-.0403	.0005	.0298
#3	320.8	.0091	7.089	-.0379	-.0001	.0311

Sample Name: 580-131010-B-1-A Acquired: 9/5/2023 20:41:19 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	46.65	-.0032	-.0031	.0030	-.0969	.0021
Stddev	.75	.0004	.0001	.0012	.0027	.0023
%RSD	1.618	11.27	2.510	41.54	2.814	106.9
#1	47.43	-.0033	-.0030	.0027	-.0946	.0038
#2	46.60	-.0028	-.0031	.0043	-.0999	.0032
#3	45.92	-.0036	-.0031	.0019	-.0961	-.0005

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0407
Stddev	.0003
%RSD	.6509
#1	.0404
#2	.0407
#3	.0409

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4026.5	23427.	12578.	25440.
Stddev	21.1	121.	61.	163.
%RSD	.52312	.51738	.48770	.63932
#1	4047.9	23541.	12515.	25281.
#2	4025.8	23441.	12582.	25432.
#3	4005.7	23300.	12637.	25606.

Sample Name: 580-131010-B-3-A Acquired: 9/5/2023 20:48:34 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0010	-.0620	-.0038	-.0663	-.0031	-.0035
Stddev	.0018	.0139	.0021	.0006	.0000	.0001
%RSD	175.9	22.49	56.21	.9656	.2852	1.957
#1	.0001	-.0780	-.0049	-.0657	-.0031	-.0035
#2	-.0000	-.0537	-.0052	-.0662	-.0031	-.0035
#3	-.0031	-.0541	-.0013	-.0670	-.0031	-.0034

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0050	-.0699	-.0030	-.0025	-.0024	-.0063
Stddev	.0015	.0059	.0000	.0002	.0000	.0092
%RSD	29.96	8.392	1.287	9.692	1.380	144.6
#1	-.0040	-.0698	-.0030	-.0023	-.0024	-.0123
#2	-.0043	-.0641	-.0029	-.0027	-.0024	-.0109
#3	-.0067	-.0758	-.0030	-.0025	-.0025	.0042

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0632	3.992	-.0067	-.0620	-.0025	.0106
Stddev	.0025	.013	.0005	.0160	.0004	.0003
%RSD	4.015	.3256	7.341	25.75	15.35	3.183
#1	-.0605	4.007	-.0063	-.0603	-.0025	.0102
#2	-.0634	3.985	-.0072	-.0787	-.0029	.0107
#3	-.0656	3.984	-.0065	-.0470	-.0021	.0108

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	242.6	-.0020	.7186	-.0068	-.0002	-.0029
Stddev	6.9	.0002	.0034	.0018	.0016	.0012
%RSD	2.860	10.24	.4692	26.22	867.2	42.82
#1	234.7	-.0021	.7219	-.0084	-.0021	-.0043
#2	247.8	-.0021	.7151	-.0071	.0005	-.0020
#3	245.2	-.0018	.7189	-.0049	.0010	-.0024

Sample Name: 580-131010-B-3-A Acquired: 9/5/2023 20:48:34 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.385	-.0041	-.0034	-.0038	-.0071	.0004
Stddev	.006	.0003	.0000	.0008	.0042	.0024
%RSD	.1301	7.268	.2776	21.98	59.36	584.7
#1	4.378	-.0040	-.0034	-.0048	-.0024	.0013
#2	4.385	-.0038	-.0035	-.0033	-.0083	.0022
#3	4.390	-.0044	-.0034	-.0033	-.0104	-.0023

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0021
Stddev	.0001
%RSD	7.043
#1	-.0020
#2	-.0022
#3	-.0020

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4062.0	23368.	12414.	25111.
Stddev	1.6	7.	52.	133.
%RSD	.04001	.03072	.42104	.52975
#1	4060.2	23376.	12449.	25204.
#2	4063.4	23368.	12440.	25171.
#3	4062.2	23361.	12354.	24959.

Sample Name: 580-131011-B-1-A Acquired: 9/5/2023 20:52:17 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0017	-.0685	-.0030	-.0484	-.0013	-.0035
Stddev	.0013	.0303	.0012	.0003	.0001	.0001
%RSD	73.22	44.28	40.60	.7083	10.25	1.725
#1	-.0031	-.0738	-.0030	-.0487	-.0015	-.0035
#2	-.0016	-.0958	-.0017	-.0480	-.0013	-.0036
#3	-.0006	-.0358	-.0042	-.0484	-.0013	-.0035

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0044	-.0728	-.0027	-.0023	-.0019	-.0033
Stddev	.0009	.0014	.0001	.0002	.0002	.0056
%RSD	19.34	1.872	3.539	7.619	12.26	172.8
#1	-.0042	-.0721	-.0027	-.0022	-.0016	-.0066
#2	-.0054	-.0744	-.0027	-.0025	-.0018	.0032
#3	-.0037	-.0719	-.0026	-.0023	-.0021	-.0064

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0640	7.682	-.0028	-.0533	-.0025	.0310
Stddev	.0020	.094	.0007	.0048	.0006	.0004
%RSD	3.125	1.226	25.23	8.982	25.67	1.262
#1	-.0618	7.765	-.0031	-.0507	-.0031	.0308
#2	-.0643	7.580	-.0033	-.0503	-.0018	.0314
#3	-.0657	7.701	-.0020	-.0588	-.0024	.0307

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	117.1	-.0006	1.399	-.0100	-.0025	.0075
Stddev	1.0	.0002	.003	.0016	.0006	.0044
%RSD	.8615	42.96	.2158	16.06	25.16	58.98
#1	116.4	-.0003	1.400	-.0083	-.0018	.0092
#2	116.7	-.0008	1.396	-.0102	-.0030	.0109
#3	118.2	-.0006	1.402	-.0114	-.0026	.0025

Sample Name: 580-131011-B-1-A Acquired: 9/5/2023 20:52:17 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	9.767	.0035	-.0034	-.0015	-.0246	-.0035
Stddev	.124	.0004	.0001	.0003	.0031	.0031
%RSD	1.269	12.25	3.606	18.05	12.71	87.73
#1	9.881	.0031	-.0035	-.0016	-.0228	-.0047
#2	9.635	.0036	-.0032	-.0016	-.0227	-.0000
#3	9.785	.0040	-.0034	-.0012	-.0282	-.0058

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0025
Stddev	.0000
%RSD	.4619
#1	.0025
#2	.0025
#3	.0025

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4189.3	23778.	12423.	25077.
Stddev	9.0	40.	149.	321.
%RSD	.21443	.16937	1.2000	1.2815
#1	4190.8	23785.	12259.	24718.
#2	4197.5	23814.	12551.	25337.
#3	4179.7	23734.	12458.	25177.

Sample Name: 580-131011-B-2-A Acquired: 9/5/2023 20:55:51 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0030	-.0413	-.0020	-.0499	-.0031	-.0034
Stddev	.0041	.0160	.0022	.0002	.0002	.0001
%RSD	135.5	38.68	114.1	.3720	5.912	1.953
#1	-.0034	-.0503	-.0045	-.0497	-.0031	-.0035
#2	.0012	-.0508	-.0006	-.0500	-.0029	-.0034
#3	-.0069	-.0229	-.0007	-.0500	-.0032	-.0033

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0051	-.0738	-.0028	-.0025	-.0021	-.0053
Stddev	.0001	.0038	.0000	.0002	.0001	.0066
%RSD	2.496	5.101	1.444	6.061	4.466	123.1
#1	-.0050	-.0774	-.0028	-.0027	-.0021	-.0126
#2	-.0050	-.0742	-.0027	-.0024	-.0021	-.0037
#3	-.0052	-.0699	-.0028	-.0025	-.0020	.0003

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0620	7.473	-.0055	-.0530	-.0027	.0295
Stddev	.0027	.045	.0011	.0134	.0002	.0002
%RSD	4.346	.6021	20.21	25.34	8.276	.5473
#1	-.0644	7.461	-.0068	-.0606	-.0027	.0294
#2	-.0623	7.435	-.0050	-.0375	-.0025	.0297
#3	-.0591	7.522	-.0047	-.0609	-.0030	.0294

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	119.2	-.0010	1.352	-.0094	-.0007	.0058
Stddev	.3	.0001	.001	.0004	.0021	.0028
%RSD	.2228	15.69	.0816	4.053	326.8	48.12
#1	119.3	-.0011	1.351	-.0093	-.0025	.0089
#2	119.0	-.0009	1.353	-.0098	.0017	.0048
#3	119.5	-.0008	1.353	-.0091	-.0012	.0036

Sample Name: 580-131011-B-2-A Acquired: 9/5/2023 20:55:51 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	9.596	-.0037	-.0032	-.0026	-.0242	-.0012
Stddev	.007	.0005	.0001	.0016	.0056	.0019
%RSD	.0755	12.80	2.497	63.20	23.12	165.8
#1	9.601	-.0035	-.0033	-.0045	-.0178	-.0032
#2	9.588	-.0043	-.0033	-.0013	-.0283	.0006
#3	9.600	-.0035	-.0032	-.0020	-.0264	-.0009

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0022
Stddev	.0001
%RSD	6.060
#1	.0020
#2	.0023
#3	.0022

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4154.8	23629.	12228.	24725.
Stddev	2.2	18.	29.	45.
%RSD	.05409	.07754	.23699	.18167
#1	4153.6	23615.	12212.	24704.
#2	4157.4	23650.	12261.	24776.
#3	4153.3	23622.	12211.	24694.

Sample Name: 580-131011-B-3-A Acquired: 9/5/2023 20:59:27 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0025	-.0638	-.0025	-.0693	-.0033	-.0036
Stddev	.0015	.0562	.0010	.0004	.0001	.0000
%RSD	59.49	88.22	40.82	.6371	2.736	.9521
#1	-.0018	-.0732	-.0025	-.0694	-.0032	-.0036
#2	-.0015	-.0034	-.0015	-.0696	-.0033	-.0036
#3	-.0043	-.1147	-.0036	-.0688	-.0034	-.0035

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0043	-.0760	-.0030	-.0026	-.0024	-.0046
Stddev	.0017	.0059	.0001	.0001	.0003	.0044
%RSD	39.09	7.796	3.068	4.469	11.67	94.39
#1	-.0063	-.0701	-.0030	-.0027	-.0024	-.0032
#2	-.0031	-.0820	-.0031	-.0024	-.0026	-.0095
#3	-.0036	-.0759	-.0029	-.0026	-.0021	-.0011

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0656	4.858	-.0126	-.0580	-.0027	.0130
Stddev	.0045	.011	.0006	.0297	.0005	.0004
%RSD	6.840	.2183	4.575	51.22	19.51	3.262
#1	-.0627	4.869	-.0132	-.0685	-.0030	.0125
#2	-.0633	4.857	-.0121	-.0811	-.0030	.0134
#3	-.0707	4.848	-.0125	-.0245	-.0021	.0131

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	272.8	-.0016	.9439	-.0071	-.0013	-.0008
Stddev	2.7	.0005	.0081	.0007	.0003	.0013
%RSD	1.001	31.90	.8587	10.28	23.05	164.4
#1	273.8	-.0022	.9396	-.0079	-.0010	.0006
#2	269.7	-.0015	.9388	-.0070	-.0016	-.0012
#3	274.9	-.0012	.9532	-.0064	-.0013	-.0018

Sample Name: 580-131011-B-3-A Acquired: 9/5/2023 20:59:27 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.403	-.0034	-.0034	-.0036	-.0125	-.0014
Stddev	.047	.0001	.0001	.0012	.0035	.0019
%RSD	1.073	1.504	3.207	33.05	27.96	141.3
#1	4.457	-.0034	-.0033	-.0035	-.0085	-.0028
#2	4.382	-.0033	-.0035	-.0025	-.0148	-.0022
#3	4.369	-.0034	-.0034	-.0049	-.0142	.0008

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0042
Stddev	.0001
%RSD	1.490
#1	-.0041
#2	-.0042
#3	-.0041

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4018.8	23237.	12104.	24452.
Stddev	5.5	34.	27.	41.
%RSD	.13719	.14729	.22464	.16669
#1	4022.2	23266.	12094.	24434.
#2	4021.8	23247.	12135.	24499.
#3	4012.5	23199.	12083.	24424.

Sample Name: CCV 3565024 Acquired: 9/5/2023 21:03:11 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9551	97.00	4.944	45.60	4.990	4.803
Stddev	.0014	.38	.079	.71	.085	.014
%RSD	.1516	.3919	1.589	1.547	1.693	.2867
#1	.9536	97.11	4.900	45.19	4.938	4.808
#2	.9551	96.58	4.898	45.20	4.945	4.788
#3	.9565	97.31	5.035	46.41	5.088	4.814
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.750	92.36	4.793	4.739	5.113	4.904
Stddev	.069	1.37	.089	.086	.087	.005
%RSD	1.454	1.482	1.860	1.824	1.709	.1000
#1	4.712	91.62	4.739	4.686	5.058	4.907
#2	4.709	91.53	4.744	4.692	5.066	4.898
#3	4.830	93.94	4.895	4.839	5.213	4.907
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	100.7	98.34	4.656	102.1	4.871	4.703
Stddev	.3	.28	.006	.3	.078	.074
%RSD	.2757	.2884	.1240	.2540	1.602	1.582
#1	100.8	98.19	4.653	102.0	4.832	4.657
#2	100.5	98.15	4.653	102.0	4.821	4.663
#3	101.0	98.66	4.663	102.4	4.961	4.789
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCV 3565024 Acquired: 9/5/2023 21:03:11 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	94.01	4.778	49.49	4.809	4.759	4.607
Stddev	1.64	.092	.78	.096	.075	.067
%RSD	1.748	1.935	1.578	1.991	1.568	1.460
#1	92.83	4.722	49.00	4.754	4.717	4.575
#2	93.32	4.728	49.08	4.754	4.715	4.561
#3	95.89	4.885	50.39	4.920	4.845	4.684
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	52.67	4.855	4.944	4.570	4.833	4.860
Stddev	.20	.092	.009	.008	.094	.009
%RSD	.3720	1.886	.1778	.1720	1.934	.1894
#1	52.58	4.795	4.947	4.574	4.784	4.868
#2	52.54	4.810	4.934	4.561	4.775	4.850
#3	52.90	4.960	4.950	4.574	4.941	4.862
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	4.724
Stddev	.092
%RSD	1.953
#1	4.670
#2	4.672
#3	4.831
Check ?	Chk Pass
Value	
Range	

Sample Name: CCV 3565024 Acquired: 9/5/2023 21:03:11 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3656.9	21724.	11719.	23688.
Stddev	60.5	311.	14.	55.
%RSD	1.6545	1.4329	.11779	.23394
#1	3698.0	21935.	11735.	23751.
#2	3685.2	21870.	11710.	23646.
#3	3587.4	21367.	11713.	23668.

Sample Name: CCB Acquired: 9/5/2023 21:07:33 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0004	.0375	.0010	-.0079	-.0000	.0009
Stddev	.0025	.0366	.0023	.0071	.0001	.0015
%RSD	609.2	97.60	228.3	89.39	324.9	177.7
#1	-.0033	.0300	.0036	-.0004	.0000	.0003
#2	.0008	.0052	-.0010	-.0089	-.0001	-.0003
#3	.0012	.0772	.0005	-.0145	.0000	.0026
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0003	.0126	-.0002	-.0002	.0002	-.0058
Stddev	.0014	.0243	.0002	.0003	.0003	.0037
%RSD	432.9	193.0	125.8	122.8	144.9	64.66
#1	.0013	.0035	.0001	.0001	.0004	-.0017
#2	-.0013	-.0059	-.0002	-.0004	.0004	-.0066
#3	-.0010	.0400	-.0004	-.0004	-.0001	-.0091
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0229	.3127	.0073	.0010	.0005	.0018
Stddev	.0332	.0288	.0019	.0466	.0009	.0006
%RSD	145.3	9.218	25.60	4592.	174.7	32.74
#1	.0054	.3003	.0075	-.0224	-.0000	.0025
#2	.0020	.2921	.0054	-.0292	.0000	.0015
#3	.0612	.3456	.0091	.0547	.0016	.0015
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: CCB Acquired: 9/5/2023 21:07:33 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F .7066	-.0003	.0058	-.0003	.0002	.0026
Stddev	.2609	.0004	.0046	.0012	.0029	.0015
%RSD	36.92	122.5	79.59	399.1	1345.	54.90
#1	.6136	.0001	.0020	-.0006	.0026	.0011
#2	.5049	-.0007	.0108	-.0013	.0010	.0029
#3	1.001	-.0003	.0044	.0010	-.0030	.0040
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.5000					
Low Limit	-.5000					

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.2076	.0002	.0012	.0009	.0106	.0024
Stddev	.0189	.0005	.0016	.0005	.0010	.0018
%RSD	9.105	209.7	128.7	50.13	9.544	78.65
#1	.2036	.0005	.0005	.0005	.0097	.0003
#2	.1910	.0006	.0001	.0008	.0117	.0030
#3	.2282	-.0003	.0030	.0014	.0106	.0038
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0022
Stddev	.0002
%RSD	7.925
#1	-.0020
#2	-.0023
#3	-.0023
Check ?	Chk Pass
High Limit	
Low Limit	

Sample Name: CCB Acquired: 9/5/2023 21:07:33 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4297.3	23702.	12133.	24498.
Stddev	8.5	54.	130.	244.
%RSD	.19734	.22692	1.0697	.99472
#1	4296.0	23731.	12279.	24774.
#2	4306.4	23736.	12033.	24311.
#3	4289.6	23640.	12086.	24409.

Sample Name: MB 580-436480/22-A Acquired: 9/5/2023 21:14:36 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0023	-.0189	-.0022	-.0591	-.0019	-.0015
Stddev	.0023	.0283	.0020	.0073	.0008	.0002
%RSD	99.73	149.5	89.50	12.29	42.67	13.42
#1	-.0011	-.0119	-.0013	-.0587	-.0018	-.0014
#2	-.0008	-.0501	-.0009	-.0521	-.0011	-.0018
#3	-.0050	.0052	-.0046	-.0666	-.0028	-.0014

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0018	-.0386	-.0021	-.0019	-.0020	-.0036
Stddev	.0022	.0101	.0007	.0007	.0008	.0048
%RSD	120.7	26.11	33.58	39.03	39.72	131.8
#1	-.0043	-.0288	-.0021	-.0021	-.0022	-.0083
#2	-.0005	-.0489	-.0014	-.0011	-.0012	.0012
#3	-.0006	-.0381	-.0029	-.0025	-.0028	-.0038

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0287	.0540	-.0054	-.0251	-.0003	-.0021
Stddev	.0020	.0345	.0020	.0120	.0003	.0006
%RSD	7.128	63.85	37.41	47.73	87.69	26.85
#1	-.0265	.0933	-.0031	-.0128	-.0002	-.0022
#2	-.0305	.0290	-.0061	-.0367	-.0001	-.0015
#3	-.0292	.0397	-.0069	-.0257	-.0006	-.0027

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.3364	-.0018	-.0161	-.0017	-.0024	-.0022
Stddev	.0301	.0004	.0095	.0007	.0020	.0046
%RSD	8.947	23.92	59.25	42.57	81.73	209.6
#1	.3584	-.0021	-.0182	-.0012	-.0039	-.0048
#2	.3021	-.0013	-.0057	-.0013	-.0031	.0031
#3	.3486	-.0020	-.0243	-.0025	-.0002	-.0048

Sample Name: MB 580-436480/22-A Acquired: 9/5/2023 21:14:36 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0520	-.0022	-.0011	-.0023	.0066	-.0011
Stddev	.0119	.0004	.0001	.0004	.0015	.0008
%RSD	22.83	19.04	13.36	16.89	23.01	73.24
#1	.0617	-.0022	-.0010	-.0024	.0075	-.0009
#2	.0557	-.0018	-.0013	-.0027	.0049	-.0020
#3	.0388	-.0027	-.0010	-.0019	.0076	-.0004

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0044
Stddev	.0008
%RSD	18.35
#1	-.0044
#2	-.0035
#3	-.0052

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4380.7	24131.	12388.	24915.
Stddev	8.0	41.	102.	258.
%RSD	.18203	.17127	.82659	1.0335
#1	4384.8	24158.	12502.	25201.
#2	4385.8	24152.	12357.	24842.
#3	4371.5	24083.	12304.	24701.

Sample Name: LCS 580-436480/23-A Acquired: 9/5/2023 21:18:10 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9634	19.79	.9704	9.344	1.010	.9786
Stddev	.0046	.09	.0025	.051	.002	.0026
%RSD	.4775	.4787	.2562	.5472	.2373	.2700
#1	.9683	19.88	.9687	9.296	1.008	.9791
#2	.9592	19.70	.9732	9.338	1.011	.9758
#3	.9625	19.80	.9692	9.398	1.012	.9810

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0057	18.44	.9572	.9372	1.038	.9749
Stddev	.0020	.14	.0046	.0041	.002	.0024
%RSD	35.15	.7475	.4832	.4404	.1542	.2470
#1	-.0042	18.30	.9527	.9329	1.037	.9729
#2	-.0049	18.46	.9571	.9376	1.038	.9742
#3	-.0079	18.57	.9619	.9411	1.040	.9775

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	20.57	19.86	.9255	20.90	.9687	.9485
Stddev	.07	.01	.0021	.09	.0086	.0069
%RSD	.3340	.0431	.2225	.4511	.8913	.7260
#1	20.61	19.87	.9248	20.96	.9608	.9432
#2	20.49	19.87	.9238	20.79	.9673	.9461
#3	20.61	19.85	.9278	20.95	.9779	.9563

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	19.14	.9439	5.106	.9675	1.011	.9392
Stddev	.21	.0036	.030	.0049	.006	.0046
%RSD	1.117	.3830	.5946	.5044	.6168	.4916
#1	18.91	.9402	5.083	.9621	1.009	.9371
#2	19.32	.9442	5.095	.9692	1.006	.9360
#3	19.20	.9474	5.140	.9714	1.018	.9445

Sample Name: LCS 580-436480/23-A Acquired: 9/5/2023 21:18:10 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	10.38	.9643	.9982	.9312	.9795	.9810
Stddev	.03	.0040	.0020	.0047	.0144	.0072
%RSD	.3194	.4137	.1966	.4995	1.468	.7351
#1	10.37	.9611	.9989	.9304	.9655	.9763
#2	10.35	.9629	.9960	.9270	.9787	.9774
#3	10.41	.9688	.9998	.9362	.9942	.9893

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.9532
Stddev	.0048
%RSD	.5081
#1	.9477
#2	.9550
#3	.9569

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4119.8	23510.	12301.	24713.
Stddev	12.2	50.	66.	113.
%RSD	.29694	.21351	.53916	.45701
#1	4133.4	23566.	12225.	24583.
#2	4116.5	23497.	12338.	24764.
#3	4109.6	23468.	12341.	24791.

Sample Name: LCSD 580-436480/24-A Acquired: 9/5/2023 21:21:12 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9751	19.92	.9769	9.400	1.015	.9865
Stddev	.0036	.07	.0049	.015	.002	.0023
%RSD	.3701	.3420	.5044	.1559	.2169	.2350
#1	.9712	19.87	.9727	9.396	1.013	.9843
#2	.9782	20.00	.9823	9.388	1.014	.9889
#3	.9760	19.90	.9757	9.416	1.017	.9862

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0064	18.41	.9589	.9385	1.044	.9717
Stddev	.0008	.06	.0013	.0022	.001	.0099
%RSD	12.44	.3245	.1322	.2352	.1093	1.022
#1	-.0071	18.36	.9576	.9367	1.043	.9679
#2	-.0055	18.39	.9590	.9379	1.044	.9642
#3	-.0066	18.47	.9601	.9410	1.045	.9829

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	20.64	19.88	.9299	20.88	.9616	.9538
Stddev	.06	.05	.0022	.11	.0058	.0018
%RSD	.3007	.2754	.2400	.5046	.6020	.1910
#1	20.57	19.86	.9277	20.76	.9592	.9549
#2	20.70	19.83	.9298	20.94	.9575	.9517
#3	20.64	19.94	.9321	20.94	.9683	.9547

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	18.99	.9465	5.114	.9686	1.010	.9424
Stddev	.05	.0020	.018	.0037	.007	.0054
%RSD	.2542	.2073	.3563	.3791	.6709	.5724
#1	18.98	.9446	5.096	.9663	1.015	.9486
#2	19.04	.9464	5.115	.9666	1.002	.9392
#3	18.94	.9485	5.132	.9728	1.012	.9394

Sample Name: LCSD 580-436480/24-A Acquired: 9/5/2023 21:21:12 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	10.38	.9683	1.001	.9398	.9921	.9875
Stddev	.05	.0014	.003	.0021	.0145	.0062
%RSD	.5129	.1485	.2540	.2253	1.459	.6229
#1	10.32	.9676	.9993	.9421	.9772	.9835
#2	10.43	.9673	1.001	.9393	1.006	.9946
#3	10.39	.9699	1.004	.9379	.9930	.9845

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.9571
Stddev	.0016
%RSD	.1670
#1	.9562
#2	.9561
#3	.9589

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4120.1	23472.	12194.	24449.
Stddev	9.4	41.	23.	7.
%RSD	.22716	.17430	.18621	.02751
#1	4129.5	23498.	12214.	24443.
#2	4120.1	23494.	12169.	24456.
#3	4110.8	23425.	12200.	24448.

Sample Name: 580-130928-D-3-A Acquired: 9/5/2023 21:24:13 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0019	.0478	.0251	.0697	.0153	.0004
Stddev	.0028	.0382	.0037	.0189	.0025	.0027
%RSD	148.3	79.89	14.85	27.07	16.27	632.4
#1	-.0011	.0386	.0215	.0645	.0142	-.0009
#2	.0023	.0150	.0249	.0540	.0135	-.0014
#3	.0044	.0897	.0290	.0906	.0181	.0036

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0014	33.29	-.0005	.0029	.0002	-.0022
Stddev	.0009	.16	.0021	.0020	.0023	.0098
%RSD	65.11	.4717	426.1	69.23	1157.	442.7
#1	-.0020	33.44	-.0011	.0023	-.0008	-.0012
#2	-.0018	33.13	-.0023	.0013	-.0015	-.0126
#3	-.0004	33.30	.0019	.0052	.0028	.0070

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	2.524	4.232	.0020	49.81	1.685	.0077
Stddev	.051	.079	.0018	.17	.007	.0015
%RSD	2.027	1.865	91.06	.3438	.4088	18.85
#1	2.492	4.218	.0009	49.92	1.691	.0084
#2	2.497	4.161	.0009	49.89	1.678	.0061
#3	2.583	4.317	.0040	49.61	1.685	.0088

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	35.73	.0080	.1177	-.0118	-.0010	.0061
Stddev	.24	.0016	.0148	.0017	.0019	.0010
%RSD	.6807	19.79	12.61	14.71	190.6	16.40
#1	35.76	.0075	.1170	-.0134	.0009	.0054
#2	35.47	.0066	.1032	-.0119	-.0029	.0057
#3	35.96	.0097	.1328	-.0100	-.0009	.0073

Sample Name: 580-130928-D-3-A Acquired: 9/5/2023 21:24:13 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	14.22	-.0007	.2231	.0035	.0256	.0016
Stddev	.18	.0027	.0020	.0022	.0119	.0036
%RSD	1.248	389.7	.8783	63.06	46.61	227.7
#1	14.02	-.0011	.2218	.0030	.0388	-.0026
#2	14.29	-.0031	.2222	.0016	.0225	.0038
#3	14.36	.0022	.2254	.0059	.0155	.0035

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0385
Stddev	.0021
%RSD	5.573
#1	.0378
#2	.0367
#3	.0408

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4105.6	23537.	12296.	24734.
Stddev	10.6	47.	55.	99.
%RSD	.25919	.19850	.44856	.40181
#1	4104.0	23536.	12334.	24810.
#2	4117.0	23585.	12233.	24622.
#3	4095.9	23491.	12322.	24771.

Sample Name: 580-130928-D-3-B DU Acquired: 9/5/2023 21:27:36 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0007	-.0028	.0232	.0509	.0142	-.0024
Stddev	.0028	.0392	.0016	.0031	.0003	.0014
%RSD	407.6	1378.	6.964	6.105	2.114	57.90
#1	.0023	.0425	.0224	.0500	.0142	-.0008
#2	-.0010	-.0256	.0251	.0544	.0145	-.0033
#3	-.0034	-.0254	.0222	.0484	.0139	-.0032

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0002	34.66	-.0018	.0018	-.0014	-.0049
Stddev	.0013	.13	.0003	.0003	.0002	.0028
%RSD	595.0	.3878	18.92	16.13	10.54	56.09
#1	-.0001	34.51	-.0021	.0017	-.0013	-.0019
#2	.0010	34.77	-.0014	.0021	-.0014	-.0055
#3	-.0016	34.68	-.0020	.0016	-.0016	-.0074

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	2.559	4.207	-.0013	51.68	1.736	.0037
Stddev	.024	.023	.0008	.17	.006	.0006
%RSD	.9457	.5484	61.36	.3318	.3368	16.53
#1	2.586	4.224	-.0006	51.50	1.731	.0032
#2	2.539	4.215	-.0021	51.70	1.742	.0043
#3	2.552	4.181	-.0011	51.84	1.734	.0035

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	36.81	.0066	.1136	-.0171	-.0007	-.0015
Stddev	.08	.0009	.0058	.0010	.0014	.0053
%RSD	.2267	13.06	5.065	5.633	219.4	354.3
#1	36.81	.0056	.1072	-.0164	-.0023	.0000
#2	36.90	.0072	.1183	-.0182	.0001	.0029
#3	36.73	.0069	.1155	-.0167	.0002	-.0074

Sample Name: 580-130928-D-3-B DU Acquired: 9/5/2023 21:27:36 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	20.69	-.0024	.2282	.0007	.0061	.0003
Stddev	.08	.0004	.0004	.0016	.0046	.0030
%RSD	.3709	14.77	.1565	235.9	75.47	1016.
#1	20.75	-.0027	.2286	.0023	.0009	.0038
#2	20.71	-.0020	.2279	-.0008	.0096	-.0017
#3	20.60	-.0024	.2282	.0004	.0080	-.0012

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0382
Stddev	.0004
%RSD	1.121
#1	.0378
#2	.0386
#3	.0382

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4058.5	23136.	12155.	24403.
Stddev	10.1	58.	44.	92.
%RSD	.24936	.25138	.36458	.37633
#1	4070.2	23202.	12200.	24488.
#2	4053.4	23110.	12155.	24417.
#3	4052.0	23095.	12111.	24306.

Sample Name: 580-130928-D-3-C MS Acquired: 9/5/2023 21:31:01 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9541	19.50	1.026	9.808	1.041	.9786
Stddev	.0561	1.16	.007	.022	.002	.0567
%RSD	5.879	5.950	.7084	.2272	.2167	5.792
#1	.9866	20.19	1.019	9.786	1.039	1.010
#2	.8894	18.16	1.034	9.808	1.041	.9132
#3	.9864	20.15	1.025	9.830	1.043	1.013

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0041	52.25	.9881	.9664	1.055	.9496
Stddev	.0018	.93	.0020	.0022	.002	.0502
%RSD	44.13	1.773	.2019	.2327	.2175	5.290
#1	-.0023	53.01	.9858	.9639	1.053	.9757
#2	-.0059	51.22	.9887	.9668	1.055	.8917
#3	-.0041	52.53	.9897	.9684	1.058	.9815

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	22.47	23.49	.9165	68.48	2.640	.9827
Stddev	1.26	1.28	.0531	3.91	.048	.0032
%RSD	5.601	5.443	5.794	5.709	1.798	.3281
#1	23.21	24.33	.9494	70.83	2.681	.9792
#2	21.02	22.02	.8552	63.97	2.588	.9834
#3	23.20	24.11	.9448	70.64	2.652	.9856

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	54.64	.9762	5.415	.9780	1.035	.9648
Stddev	.96	.0029	.009	.0061	.002	.0042
%RSD	1.752	.2952	.1702	.6227	.2178	.4395
#1	55.40	.9733	5.422	.9711	1.033	.9610
#2	53.57	.9763	5.417	.9827	1.035	.9694
#3	54.96	.9791	5.405	.9801	1.037	.9640

Sample Name: 580-130928-D-3-C MS Acquired: 9/5/2023 21:31:01 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	28.84	1.001	1.199	.9347	1.017	.9753
Stddev	1.62	.003	.068	.0545	.012	.0540
%RSD	5.626	.2479	5.638	5.836	1.167	5.533
#1	29.73	.9979	1.240	.9657	1.003	1.000
#2	26.96	1.002	1.121	.8717	1.027	.9133
#3	29.81	1.002	1.236	.9667	1.020	1.012

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	1.027
Stddev	.001
%RSD	.0589
#1	1.027
#2	1.028
#3	1.027

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3924.8	22846.	12406.	24807.
Stddev	4.1	46.	518.	1003.
%RSD	.10568	.20299	4.1789	4.0415
#1	3922.7	22797.	12134.	24244.
#2	3922.1	22851.	13004.	25965.
#3	3929.6	22889.	12081.	24213.

Sample Name: 580-130928-D-3-A PDS Acquired: 9/5/2023 21:37:05 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9412	19.30	.9702	9.303	.9830	.9586
Stddev	.0031	.07	.0081	.045	.0040	.0006
%RSD	.3265	.3625	.8357	.4805	.4041	.0608
#1	.9410	19.37	.9739	9.262	.9790	.9585
#2	.9382	19.24	.9609	9.297	.9830	.9580
#3	.9443	19.28	.9758	9.351	.9869	.9591

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0058	50.00	.9349	.9145	.9941	.9323
Stddev	.0010	.06	.0032	.0028	.0033	.0033
%RSD	17.85	.1182	.3431	.3083	.3347	.3492
#1	-.0069	50.07	.9317	.9119	.9909	.9327
#2	-.0057	49.98	.9349	.9140	.9940	.9353
#3	-.0049	49.96	.9381	.9175	.9975	.9288

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	22.11	23.32	.9001	67.58	2.533	.9248
Stddev	.03	.07	.0008	.12	.007	.0040
%RSD	.1575	.3162	.0841	.1789	.2739	.4328
#1	22.11	23.39	.9001	67.71	2.541	.9210
#2	22.07	23.24	.8993	67.47	2.528	.9246
#3	22.14	23.32	.9008	67.56	2.529	.9290

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	52.37	.9227	5.145	.9250	.9761	.9186
Stddev	.12	.0031	.015	.0055	.0042	.0109
%RSD	.2379	.3398	.2872	.5942	.4258	1.182
#1	52.51	.9191	5.129	.9189	.9716	.9063
#2	52.27	.9242	5.148	.9294	.9769	.9268
#3	52.33	.9248	5.158	.9268	.9798	.9227

Sample Name: 580-130928-D-3-A PDS Acquired: 9/5/2023 21:37:05 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	28.40	.9462	1.177	.9155	.9678	.9554
Stddev	.08	.0032	.002	.0012	.0045	.0039
%RSD	.2786	.3425	.1285	.1271	.4613	.4131
#1	28.42	.9429	1.178	.9161	.9641	.9550
#2	28.31	.9461	1.175	.9142	.9666	.9517
#3	28.46	.9494	1.177	.9163	.9728	.9595

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.9742
Stddev	.0037
%RSD	.3842
#1	.9706
#2	.9739
#3	.9781

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4012.7	23404.	12348.	24776.
Stddev	12.7	80.	51.	97.
%RSD	.31765	.33986	.41703	.39344
#1	4025.9	23480.	12387.	24861.
#2	4011.6	23410.	12367.	24796.
#3	4000.5	23321.	12289.	24670.

Sample Name: CCV 3565024 Acquired: 9/5/2023 21:43:38 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.022	104.7	4.862	45.09	4.922	5.201
Stddev	.077	7.9	.012	.11	.009	.389
%RSD	7.548	7.520	.2420	.2352	.1913	7.475
#1	.9740	99.83	4.874	45.09	4.932	4.960
#2	1.111	113.8	4.860	44.99	4.914	5.650
#3	.9804	100.4	4.851	45.20	4.919	4.994
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.676	90.72	4.777	4.710	5.036	5.176
Stddev	.010	.43	.008	.009	.009	.404
%RSD	.2206	.4724	.1728	.1927	.1876	7.802
#1	4.680	90.73	4.779	4.714	5.047	4.914
#2	4.664	90.29	4.768	4.700	5.029	5.641
#3	4.683	91.15	4.784	4.717	5.032	4.974
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	107.1	106.4	4.927	109.0	4.697	4.659
Stddev	8.1	8.4	.378	8.3	.021	.014
%RSD	7.560	7.858	7.679	7.643	.4558	.3023
#1	102.0	101.1	4.678	103.7	4.700	4.664
#2	116.4	116.0	5.362	118.6	4.674	4.643
#3	102.8	102.1	4.741	104.7	4.717	4.669
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCV 3565024 Acquired: 9/5/2023 21:43:38 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	93.44	4.743	49.69	4.780	4.677	4.569
Stddev	.34	.009	.12	.017	.012	.015
%RSD	.3645	.1815	.2329	.3527	.2545	.3288
#1	93.55	4.748	49.58	4.790	4.685	4.567
#2	93.06	4.733	49.66	4.760	4.663	4.555
#3	93.72	4.749	49.81	4.788	4.683	4.585
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F 55.41	4.835	5.266	4.980	4.764	5.255
Stddev	4.24	.006	.402	.371	.057	.387
%RSD	7.660	.1224	7.631	7.453	1.193	7.356
#1	52.62	4.836	5.009	4.751	4.790	5.011
#2	60.29	4.828	5.729	5.409	4.699	5.701
#3	53.31	4.840	5.060	4.782	4.803	5.054
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	50.00					
Range	10.00%					

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	4.735
Stddev	.007
%RSD	.1502
#1	4.736
#2	4.727
#3	4.741
Check ?	Chk Pass
Value	
Range	

Sample Name: CCV 3565024 Acquired: 9/5/2023 21:43:38 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3687.0	21954.	10891.	21859.
Stddev	4.6	35.	816.	1670.
%RSD	.12573	.15868	7.4929	7.6411
#1	3681.8	21914.	11370.	22867.
#2	3690.7	21975.	9948.6	19931.
#3	3688.4	21974.	11354.	22778.

Sample Name: CCB Acquired: 9/5/2023 21:47:58 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0034	.0399	.0037	.0312	.0025	.0028
Stddev	.0027	.0288	.0018	.0072	.0014	.0006
%RSD	78.96	72.23	48.36	23.17	54.78	22.02
#1	.0009	.0433	.0019	.0229	.0010	.0035
#2	.0030	.0669	.0055	.0344	.0030	.0024
#3	.0063	.0095	.0038	.0363	.0036	.0026
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0015	.0914	.0020	.0022	.0026	-.0061
Stddev	.0034	.0197	.0012	.0011	.0016	.0041
%RSD	219.3	21.52	58.57	50.72	59.42	66.53
#1	-.0015	.1130	.0007	.0012	.0009	-.0024
#2	.0052	.0746	.0024	.0020	.0030	-.0055
#3	.0009	.0866	.0030	.0034	.0040	-.0105
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0628	.2868	.0072	.1397	.0049	.0049
Stddev	.0153	.0879	.0005	.0340	.0009	.0006
%RSD	24.32	30.66	6.345	24.35	18.39	11.37
#1	.0799	.3826	.0068	.1786	.0058	.0043
#2	.0507	.2679	.0071	.1244	.0040	.0051
#3	.0577	.2098	.0077	.1160	.0050	.0054
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: CCB Acquired: 9/5/2023 21:47:58 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.1785	.0020	.0188	.0024	.0036	.0072
Stddev	.0366	.0015	.0150	.0037	.0031	.0026
%RSD	20.50	77.47	79.55	152.4	85.24	35.96
#1	.2207	.0002	.0026	-.0015	.0009	.0067
#2	.1546	.0027	.0217	.0031	.0069	.0049
#3	.1603	.0031	.0322	.0057	.0030	.0100
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.1510	.0029	.0034	.0022	.0220	.0032
Stddev	.0239	.0013	.0008	.0008	.0052	.0012
%RSD	15.82	46.00	24.74	38.47	23.74	37.88
#1	.1769	.0014	.0044	.0031	.0272	.0043
#2	.1298	.0033	.0029	.0018	.0219	.0033
#3	.1463	.0040	.0030	.0016	.0168	.0019
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0000
Stddev	.0012
%RSD	3885.
#1	-.0013
#2	.0003
#3	.0010
Check ?	Chk Pass
High Limit	
Low Limit	

Sample Name: CCB Acquired: 9/5/2023 21:47:58 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4242.8	23481.	11729.	23515.
Stddev	5.6	40.	80.	186.
%RSD	.13176	.17022	.68214	.78918
#1	4245.4	23507.	11658.	23358.
#2	4246.6	23501.	11713.	23468.
#3	4236.4	23435.	11816.	23720.

Sample Name: 580-131108-D-1-A Acquired: 9/5/2023 21:51:34 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0031	.7868	.0004	.0075	.0569	-.0009
Stddev	.0015	.0325	.0014	.0058	.0008	.0011
%RSD	48.24	4.133	340.3	77.21	1.416	119.9
#1	-.0024	.7497	-.0008	.0049	.0568	-.0017
#2	-.0049	.8103	.0001	.0035	.0561	-.0013
#3	-.0021	.8006	.0020	.0142	.0577	.0003

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0013	17.67	-.0007	.0005	.0021	.0051
Stddev	.0008	.13	.0007	.0007	.0008	.0015
%RSD	65.62	.7180	94.05	163.4	40.95	29.77
#1	-.0021	17.62	-.0010	-.0001	.0014	.0047
#2	-.0012	17.58	-.0011	.0002	.0018	.0038
#3	-.0005	17.82	.0001	.0013	.0030	.0068

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	5.739	5.054	-.0014	1.895	.2179	.0028
Stddev	.032	.029	.0005	.044	.0021	.0005
%RSD	.5645	.5787	38.80	2.329	.9736	19.38
#1	5.709	5.051	-.0017	1.888	.2183	.0028
#2	5.734	5.027	-.0008	1.855	.2155	.0022
#3	5.773	5.085	-.0016	1.942	.2197	.0033

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.500	.0025	.2268	-.0034	.0021	.0039
Stddev	.057	.0009	.0094	.0012	.0012	.0012
%RSD	1.257	37.17	4.146	34.20	54.42	30.13
#1	4.478	.0019	.2179	-.0033	.0016	.0049
#2	4.458	.0020	.2261	-.0047	.0013	.0026
#3	4.564	.0036	.2366	-.0024	.0035	.0041

Sample Name: 580-131108-D-1-A Acquired: 9/5/2023 21:51:34 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	5.810	-.0009	.0704	.0479	.0093	.0054
Stddev	.038	.0006	.0012	.0023	.0051	.0002
%RSD	.6541	74.52	1.690	4.700	54.84	4.639
#1	5.769	-.0012	.0694	.0457	.0138	.0055
#2	5.817	-.0013	.0701	.0480	.0104	.0055
#3	5.844	-.0001	.0717	.0502	.0038	.0051

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.2219
Stddev	.0011
%RSD	.5014
#1	.2212
#2	.2213
#3	.2232

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4362.1	24368.	12414.	24937.
Stddev	11.8	90.	37.	92.
%RSD	.27109	.37088	.29411	.36785
#1	4372.4	24448.	12436.	25034.
#2	4364.9	24386.	12372.	24852.
#3	4349.2	24270.	12433.	24924.

Sample Name: 580-130928-A-1-A Acquired: 9/5/2023 21:54:57 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0029	.2308	.0049	.0334	.0532	-.0022
Stddev	.0023	.0304	.0016	.0068	.0012	.0002
%RSD	79.55	13.16	32.89	20.25	2.205	11.00
#1	-.0007	.2531	.0066	.0379	.0532	-.0020
#2	-.0027	.1962	.0045	.0256	.0520	-.0025
#3	-.0052	.2432	.0035	.0367	.0543	-.0022

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0023	33.55	-.0018	-.0010	.0206	-.0019
Stddev	.0016	.13	.0007	.0009	.0006	.0065
%RSD	72.29	.3745	39.53	89.18	3.023	335.0
#1	-.0019	33.44	-.0014	-.0007	.0208	-.0094
#2	-.0040	33.69	-.0026	-.0020	.0199	.0020
#3	-.0008	33.53	-.0013	-.0003	.0211	.0016

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.5534	8.767	-.0029	56.24	.0187	.0008
Stddev	.0060	.039	.0002	.11	.0002	.0005
%RSD	1.092	.4431	6.667	.1958	1.106	68.44
#1	.5544	8.726	-.0028	56.33	.0188	.0007
#2	.5469	8.772	-.0031	56.27	.0184	.0003
#3	.5588	8.803	-.0027	56.12	.0187	.0013

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	45.69	.0399	.0956	-.0136	-.0022	-.0028
Stddev	.14	.0009	.0086	.0011	.0020	.0030
%RSD	.3142	2.169	8.973	8.428	92.21	108.6
#1	45.59	.0394	.0926	-.0146	-.0029	.0006
#2	45.86	.0393	.0888	-.0138	-.0038	-.0036
#3	45.64	.0409	.1052	-.0123	.0001	-.0053

Sample Name: 580-130928-A-1-A Acquired: 9/5/2023 21:54:57 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	16.70	-.0019	.3883	.0135	.0038	-.0001
Stddev	.05	.0005	.0003	.0018	.0046	.0024
%RSD	.3062	26.11	.0810	12.99	121.4	1624.
#1	16.74	-.0019	.3881	.0156	.0049	.0010
#2	16.64	-.0024	.3887	.0125	-.0013	.0014
#3	16.71	-.0014	.3882	.0125	.0077	-.0029

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.1129
Stddev	.0007
%RSD	.6045
#1	.1129
#2	.1123
#3	.1136

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4051.6	23276.	12052.	24148.
Stddev	12.8	57.	36.	73.
%RSD	.31547	.24667	.29657	.30202
#1	4065.6	23337.	12059.	24164.
#2	4048.6	23265.	12084.	24212.
#3	4040.6	23224.	12014.	24069.

Sample Name: 580-130928-A-2-A Acquired: 9/5/2023 21:58:22 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0020	-.0051	-.0014	-.0180	.0105	-.0008
Stddev	.0020	.0584	.0005	.0047	.0007	.0012
%RSD	99.16	1151.	33.05	26.25	6.541	147.6
#1	-.0043	.0472	-.0020	-.0235	.0097	.0004
#2	-.0007	-.0681	-.0010	-.0154	.0109	-.0021
#3	-.0010	.0056	-.0013	-.0151	.0109	-.0008

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0019	44.22	-.0020	-.0012	-.0010	-.0048
Stddev	.0019	.26	.0006	.0008	.0005	.0015
%RSD	100.0	.5830	29.65	63.86	46.58	31.16
#1	-.0038	44.46	-.0027	-.0020	-.0015	-.0056
#2	-.0020	44.26	-.0016	-.0011	-.0006	-.0031
#3	.0000	43.95	-.0017	-.0005	-.0009	-.0058

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0070	3.073	.0005	19.34	.7011	-.0019
Stddev	.0266	.024	.0010	.14	.0025	.0007
%RSD	380.2	.7859	205.0	.7097	.3606	38.83
#1	.0290	3.099	.0015	19.37	.7031	-.0027
#2	-.0226	3.052	-.0005	19.19	.7020	-.0015
#3	.0146	3.067	.0004	19.46	.6983	-.0014

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	15.77	.0043	.0342	-.0098	-.0004	-.0015
Stddev	.08	.0007	.0069	.0012	.0018	.0025
%RSD	.5209	17.19	20.18	12.27	486.0	170.0
#1	15.85	.0035	.0263	-.0111	.0016	.0010
#2	15.75	.0047	.0374	-.0087	-.0019	-.0015
#3	15.69	.0048	.0390	-.0097	-.0007	-.0041

Sample Name: 580-130928-A-2-A Acquired: 9/5/2023 21:58:22 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	9.972	-.0028	.2737	.0013	.0036	.0006
Stddev	.085	.0005	.0009	.0016	.0027	.0030
%RSD	.8479	17.10	.3277	122.0	74.09	522.6
#1	9.885	-.0033	.2743	.0025	.0042	.0030
#2	9.978	-.0026	.2727	-.0005	.0007	-.0028
#3	10.05	-.0024	.2742	.0018	.0059	.0015

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0317
Stddev	.0006
%RSD	1.932
#1	.0310
#2	.0319
#3	.0321

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4168.7	23713.	12149.	24346.
Stddev	11.1	75.	107.	191.
%RSD	.26720	.31838	.88144	.78422
#1	4165.8	23695.	12202.	24440.
#2	4181.1	23796.	12220.	24471.
#3	4159.4	23649.	12026.	24126.

Sample Name: 580-130928-D-4-A Acquired: 9/5/2023 22:01:47 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0010	.0250	.0213	.0436	.0137	-.0024
Stddev	.0018	.0145	.0008	.0004	.0004	.0005
%RSD	190.4	58.15	3.789	.8420	2.591	20.41
#1	-.0030	.0206	.0221	.0431	.0133	-.0026
#2	-.0002	.0412	.0205	.0438	.0136	-.0019
#3	.0004	.0132	.0214	.0437	.0140	-.0028

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0017	33.47	-.0024	.0013	-.0016	-.0052
Stddev	.0018	.14	.0002	.0003	.0002	.0059
%RSD	106.8	.4191	8.204	25.09	11.94	113.7
#1	-.0026	33.63	-.0026	.0010	-.0017	-.0076
#2	.0004	33.42	-.0023	.0013	-.0014	.0015
#3	-.0027	33.37	-.0022	.0016	-.0016	-.0096

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	2.540	4.204	-.0017	50.64	1.661	.0020
Stddev	.012	.025	.0020	.09	.011	.0000
%RSD	.4540	.5923	118.1	.1716	.6841	.9382
#1	2.543	4.184	-.0012	50.67	1.674	.0020
#2	2.549	4.232	.0000	50.54	1.652	.0020
#3	2.527	4.197	-.0039	50.70	1.658	.0020

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	35.20	.0069	.1091	-.0169	-.0023	.0014
Stddev	.16	.0005	.0056	.0021	.0018	.0009
%RSD	.4412	7.176	5.121	12.46	78.05	65.39
#1	35.38	.0063	.1063	-.0161	-.0005	.0006
#2	35.11	.0073	.1155	-.0193	-.0024	.0023
#3	35.10	.0070	.1055	-.0154	-.0041	.0011

Sample Name: 580-130928-D-4-A Acquired: 9/5/2023 22:01:47 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	19.96	-.0027	.2248	.0026	.0053	-.0009
Stddev	.04	.0002	.0005	.0004	.0023	.0029
%RSD	.1863	7.125	.2266	15.23	44.47	343.3
#1	20.00	-.0025	.2246	.0023	.0077	-.0043
#2	19.96	-.0027	.2253	.0024	.0051	.0007
#3	19.93	-.0028	.2244	.0030	.0030	.0010

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0400
Stddev	.0002
%RSD	.5967
#1	.0400
#2	.0402
#3	.0397

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4064.3	23318.	12010.	24034.
Stddev	6.7	46.	32.	61.
%RSD	.16461	.19938	.26832	.25353
#1	4056.6	23264.	12047.	24104.
#2	4067.4	23342.	11997.	24006.
#3	4068.8	23348.	11986.	23993.

Sample Name: 580-131123-J-3-A Acquired: 9/5/2023 22:05:12 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0015	-.0720	-.0044	-.0122	.0065	-.0034
Stddev	.0020	.0185	.0021	.0075	.0008	.0000
%RSD	137.3	25.70	46.83	61.39	12.15	1.210
#1	-.0007	-.0508	-.0025	-.0040	.0073	-.0033
#2	.0001	-.0799	-.0042	-.0141	.0064	-.0034
#3	-.0038	-.0851	-.0066	-.0186	.0058	-.0034

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0015	21.51	-.0023	-.0024	-.0004	-.0055
Stddev	.0016	.56	.0009	.0011	.0010	.0024
%RSD	105.5	2.594	41.18	45.56	246.9	43.74
#1	.0000	21.75	-.0012	-.0012	.0007	-.0069
#2	-.0031	21.90	-.0025	-.0025	-.0008	-.0027
#3	-.0014	20.87	-.0031	-.0033	-.0012	-.0068

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0706	3.066	-.0067	22.81	.0042	-.0023
Stddev	.0025	.080	.0007	.97	.0004	.0008
%RSD	3.505	2.599	10.49	4.247	9.061	36.60
#1	-.0692	3.120	-.0074	23.37	.0038	-.0013
#2	-.0735	3.104	-.0060	23.38	.0046	-.0028
#3	-.0692	2.975	-.0067	21.70	.0043	-.0028

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	45.93	-.0014	.0445	-.0186	-.0002	-.0021
Stddev	1.19	.0006	.0070	.0003	.0017	.0006
%RSD	2.598	42.95	15.76	1.368	835.7	29.88
#1	46.51	-.0007	.0526	-.0188	-.0013	-.0018
#2	46.72	-.0016	.0400	-.0183	-.0009	-.0028
#3	44.56	-.0017	.0411	-.0186	.0017	-.0016

Sample Name: 580-131123-J-3-A Acquired: 9/5/2023 22:05:12 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	21.24	-.0026	.1536	-.0035	.0013	.0132
Stddev	.85	.0007	.0068	.0007	.0032	.0046
%RSD	3.987	26.52	4.443	19.19	253.8	34.80
#1	21.74	-.0018	.1576	-.0028	-.0014	.0164
#2	21.73	-.0028	.1575	-.0041	.0049	.0154
#3	20.27	-.0031	.1457	-.0036	.0004	.0080

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0055
Stddev	.0010
%RSD	18.20
#1	.0066
#2	.0051
#3	.0047

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4066.4	23095.	12114.	24260.
Stddev	20.8	117.	149.	269.
%RSD	.51124	.50625	1.2312	1.1104
#1	4089.1	23218.	12024.	24090.
#2	4061.7	23080.	12033.	24120.
#3	4048.4	22986.	12286.	24571.

Sample Name: CCV 3565024 Acquired: 9/5/2023 22:08:43 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9853	102.0	5.000	46.41	5.062	5.061
Stddev	.0024	.4	.017	.16	.021	.014
%RSD	.2445	.3935	.3489	.3490	.4240	.2706
#1	.9846	101.7	4.990	46.39	5.054	5.055
#2	.9833	101.8	4.989	46.25	5.047	5.051
#3	.9880	102.4	5.020	46.58	5.087	5.077
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.810	92.84	4.934	4.868	5.184	4.967
Stddev	.015	.92	.019	.018	.021	.009
%RSD	.3097	.9883	.3760	.3667	.4110	.1822
#1	4.804	92.13	4.930	4.864	5.173	4.976
#2	4.800	92.51	4.919	4.853	5.171	4.958
#3	4.827	93.87	4.955	4.888	5.209	4.967
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	103.1	102.6	4.737	105.0	4.792	4.796
Stddev	.3	.3	.011	.5	.040	.018
%RSD	.2626	.2884	.2287	.4589	.8313	.3647
#1	103.2	102.8	4.739	105.1	4.762	4.791
#2	102.9	102.3	4.725	104.5	4.777	4.782
#3	103.4	102.8	4.746	105.4	4.837	4.816
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCV 3565024 Acquired: 9/5/2023 22:08:43 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	94.94	4.891	51.24	4.930	4.805	4.709
Stddev	.76	.017	.19	.024	.017	.014
%RSD	.8022	.3387	.3685	.4799	.3609	.3034
#1	94.38	4.884	51.25	4.917	4.811	4.725
#2	94.63	4.878	51.04	4.916	4.785	4.697
#3	95.81	4.909	51.42	4.957	4.818	4.705
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	53.27	4.996	5.079	4.844	4.941	5.121
Stddev	.17	.016	.010	.016	.020	.029
%RSD	.3194	.3209	.1950	.3265	.4123	.5657
#1	53.17	4.992	5.086	4.838	4.933	5.108
#2	53.18	4.982	5.067	4.832	4.926	5.101
#3	53.47	5.013	5.083	4.862	4.964	5.154
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	4.890
Stddev	.017
%RSD	.3374
#1	4.885
#2	4.877
#3	4.909
Check ?	Chk Pass
Value	
Range	

Sample Name: CCV 3565024 Acquired: 9/5/2023 22:08:43 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3584.9	21393.	11204.	22470.
Stddev	14.4	86.	54.	121.
%RSD	.40309	.40181	.47836	.53840
#1	3592.0	21440.	11146.	22346.
#2	3594.4	21445.	11216.	22476.
#3	3568.2	21293.	11251.	22587.

Sample Name: CCB Acquired: 9/5/2023 22:13:05 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0001	.0358	.0026	.0220	.0017	.0016
Stddev	.0013	.0104	.0023	.0034	.0009	.0007
%RSD	1568.	29.11	87.37	15.43	52.08	44.67
#1	-.0009	.0322	.0050	.0210	.0007	.0009
#2	-.0007	.0276	.0005	.0258	.0024	.0015
#3	.0014	.0475	.0024	.0192	.0021	.0023
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0031	.0791	.0013	.0014	.0019	-.0088
Stddev	.0018	.0171	.0008	.0006	.0009	.0061
%RSD	57.07	21.59	58.56	44.35	47.38	69.15
#1	.0012	.0632	.0004	.0007	.0009	-.0019
#2	.0035	.0771	.0016	.0018	.0026	-.0109
#3	.0046	.0972	.0018	.0018	.0023	-.0135
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0348	.2217	.0055	.1218	.0023	.0042
Stddev	.0155	.0163	.0022	.0307	.0008	.0004
%RSD	44.72	7.371	40.95	25.23	33.27	10.31
#1	.0190	.2404	.0039	.1015	.0018	.0039
#2	.0352	.2140	.0045	.1068	.0019	.0047
#3	.0501	.2106	.0080	.1572	.0031	.0040
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: CCB Acquired: 9/5/2023 22:13:05 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.1557	.0011	.0180	.0008	.0026	.0041
Stddev	.0211	.0008	.0084	.0009	.0008	.0029
%RSD	13.57	70.26	46.72	105.9	31.69	72.36
#1	.1316	.0002	.0084	.0012	.0026	.0007
#2	.1713	.0018	.0217	.0015	.0035	.0062
#3	.1642	.0014	.0239	-.0002	.0018	.0053
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.1318	.0020	.0021	.0017	.0122	.0055
Stddev	.0056	.0009	.0008	.0001	.0008	.0018
%RSD	4.235	44.18	36.13	5.545	6.626	33.52
#1	.1296	.0010	.0014	.0016	.0117	.0034
#2	.1275	.0025	.0021	.0017	.0117	.0065
#3	.1381	.0026	.0029	.0018	.0131	.0066
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0006
Stddev	.0008
%RSD	128.2
#1	-.0015
#2	-.0002
#3	-.0002
Check ?	Chk Pass
High Limit	
Low Limit	

Sample Name: CCB Acquired: 9/5/2023 22:13:05 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4175.5	23161.	11494.	23021.
Stddev	54.4	328.	24.	58.
%RSD	1.3022	1.4156	.20460	.25197
#1	4124.0	22841.	11508.	23081.
#2	4170.0	23145.	11508.	23015.
#3	4232.4	23496.	11467.	22966.

Sample Name: CCVL 3561056 Acquired: 9/5/2023 22:16:41 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0518	.5106	.0580	.4535	.0214	.0201
Stddev	.0028	.0240	.0012	.0037	.0007	.0008
%RSD	5.330	4.702	2.063	.8056	3.125	4.097
#1	.0545	.5305	.0568	.4572	.0221	.0193
#2	.0490	.5174	.0592	.4534	.0213	.0200
#3	.0519	.4839	.0580	.4499	.0208	.0209
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.2742	.5316	.0196	.0194	.0278	.0500
Stddev	.0019	.0251	.0003	.0006	.0005	.0049
%RSD	.6940	4.730	1.781	2.995	1.718	9.745
#1	.2741	.5084	.0199	.0198	.0282	.0446
#2	.2723	.5279	.0196	.0196	.0279	.0514
#3	.2761	.5583	.0192	.0187	.0272	.0541
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.5280	3.472	.0980	.5906	.0198	.0389
Stddev	.0160	.013	.0005	.0298	.0006	.0001
%RSD	3.029	.3820	.5429	5.046	3.012	.3739
#1	.5143	3.478	.0974	.5634	.0191	.0390
#2	.5241	3.456	.0982	.5859	.0200	.0388
#3	.5456	3.480	.0984	.6225	.0202	.0388
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCVL 3561056 Acquired: 9/5/2023 22:16:41 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.5674	.0197	.1058	.0294	.0611	.0907
Stddev	.0295	.0004	.0070	.0025	.0005	.0030
%RSD	5.192	2.243	6.637	8.453	.8741	3.326
#1	.5355	.0200	.1127	.0279	.0614	.0876
#2	.5732	.0199	.1062	.0323	.0615	.0936
#3	.5935	.0192	.0986	.0281	.0605	.0908
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.153	.0967	.1050	.0291	.1082	.0313
Stddev	.018	.0006	.0005	.0013	.0077	.0027
%RSD	1.526	.6673	.5151	4.486	7.103	8.782
#1	1.136	.0967	.1045	.0299	.1066	.0339
#2	1.153	.0961	.1048	.0276	.1166	.0285
#3	1.171	.0974	.1056	.0298	.1015	.0314
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0368
Stddev	.0004
%RSD	1.193
#1	.0372
#2	.0368
#3	.0363
Check ?	Chk Pass
Value	
Range	

Sample Name: CCVL 3561056 Acquired: 9/5/2023 22:16:41 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4215.4	23513.	11803.	23581.
Stddev	11.2	63.	80.	161.
%RSD	.26458	.26737	.68168	.68317
#1	4213.0	23507.	11720.	23403.
#2	4227.6	23579.	11881.	23717.
#3	4205.7	23454.	11808.	23622.

Sample Name: MB 580-436332/10-B Acquired: 9/5/2023 22:20:07 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0022	.1866	.0014	.3071	.0054	-.0024
Stddev	.0025	.0304	.0043	.0233	.0028	.0002
%RSD	113.5	16.28	308.3	7.591	51.10	8.919
#1	-.0005	.1528	-.0029	.2876	.0031	-.0026
#2	-.0051	.1957	.0014	.3007	.0047	-.0024
#3	-.0010	.2115	.0057	.3329	.0085	-.0021

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0007	1.361	-.0001	.0000	.0020	-.0072
Stddev	.0035	.009	.0029	.0029	.0028	.0019
%RSD	491.6	.6715	2675.	12120.	139.7	26.45
#1	-.0030	1.365	-.0026	-.0022	-.0004	-.0055
#2	.0013	1.351	-.0009	-.0010	.0014	-.0068
#3	.0039	1.368	.0031	.0033	.0050	-.0093

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0267	2.843	-.0122	.6345	-.0007	.0003
Stddev	.0044	.307	.0184	.0450	.0009	.0029
%RSD	16.35	10.80	151.1	7.099	128.7	1051.
#1	-.0302	2.498	-.0318	.6149	-.0015	-.0021
#2	-.0283	2.944	-.0092	.6860	-.0011	-.0005
#3	-.0218	3.087	.0045	.6026	.0003	.0035

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	874.7	.0031	.0085	-.0008	.0001	.0018
Stddev	51.4	.0027	.0318	.0043	.0024	.0087
%RSD	5.878	86.27	375.7	534.2	3590.	489.1
#1	926.7	.0011	-.0190	-.0052	-.0013	-.0069
#2	873.6	.0021	.0011	-.0007	-.0014	.0019
#3	823.9	.0062	.0433	.0035	.0029	.0104

Sample Name: MB 580-436332/10-B Acquired: 9/5/2023 22:20:07 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.8117	.0006	.0006	.0022	.0079	-.0009
Stddev	.0310	.0028	.0003	.0003	.0024	.0040
%RSD	3.814	467.6	46.05	13.90	30.40	441.5
#1	.8344	-.0019	.0003	.0023	.0088	-.0055
#2	.8243	.0001	.0005	.0018	.0097	.0010
#3	.7764	.0037	.0009	.0024	.0052	.0018

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0066
Stddev	.0029
%RSD	43.61
#1	.0043
#2	.0057
#3	.0098

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3613.3	21657.	11465.	22909.
Stddev	15.1	73.	6.	7.
%RSD	.41812	.33711	.05418	.02880
#1	3596.4	21576.	11462.	22904.
#2	3618.2	21679.	11472.	22916.
#3	3625.3	21717.	11460.	22906.

Sample Name: LCS 580-436332/12-B Acquired: 9/5/2023 22:27:18 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9869	20.73	.9971	9.377	.9871	1.033
Stddev	.0069	.15	.0057	.019	.0029	.003
%RSD	.6951	.7206	.5766	.2031	.2980	.3053
#1	.9947	20.90	.9941	9.371	.9859	1.034
#2	.9820	20.69	.9935	9.362	.9850	1.035
#3	.9839	20.60	1.004	9.399	.9905	1.029

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0047	20.41	.9957	.9663	1.018	.9848
Stddev	.0010	.05	.0015	.0010	.003	.0041
%RSD	20.66	.2212	.1520	.1033	.2772	.4195
#1	-.0036	20.35	.9970	.9661	1.018	.9880
#2	-.0052	20.44	.9940	.9654	1.015	.9862
#3	-.0053	20.43	.9959	.9673	1.021	.9801

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	20.82	23.04	.9720	21.21	.9849	.9504
Stddev	.08	.13	.0141	.12	.0023	.0031
%RSD	.3793	.5636	1.454	.5498	.2311	.3304
#1	20.87	22.91	.9584	21.24	.9826	.9491
#2	20.85	23.17	.9710	21.31	.9850	.9482
#3	20.73	23.04	.9866	21.08	.9872	.9540

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	838.1	.9689	5.289	.9717	.9833	.9476
Stddev	36.3	.0011	.009	.0020	.0041	.0034
%RSD	4.332	.1106	.1603	.2076	.4184	.3566
#1	878.2	.9681	5.291	.9731	.9812	.9437
#2	828.9	.9685	5.280	.9694	.9806	.9490
#3	807.3	.9701	5.297	.9725	.9880	.9500

Sample Name: LCS 580-436332/12-B Acquired: 9/5/2023 22:27:18 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	11.73	.9973	1.012	.9910	.9850	1.026
Stddev	.02	.0027	.001	.0034	.0099	.007
%RSD	.1490	.2742	.1165	.3406	1.003	.7175
#1	11.71	.9991	1.010	.9933	.9874	1.032
#2	11.75	.9942	1.012	.9925	.9742	1.028
#3	11.72	.9987	1.013	.9871	.9935	1.018

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	1.028
Stddev	.001
%RSD	.1212
#1	1.029
#2	1.027
#3	1.029

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3673.1	22267.	11862.	23740.
Stddev	5.2	61.	37.	19.
%RSD	.14127	.27393	.30854	.07994
#1	3677.9	22305.	11824.	23718.
#2	3673.7	22301.	11863.	23747.
#3	3667.6	22197.	11898.	23754.

Sample Name: LCSD 580-436332/13-B Acquired: 9/5/2023 22:30:28 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9809	20.52	1.008	9.518	1.001	1.024
Stddev	.0065	.15	.024	.215	.020	.007
%RSD	.6586	.7133	2.398	2.260	2.004	.6658
#1	.9735	20.36	1.010	9.542	.9992	1.017
#2	.9834	20.56	1.032	9.720	1.021	1.026
#3	.9857	20.65	.9835	9.292	.9814	1.030

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0063	21.00	1.017	.9857	1.035	.9706
Stddev	.0005	.46	.023	.0222	.021	.0094
%RSD	7.271	2.197	2.243	2.255	2.073	.9636
#1	-.0059	20.62	1.013	.9830	1.033	.9634
#2	-.0062	21.51	1.041	1.009	1.057	.9812
#3	-.0068	20.86	.9964	.9649	1.014	.9672

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	20.61	22.62	.9793	21.04	1.009	.9674
Stddev	.16	.11	.0106	.10	.023	.0215
%RSD	.7968	.5078	1.082	.4896	2.264	2.228
#1	20.43	22.49	.9672	20.92	.9904	.9681
#2	20.67	22.67	.9836	21.10	1.034	.9885
#3	20.74	22.71	.9870	21.09	1.001	.9455

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	794.3	.9891	5.443	.9973	.9928	.9614
Stddev	20.3	.0209	.123	.0247	.0237	.0234
%RSD	2.555	2.114	2.255	2.474	2.391	2.430
#1	786.6	.9880	5.415	.9929	.9965	.9674
#2	817.3	1.011	5.577	1.024	1.014	.9812
#3	778.9	.9688	5.336	.9750	.9674	.9356

Sample Name: LCSD 580-436332/13-B Acquired: 9/5/2023 22:30:28 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	11.61	1.020	1.003	.9865	1.007	1.024
Stddev	.11	.023	.008	.0082	.022	.006
%RSD	.9052	2.266	.7882	.8320	2.176	.5892
#1	11.49	1.018	.9940	.9783	1.007	1.017
#2	11.64	1.045	1.007	.9863	1.030	1.029
#3	11.69	.9985	1.009	.9948	.9857	1.025

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	1.061
Stddev	.025
%RSD	2.396
#1	1.053
#2	1.089
#3	1.040

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3522.2	21389.	11829.	23641.
Stddev	84.7	485.	88.	161.
%RSD	2.4037	2.2654	.74639	.68194
#1	3591.2	21779.	11930.	23822.
#2	3427.7	20846.	11765.	23512.
#3	3547.6	21541.	11793.	23590.

Sample Name: 580-131096-A-1-B Acquired: 9/5/2023 22:33:39 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0013	.1061	.0040	12.17	.0929	-.0004
Stddev	.0038	.0626	.0030	.06	.0003	.0014
%RSD	284.1	58.96	75.14	.4884	.2947	303.3
#1	.0054	.1471	.0072	12.15	.0932	.0011
#2	.0006	.1372	.0035	12.13	.0929	-.0009
#3	-.0020	.0341	.0013	12.24	.0926	-.0015

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0014	2137.	.0751	-.0008	.0064	.0625
Stddev	.0017	35.	.0004	.0003	.0002	.0025
%RSD	117.5	1.624	.5531	33.72	3.142	3.974
#1	.0005	2098.	.0751	-.0005	.0066	.0620
#2	-.0021	2145.	.0747	-.0009	.0063	.0652
#3	-.0027	2166.	.0756	-.0011	.0062	.0603

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0178	27.49	.1198	33.93	.0198	.3743
Stddev	.0337	.02	.0061	.05	.0013	.0013
%RSD	189.6	.0581	5.072	.1489	6.719	.3591
#1	.0557	27.51	.1262	33.93	.0213	.3738
#2	.0067	27.49	.1191	33.98	.0193	.3733
#3	-.0090	27.48	.1141	33.88	.0188	.3759

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	65.25	.3935	.5622	-.0079	-.0002	.0156
Stddev	.62	.0015	.0019	.0021	.0025	.0043
%RSD	.9456	.3848	.3333	26.61	1383.	27.31
#1	65.93	.3932	.5626	-.0073	.0012	.0203
#2	64.72	.3922	.5601	-.0062	.0013	.0119
#3	65.10	.3952	.5638	-.0103	-.0031	.0146

Sample Name: 580-131096-A-1-B Acquired: 9/5/2023 22:33:39 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	5.521	.0082	5.258	-.0043	.0072	1.562
Stddev	.058	.0006	.015	.0008	.0093	.007
%RSD	1.041	7.245	.2878	17.76	128.2	.4366
#1	5.573	.0075	5.265	-.0034	.0127	1.569
#2	5.532	.0086	5.267	-.0045	.0124	1.562
#3	5.459	.0086	5.240	-.0049	-.0035	1.556

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0059
Stddev	.0003
%RSD	5.401
#1	.0061
#2	.0061
#3	.0055

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3312.2	19891.	11176.	22463.
Stddev	26.0	148.	9.	31.
%RSD	.78589	.74199	.08370	.13645
#1	3322.7	19953.	11166.	22474.
#2	3331.5	19997.	11184.	22486.
#3	3282.6	19722.	11179.	22428.

Sample Name: 580-131096-A-1-C DU Acquired: 9/5/2023 22:37:18 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0053	.0557	.0017	12.14	.0899	-.0033
Stddev	.0004	.0248	.0050	.11	.0011	.0000
%RSD	7.489	44.48	286.4	.9407	1.196	1.329
#1	-.0056	.0272	.0003	12.02	.0889	-.0034
#2	-.0048	.0719	.0073	12.14	.0899	-.0033
#3	-.0054	.0681	-.0024	12.25	.0910	-.0033

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0005	2055.	.0728	-.0019	.0047	.0550
Stddev	.0014	77.	.0006	.0003	.0003	.0064
%RSD	265.7	3.739	.8835	17.22	5.333	11.57
#1	-.0020	2015.	.0720	-.0020	.0045	.0568
#2	.0008	2007.	.0731	-.0015	.0050	.0602
#3	-.0003	2144.	.0732	-.0020	.0046	.0479

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0464	26.40	.0955	32.79	.0144	.3672
Stddev	.0023	.38	.0009	.54	.0006	.0037
%RSD	4.866	1.446	.9833	1.636	4.197	1.004
#1	-.0438	26.76	.0961	33.32	.0138	.3631
#2	-.0478	26.45	.0960	32.80	.0145	.3682
#3	-.0475	26.00	.0944	32.25	.0150	.3703

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	63.96	.3810	.5356	-.0145	-.0018	.0191
Stddev	2.38	.0029	.0105	.0027	.0031	.0016
%RSD	3.723	.7687	1.955	18.25	175.3	8.477
#1	61.21	.3776	.5235	-.0159	-.0020	.0172
#2	65.33	.3828	.5417	-.0115	-.0048	.0199
#3	65.34	.3826	.5416	-.0162	.0014	.0202

Sample Name: 580-131096-A-1-C DU Acquired: 9/5/2023 22:37:18 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	10.44	-.0013	5.160	-.0065	.0095	1.534
Stddev	.15	.0009	.068	.0011	.0034	.013
%RSD	1.402	70.82	1.309	16.93	36.08	.8251
#1	10.58	-.0020	5.207	-.0065	.0056	1.543
#2	10.46	-.0003	5.190	-.0076	.0120	1.540
#3	10.29	-.0016	5.082	-.0054	.0109	1.520

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0003
Stddev	.0003
%RSD	100.1
#1	.0001
#2	.0007
#3	.0002

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3393.9	20248.	11401.	22831.
Stddev	29.3	179.	444.	890.
%RSD	.86241	.88242	3.8917	3.8971
#1	3426.0	20429.	10898.	21823.
#2	3387.0	20242.	11573.	23167.
#3	3368.6	20072.	11734.	23505.

Sample Name: 580-131096-A-1-D MS Acquired: 9/5/2023 22:40:57 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9997	20.83	1.047	21.82	1.083	.9894
Stddev	.0040	.08	.004	.03	.003	.0039
%RSD	.4013	.3978	.4013	.1419	.2701	.3895
#1	1.003	20.75	1.042	21.80	1.080	.9854
#2	1.001	20.82	1.050	21.80	1.082	.9898
#3	.9952	20.92	1.048	21.85	1.086	.9930

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0041	2056.	1.034	.9457	1.029	1.054
Stddev	.0020	7.	.001	.0011	.002	.007
%RSD	49.16	.3290	.1359	.1156	.1689	.7003
#1	-.0030	2050.	1.033	.9456	1.028	1.050
#2	-.0064	2055.	1.034	.9447	1.028	1.049
#3	-.0029	2063.	1.036	.9469	1.031	1.062

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	19.81	47.81	1.087	52.16	1.005	1.341
Stddev	.01	.05	.005	.19	.013	.003
%RSD	.0489	.1021	.4737	.3721	1.325	.2217
#1	19.80	47.80	1.081	52.06	.9904	1.340
#2	19.82	47.78	1.089	52.39	1.009	1.340
#3	19.82	47.87	1.091	52.04	1.016	1.345

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	84.61	1.321	6.073	.9353	1.047	1.017
Stddev	.78	.004	.053	.0057	.004	.005
%RSD	.9254	.2762	.8774	.6146	.3370	.5261
#1	83.78	1.318	6.014	.9296	1.046	1.015
#2	84.71	1.320	6.090	.9351	1.044	1.012
#3	85.34	1.326	6.116	.9411	1.051	1.022

Sample Name: 580-131096-A-1-D MS Acquired: 9/5/2023 22:40:57 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	20.20	.9765	6.179	.9689	.9579	2.558
Stddev	.03	.0012	.090	.0042	.0150	.009
%RSD	.1335	.1238	1.461	.4320	1.562	.3623
#1	20.19	.9751	6.078	.9664	.9508	2.549
#2	20.23	.9770	6.209	.9666	.9479	2.559
#3	20.19	.9774	6.251	.9737	.9751	2.568

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.9599
Stddev	.0009
%RSD	.0968
#1	.9589
#2	.9599
#3	.9608

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3271.5	19698.	11091.	22172.
Stddev	4.7	32.	120.	219.
%RSD	.14421	.16278	1.0849	.98673
#1	3273.1	19713.	10965.	21953.
#2	3275.2	19720.	11103.	22174.
#3	3266.2	19661.	11205.	22390.

Sample Name: 580-131096-A-1-E MSD Acquired: 9/5/2023 22:44:26 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.013	21.27	1.067	22.30	1.094	1.002
Stddev	.007	.06	.010	.10	.006	.003
%RSD	.6923	.2804	.8995	.4557	.5487	.2659
#1	1.018	21.31	1.063	22.26	1.092	1.003
#2	1.016	21.30	1.061	22.22	1.090	1.003
#3	1.005	21.20	1.078	22.41	1.101	.9985

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0055	2149.	1.038	.9496	1.039	1.056
Stddev	.0026	20.	.003	.0039	.006	.007
%RSD	47.99	.9463	.3201	.4127	.5650	.7006
#1	-.0085	2145.	1.037	.9471	1.037	1.060
#2	-.0039	2131.	1.036	.9476	1.035	1.048
#3	-.0041	2171.	1.042	.9541	1.046	1.061

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	20.18	48.82	1.092	53.12	1.033	1.358
Stddev	.02	.11	.005	.13	.006	.006
%RSD	.0817	.2217	.4885	.2461	.5634	.4171
#1	20.16	48.91	1.095	53.09	1.038	1.353
#2	20.19	48.85	1.095	53.26	1.027	1.355
#3	20.17	48.70	1.086	53.00	1.036	1.364

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	88.09	1.334	6.120	.9343	1.058	1.031
Stddev	.27	.004	.046	.0041	.005	.005
%RSD	.3047	.3108	.7586	.4401	.4892	.4475
#1	88.40	1.332	6.096	.9315	1.053	1.027
#2	87.93	1.331	6.091	.9323	1.058	1.029
#3	87.94	1.339	6.174	.9390	1.064	1.036

Sample Name: 580-131096-A-1-E MSD Acquired: 9/5/2023 22:44:26 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	20.60	.9762	6.318	.9746	.9719	2.594
Stddev	.02	.0031	.019	.0050	.0088	.013
%RSD	.1192	.3204	.3032	.5091	.9074	.5080
#1	20.62	.9745	6.316	.9739	.9704	2.608
#2	20.60	.9742	6.337	.9799	.9639	2.593
#3	20.57	.9798	6.299	.9700	.9813	2.582

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.9628
Stddev	.0027
%RSD	.2765
#1	.9617
#2	.9608
#3	.9658

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3316.3	19975.	11459.	22934.
Stddev	1.4	5.	31.	54.
%RSD	.04324	.02297	.26970	.23488
#1	3316.1	19972.	11491.	22969.
#2	3315.0	19980.	11429.	22872.
#3	3317.8	19972.	11457.	22961.

Sample Name: 580-131096-A-1-B PDS Acquired: 9/5/2023 22:47:53 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9949	20.80	1.038	21.42	1.072	.9802
Stddev	.0039	.15	.002	.09	.003	.0051
%RSD	.3945	.7024	.1925	.4107	.3142	.5226
#1	.9957	20.96	1.040	21.33	1.069	.9855
#2	.9984	20.74	1.038	21.43	1.072	.9797
#3	.9906	20.69	1.036	21.51	1.076	.9753

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0055	2048.	1.027	.9379	1.022	1.042
Stddev	.0013	16.	.005	.0038	.002	.012
%RSD	23.42	.7625	.4600	.4072	.1801	1.134
#1	-.0054	2031.	1.023	.9345	1.020	1.037
#2	-.0068	2052.	1.027	.9371	1.021	1.056
#3	-.0042	2061.	1.032	.9420	1.024	1.034

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	19.71	47.70	1.068	52.41	1.001	1.317
Stddev	.10	.25	.005	.31	.010	.005
%RSD	.5096	.5163	.4879	.5831	1.012	.3565
#1	19.78	47.93	1.073	52.75	.9898	1.313
#2	19.75	47.73	1.068	52.30	1.009	1.317
#3	19.59	47.44	1.063	52.17	1.004	1.322

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	84.49	1.313	5.995	.9328	1.032	.9883
Stddev	.63	.006	.029	.0094	.004	.0086
%RSD	.7462	.4485	.4846	1.008	.4137	.8716
#1	83.77	1.307	6.009	.9233	1.028	.9869
#2	84.94	1.315	5.961	.9331	1.033	.9804
#3	84.76	1.318	6.013	.9421	1.036	.9975

Sample Name: 580-131096-A-1-B PDS Acquired: 9/5/2023 22:47:53 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	19.00	.9806	6.174	.9575	.9620	2.545
Stddev	.09	.0044	.066	.0035	.0103	.024
%RSD	.4521	.4440	1.075	.3607	1.069	.9528
#1	19.08	.9771	6.224	.9592	.9593	2.566
#2	19.00	.9792	6.198	.9598	.9534	2.551
#3	18.91	.9855	6.098	.9536	.9734	2.518

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.9544
Stddev	.0040
%RSD	.4163
#1	.9505
#2	.9543
#3	.9584

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3233.0	19578.	10919.	21906.
Stddev	14.1	68.	87.	166.
%RSD	.43702	.34799	.79287	.75634
#1	3247.2	19653.	10820.	21715.
#2	3232.9	19563.	10963.	22002.
#3	3219.0	19519.	10975.	22002.

Sample Name: 580-131096-A-1B SD@5 Acquired: 9/5/2023 22:51:22 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0030	-.0022	-.0021	2.550	.0170	-.0032
Stddev	.0032	.0329	.0010	.003	.0002	.0002
%RSD	108.3	1470.	47.75	.1289	1.340	5.055
#1	.0005	-.0177	-.0025	2.553	.0172	-.0031
#2	-.0059	-.0245	-.0009	2.550	.0169	-.0033
#3	-.0035	.0355	-.0028	2.547	.0168	-.0034

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0013	472.0	.0129	-.0026	-.0011	.0027
Stddev	.0021	1.8	.0001	.0003	.0002	.0072
%RSD	162.0	.3826	.9847	9.806	16.11	267.6
#1	-.0001	470.2	.0128	-.0028	-.0013	.0099
#2	-.0037	471.9	.0130	-.0023	-.0010	.0026
#3	-.0001	473.8	.0130	-.0025	-.0011	-.0045

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0596	5.398	.0134	7.234	.0002	.0777
Stddev	.0027	.015	.0010	.042	.0004	.0008
%RSD	4.509	.2835	7.508	.5776	221.3	1.071
#1	-.0579	5.403	.0144	7.282	.0001	.0787
#2	-.0582	5.410	.0134	7.204	-.0002	.0775
#3	-.0627	5.380	.0124	7.216	.0005	.0771

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	12.69	.0782	.0821	-.0055	-.0020	.0039
Stddev	.02	.0001	.0064	.0018	.0017	.0017
%RSD	.1585	.1426	7.820	33.08	84.89	44.44
#1	12.67	.0782	.0793	-.0034	-.0025	.0057
#2	12.68	.0782	.0776	-.0066	-.0033	.0034
#3	12.71	.0780	.0895	-.0065	-.0001	.0024

Sample Name: 580-131096-A-1B SD@5 Acquired: 9/5/2023 22:51:22 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.159	-.0005	1.082	.0081	.0147	.3258
Stddev	.022	.0002	.003	.0016	.0053	.0039
%RSD	1.943	43.56	.2937	19.87	35.67	1.185
#1	1.180	-.0008	1.082	.0083	.0197	.3274
#2	1.135	-.0005	1.078	.0097	.0092	.3214
#3	1.161	-.0003	1.084	.0065	.0152	.3285

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0029
Stddev	.0001
%RSD	3.379
#1	-.0030
#2	-.0028
#3	-.0028

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3703.9	21395.	11329.	22657.
Stddev	13.9	77.	41.	90.
%RSD	.37661	.35797	.36125	.39537
#1	3715.5	21462.	11336.	22677.
#2	3707.9	21411.	11365.	22735.
#3	3688.4	21311.	11284.	22559.

Sample Name: CCV 3565024 Acquired: 9/5/2023 22:55:02 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9800	102.9	4.881	45.83	4.977	5.130
Stddev	.0036	.2	.016	.20	.016	.012
%RSD	.3696	.1669	.3342	.4391	.3241	.2397
#1	.9794	103.0	4.879	45.70	4.970	5.144
#2	.9768	102.7	4.865	45.74	4.965	5.121
#3	.9839	103.0	4.898	46.06	4.995	5.123
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.711	91.89	4.917	4.838	5.080	4.877
Stddev	.016	.24	.021	.019	.015	.017
%RSD	.3487	.2623	.4224	.3964	.2907	.3488
#1	4.703	91.75	4.900	4.822	5.074	4.896
#2	4.700	91.76	4.911	4.833	5.069	4.872
#3	4.729	92.17	4.940	4.859	5.097	4.862
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	101.8	101.7	4.699	104.0	4.707	4.747
Stddev	.3	.1	.001	.1	.011	.023
%RSD	.2523	.0633	.0233	.1365	.2419	.4808
#1	102.1	101.6	4.698	104.1	4.703	4.728
#2	101.7	101.6	4.699	103.8	4.697	4.740
#3	101.5	101.7	4.700	104.0	4.719	4.772
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCV 3565024 Acquired: 9/5/2023 22:55:02 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	91.54	4.844	51.00	4.873	4.692	4.651
Stddev	.18	.018	.33	.020	.013	.028
%RSD	.1971	.3731	.6412	.4163	.2712	.6055
#1	91.42	4.831	50.80	4.859	4.696	4.635
#2	91.45	4.836	50.82	4.863	4.677	4.635
#3	91.75	4.865	51.38	4.896	4.702	4.683
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	51.81	4.948	5.026	4.887	4.893	5.171
Stddev	.10	.022	.005	.004	.043	.010
%RSD	.1989	.4458	.0947	.0911	.8822	.1914
#1	51.69	4.930	5.027	4.889	4.879	5.182
#2	51.83	4.941	5.021	4.890	4.858	5.169
#3	51.89	4.973	5.030	4.882	4.941	5.163
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	4.898
Stddev	.025
%RSD	.5137
#1	4.876
#2	4.891
#3	4.925
Check ?	Chk Pass
Value	
Range	

Sample Name: CCV 3565024 Acquired: 9/5/2023 22:55:02 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3569.2	21392.	11200.	22332.
Stddev	14.2	81.	12.	35.
%RSD	.39835	.37797	.10470	.15763
#1	3581.2	21452.	11188.	22344.
#2	3572.8	21424.	11212.	22360.
#3	3553.5	21300.	11199.	22293.

Sample Name: CCB Acquired: 9/5/2023 22:59:21 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0001	-.0428	-.0007	.0244	-.0012	-.0021
Stddev	.0013	.0172	.0031	.0101	.0006	.0001
%RSD	1636.	40.17	424.5	41.27	50.26	4.126
#1	.0011	-.0451	-.0009	.0322	-.0008	-.0022
#2	.0001	-.0588	.0024	.0280	-.0009	-.0021
#3	-.0015	-.0246	-.0037	.0130	-.0019	-.0021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0016	-.0272	-.0012	-.0011	-.0010	-.0044
Stddev	.0001	.0034	.0007	.0007	.0008	.0029
%RSD	8.113	12.52	56.25	59.93	75.37	65.88
#1	-.0017	-.0272	-.0008	-.0008	-.0009	-.0028
#2	-.0014	-.0306	-.0008	-.0007	-.0003	-.0077
#3	-.0017	-.0238	-.0019	-.0019	-.0019	-.0026
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0467	.0752	-.0021	-.0174	-.0026	.0018
Stddev	.0032	.0318	.0034	.0042	.0002	.0014
%RSD	6.912	42.33	162.5	24.40	7.965	78.06
#1	-.0492	.1003	.0010	-.0136	-.0026	.0028
#2	-.0478	.0859	-.0016	-.0165	-.0028	.0024
#3	-.0430	.0394	-.0056	-.0220	-.0024	.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: CCB Acquired: 9/5/2023 22:59:21 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0539	-.0013	-.0082	-.0015	.0008	.0039
Stddev	.0110	.0013	.0062	.0025	.0016	.0022
%RSD	20.47	101.7	76.64	173.4	202.5	56.25
#1	.0657	-.0004	-.0043	.0009	.0015	.0032
#2	.0518	-.0007	-.0047	-.0011	.0019	.0022
#3	.0440	-.0028	-.0154	-.0042	-.0011	.0064
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0249	-.0008	-.0021	-.0018	.0145	.0004
Stddev	.0044	.0005	.0001	.0008	.0033	.0018
%RSD	17.52	69.43	4.668	45.35	22.70	482.0
#1	.0297	-.0002	-.0022	-.0024	.0107	.0000
#2	.0211	-.0010	-.0021	-.0021	.0162	-.0012
#3	.0241	-.0011	-.0020	-.0009	.0165	.0023
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	-.0033
Stddev	.0006
%RSD	18.98
#1	-.0030
#2	-.0028
#3	-.0040
Check ?	Chk Pass
High Limit	
Low Limit	

Sample Name: CCB Acquired: 9/5/2023 22:59:21 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4095.8	22807.	11239.	22377.
Stddev	12.4	75.	84.	160.
%RSD	.30375	.33078	.74568	.71690
#1	4107.1	22865.	11175.	22232.
#2	4097.8	22835.	11209.	22349.
#3	4082.4	22722.	11334.	22549.

Sample Name: CCVL 3561056 Acquired: 9/5/2023 23:02:58 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0542	.5159	.0550	.4469	.0187	.0185
Stddev	.0040	.0442	.0015	.0012	.0003	.0000
%RSD	7.380	8.569	2.645	.2698	1.413	.2170
#1	.0538	.4842	.0567	.4480	.0184	.0186
#2	.0584	.4970	.0540	.4472	.0187	.0185
#3	.0505	.5664	.0544	.4456	.0189	.0185
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.2703	.4549	.0172	.0170	.0248	.0434
Stddev	.0009	.0063	.0001	.0003	.0003	.0055
%RSD	.3354	1.387	.4952	1.681	1.094	12.78
#1	.2693	.4502	.0171	.0170	.0246	.0418
#2	.2706	.4620	.0173	.0168	.0248	.0388
#3	.2710	.4524	.0171	.0173	.0251	.0496
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.4787	3.400	.0915	.5247	.0160	.0361
Stddev	.0033	.032	.0008	.0083	.0006	.0005
%RSD	.6981	.9509	.8826	1.573	3.845	1.285
#1	.4776	3.434	.0925	.5208	.0155	.0359
#2	.4760	3.395	.0912	.5191	.0167	.0366
#3	.4825	3.370	.0910	.5342	.0158	.0358
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCVL 3561056 Acquired: 9/5/2023 23:02:58 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.5103	.0170	.0811	.0261	.0582	.0906
Stddev	.0092	.0005	.0031	.0010	.0010	.0054
%RSD	1.804	2.723	3.854	3.640	1.723	5.943
#1	.5124	.0175	.0776	.0258	.0572	.0909
#2	.5002	.0168	.0836	.0254	.0582	.0851
#3	.5182	.0167	.0821	.0272	.0592	.0958
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.098	.0949	.1025	.0273	.1069	.0323
Stddev	.018	.0008	.0001	.0012	.0061	.0004
%RSD	1.681	.8303	.1428	4.392	5.732	1.226
#1	1.112	.0943	.1026	.0260	.1052	.0319
#2	1.106	.0946	.1023	.0275	.1018	.0322
#3	1.077	.0958	.1025	.0284	.1137	.0327
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0344
Stddev	.0001
%RSD	.3987
#1	.0345
#2	.0343
#3	.0345
Check ?	Chk Pass
Value	
Range	

Sample Name: CCVL 3561056 Acquired: 9/5/2023 23:02:58 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4060.8	22763.	11235.	22352.
Stddev	7.0	53.	60.	103.
%RSD	.17335	.23162	.53192	.45982
#1	4067.1	22813.	11188.	22241.
#2	4062.2	22768.	11302.	22443.
#3	4053.2	22708.	11214.	22372.

Sample Name: 580-131051-E-1-N Acquired: 9/5/2023 23:06:25 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0017	.2878	.0044	.4271	.7196	-.0025
Stddev	.0030	.0399	.0026	.0374	.0015	.0012
%RSD	182.0	13.85	59.26	8.767	.2081	49.66
#1	.0051	.3035	.0068	.4475	.7185	-.0032
#2	-.0003	.2425	.0049	.4499	.7191	-.0032
#3	.0002	.3174	.0016	.3839	.7213	-.0011

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0183	114.3	.0227	.0168	.0532	13.47
Stddev	.0040	.9	.0038	.0037	.0037	.35
%RSD	21.72	.7858	16.84	22.04	6.961	2.597
#1	-.0169	115.4	.0246	.0185	.0549	13.87
#2	-.0153	113.9	.0252	.0193	.0557	13.32
#3	-.0228	113.7	.0183	.0125	.0489	13.22

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0089	7.561	.0247	5.985	.6431	.0029
Stddev	.0202	.075	.0149	.168	.0055	.0039
%RSD	227.6	.9912	60.25	2.808	.8615	137.5
#1	-.0213	7.475	.0079	6.179	.6495	.0048
#2	-.0198	7.611	.0299	5.891	.6403	.0054
#3	.0144	7.597	.0363	5.884	.6396	-.0017

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	816.4	.1620	.0644	2.699	.0170	.0026
Stddev	43.2	.0029	.0414	.021	.0024	.0045
%RSD	5.296	1.782	64.21	.7894	14.20	171.0
#1	858.2	.1623	.0879	2.686	.0183	.0025
#2	819.0	.1647	.0887	2.688	.0185	.0072
#3	771.9	.1589	.0167	2.724	.0142	-.0018

Sample Name: 580-131051-E-1-N Acquired: 9/5/2023 23:06:25 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	3.362	.0030	.9378	.0082	.0180	.0035
Stddev	.083	.0039	.0207	.0008	.0060	.0020
%RSD	2.467	128.6	2.202	10.02	33.14	58.68
#1	3.452	.0049	.9613	.0081	.0193	.0058
#2	3.345	.0057	.9293	.0074	.0232	.0024
#3	3.289	-.0015	.9227	.0090	.0115	.0022

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	6.918
Stddev	.050
%RSD	.7283
#1	6.885
#2	6.894
#3	6.976

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3448.9	20950.	10651.	21255.
Stddev	18.6	119.	215.	399.
%RSD	.54036	.57036	2.0159	1.8779
#1	3429.9	20832.	10420.	20833.
#2	3449.7	20946.	10691.	21307.
#3	3467.1	21071.	10844.	21626.

Sample Name: 580-131051-C-2-C Acquired: 9/5/2023 23:11:27 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0002	.3062	.0061	.5263	.3066	-.0015
Stddev	.0013	.1091	.0023	.0053	.0013	.0034
%RSD	820.3	35.62	37.34	1.003	.4162	220.1
#1	-.0008	.2683	.0041	.5295	.3064	-.0036
#2	-.0010	.2212	.0086	.5202	.3054	-.0033
#3	.0013	.4292	.0058	.5292	.3079	.0024

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0011	350.9	.0025	.0095	.0046	1.410
Stddev	.0030	1.8	.0004	.0006	.0003	.008
%RSD	266.9	.5098	14.43	6.605	5.704	.5949
#1	-.0014	352.6	.0028	.0101	.0048	1.407
#2	.0020	351.0	.0021	.0089	.0043	1.404
#3	-.0041	349.1	.0026	.0094	.0045	1.419

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0499	10.44	.0263	11.65	.3814	.0020
Stddev	.0679	.12	.0124	.01	.0003	.0012
%RSD	136.3	1.155	47.17	.0926	.0771	59.29
#1	.0100	10.30	.0128	11.64	.3816	.0032
#2	.0113	10.49	.0287	11.64	.3811	.0009
#3	.1283	10.52	.0372	11.66	.3815	.0019

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	812.8	.1542	.0648	.4924	.0019	.0025
Stddev	15.3	.0004	.0050	.0017	.0034	.0023
%RSD	1.878	.2849	7.717	.3366	174.7	89.63
#1	830.0	.1542	.0703	.4906	-.0004	.0047
#2	807.4	.1538	.0605	.4925	.0004	.0002
#3	801.0	.1547	.0636	.4939	.0058	.0028

Sample Name: 580-131051-C-2-C Acquired: 9/5/2023 23:11:27 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	2.526	.0024	1.832	.0161	.0147	.0010
Stddev	.028	.0006	.010	.0037	.0013	.0063
%RSD	1.102	24.40	.5564	23.08	9.030	626.6
#1	2.509	.0031	1.836	.0135	.0135	.0002
#2	2.510	.0024	1.839	.0146	.0145	-.0048
#3	2.558	.0019	1.820	.0204	.0161	.0076

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.8328
Stddev	.0031
%RSD	.3680
#1	.8335
#2	.8295
#3	.8355

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3417.7	20814.	11087.	22110.
Stddev	4.0	43.	61.	130.
%RSD	.11727	.20598	.55381	.58904
#1	3421.9	20859.	11157.	22246.
#2	3413.9	20774.	11044.	21987.
#3	3417.4	20809.	11059.	22097.

Sample Name: 580-131051-C-3-C Acquired: 9/5/2023 23:15:04 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0019	.2225	-.0014	.5335	.0999	-.0034
Stddev	.0023	.0310	.0020	.0019	.0008	.0001
%RSD	123.2	13.91	149.2	.3569	.7938	2.042
#1	-.0045	.2166	-.0037	.5317	.0990	-.0034
#2	-.0008	.2560	-.0007	.5333	.1001	-.0035
#3	-.0003	.1950	.0002	.5355	.1006	-.0033

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0037	189.7	.0025	.0072	-.0009	.7842
Stddev	.0022	2.5	.0001	.0003	.0001	.0045
%RSD	58.00	1.325	3.434	4.501	10.45	.5776
#1	-.0062	187.2	.0025	.0073	-.0009	.7895
#2	-.0027	192.2	.0024	.0068	-.0008	.7815
#3	-.0023	189.6	.0025	.0075	-.0009	.7817

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0053	9.572	.0131	9.577	.4727	-.0034
Stddev	.0015	.133	.0032	.041	.0060	.0002
%RSD	27.71	1.390	24.58	.4315	1.270	6.155
#1	-.0061	9.477	.0121	9.617	.4671	-.0031
#2	-.0062	9.515	.0105	9.534	.4790	-.0034
#3	-.0036	9.724	.0167	9.581	.4718	-.0035

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	746.8	.1247	.0182	.2039	-.0020	.0040
Stddev	12.6	.0007	.0011	.0015	.0029	.0010
%RSD	1.681	.5517	5.828	.7418	142.3	25.84
#1	741.7	.1242	.0172	.2021	-.0038	.0047
#2	761.1	.1243	.0193	.2047	.0013	.0046
#3	737.6	.1255	.0181	.2048	-.0036	.0028

Sample Name: 580-131051-C-3-C Acquired: 9/5/2023 23:15:04 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	2.469	-.0025	1.151	.0047	.0058	-.0001
Stddev	.021	.0002	.003	.0018	.0042	.0007
%RSD	.8439	8.524	.2519	37.55	71.72	1085.
#1	2.483	-.0025	1.154	.0055	.0083	.0002
#2	2.445	-.0026	1.148	.0060	.0010	.0005
#3	2.478	-.0022	1.151	.0027	.0081	-.0009

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.6389
Stddev	.0028
%RSD	.4315
#1	.6365
#2	.6385
#3	.6419

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3535.2	21536.	11350.	22633.
Stddev	22.0	140.	135.	278.
%RSD	.62348	.65227	1.1900	1.2288
#1	3560.3	21698.	11259.	22488.
#2	3526.2	21463.	11505.	22953.
#3	3519.1	21447.	11285.	22457.

Sample Name: 580-131051-E-4-B Acquired: 9/5/2023 23:18:37 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0021	.1148	-.0017	.2992	.1629	-.0033
Stddev	.0029	.0289	.0021	.0003	.0006	.0001
%RSD	135.4	25.13	125.3	.1030	.3576	2.117
#1	-.0024	.1137	.0005	.2995	.1627	-.0032
#2	.0009	.0866	-.0038	.2990	.1624	-.0033
#3	-.0048	.1442	-.0019	.2991	.1635	-.0033

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0036	293.5	-.0025	.0044	-.0015	.4462
Stddev	.0009	3.0	.0001	.0002	.0002	.0036
%RSD	23.91	1.038	4.228	3.605	10.40	.8139
#1	-.0028	290.6	-.0026	.0046	-.0016	.4491
#2	-.0046	296.7	-.0024	.0044	-.0017	.4422
#3	-.0035	293.1	-.0026	.0042	-.0014	.4475

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0496	9.098	.0005	8.923	.4098	-.0031
Stddev	.0008	.069	.0044	.027	.0048	.0004
%RSD	1.675	.7563	830.5	.3032	1.166	11.80
#1	-.0491	9.043	-.0043	8.900	.4054	-.0033
#2	-.0506	9.077	.0016	8.917	.4149	-.0027
#3	-.0492	9.175	.0043	8.953	.4092	-.0034

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	743.8	.0854	-.0033	.1946	-.0032	-.0014
Stddev	22.2	.0001	.0035	.0033	.0022	.0041
%RSD	2.981	.0882	106.1	1.675	67.91	286.3
#1	768.3	.0853	-.0041	.1913	-.0039	.0007
#2	737.7	.0854	-.0063	.1947	-.0050	-.0062
#3	725.3	.0854	.0005	.1978	-.0008	.0012

Sample Name: 580-131051-E-4-B Acquired: 9/5/2023 23:18:37 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	2.081	.0680	1.794	.0090	.0076	-.0038
Stddev	.003	.0007	.002	.0003	.0056	.0028
%RSD	.1510	.9806	.0975	3.870	73.74	73.98
#1	2.077	.0675	1.796	.0092	.0051	-.0043
#2	2.082	.0676	1.792	.0092	.0140	-.0064
#3	2.083	.0687	1.795	.0086	.0037	-.0008

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.4775
Stddev	.0026
%RSD	.5450
#1	.4754
#2	.4768
#3	.4804

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3445.9	21057.	11281.	22497.
Stddev	45.9	261.	150.	303.
%RSD	1.3314	1.2384	1.3275	1.3459
#1	3493.2	21317.	11312.	22581.
#2	3442.7	21061.	11413.	22750.
#3	3401.6	20795.	11118.	22162.

Sample Name: 580-131051-D-5-C Acquired: 9/5/2023 23:22:18 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0017	.3651	-.0030	.3375	.4912	-.0033
Stddev	.0015	.0461	.0013	.0014	.0017	.0001
%RSD	92.42	12.63	43.08	.4239	.3374	2.829
#1	.0028	.3435	-.0046	.3389	.4916	-.0032
#2	.0022	.4181	-.0022	.3360	.4894	-.0033
#3	-.0001	.3339	-.0024	.3377	.4927	-.0034

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0204	183.2	.0076	.0113	.0384	8.685
Stddev	.0013	2.5	.0001	.0004	.0002	.030
%RSD	6.322	1.393	1.046	3.558	.4275	.3438
#1	-.0203	180.9	.0076	.0115	.0386	8.706
#2	-.0217	182.6	.0077	.0108	.0382	8.699
#3	-.0191	185.9	.0075	.0116	.0385	8.651

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.1061	7.559	-.0096	6.355	.6851	-.0036
Stddev	.0045	.075	.0016	.040	.0072	.0000
%RSD	4.244	.9956	16.44	.6324	1.057	.8030
#1	.1045	7.645	-.0106	6.400	.6789	-.0036
#2	.1112	7.529	-.0103	6.343	.6832	-.0036
#3	.1027	7.504	-.0078	6.322	.6930	-.0035

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	715.4	.1168	-.0057	1.958	-.0003	.0014
Stddev	3.9	.0004	.0027	.006	.0008	.0017
%RSD	.5448	.3656	47.18	.3316	240.6	125.8
#1	715.7	.1171	-.0085	1.962	-.0004	.0023
#2	719.1	.1163	-.0032	1.950	.0005	.0024
#3	711.4	.1170	-.0052	1.961	-.0011	-.0006

Sample Name: 580-131051-D-5-C Acquired: 9/5/2023 23:22:18 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	3.203	-.0028	1.323	.0159	.0086	.0054
Stddev	.010	.0002	.005	.0020	.0055	.0012
%RSD	.3226	6.390	.3950	12.43	63.58	22.64
#1	3.214	-.0028	1.328	.0143	.0030	.0044
#2	3.194	-.0026	1.324	.0181	.0090	.0067
#3	3.199	-.0029	1.318	.0153	.0139	.0050

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	4.432
Stddev	.002
%RSD	.0437
#1	4.433
#2	4.430
#3	4.434

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3515.1	21463.	11230.	22454.
Stddev	14.8	85.	270.	544.
%RSD	.42222	.39578	2.4072	2.4207
#1	3501.7	21371.	10978.	21937.
#2	3512.6	21479.	11196.	22404.
#3	3531.0	21539.	11516.	23020.

Sample Name: 580-131051-D-6-B Acquired: 9/5/2023 23:27:20 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0016	-.0091	-.0028	.0400	.9479	-.0035
Stddev	.0013	.0338	.0009	.0010	.0019	.0000
%RSD	78.86	373.0	32.17	2.380	.1973	1.225
#1	-.0001	-.0156	-.0018	.0395	.9477	-.0035
#2	-.0022	-.0391	-.0032	.0394	.9462	-.0034
#3	-.0024	.0275	-.0035	.0411	.9499	-.0035

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0200	294.3	.0218	.0111	.0209	9.897
Stddev	.0020	2.0	.0001	.0002	.0002	.014
%RSD	10.01	.6958	.5571	1.730	.8838	.1417
#1	-.0189	293.4	.0217	.0109	.0211	9.911
#2	-.0187	292.8	.0218	.0111	.0207	9.897
#3	-.0223	296.6	.0219	.0112	.0208	9.883

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0521	5.711	-.0244	5.103	.7218	-.0035
Stddev	.0046	.120	.0074	.004	.0037	.0001
%RSD	8.777	2.095	30.52	.0744	.5174	2.709
#1	-.0541	5.573	-.0324	5.107	.7193	-.0035
#2	-.0554	5.775	-.0232	5.103	.7201	-.0036
#3	-.0469	5.786	-.0176	5.099	.7261	-.0034

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	746.3	.1184	-.0180	2.279	-.0008	-.0011
Stddev	28.7	.0001	.0006	.009	.0027	.0027
%RSD	3.852	.0967	3.409	.3951	334.4	239.6
#1	778.9	.1185	-.0176	2.277	.0018	-.0000
#2	735.5	.1184	-.0178	2.270	-.0037	-.0043
#3	724.6	.1183	-.0187	2.288	-.0006	.0009

Sample Name: 580-131051-D-6-B Acquired: 9/5/2023 23:27:20 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	2.680	-.0022	1.941	.0048	.0071	.0005
Stddev	.018	.0002	.004	.0011	.0040	.0053
%RSD	.6885	7.150	.2232	22.27	56.17	1063.
#1	2.668	-.0022	1.945	.0040	.0027	.0002
#2	2.671	-.0020	1.942	.0045	.0082	-.0046
#3	2.701	-.0023	1.936	.0061	.0103	.0060

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	5.939
Stddev	.018
%RSD	.2955
#1	5.933
#2	5.926
#3	5.959

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3650.1	22244.	12077.	24104.
Stddev	21.1	106.	58.	123.
%RSD	.57781	.47770	.48090	.51159
#1	3645.3	22213.	12025.	23993.
#2	3673.2	22362.	12066.	24081.
#3	3631.9	22157.	12140.	24237.

Sample Name: 580-131051-F-7-C Acquired: 9/5/2023 23:31:47 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0015	.1738	-.0008	.1086	.9484	-.0034
Stddev	.0003	.0185	.0008	.0013	.0028	.0000
%RSD	17.49	10.65	106.9	1.189	.2967	1.044
#1	-.0018	.1919	-.0002	.1099	.9467	-.0033
#2	-.0016	.1746	-.0004	.1073	.9467	-.0034
#3	-.0012	.1549	-.0017	.1087	.9516	-.0034

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0261	60.89	.0261	.0125	.0401	15.30
Stddev	.0011	2.29	.0002	.0001	.0006	.04
%RSD	4.035	3.755	.7853	.9325	1.379	.2778
#1	-.0266	63.53	.0262	.0125	.0396	15.33
#2	-.0249	59.64	.0259	.0125	.0401	15.33
#3	-.0268	59.50	.0263	.0123	.0407	15.25

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0348	5.642	-.0281	5.377	.7094	-.0038
Stddev	.0018	.105	.0058	.067	.0244	.0001
%RSD	5.206	1.857	20.62	1.254	3.444	3.445
#1	-.0340	5.524	-.0346	5.320	.7374	-.0037
#2	-.0335	5.678	-.0260	5.358	.6981	-.0039
#3	-.0369	5.725	-.0236	5.451	.6926	-.0038

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	692.6	.1307	-.0056	7.264	.0005	.0004
Stddev	37.4	.0005	.0025	.032	.0031	.0011
%RSD	5.393	.3664	43.99	.4359	659.6	280.8
#1	735.4	.1312	-.0036	7.298	.0018	.0015
#2	675.7	.1304	-.0084	7.235	.0026	.0002
#3	666.6	.1304	-.0049	7.260	-.0030	-.0006

Sample Name: 580-131051-F-7-C Acquired: 9/5/2023 23:31:47 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	3.702	-.0025	.5496	.0008	.0077	.0046
Stddev	.025	.0001	.0031	.0011	.0007	.0034
%RSD	.6888	5.064	.5563	141.2	8.508	74.47
#1	3.723	-.0026	.5531	.0021	.0071	.0016
#2	3.709	-.0025	.5483	.0004	.0075	.0082
#3	3.674	-.0024	.5474	-.0001	.0084	.0039

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	8.392
Stddev	.066
%RSD	.7808
#1	8.462
#2	8.332
#3	8.381

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3781.1	22925.	11827.	23622.
Stddev	91.4	537.	155.	311.
%RSD	2.4178	2.3438	1.3144	1.3171
#1	3676.5	22311.	11991.	23941.
#2	3845.7	23309.	11807.	23605.
#3	3821.2	23154.	11682.	23320.

Sample Name: 580-131112-A-1-B Acquired: 9/5/2023 23:36:49 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0033	.4060	-.0036	.4796	.0142	-.0035
Stddev	.0011	.0215	.0005	.0024	.0019	.0000
%RSD	33.79	5.290	15.03	.5099	13.40	.5298
#1	-.0035	.4069	-.0042	.4801	.0129	-.0035
#2	-.0021	.3841	-.0035	.4770	.0132	-.0035
#3	-.0043	.4270	-.0031	.4818	.0164	-.0035

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0027	23.20	-.0032	-.0031	-.0017	-.0128
Stddev	.0011	.13	.0001	.0003	.0002	.0038
%RSD	38.93	.5695	2.820	8.897	13.40	29.64
#1	-.0031	23.17	-.0032	-.0034	-.0019	-.0116
#2	-.0035	23.09	-.0032	-.0029	-.0019	-.0171
#3	-.0015	23.35	-.0031	-.0031	-.0015	-.0098

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0142	2.230	-.0050	12.70	.0641	-.0031
Stddev	.0022	.043	.0016	.05	.0008	.0004
%RSD	15.86	1.943	32.03	.3778	1.324	11.91
#1	-.0150	2.186	-.0032	12.70	.0633	-.0029
#2	-.0159	2.273	-.0061	12.66	.0641	-.0036
#3	-.0116	2.231	-.0057	12.75	.0650	-.0029

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	27.97	-.0027	.1603	-.0100	-.0026	-.0016
Stddev	.21	.0010	.0003	.0090	.0024	.0017
%RSD	.7548	38.04	.2146	89.77	94.31	106.5
#1	27.88	-.0034	.1603	-.0148	.0002	.0001
#2	27.82	-.0031	.1607	-.0155	-.0038	-.0015
#3	28.21	-.0015	.1600	.0004	-.0041	-.0033

Sample Name: 580-131112-A-1-B Acquired: 9/5/2023 23:36:49 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	18.47	-.0033	.1330	.0071	-.0011	.0027
Stddev	.08	.0004	.0002	.0012	.0049	.0015
%RSD	.4196	11.87	.1702	16.43	432.9	55.67
#1	18.49	-.0034	.1328	.0084	.0042	.0027
#2	18.39	-.0036	.1333	.0063	-.0055	.0042
#3	18.55	-.0029	.1329	.0066	-.0022	.0012

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0154
Stddev	.0121
%RSD	78.33
#1	.0083
#2	.0086
#3	.0293

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4464.2	25343.	13521.	27037.
Stddev	39.9	210.	79.	145.
%RSD	.89268	.82709	.58402	.53603
#1	4492.2	25478.	13573.	27119.
#2	4481.8	25451.	13560.	27122.
#3	4418.6	25102.	13430.	26870.

Sample Name: CCV 3565024 Acquired: 9/5/2023 23:40:19 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9551	103.1	4.900	45.44	4.968	5.101
Stddev	.0096	.7	.016	.29	.023	.030
%RSD	1.006	.6440	.3299	.6311	.4620	.5822
#1	.9648	103.8	4.891	45.26	4.953	5.134
#2	.9548	102.6	4.891	45.30	4.956	5.078
#3	.9456	102.8	4.919	45.77	4.994	5.089
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.759	93.28	4.832	4.796	5.071	4.875
Stddev	.031	1.42	.024	.022	.024	.009
%RSD	.6429	1.527	.4994	.4654	.4761	.1763
#1	4.744	91.86	4.815	4.781	5.054	4.884
#2	4.738	93.27	4.821	4.786	5.062	4.872
#3	4.794	94.70	4.860	4.822	5.099	4.867
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	100.1	101.3	4.641	101.5	4.792	4.665
Stddev	.5	.4	.010	.6	.078	.029
%RSD	.5422	.4074	.2138	.6104	1.625	.6289
#1	100.7	101.8	4.652	102.2	4.713	4.646
#2	99.82	101.2	4.632	101.0	4.793	4.651
#3	99.78	101.0	4.640	101.2	4.869	4.699
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCV 3565024 Acquired: 9/5/2023 23:40:19 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	94.53	4.771	49.20	4.784	4.697	4.601
Stddev	1.39	.022	.44	.024	.028	.032
%RSD	1.470	.4686	.8877	.5072	.5991	.6920
#1	93.06	4.754	48.92	4.766	4.675	4.589
#2	94.71	4.762	48.97	4.774	4.686	4.577
#3	95.82	4.796	49.70	4.812	4.728	4.638
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	51.03	4.870	4.990	4.870	4.863	5.211
Stddev	.22	.024	.085	.026	.043	.024
%RSD	.4396	.4894	1.704	.5358	.8946	.4679
#1	51.27	4.856	5.002	4.900	4.822	5.239
#2	50.83	4.857	4.899	4.855	4.856	5.193
#3	50.97	4.898	5.068	4.856	4.909	5.201
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	4.706
Stddev	.024
%RSD	.5190
#1	4.692
#2	4.692
#3	4.734
Check ?	Chk Pass
Value	
Range	

Sample Name: CCV 3565024 Acquired: 9/5/2023 23:40:19 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4001.7	24108.	12882.	25866.
Stddev	19.9	135.	216.	404.
%RSD	.49674	.56122	1.6752	1.5608
#1	4014.8	24192.	12638.	25411.
#2	4011.5	24179.	12961.	26007.
#3	3978.8	23951.	13047.	26180.

Sample Name: CCVL 3561056 Acquired: 9/5/2023 23:47:43 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0506	.5031	.0555	.4103	.0182	.0185
Stddev	.0012	.0030	.0009	.0016	.0000	.0002
%RSD	2.299	.5865	1.649	.4014	.2046	.8403
#1	.0519	.5060	.0561	.4110	.0182	.0183
#2	.0498	.5032	.0545	.4084	.0183	.0186
#3	.0500	.5001	.0560	.4114	.0182	.0186
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.2770	.4777	.0171	.0168	.0250	.0426
Stddev	.0027	.0056	.0002	.0003	.0002	.0085
%RSD	.9673	1.175	.9854	1.574	.8420	19.92
#1	.2754	.4712	.0169	.0165	.0251	.0492
#2	.2755	.4802	.0172	.0167	.0247	.0456
#3	.2801	.4815	.0172	.0170	.0251	.0331
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.4774	3.480	.0931	.5163	.0177	.0357
Stddev	.0051	.023	.0009	.0328	.0004	.0002
%RSD	1.071	.6508	.9458	6.360	2.258	.4248
#1	.4770	3.460	.0940	.5129	.0173	.0355
#2	.4828	3.474	.0922	.5507	.0177	.0358
#3	.4726	3.505	.0931	.4853	.0181	.0358
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCVL 3561056 Acquired: 9/5/2023 23:47:43 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	F .7788	.0163	.0810	.0270	.0569	.0888
Stddev	.0092	.0001	.0034	.0003	.0011	.0034
%RSD	1.180	.8130	4.193	1.209	1.885	3.825
#1	.7740	.0164	.0802	.0267	.0575	.0892
#2	.7730	.0161	.0781	.0269	.0577	.0853
#3	.7894	.0164	.0848	.0273	.0557	.0920
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	.5000					
Range	30.00%					

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.054	.0944	.1031	.0265	.1003	.0304
Stddev	.007	.0003	.0003	.0007	.0022	.0018
%RSD	.7120	.2745	.2554	2.461	2.233	5.995
#1	1.063	.0942	.1029	.0268	.0993	.0286
#2	1.050	.0943	.1029	.0258	.0988	.0322
#3	1.050	.0947	.1034	.0270	.1029	.0305
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0334
Stddev	.0001
%RSD	.4483
#1	.0333
#2	.0333
#3	.0336
Check ?	Chk Pass
Value	
Range	

Sample Name: CCVL 3561056 Acquired: 9/5/2023 23:47:43 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4603.9	25833.	13572.	27160.
Stddev	16.0	123.	37.	68.
%RSD	.34858	.47538	.27197	.24929
#1	4611.1	25905.	13537.	27095.
#2	4615.0	25903.	13610.	27230.
#3	4585.5	25692.	13569.	27155.

Sample Name: 580-131154-A-4-B@10 Acquired: 9/5/2023 23:51:11 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0043	-.0319	.0008	-.0476	-.0006	-.0027
Stddev	.0005	.0351	.0040	.0146	.0019	.0010
%RSD	12.21	109.9	484.1	30.76	328.5	36.74
#1	-.0037	-.0237	.0001	-.0509	-.0011	-.0030
#2	-.0044	-.0704	-.0027	-.0603	-.0022	-.0036
#3	-.0047	-.0016	.0051	-.0316	.0015	-.0016

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0008	-.0128	-.0008	-.0006	-.0005	-.0020
Stddev	.0017	.0425	.0016	.0016	.0018	.0044
%RSD	216.3	333.2	198.5	256.5	361.9	218.7
#1	.0009	-.0253	-.0013	-.0010	-.0010	.0008
#2	-.0010	-.0476	-.0020	-.0019	-.0020	.0002
#3	.0025	.0346	.0010	.0011	.0015	-.0071

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0558	.0883	-.0042	-.0466	-.0030	-.0004
Stddev	.0177	.0141	.0014	.0246	.0006	.0015
%RSD	31.75	15.98	33.80	52.77	19.67	415.3
#1	-.0637	.0763	-.0025	-.0611	-.0034	-.0006
#2	-.0683	.1039	-.0050	-.0605	-.0032	-.0017
#3	-.0355	.0849	-.0049	-.0182	-.0023	.0012

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.4399	-.0019	-.0080	.0017	.1051	.0078
Stddev	.1129	.0022	.0167	.0026	.0018	.0042
%RSD	25.68	114.6	208.2	148.9	1.687	53.52
#1	.3916	-.0024	-.0104	.0011	.1031	.0080
#2	.3591	-.0038	-.0235	-.0005	.1061	.0036
#3	.5689	.0005	.0097	.0046	.1062	.0119

Sample Name: 580-131154-A-4-B@10 Acquired: 9/5/2023 23:51:11 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0252	-.0004	-.0024	-.0020	.0097	-.0036
Stddev	.0127	.0017	.0011	.0002	.0040	.0038
%RSD	50.41	457.2	46.62	11.07	41.48	104.6
#1	-.0292	-.0009	-.0027	-.0022	.0131	.0007
#2	-.0355	-.0018	-.0032	-.0019	.0053	-.0050
#3	-.0110	.0015	-.0011	-.0018	.0108	-.0064

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0038
Stddev	.0026
%RSD	69.19
#1	.0031
#2	.0016
#3	.0068

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4727.4	26219.	13883.	27724.
Stddev	16.2	86.	79.	135.
%RSD	.34225	.32611	.57186	.48654
#1	4743.6	26291.	13931.	27794.
#2	4727.4	26242.	13926.	27810.
#3	4711.3	26125.	13791.	27569.

Sample Name: 580-131154-A-4-B Acquired: 9/5/2023 23:54:46 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0043	.1074	.0269	-.0320	-.0013	.0005
Stddev	.0010	.0627	.0008	.0017	.0001	.0022
%RSD	22.62	58.39	3.123	5.215	10.57	466.8
#1	-.0053	.1679	.0277	-.0327	-.0014	.0027
#2	-.0035	.1115	.0268	-.0332	-.0014	.0005
#3	-.0039	.0427	.0260	-.0301	-.0011	-.0018

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	-.0009	.3583	-.0027	-.0023	-.0026	-.0030
Stddev	.0010	.1026	.0001	.0003	.0003	.0077
%RSD	109.4	28.63	3.837	14.00	11.09	258.5
#1	-.0016	.4612	-.0027	-.0027	-.0029	.0042
#2	-.0015	.3579	-.0028	-.0022	-.0028	-.0020
#3	.0002	.2560	-.0026	-.0021	-.0023	-.0111

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0106	.1715	-.0032	.1217	.0005	-.0037
Stddev	.0489	.0391	.0022	.0709	.0023	.0003
%RSD	459.8	22.81	68.24	58.26	444.9	7.516
#1	.0602	.2100	-.0012	.1826	.0030	-.0039
#2	.0095	.1728	-.0029	.1387	.0001	-.0036
#3	-.0377	.1318	-.0055	.0439	-.0016	-.0034

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	2.528	-.0036	-.0495	-.0029	1.043	.0505
Stddev	.325	.0002	.0032	.0006	.011	.0033
%RSD	12.85	4.521	6.411	19.03	1.006	6.454
#1	2.850	-.0036	-.0527	-.0035	1.031	.0477
#2	2.533	-.0037	-.0495	-.0029	1.044	.0499
#3	2.201	-.0034	-.0463	-.0024	1.052	.0541

Sample Name: 580-131154-A-4-B Acquired: 9/5/2023 23:54:46 Type: Unk
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0995	.0021	.0017	.0021	.0537	.0021
Stddev	.0277	.0007	.0026	.0031	.0018	.0032
%RSD	27.82	33.19	150.9	151.9	3.408	157.4
#1	.1288	.0020	.0044	.0051	.0518	.0053
#2	.0959	.0014	.0016	.0023	.0554	.0020
#3	.0738	.0028	-.0008	-.0012	.0538	-.0011

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0391
Stddev	.0005
%RSD	1.164
#1	.0389
#2	.0388
#3	.0396

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	W 4984.0	26047.	14451.	W 28985.
Stddev	20.5	132.	285.	590.
%RSD	.41151	.50528	1.9699	2.0365
#1	5007.0	26198.	14665.	29431.
#2	4967.7	25978.	14559.	29208.
#3	4977.2	25963.	14128.	28316.

Sample Name: CCV 3565024 Acquired: 9/6/2023 0:12:50 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.9759	104.8	4.886	45.64	4.970	5.210
Stddev	.0044	.2	.018	.18	.020	.009
%RSD	.4501	.1513	.3745	.4007	.3924	.1829
#1	.9775	104.8	4.875	45.50	4.959	5.208
#2	.9709	104.6	4.876	45.57	4.958	5.201
#3	.9792	104.9	4.907	45.84	4.992	5.220
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	4.737	94.34	4.906	4.851	5.066	4.846
Stddev	.012	.13	.025	.021	.019	.013
%RSD	.2519	.1380	.5156	.4432	.3742	.2669
#1	4.732	94.19	4.890	4.838	5.059	4.860
#2	4.728	94.42	4.892	4.839	5.051	4.834
#3	4.751	94.42	4.935	4.876	5.087	4.843
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	101.1	103.2	4.694	102.4	4.838	4.704
Stddev	.3	.3	.011	.2	.007	.022
%RSD	.3114	.3331	.2326	.2331	.1469	.4591
#1	101.1	103.0	4.686	102.3	4.832	4.687
#2	100.9	103.0	4.691	102.2	4.846	4.697
#3	101.5	103.6	4.707	102.7	4.835	4.728
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCV 3565024 Acquired: 9/6/2023 0:12:50 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	93.90	4.826	50.10	4.848	4.686	4.636
Stddev	.18	.020	.16	.024	.011	.024
%RSD	.1884	.4234	.3175	.4903	.2309	.5067
#1	93.92	4.814	50.02	4.835	4.680	4.616
#2	94.07	4.814	49.99	4.833	4.680	4.629
#3	93.71	4.849	50.28	4.875	4.699	4.662
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	51.12	4.938	5.078	5.002	4.901	5.295
Stddev	.25	.020	.077	.009	.041	.005
%RSD	.4909	.4101	1.526	.1837	.8361	.1027
#1	50.89	4.927	5.002	4.997	4.867	5.297
#2	51.08	4.926	5.075	4.997	4.889	5.289
#3	51.39	4.962	5.157	5.012	4.946	5.299
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	4.821
Stddev	.025
%RSD	.5099
#1	4.807
#2	4.807
#3	4.850
Check ?	Chk Pass
Value	
Range	

Sample Name: CCV 3565024 Acquired: 9/6/2023 0:12:50 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3898.6	23539.	12687.	25344.
Stddev	18.1	104.	90.	187.
%RSD	.46431	.44193	.70912	.73707
#1	3904.7	23574.	12708.	25401.
#2	3912.9	23621.	12765.	25496.
#3	3878.3	23422.	12588.	25136.

Sample Name: CCVL 3561056 Acquired: 9/6/2023 0:20:16 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Elem	Ag3280	Al3082	As1890	B_2089	Ba2335	Be3130
Line	328.068 {103}	308.215 {109}	189.042 {478}	208.959 {461}	233.527 {445}	313.042 {108}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.0521	.5283	.0562	.3998	.0184	.0186
Stddev	.0013	.0421	.0014	.0034	.0002	.0001
%RSD	2.555	7.961	2.475	.8465	1.100	.6351
#1	.0515	.5446	.0563	.3971	.0182	.0185
#2	.0536	.4806	.0548	.3988	.0184	.0185
#3	.0511	.5598	.0575	.4036	.0186	.0187
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Bi2230	Ca3158	Cd2265	Co2286	Cr2055	Cu3273
Line	223.061 {451}	315.887 {107}	226.502 {449}	228.616 {447}	205.560 {464}	327.396 {103}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.2738	.4758	.0171	.0172	.0253	.0455
Stddev	.0024	.0053	.0003	.0003	.0005	.0025
%RSD	.8765	1.123	1.671	1.734	1.915	5.427
#1	.2743	.4700	.0168	.0170	.0251	.0428
#2	.2712	.4805	.0171	.0171	.0249	.0460
#3	.2759	.4770	.0174	.0176	.0258	.0477
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.4789	3.488	.0910	.5204	.0168	.0360
Stddev	.0052	.051	.0008	.0175	.0004	.0007
%RSD	1.091	1.451	.8810	3.359	2.638	1.964
#1	.4765	3.544	.0901	.5009	.0164	.0353
#2	.4752	3.474	.0913	.5255	.0173	.0360
#3	.4849	3.446	.0917	.5347	.0168	.0367
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Sample Name: CCVL 3561056 Acquired: 9/6/2023 0:20:16 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

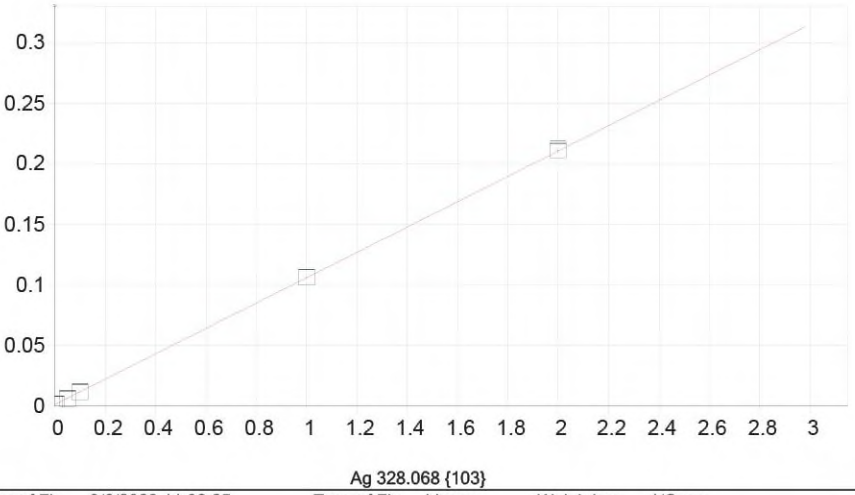
Elem	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	206.833 {463}	196.090 {472}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	.5689	.0164	.0815	.0270	.0604	.0890
Stddev	.0041	.0002	.0048	.0003	.0014	.0008
%RSD	.7263	1.102	5.911	.9313	2.387	.9545
#1	.5641	.0166	.0768	.0270	.0587	.0885
#2	.5712	.0163	.0812	.0268	.0611	.0886
#3	.5713	.0163	.0864	.0273	.0613	.0900
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Si2516	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Line	251.611 {134}	189.989 {477}	407.771 { 83}	334.941 {101}	190.856 {477}	292.402 {115}
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avg	1.058	.0948	.1033	.0260	.1070	.0277
Stddev	.002	.0010	.0004	.0012	.0004	.0026
%RSD	.1782	1.060	.3829	4.592	.3858	9.483
#1	1.056	.0939	.1029	.0263	.1069	.0247
#2	1.060	.0947	.1037	.0270	.1075	.0295
#3	1.057	.0959	.1032	.0247	.1067	.0289
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Zn2062
Line	206.200 {463}
Units	mg/L
Avg	.0335
Stddev	.0003
%RSD	.9105
#1	.0333
#2	.0335
#3	.0339
Check ?	Chk Pass
Value	
Range	

Sample Name: CCVL 3561056 Acquired: 9/6/2023 0:20:16 Type: QC
Method: NEW IEC MAY 2023(v66) Mode: CONC Corr. Factor: 1.000000
User: JLS : : :
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3774
Line	230.606 {446}	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4578.4	25790.	13435.	26939.
Stddev	22.8	115.	65.	115.
%RSD	.49795	.44673	.48565	.42516
#1	4588.0	25846.	13455.	27005.
#2	4594.8	25867.	13488.	27004.
#3	4552.3	25658.	13363.	26806.

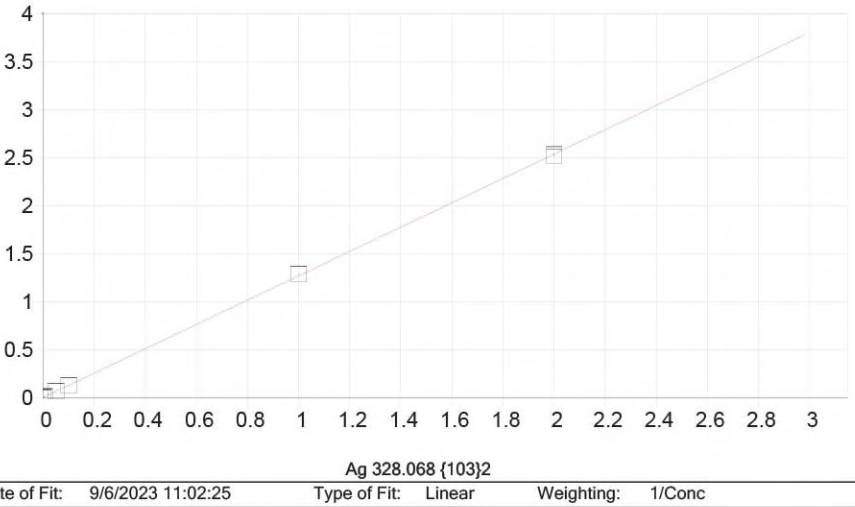


Ag 328.068 {103}

Date of Fit:	9/6/2023 11:02:25	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001321	Re-Slope:	1.000000
A1 (Gain):	0.104550	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999421	Status:	OK.
Std Error of Est:	0.000017		
Predicted MDL:	0.003112		
Predicted MQL:	0.010372		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00000	.000	.000	.00132	.000	1
STD1 35069	.05000	.04693	-.003	-6.13	.00623	.000	1
STD2 35280	.10000	.09758	-.002	-2.42	.01152	.000	1
STD3 35650	1.0000	1.0028	.003	.276	.10616	.000	1
STD4 35745	2.0000	2.0068	.007	.342	.21114	.001	1
STD0.1 3519	.00500	.00089	-.004	-82.1	.00141	.000	1

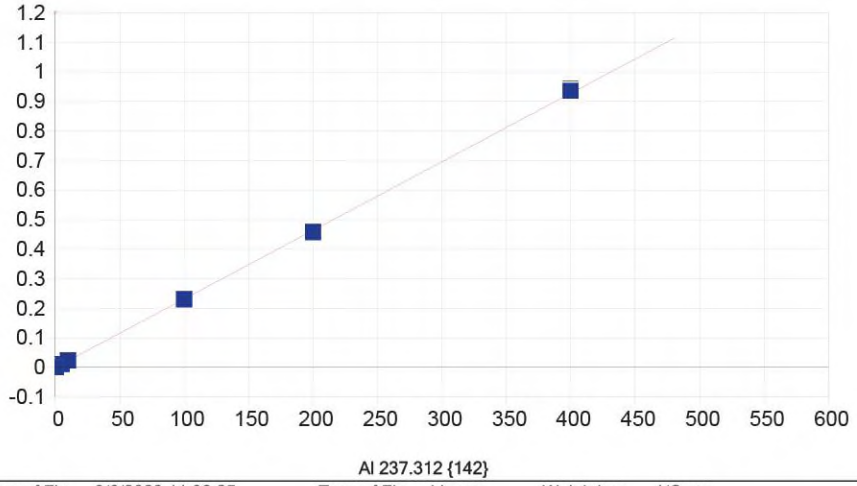


Ag 328.068 {103}2

Date of Fit:	9/6/2023 11:02:25	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.004553	Re-Slope:	1.000000
A1 (Gain):	1.267106	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999954	Status:	OK.
Std Error of Est:	0.000059		
Predicted MDL:	0.001345		
Predicted MQL:	0.004484		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00000	-.000	.000	.00455	.001	1
STD1 35069	.05000	.04915	-.001	-1.69	.06683	.002	1
STD2 35280	.10000	.09837	-.002	-1.63	.12920	.001	1
STD3 35650	1.0000	1.0130	.013	1.30	1.2881	.003	1
STD4 35745	2.0000	1.9892	-.011	-.540	2.5251	.015	1
STD0.1 3519	.00500	.00533	.000	6.59	.01131	.002	1

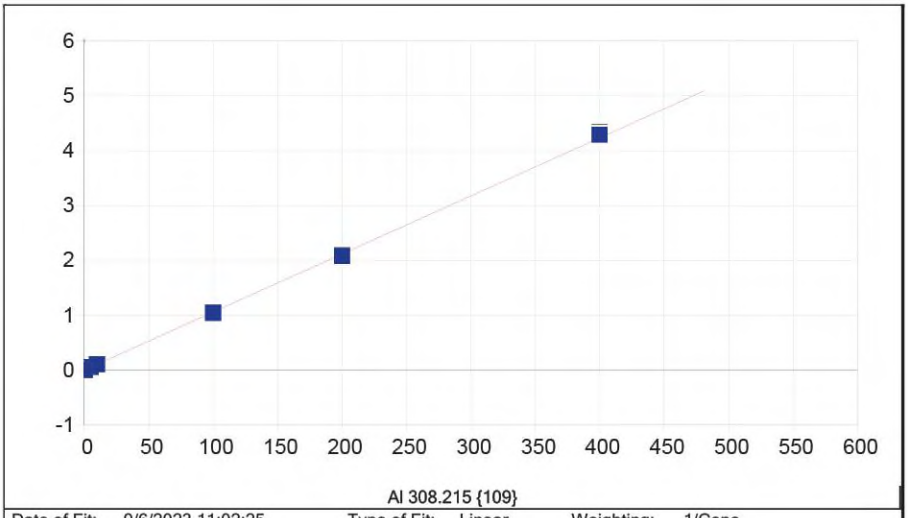


Al 237.312 {142}

Date of Fit:	9/6/2023 11:02:25	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000429	Re-Slope:	1.000000
A1 (Gain):	0.002321	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999935	Status:	OK.
Std Error of Est:	0.000010		
Predicted MDL:	0.090276		
Predicted MQL:	0.300921		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00004	.000	.000	-.00043	.000	1
STD1 35069	5.0000	5.0315	.032	.631	.01125	.000	1
STD2 35280	10.000	10.113	.113	1.13	.02305	.000	1
STD3 35650	100.00	99.257	-.743	-.743	.22997	.001	1
STD4 35745	200.00	197.08	-2.92	-1.46	.45703	.001	1
STD5 35635	400.00	403.56	3.56	.889	.93630	.008	1
STD0.1 3519	.50000	.50777	.008	1.55	.00075	.000	1
STD0.03 351	.16000	.11734	-.043	-26.7	-.00016	.000	1

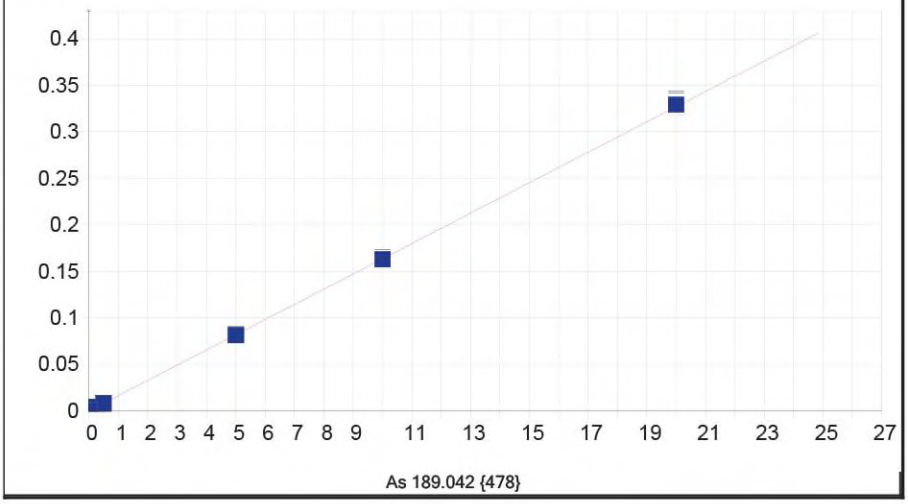


Al 308.215 {109}

Date of Fit:	9/6/2023 11:02:25	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000133	Re-Slope:	1.000000
A1 (Gain):	0.010585	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999880	Status:	OK.
Std Error of Est:	0.000064		
Predicted MDL:	0.039791		
Predicted MQL:	0.132635		

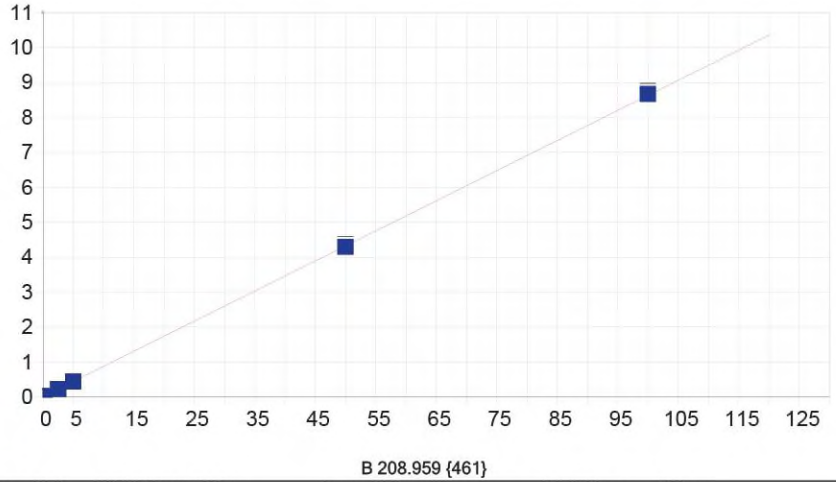
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00002	.000	.000	-.00013	.001	1
STD1 35069	5.0000	5.0511	.051	1.02	.05356	.000	1
STD2 35280	10.000	10.039	.039	.386	.10658	.000	1
STD3 35650	100.00	98.321	-1.68	-1.68	1.0451	.005	1
STD4 35745	200.00	196.24	-3.76	-1.88	2.0861	.006	1
STD5 35635	400.00	405.38	5.38	1.34	4.3089	.037	1
STD0.1 3519	.50000	.48815	-.012	-2.37	.00506	.000	1
STD0.03 351	.16000	.14573	-.014	-8.92	.00142	.000	1



As 189.042 {478}

Date of Fit:	9/6/2023 11:02:25	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000140		Re-Slope:	1.000000	
A1 (Gain):	0.016355		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999941		Status:	OK.	
Std Error of Est:	0.000003				
Predicted MDL:	0.002516				
Predicted MQL:	0.008385				

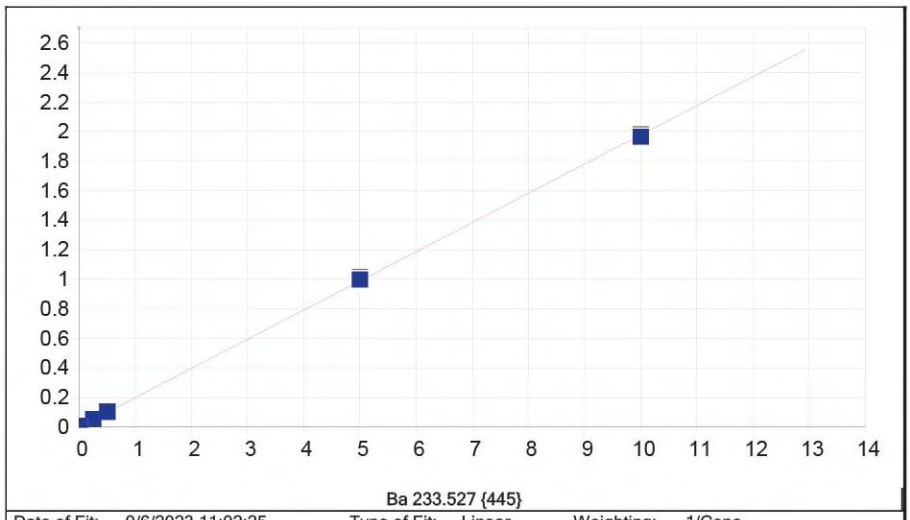
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00000	.000	.000	.00014	.000	1
STD1 35069	.25000	.23879	-.011	-4.48	.00401	.000	1
STD2 35280	.50000	.46928	-.031	-6.14	.00775	.000	1
STD3 35650	5.0000	4.9639	-.036	-.722	.08065	.001	1
STD4 35745	10.000	9.9605	-.040	-.395	.16169	.002	1
STD5 35635	20.000	20.122	.122	.611	.32652	.006	1
STD0.1 3519	.02500	.02143	-.004	-14.3	.00049	.000	1
STD0.03 351	.00800	.00702	-.001	-12.3	.00025	.000	1



B 208.959 {461}

Date of Fit:	9/6/2023 11:02:25	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.010072		Re-Slope:	1.000000	
A1 (Gain):	0.086249		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999934		Status:	OK.	
Std Error of Est:	0.000132				
Predicted MDL:	0.000605				
Predicted MQL:	0.002017				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00004	.000	.000	.01008	.001	1
STD1 35069	2.5000	2.4560	-.044	-1.76	.22244	.001	1
STD2 35280	5.0000	4.9233	-.077	-1.53	.43578	.001	1
STD3 35650	50.000	49.741	-.259	-.518	4.3110	.067	1
STD4 35745	100.00	100.45	.446	.446	8.6952	.079	1
STD0.1 3519	.25000	.21058	-.039	-15.8	.02829	.000	1
STD0.03 351	.08000	.05276	-.027	-34.1	.01464	.001	1

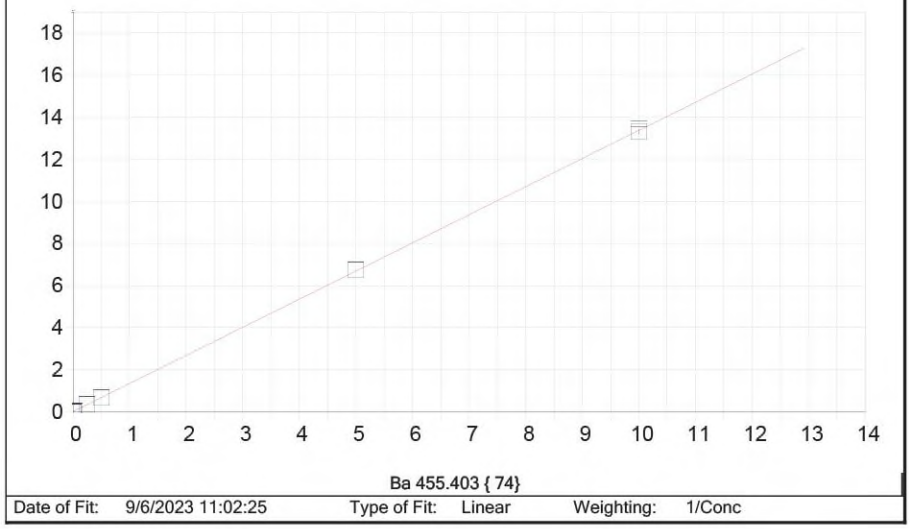


Ba 233.527 {445}

Date of Fit:	9/6/2023 11:02:25	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000897	Re-Slope:	1.000000
A1 (Gain):	0.197587	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999960	Status:	OK.
Std Error of Est:	0.000023		
Predicted MDL:	0.000267		
Predicted MQL:	0.000888		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00000	.000	.000	.00090	.000	1
STD1 35069	.25000	.25816	.008	3.26	.05176	.000	1
STD2 35280	.50000	.50551	.006	1.10	.10049	.000	1
STD3 35650	5.0000	5.0468	.047	.936	.99520	.016	1
STD4 35745	10.000	9.9408	-.059	-.592	1.9593	.019	1
STD0.1 3519	.02500	.02477	-.000	-.918	.00578	.000	1
STD0.03 351	.00800	.00698	-.001	-12.8	.00227	.000	1

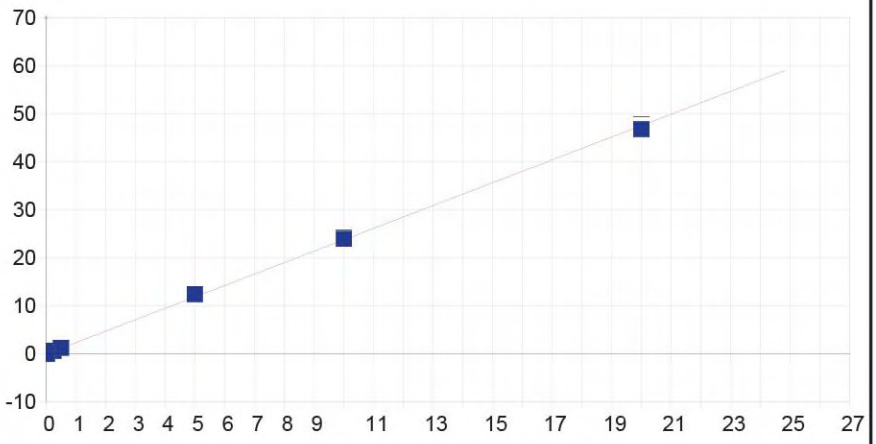


Ba 455.403 { 74}

Date of Fit:	9/6/2023 11:02:25	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.010550	Re-Slope:	1.000000
A1 (Gain):	1.336210	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999958	Status:	OK.
Std Error of Est:	0.000163		
Predicted MDL:	0.000278		
Predicted MQL:	0.000928		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00000	.000	.000	.01055	.006	1
STD1 35069	.25000	.25294	.003	1.18	.34853	.002	1
STD2 35280	.50000	.49677	-.003	-.646	.67434	.002	1
STD3 35650	5.0000	5.0471	.047	.942	6.7545	.010	1
STD4 35745	10.000	9.9569	-.043	-.431	13.315	.127	1
STD0.1 3519	.02500	.02340	-.002	-6.39	.04182	.002	1
STD0.03 351	.00800	.00590	-.002	-26.2	.01844	.002	1

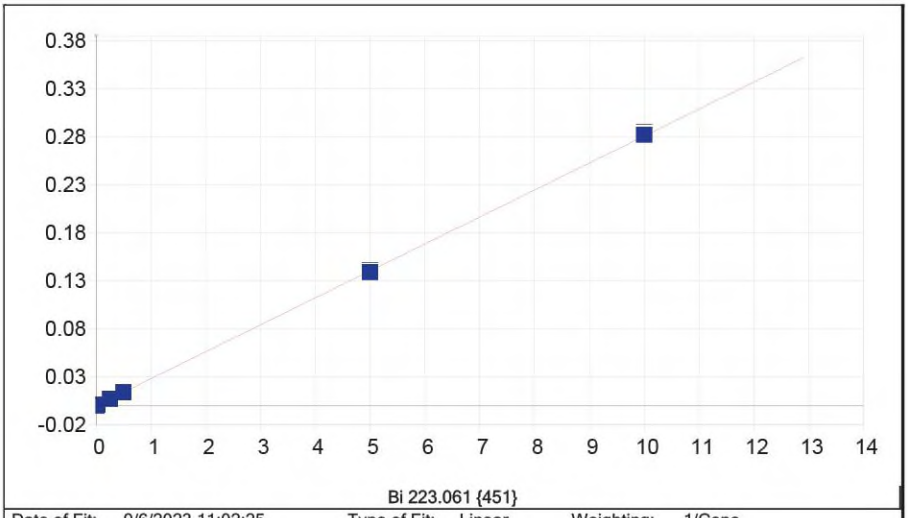


Be 313.042 {108}

Date of Fit:	9/6/2023 11:02:25	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.008507	Re-Slope:	1.000000
A1 (Gain):	2.378470	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999760	Status:	OK.
Std Error of Est:	0.001017		
Predicted MDL:	0.000130		
Predicted MQL:	0.000432		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00000	.000	.000	.00851	.010	1
STD1 35069	.25000	.26529	.015	6.12	.63928	.004	1
STD2 35280	.50000	.51746	.017	3.49	1.2388	.005	1
STD3 35650	5.0000	5.2177	.218	4.35	12.414	.053	1
STD4 35745	10.000	10.076	.076	.761	23.966	.147	1
STD5 35635	20.000	19.675	-.325	-1.62	46.789	1.07	1
STD0.1 3519	.02500	.02468	-.000	-1.29	.06718	.003	1
STD0.03 351	.00800	.00648	-.002	-19.0	.02391	.003	1

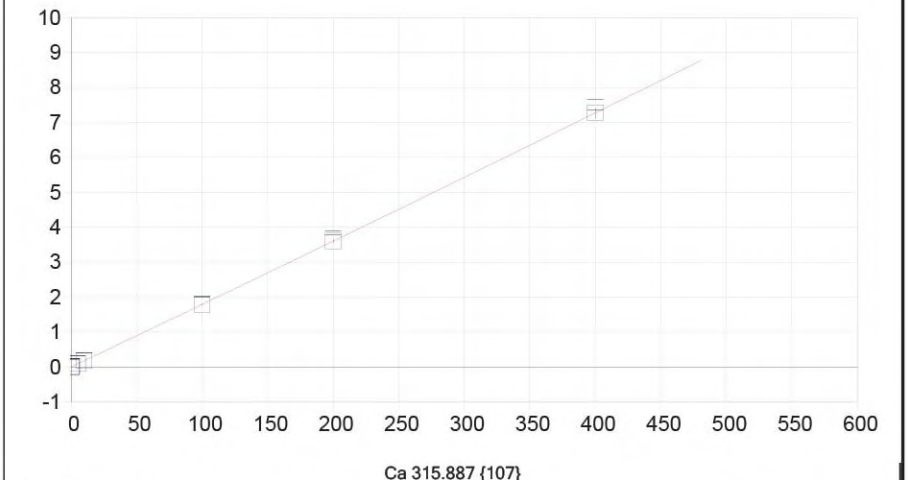


Bi 223.061 {451}

Date of Fit:	9/6/2023 11:02:25	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000077	Re-Slope:	1.000000
A1 (Gain):	0.028075	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999970	Status:	OK.
Std Error of Est:	0.000003		
Predicted MDL:	0.002289		
Predicted MQL:	0.007629		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00000	.000	.000	.00008	.000	1
STD1 35069	.25000	.25241	.002	.965	.00716	.000	1
STD2 35280	.50000	.49452	-.005	-1.10	.01394	.000	1
STD3 35650	5.0000	4.9518	-.048	-.964	.13894	.002	1
STD4 35745	10.000	10.053	.053	.531	.28199	.003	1
STD0.1 3519	.02500	.02362	-.001	-5.52	.00074	.000	1
STD0.03 351	.00800	.00756	-.000	-5.51	.00029	.000	1

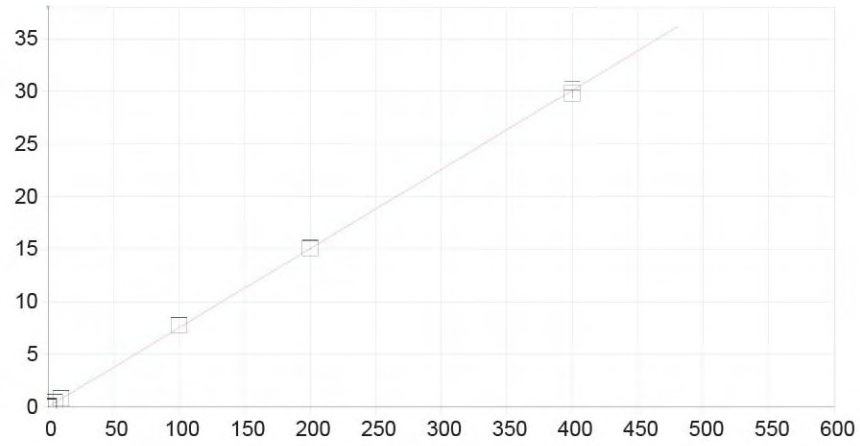


Ca 315.887 {107}

Date of Fit:	9/6/2023 11:02:25	Type of Fit:	Curvilinear	Weighting:	1/Conc

A0 (Offset):	0.001055	Re-Slope:	1.000000
A1 (Gain):	0.017825	Y-int:	0.000000
A2 (Curvature):	0.000001		
n (Exponent):	1.000000		
Correlation:	0.999989	Status:	Warning Positive Curvature
Std Error of Est:	0.000037		
Predicted MDL:	0.007575		
Predicted MQL:	0.025251		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00005	.000	.000	.00106	.001	1
STD1 35069	5.0000	5.0576	.058	1.15	.09123	.001	1
STD2 35280	10.000	10.099	.099	.985	.18115	.002	1
STD3 35650	100.00	99.719	-.281	-.281	1.7877	.023	1
STD4 35745	200.00	200.28	.279	.140	3.6078	.051	1
STD5 35635	400.00	399.93	-.072	-.018	7.2767	.152	1
STD0.1 3519	.50000	.45783	-.042	-8.43	.00922	.001	1
STD0.03 351	.16000	.11931	-.041	-25.4	.00318	.000	1

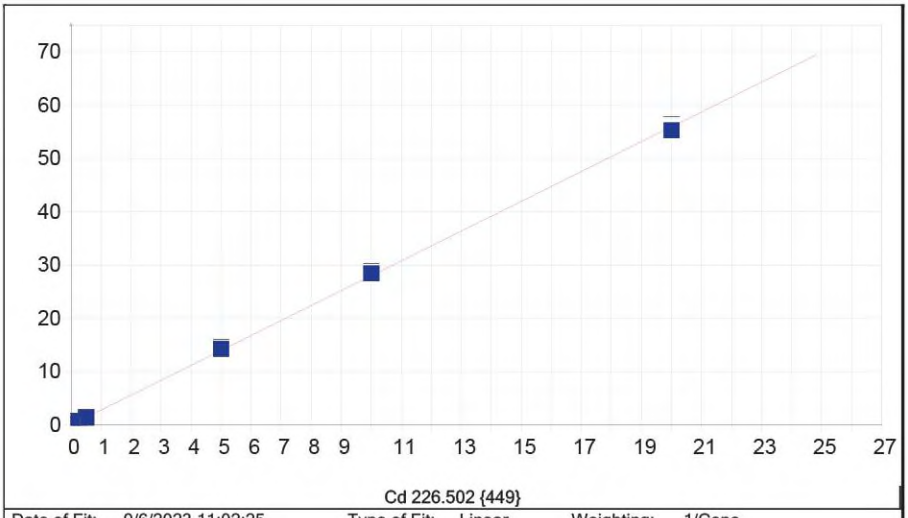


Ca 317.933 {106}

Date of Fit:	9/6/2023 11:02:25	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.019171	Re-Slope:	1.000000
A1 (Gain):	0.075190	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999863	Status:	OK.
Std Error of Est:	0.000486		
Predicted MDL:	0.003803		
Predicted MQL:	0.012678		

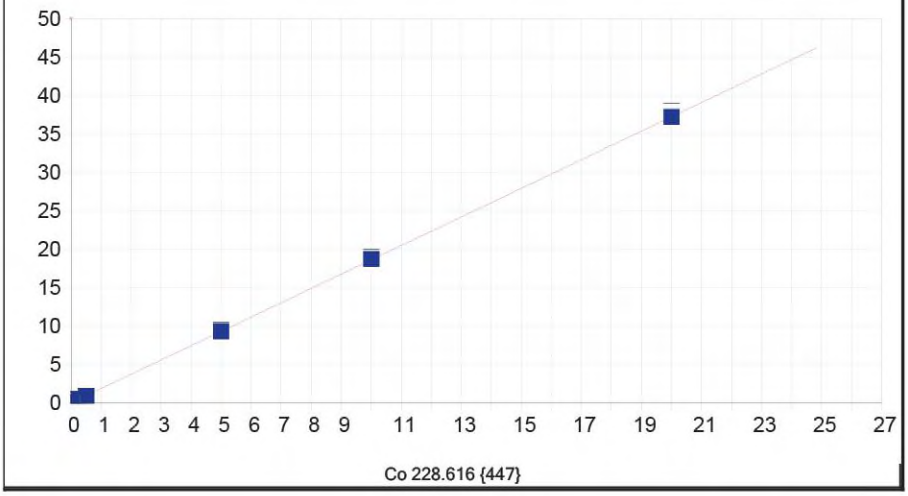
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00003	.000	.000	.01917	.007	1
STD1 35069	5.0000	5.3077	.308	6.15	.41826	.001	1
STD2 35280	10.000	10.574	.574	5.74	.81421	.004	1
STD3 35650	100.00	102.97	2.97	2.97	7.7617	.032	1
STD4 35745	200.00	200.25	.253	.126	15.076	.044	1
STD5 35635	400.00	395.96	-4.04	-1.01	29.791	.388	1
STD0.1 3519	.50000	.47644	-.024	-4.71	.05499	.002	1
STD0.03 351	.16000	.11394	-.046	-28.8	.02774	.002	1



Date of Fit:	9/6/2023 11:02:25	Type of Fit:	Linear	Weighting:	1/Conc

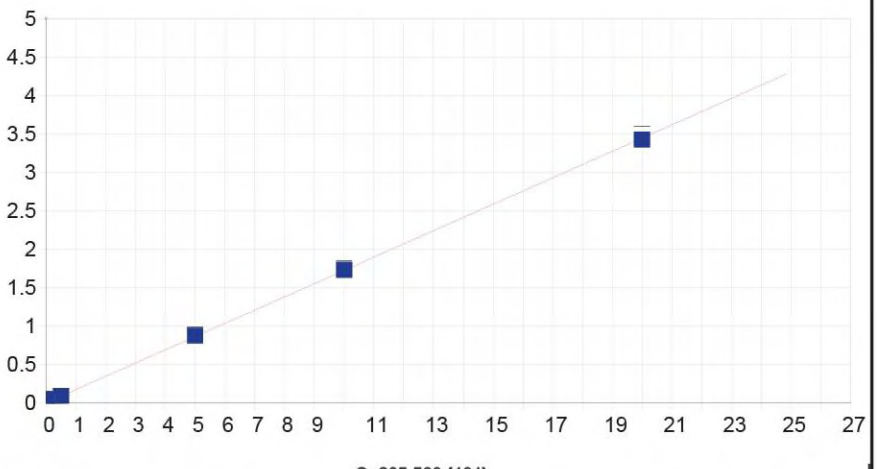
A0 (Offset):	0.006555	Re-Slope:	1.000000
A1 (Gain):	2.796343	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999882	Status:	OK.
Std Error of Est:	0.000841		
Predicted MDL:	0.000131		
Predicted MQL:	0.000436		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00000	.000	.000	.00656	.005	1
STD1 35069	.25000	.24849	-.002	-.604	.70214	.002	1
STD2 35280	.50000	.48695	-.013	-2.61	1.3697	.002	1
STD3 35650	5.0000	5.1024	.102	2.05	14.289	.250	1
STD4 35745	10.000	10.160	.160	1.60	28.448	.348	1
STD5 35635	20.000	19.755	-.245	-1.22	55.307	1.06	1
STD0.1 3519	.02500	.02302	-.002	-7.93	.07099	.001	1
STD0.03 351	.00800	.00641	-.002	-19.8	.02451	.004	1



Date of Fit:	9/6/2023 11:02:25	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.005018		Re-Slope:	1.000000	
A1 (Gain):	1.862546		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999969		Status:	OK.	
Std Error of Est:	0.000287				
Predicted MDL:	0.000242				
Predicted MQL:	0.000807				

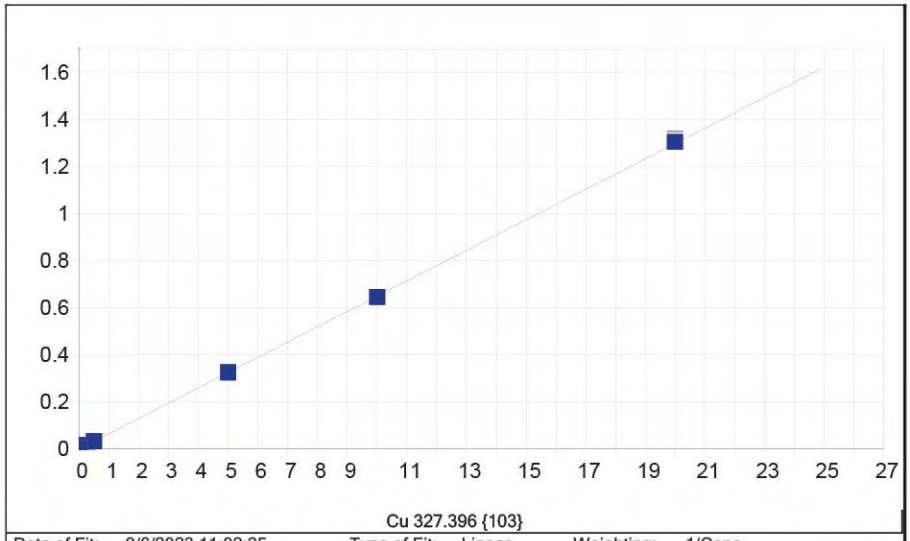
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00000	.000	.000	.00502	.003	1
STD1 35069	.25000	.24281	-.007	-2.88	.45854	.002	1
STD2 35280	.50000	.47642	-.024	-4.72	.89492	.002	1
STD3 35650	5.0000	4.9946	-.005	-.107	9.3333	.157	1
STD4 35745	10.000	10.058	.058	.582	18.790	.224	1
STD5 35635	20.000	19.982	-.018	-.090	37.325	.714	1
STD0.1 3519	.02500	.02243	-.003	-10.3	.04692	.001	1
STD0.03 351	.00800	.00648	-.002	-19.0	.01713	.003	1



Cr 205.560 {464}

Date of Fit:	9/6/2023 11:02:25	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000475		Re-Slope:	1.000000	
A1 (Gain):	0.172362		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999970		Status:	OK.	
Std Error of Est:	0.000026				
Predicted MDL:	0.000258				
Predicted MQL:	0.000859				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00000	.000	.000	.00047	.000	1
STD1 35069	.25000	.25823	.008	3.29	.04502	.000	1
STD2 35280	.50000	.50171	.002	.342	.08703	.000	1
STD3 35650	5.0000	5.0691	.069	1.38	.87500	.015	1
STD4 35745	10.000	10.039	.039	.390	1.7324	.017	1
STD5 35635	20.000	19.883	-.117	-.586	3.4307	.066	1
STD0.1 3519	.02500	.02490	-.000	-.416	.00477	.000	1
STD0.03 351	.00800	.00718	-.001	-10.3	.00171	.000	1

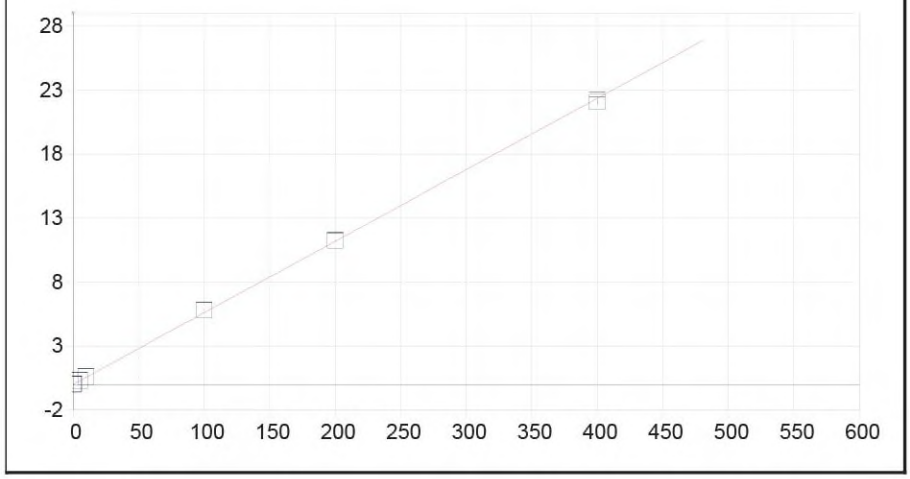


Cu 327.396 {103}

Date of Fit:	9/6/2023 11:02:25	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000613	Re-Slope:	1.000000
A1 (Gain):	0.064925	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999900	Status:	OK.
Std Error of Est:	0.000018		
Predicted MDL:	0.007829		
Predicted MQL:	0.026098		

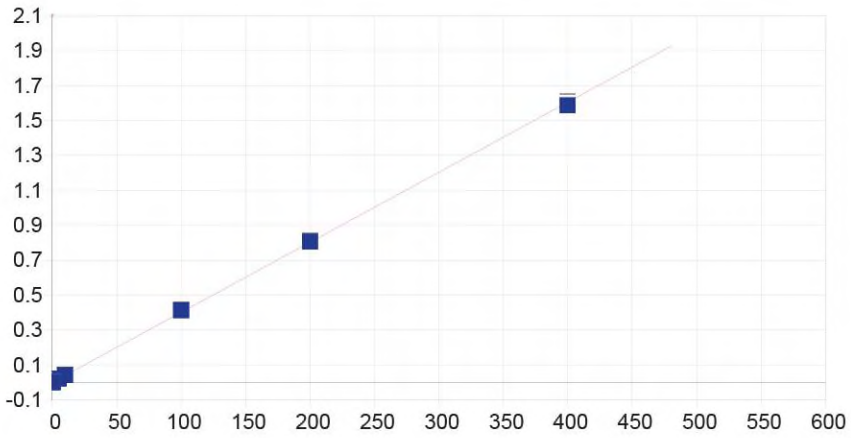
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00001	.000	.000	.00061	.000	1
STD1 35069	.25000	.24185	-.008	-3.26	.01632	.000	1
STD2 35280	.50000	.48862	-.011	-2.28	.03235	.000	1
STD3 35650	5.0000	4.9983	-.002	-.034	.32526	.001	1
STD4 35745	10.000	9.9347	-.065	-.653	.64588	.001	1
STD5 35635	20.000	20.100	.100	.499	1.3061	.010	1
STD0.1 3519	.02500	.01651	-.008	-34.0	.00169	.000	1
STD0.03 351	.00800	.00323	-.005	-59.6	.00082	.000	1



Fe 259.940 {130}

Date of Fit:	9/6/2023 11:02:25	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.004174		Re-Slope:	1.000000	
A1 (Gain):	0.055884		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999834		Status:	OK.	
Std Error of Est:	0.000398				
Predicted MDL:	0.003294				
Predicted MQL:	0.010979				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00001	.000	.000	.00417	.005	1
STD1 35069	5.0000	5.3089	.309	6.18	.30086	.001	1
STD2 35280	10.000	10.576	.576	5.76	.59523	.003	1
STD3 35650	100.00	103.22	3.22	3.22	5.7722	.018	1
STD4 35745	200.00	201.22	1.22	.610	11.249	.026	1
STD5 35635	400.00	394.72	-5.28	-1.32	22.063	.181	1
STD0.1 3519	.50000	.48910	-.011	-2.18	.03151	.002	1
STD0.03 351	.16000	.13150	-.028	-17.8	.01152	.001	1

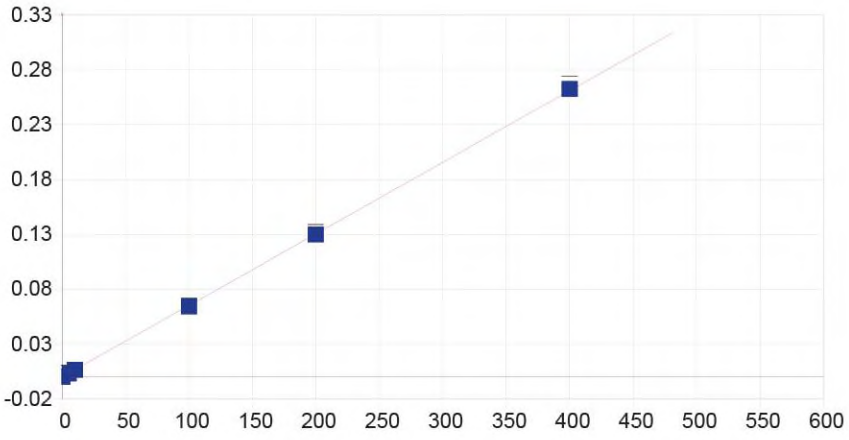


Fe 271.441 {124}

Date of Fit:	9/6/2023 11:02:25	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000418		Re-Slope:	1.000000	
A1 (Gain):	0.004011		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999867		Status:	OK.	
Std Error of Est:	0.000026				
Predicted MDL:	0.076683				
Predicted MQL:	0.255611				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00002	.000	.000	.00042	.001	1
STD1 35069	5.0000	5.2803	.280	5.61	.02167	.000	1
STD2 35280	10.000	10.490	.490	4.90	.04265	.000	1
STD3 35650	100.00	102.96	2.96	2.96	.41495	.002	1
STD4 35745	200.00	200.87	.875	.437	.80923	.003	1
STD5 35635	400.00	395.44	-4.56	-1.14	1.5927	.016	1
STD0.1 3519	.50000	.48587	-.014	-2.83	.00237	.000	1

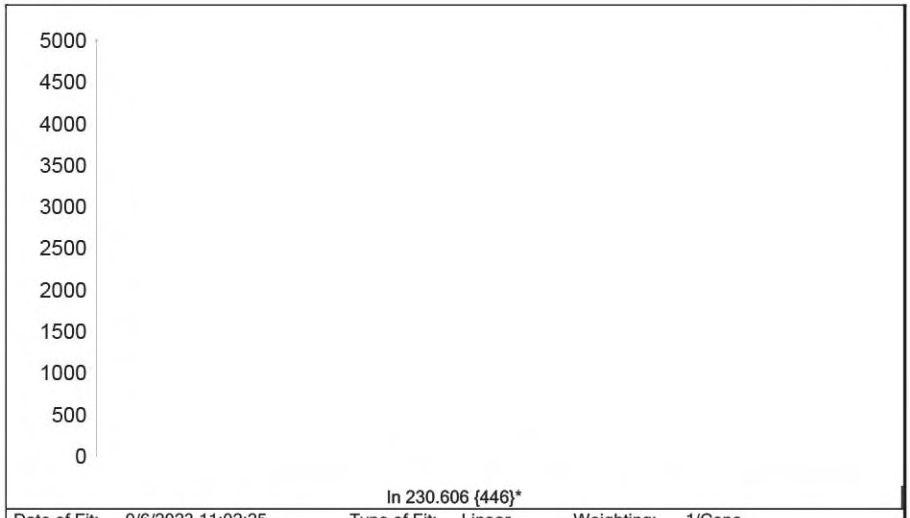
STD0.03 351	.16000	.12458	-.035	-22.1	.00092	.000	1



Fe 273.074 {123}

Date of Fit:	9/6/2023 11:02:25	Type of Fit:	Linear
Weighting:	1/Conc		
A0 (Offset):	-0.000053	Re-Slope:	1.000000
A1 (Gain):	0.000652	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999965	Status:	OK.
Std Error of Est:	0.000002		
Predicted MDL:	0.216984		
Predicted MQL:	0.723281		

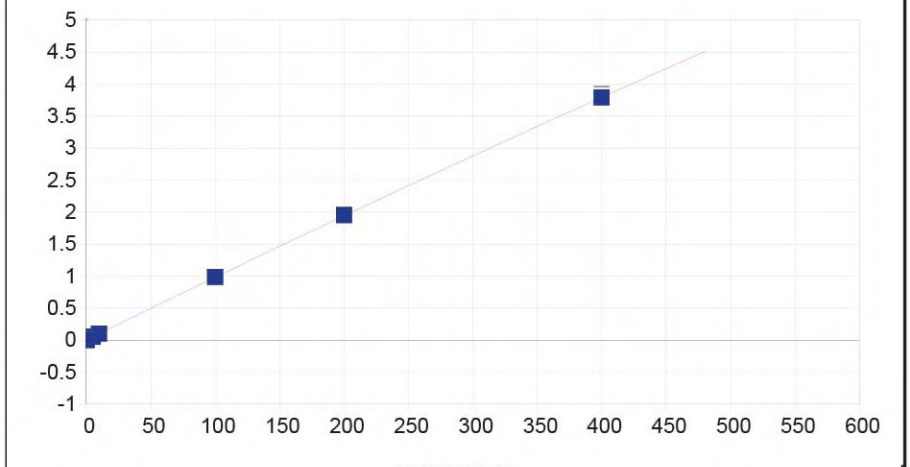
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00003	-.000	.000	-.00005	.000	1
STD1 35069	5.0000	4.9955	-.005	-.091	.00320	.000	1
STD2 35280	10.000	9.8763	-.124	-1.24	.00638	.000	1
STD3 35650	100.00	98.438	-1.56	-1.56	.06409	.001	1
STD4 35745	200.00	199.21	-.786	-.393	.12975	.002	1
STD5 35635	400.00	402.41	2.41	.604	.26215	.005	1
STD0.1 3519	.50000	.54255	.043	8.51	.00030	.000	1
STD0.03 351	.16000	.17875	.019	11.7	.00006	.000	1



In 230.606 {446}*

Date of Fit:	9/6/2023 11:02:25	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.000000		Status:	Warning	Zero Gain
Std Error of Est:	0.000000				
Predicted MDL:	n/a				
Predicted MQL:	n/a				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00000	.000	.000	4090.8	12.9	1

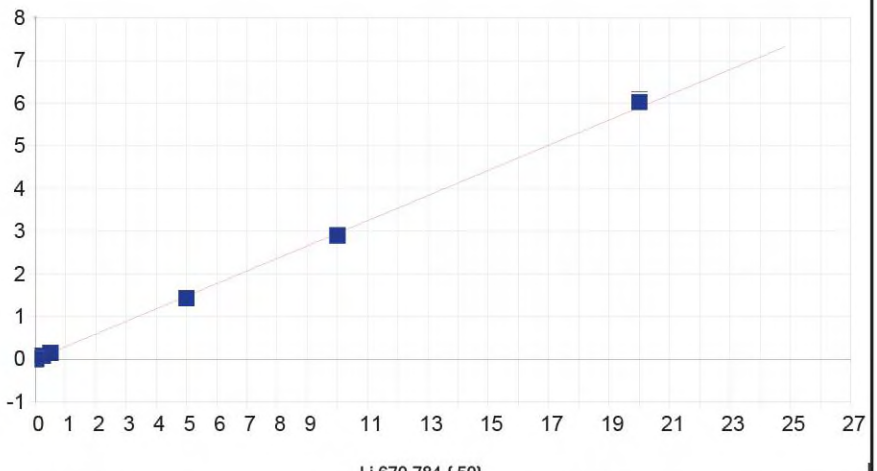


K 766.490 { 44}

Date of Fit:	9/6/2023 11:02:25	Type of Fit:	Curvilinear	Weighting:	1/Conc
A0 (Offset):	-0.000425		Re-Slope:	1.000000	
A1 (Gain):	0.009919		Y-int:	0.000000	
A2 (Curvature):	-0.000001				
n (Exponent):	1.000000				
Correlation:	0.999921		Status:	OK.	

Std Error of Est:	0.000052
Predicted MDL:	0.058038
Predicted MQL:	0.193460

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00015	.000	.000	-.00042	.001	1
STD1 35069	5.0000	4.9239	-.076	-1.52	.04845	.000	1
STD2 35280	10.000	9.8148	-.185	-1.85	.09695	.000	1
STD3 35650	100.00	100.14	.145	.145	.98307	.002	1
STD4 35745	200.00	200.73	.730	.365	1.9486	.007	1
STD5 35635	400.00	399.58	-.415	-.104	3.7916	.050	1
STD0.1 3519	.50000	.41646	-.084	-16.7	.00371	.000	1
STD0.03 351	.16000	.04369	-.116	-72.7	.00001	.000	1

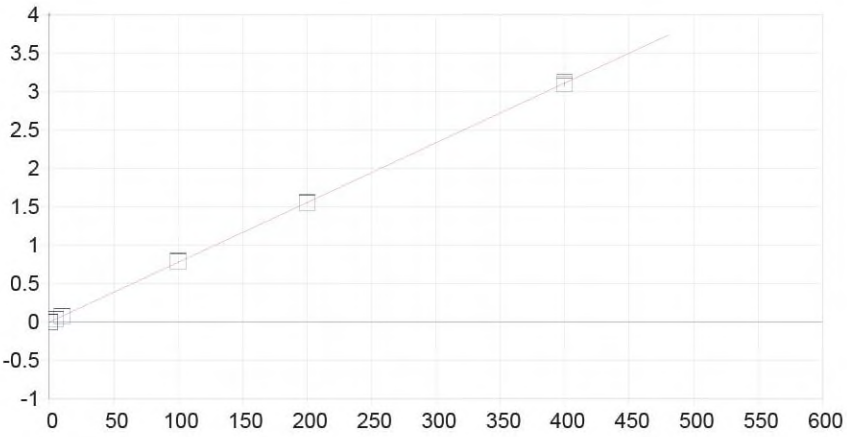


Li 670.784 { 50}

Date of Fit:	9/6/2023 11:02:25	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001057	Re-Slope:	1.000000
A1 (Gain):	0.295086	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999700	Status:	OK.
Std Error of Est:	0.000141		
Predicted MDL:	0.001984		
Predicted MQL:	0.006614		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00000	.000	.000	.00106	.001	1
STD1 35069	.25000	.23980	-.010	-4.08	.07194	.000	1
STD2 35280	.50000	.47155	-.028	-5.69	.14045	.001	1
STD3 35650	5.0000	4.8239	-.176	-3.52	1.4270	.002	1
STD4 35745	10.000	9.8111	-.189	-1.89	2.9011	.006	1
STD5 35635	20.000	20.410	.410	2.05	6.0337	.052	1
STD0.1 3519	.02500	.02031	-.005	-18.8	.00706	.000	1
STD0.03 351	.00800	.00609	-.002	-23.8	.00286	.000	1

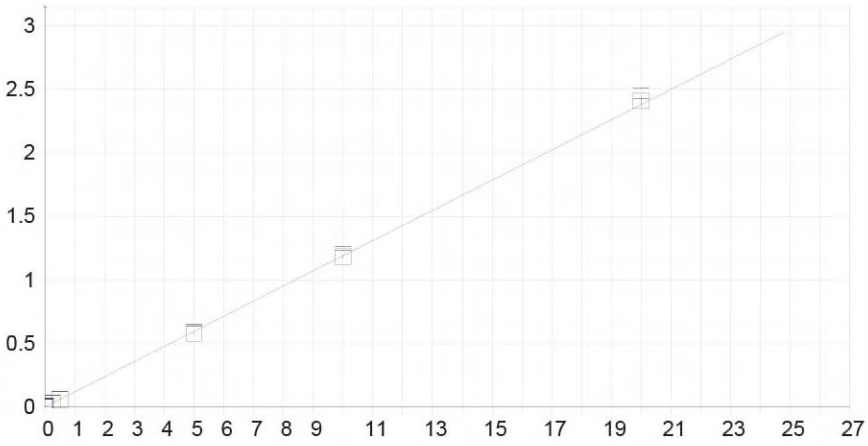


Mg 279.079 {121}

Date of Fit:	9/6/2023 11:02:25	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000658	Re-Slope:	1.000000
A1 (Gain):	0.007780	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999961	Status:	OK.
Std Error of Est:	0.000027		
Predicted MDL:	0.030370		
Predicted MQL:	0.101234		

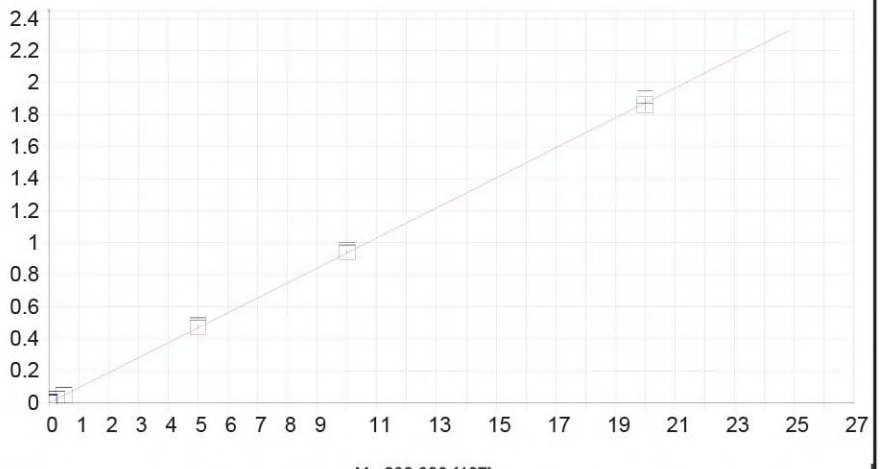
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00002	.000	.000	.00066	.001	1
STD1 35069	5.0000	5.2366	.237	4.73	.04140	.000	1
STD2 35280	10.000	10.319	.319	3.19	.08094	.000	1
STD3 35650	100.00	101.44	1.44	1.44	.78994	.003	1
STD4 35745	200.00	199.50	-.502	-.251	1.5528	.003	1
STD5 35635	400.00	398.55	-1.45	-.363	3.1015	.029	1
STD0.1 3519	.50000	.48878	-.011	-2.24	.00446	.000	1
STD0.03 351	.16000	.12653	-.033	-20.9	.00164	.000	1



Mn 257.610 {131}

Date of Fit:	9/6/2023 11:02:25	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000590		Re-Slope:	1.000000	
A1 (Gain):	0.119038		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999875		Status:	OK.	
Std Error of Est:	0.000037				
Predicted MDL:	0.000836				
Predicted MQL:	0.002785				

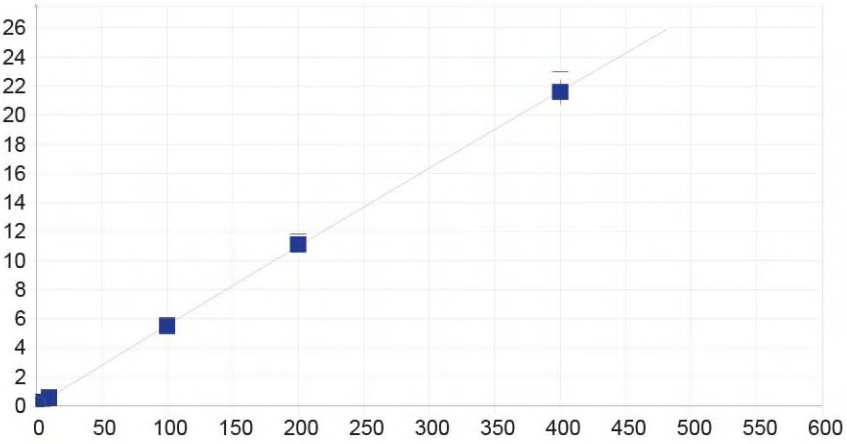
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00000	.000	.000	.00059	.001	1
STD1 35069	.25000	.24542	-.005	-1.83	.02980	.000	1
STD2 35280	.50000	.47744	-.023	-4.51	.05742	.001	1
STD3 35650	5.0000	4.8610	-.139	-2.78	.57924	.008	1
STD4 35745	10.000	9.9345	-.065	-.655	1.1832	.015	1
STD5 35635	20.000	20.236	.236	1.18	2.4095	.040	1
STD0.1 3519	.02500	.02222	-.003	-11.1	.00324	.000	1
STD0.03 351	.00800	.00610	-.002	-23.8	.00132	.000	1



Mo 202.030 {467}

Date of Fit:	9/6/2023 11:02:25	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000439		Re-Slope:	1.000000	
A1 (Gain):	0.093625		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999959		Status:	OK.	
Std Error of Est:	0.000017				
Predicted MDL:	0.000410				
Predicted MQL:	0.001365				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00000	.000	.000	.00044	.000	1
STD1 35069	.25000	.25235	.002	.940	.02407	.000	1
STD2 35280	.50000	.49448	-.006	-1.10	.04673	.000	1
STD3 35650	5.0000	5.0852	.085	1.70	.47653	.008	1
STD4 35745	10.000	10.051	.051	.511	.94147	.009	1
STD5 35635	20.000	19.870	-.130	-.652	1.8607	.039	1
STD0.1 3519	.02500	.02346	-.002	-6.15	.00264	.000	1
STD0.03 351	.00800	.00677	-.001	-15.4	.00107	.000	1

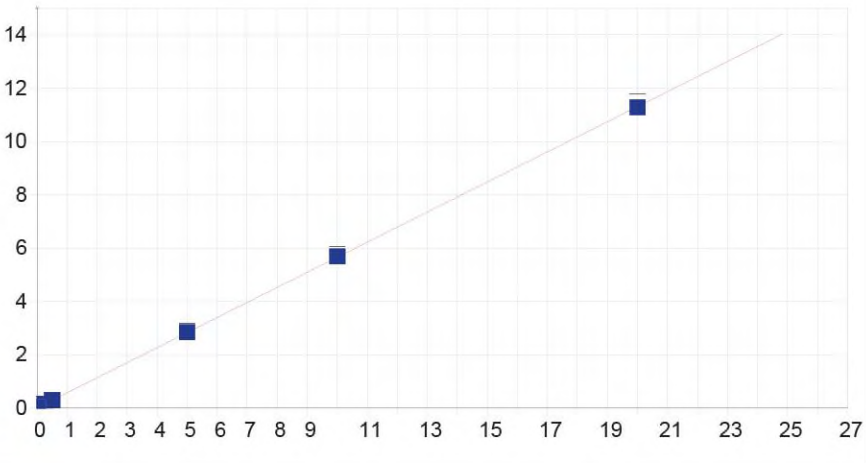


Na 589.592 { 57}

Date of Fit:	9/6/2023 11:02:25	Type of Fit:	Curvilinear	Weighting:	1/Conc

A0 (Offset):	0.006556	Re-Slope:	1.000000
A1 (Gain):	0.055685	Y-int:	0.000000
A2 (Curvature):	-0.000004		
n (Exponent):	1.000000		
Correlation:	0.999948	Status:	OK.
Std Error of Est:	0.000239		
Predicted MDL:	0.012809		
Predicted MQL:	0.042696		

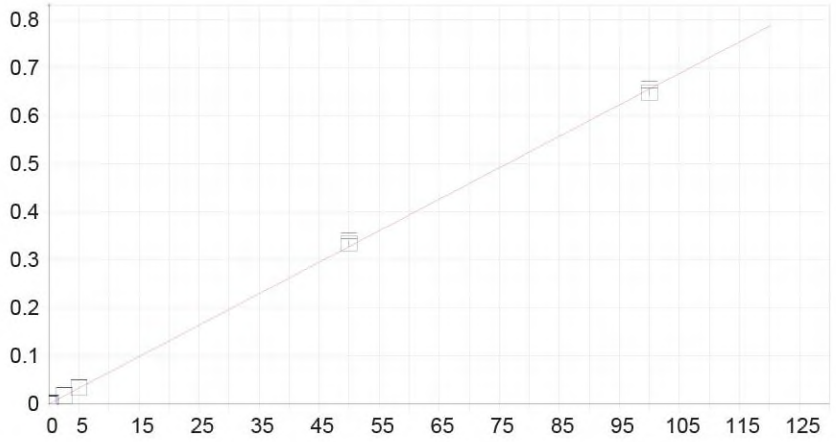
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00009	.000	.000	.00656	.005	1
STD1 35069	5.0000	4.8702	-.130	-2.60	.27791	.004	1
STD2 35280	10.000	9.7606	-.239	-2.39	.55020	.006	1
STD3 35650	100.00	99.141	-.859	-.859	5.4935	.064	1
STD4 35745	200.00	202.30	2.30	1.15	11.121	.169	1
STD5 35635	400.00	399.05	-.953	-.238	21.620	.847	1
STD0.1 3519	.50000	.43486	-.065	-13.0	.03080	.002	1
STD0.03 351	.16000	.10348	-.057	-35.3	.01233	.001	1



Ni 231.604 {446}

Date of Fit:	9/6/2023 11:02:25	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.002959		Re-Slope:	1.000000	
A1 (Gain):	0.565079		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999982		Status:	OK.	
Std Error of Est:	0.000066				
Predicted MDL:	0.000557				
Predicted MQL:	0.001857				

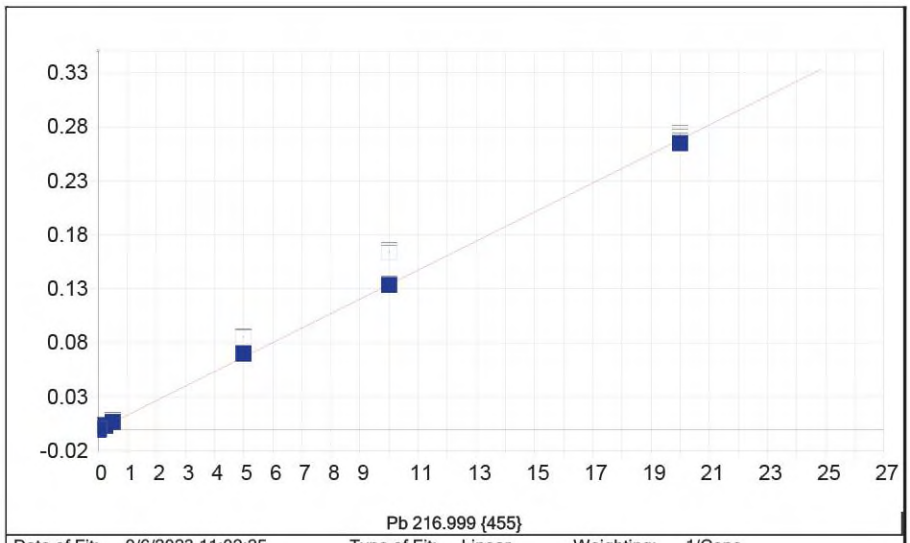
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00000	.000	.000	.00296	.001	1
STD1 35069	.25000	.24700	-.003	-1.20	.14258	.001	1
STD2 35280	.50000	.48455	-.015	-3.09	.27687	.001	1
STD3 35650	5.0000	5.0178	.018	.356	2.8394	.049	1
STD4 35745	10.000	10.054	.054	.543	5.6864	.068	1
STD5 35635	20.000	19.949	-.051	-.254	11.280	.209	1
STD0.1 3519	.02500	.02327	-.002	-6.93	.01611	.000	1
STD0.03 351	.00800	.00687	-.001	-14.1	.00684	.001	1



P 178.284 {489}

Date of Fit:	9/6/2023 11:02:25	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000186		Re-Slope:	1.000000	
A1 (Gain):	0.006557		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999888		Status:	OK.	
Std Error of Est:	0.000013				
Predicted MDL:	0.004253				
Predicted MQL:	0.014177				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00001	.000	.000	.00019	.000	1
STD1 35069	2.5000	2.5752	.075	3.01	.01707	.000	1
STD2 35280	5.0000	5.0727	.073	1.45	.03345	.000	1
STD3 35650	50.000	50.958	.958	1.92	.33431	.006	1
STD4 35745	100.00	98.914	-1.09	-1.09	.64876	.007	1
STD0.1 3519	.25000	.24130	-.009	-3.48	.00177	.000	1
STD0.03 351	.08000	.06929	-.011	-13.4	.00064	.000	1

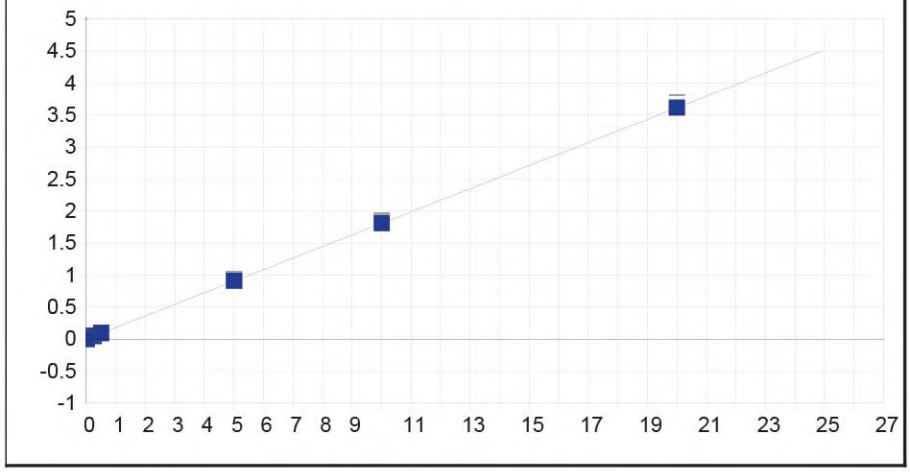


Pb 216.999 {455}

Date of Fit:	9/6/2023 11:02:25	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000253	Re-Slope:	1.000000
A1 (Gain):	0.013421	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999743	Status:	OK.
Std Error of Est:	0.000007		
Predicted MDL:	0.007213		
Predicted MQL:	0.024044		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00001	.000	.000	-.00025	.000	1
STD1 35069	.25000	.25134	.001	.536	.00389	.000	1
STD2 35280	.50000	.51669	.017	3.34	.00823	.000	1
STD3 35650	5.0000	5.2324	.232	4.65	.08541	.001	1
STD4 35745	10.000	9.9689	-.031	-.311	.16441	.001	1
STD5 35635	20.000	19.751	-.249	-1.24	.27198	.002	1
STD0.1 3519	.02500	.02147	-.004	-14.1	.00011	.000	1
STD0.03 351	.00800	-.00004	-.008	-101.	-.00023	.000	1

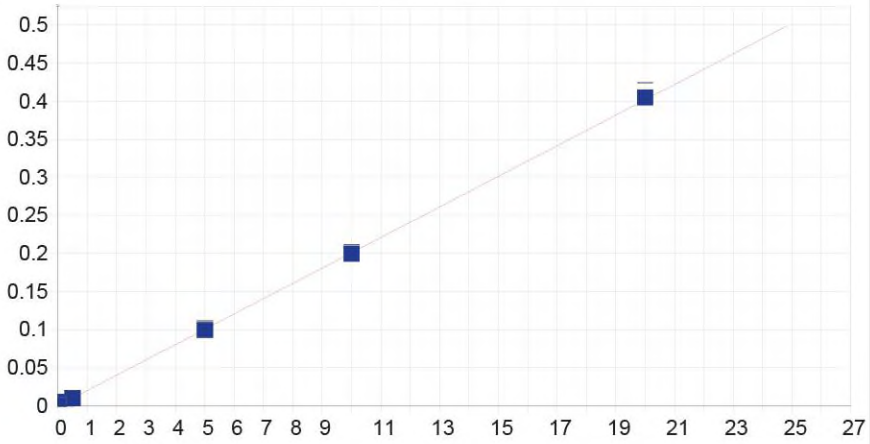


Pb 220.353 {453}

Date of Fit:	9/6/2023 11:02:25	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000758	Re-Slope:	1.000000
A1 (Gain):	0.180751	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999984	Status:	OK.
Std Error of Est:	0.000020		
Predicted MDL:	0.001870		
Predicted MQL:	0.006232		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00000	.000	.000	-.00076	.000	1
STD1 35069	.25000	.24810	-.002	-.761	.04476	.000	1
STD2 35280	.50000	.48517	-.015	-2.97	.08828	.001	1
STD3 35650	5.0000	5.0207	.021	.413	.92021	.016	1
STD4 35745	10.000	10.002	.002	.023	1.8341	.022	1
STD5 35635	20.000	19.998	-.002	-.009	3.6318	.070	1
STD0.1 3519	.02500	.02141	-.004	-14.4	.00318	.000	1
STD0.03 351	.00800	.00707	-.001	-11.6	.00054	.000	1



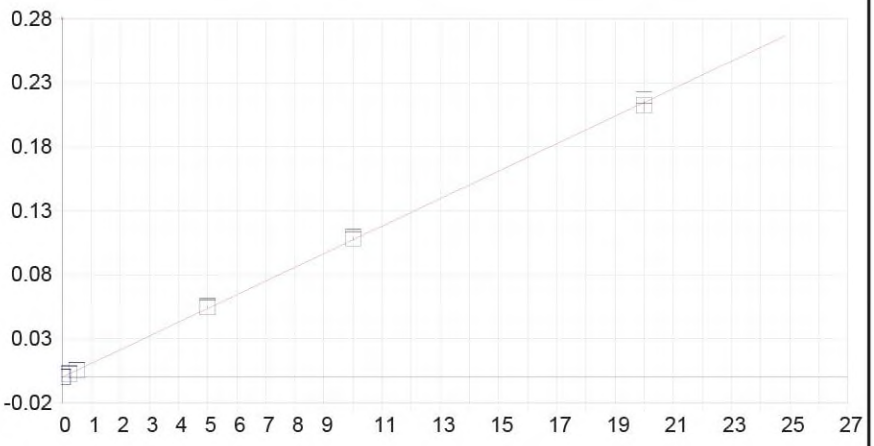
Sb 206.833 {463}

Date of Fit:	9/6/2023 11:02:25	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000119	Re-Slope:	1.000000
A1 (Gain):	0.020087	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999942	Status:	OK.
Std Error of Est:	0.000004		
Predicted MDL:	0.002782		
Predicted MQL:	0.009273		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00000	.000	.000	.00012	.000	1
STD1 35069	.25000	.24173	-.008	-3.31	.00499	.000	1
STD2 35280	.50000	.47433	-.026	-5.13	.00969	.000	1
STD3 35650	5.0000	4.9547	-.045	-.905	.10004	.002	1
STD4 35745	10.000	9.9250	-.075	-.750	.20027	.002	1
STD5 35635	20.000	20.157	.157	.786	.40660	.008	1
STD0.1 3519	.02500	.02365	-.001	-5.41	.00060	.000	1

STD0.03 351	.00800	.00646	-.002	-19.2	.00025	.000	1

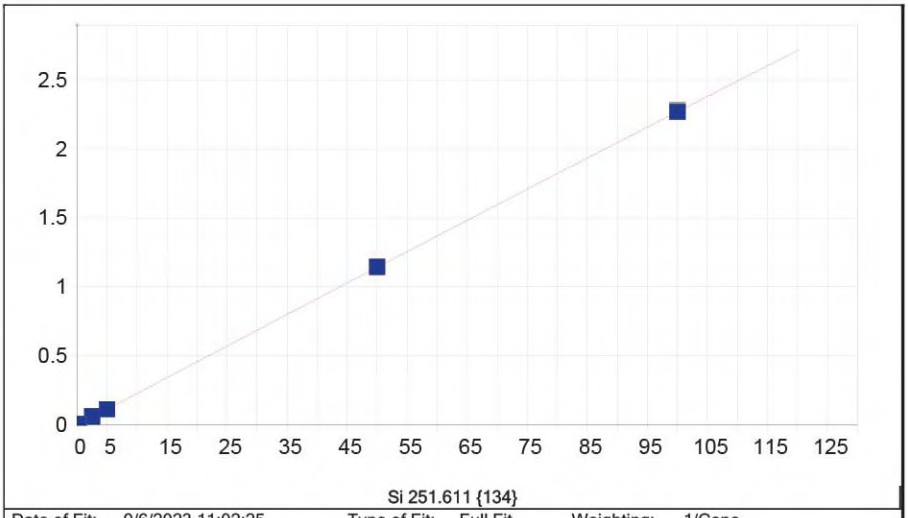


Se 196.090 {472}

Date of Fit:	9/6/2023 11:02:25	Type of Fit:	Linear
Weighting:	1/Conc		

A0 (Offset):	0.000011	Re-Slope:	1.000000
A1 (Gain):	0.010733	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999894	Status:	OK.
Std Error of Est:	0.000003		
Predicted MDL:	0.004096		
Predicted MQL:	0.013653		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00000	-.000	.000	.00001	.000	1
STD1 35069	.25000	.24873	-.001	-.507	.00268	.000	1
STD2 35280	.50000	.49310	-.007	-1.38	.00530	.000	1
STD3 35650	5.0000	5.1148	.115	2.30	.05491	.001	1
STD4 35745	10.000	10.111	.111	1.11	.10854	.001	1
STD5 35635	20.000	19.776	-.224	-1.12	.21228	.005	1
STD0.1 3519	.02500	.02901	.004	16.1	.00032	.000	1
STD0.03 351	.00800	.00991	.002	23.9	.00012	.000	1

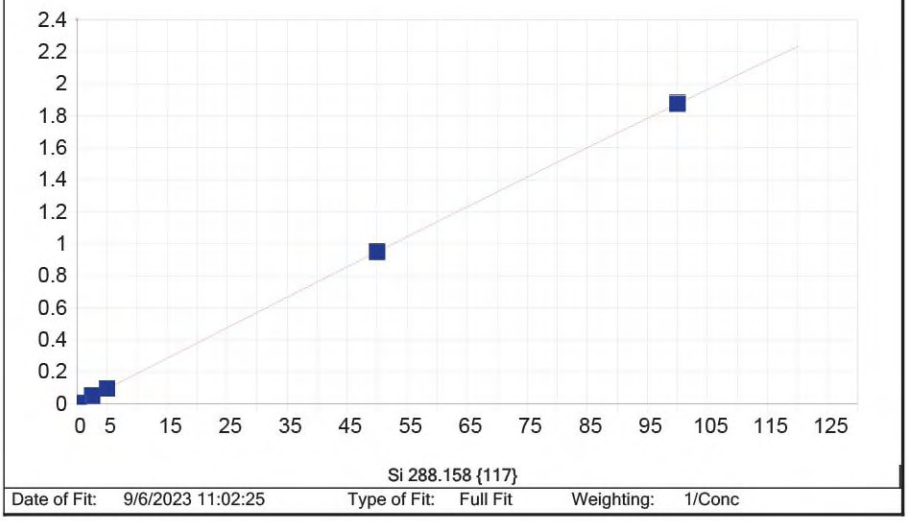


Si 251.611 {134}

Date of Fit:	9/6/2023 11:02:25	Type of Fit:	Full Fit	Weighting:	1/Conc

A0 (Offset):	0.001768	Re-Slope:	1.000000
A1 (Gain):	0.022240	Y-int:	0.000000
A2 (Curvature):	-0.000005		
n (Exponent):	1.010000		
Correlation:	0.999950	Status:	OK.
Std Error of Est:	0.000039		
Predicted MDL:	0.009169		
Predicted MQL:	0.030562		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00004	.000	.000	.00177	.001	1
STD1 35069	2.5000	2.5940	.094	3.76	.06003	.000	1
STD2 35280	5.0000	4.9314	-.069	-1.37	.11319	.000	1
STD3 35650	50.000	50.030	.030	.059	1.1454	.003	1
STD4 35745	100.00	99.986	-.014	-.014	2.2732	.007	1
STD0.1 3519	.25000	.23657	-.013	-5.37	.00696	.001	1
STD0.03 351	.08000	.04974	-.030	-37.8	.00284	.000	1

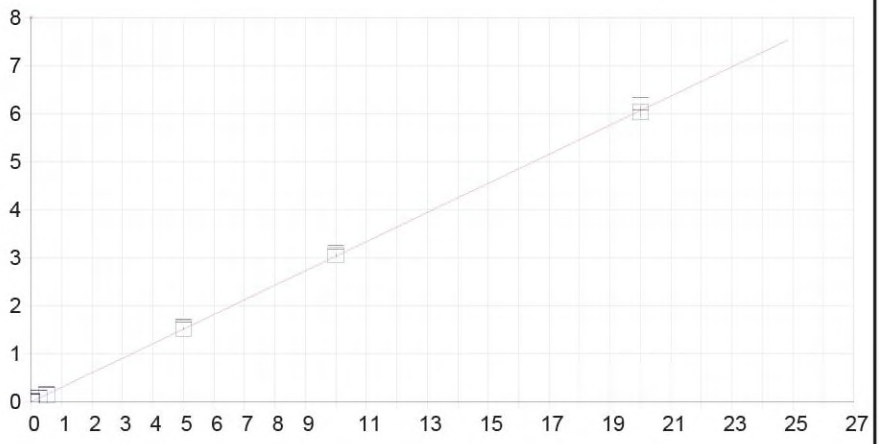


Si 288.158 {117}

Date of Fit:	9/6/2023 11:02:25	Type of Fit:	Full Fit	Weighting:	1/Conc

A0 (Offset):	0.002180	Re-Slope:	1.000000
A1 (Gain):	0.017977	Y-int:	0.000000
A2 (Curvature):	-0.000008		
n (Exponent):	1.020000		
Correlation:	0.999960	Status:	OK.
Std Error of Est:	0.000029		
Predicted MDL:	0.019140		
Predicted MQL:	0.063799		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00003	.000	.000	.00218	.001	1
STD1 35069	2.5000	2.6269	.127	5.08	.05032	.000	1
STD2 35280	5.0000	4.9878	-.012	-.244	.09466	.000	1
STD3 35650	50.000	49.851	-.149	-.299	.94825	.003	1
STD4 35745	100.00	100.07	.073	.073	1.8774	.006	1
STD0.1 3519	.25000	.23686	-.013	-5.26	.00632	.000	1
STD0.03 351	.08000	.05833	-.022	-27.1	.00317	.000	1

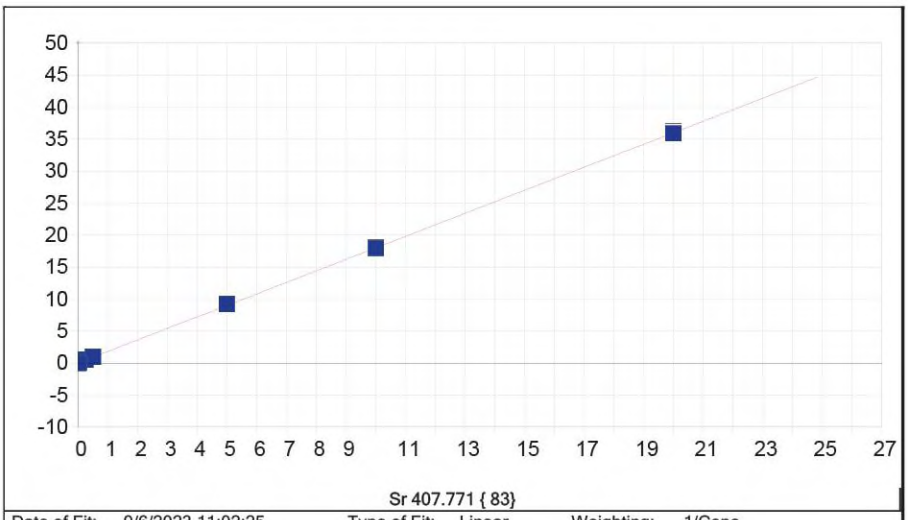


Sn 189.989 {477}

Date of Fit:	9/6/2023 11:02:25	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001114	Re-Slope:	1.000000
A1 (Gain):	0.303557	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999955	Status:	OK.
Std Error of Est:	0.000056		
Predicted MDL:	0.000564		
Predicted MQL:	0.001878		

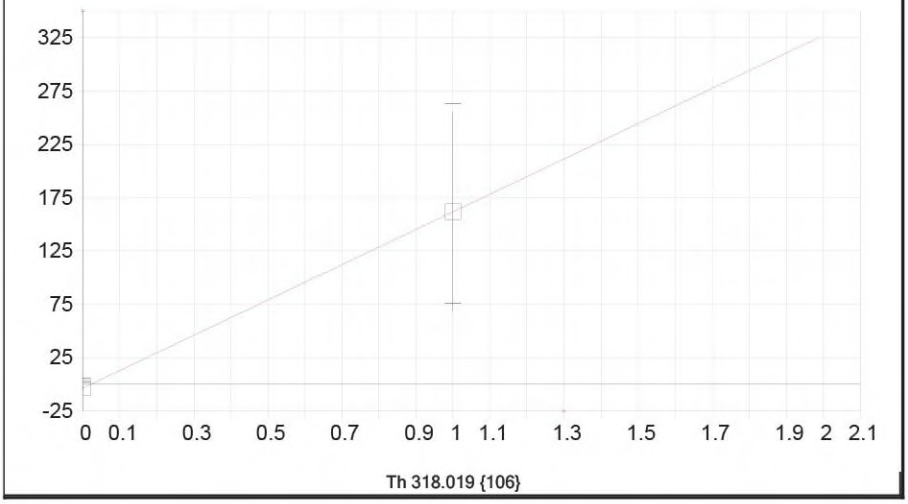
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00000	.000	.000	.00112	.000	1
STD1 35069	.25000	.24506	-.005	-1.97	.07551	.000	1
STD2 35280	.50000	.47848	-.022	-4.30	.14636	.000	1
STD3 35650	5.0000	5.0389	.039	.777	1.5307	.027	1
STD4 35745	10.000	10.086	.086	.859	3.0628	.038	1
STD5 35635	20.000	19.906	-.094	-.469	6.0438	.125	1
STD0.1 3519	.02500	.02241	-.003	-10.4	.00792	.000	1
STD0.03 351	.00800	.00604	-.002	-24.4	.00295	.000	1



Date of Fit:	9/6/2023 11:02:25	Type of Fit:	Linear	Weighting:	1/Conc

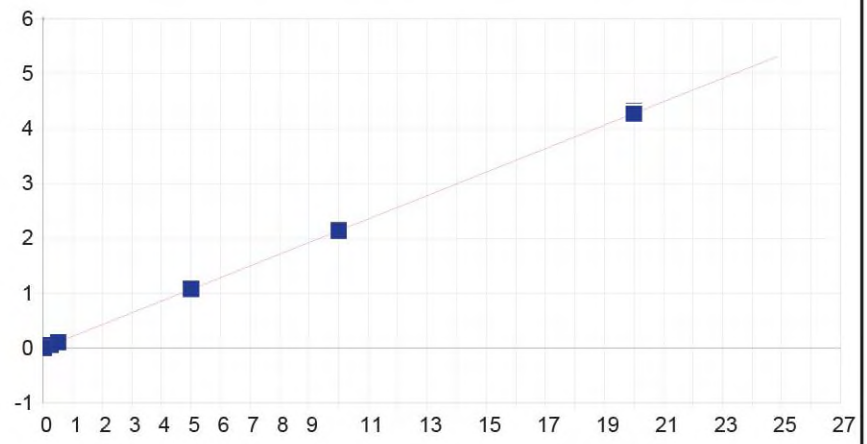
A0 (Offset):	0.005640	Re-Slope:	1.000000
A1 (Gain):	1.798636	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999965	Status:	OK.
Std Error of Est:	0.000293		
Predicted MDL:	0.000131		
Predicted MQL:	0.000436		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00000	.000	.000	.00564	.008	1
STD1 35069	.25000	.25815	.008	3.26	.47027	.001	1
STD2 35280	.50000	.50348	.003	.697	.91184	.002	1
STD3 35650	5.0000	5.0860	.086	1.72	9.1596	.017	1
STD4 35745	10.000	9.9624	-.038	-.376	17.937	.117	1
STD5 35635	20.000	19.943	-.057	-.287	35.900	.226	1
STD0.1 3519	.02500	.02412	-.001	-3.54	.04905	.002	1
STD0.03 351	.00800	.00624	-.002	-22.0	.01688	.002	1



Date of Fit:	9/6/2023 11:02:25	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	-3.629375		Re-Slope:	1.000000	
A1 (Gain):	165.385772		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	1.000000		Status:	OK.	
Std Error of Est:	0.000000				
Predicted MDL:	0.019894				
Predicted MQL:	0.066314				

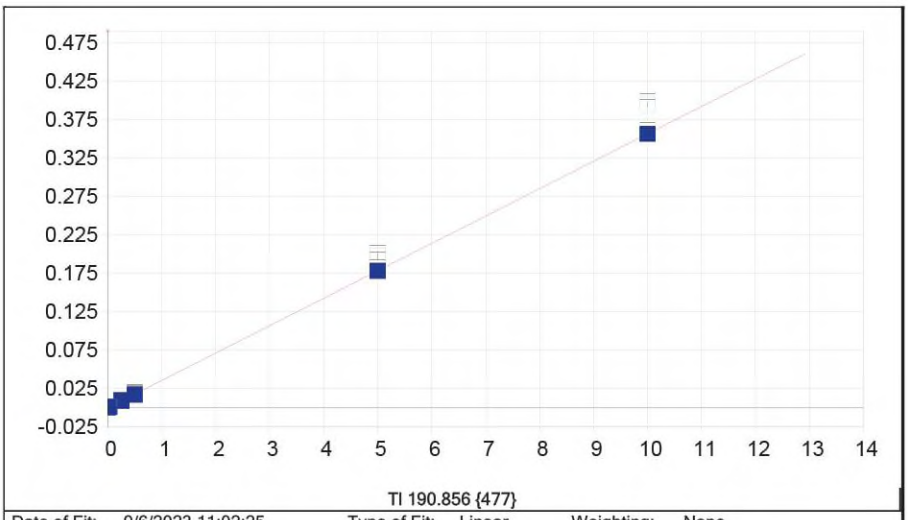
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00000	.000	.000	-3.6294	1.99	1
STD5 35635	1.0000	1.0000	.000	.000	161.76	93.7	1



Ti 334.941 {101}

Date of Fit:	9/6/2023 11:02:25	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000747		Re-Slope:	1.000000	
A1 (Gain):	0.213838		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999987		Status:	OK.	
Std Error of Est:	0.000021				
Predicted MDL:	0.001513				
Predicted MQL:	0.005045				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00000	.000	.000	.00075	.001	1
STD1 35069	.25000	.25166	.002	.662	.05458	.000	1
STD2 35280	.50000	.49626	-.004	-.748	.10690	.001	1
STD3 35650	5.0000	5.0291	.029	.582	1.0765	.004	1
STD4 35745	10.000	9.9929	-.007	-.071	2.1383	.008	1
STD5 35635	20.000	19.983	-.017	-.083	4.2753	.048	1
STD0.1 3519	.02500	.02401	-.001	-3.94	.00588	.001	1
STD0.03 351	.00800	.00573	-.002	-28.3	.00197	.000	1

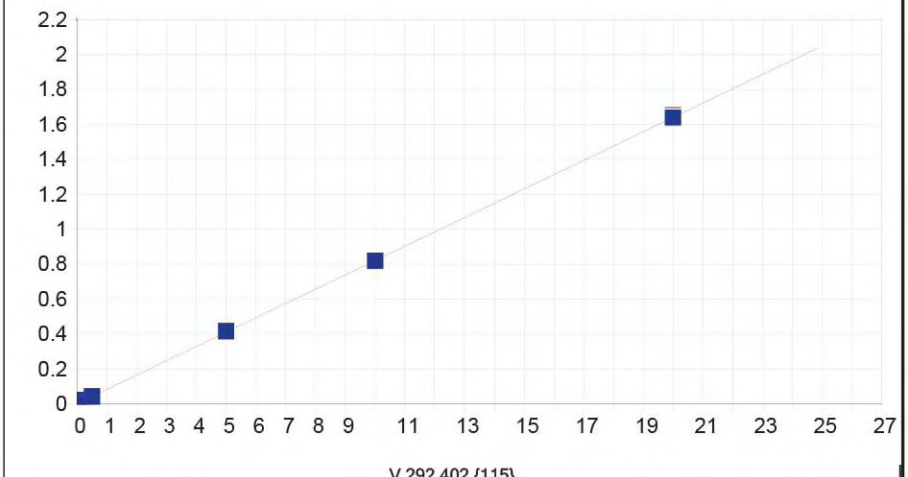


Tl 190.856 {477}

Date of Fit:	9/6/2023 11:02:25	Type of Fit:	Linear	Weighting:	None

A0 (Offset):	-0.000039	Re-Slope:	1.000000
A1 (Gain):	0.035670	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999997	Status:	OK.
Std Error of Est:	0.000408		
Predicted MDL:	0.004695		
Predicted MQL:	0.015652		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00719	.007	.000	.00022	.000	1
STD1 35069	.25000	.25035	.000	.138	.00984	.000	1
STD2 35280	.50000	.47749	-.023	-4.50	.01888	.001	1
STD3 35650	5.0000	5.0006	.001	.012	.19724	.004	1
STD4 35745	10.000	10.001	.001	.008	.39450	.004	1
STD0.1 3519	.02500	.03044	.005	21.7	.00114	.000	1
STD0.03 351	.00800	.01614	.008	102.	.00057	.000	1

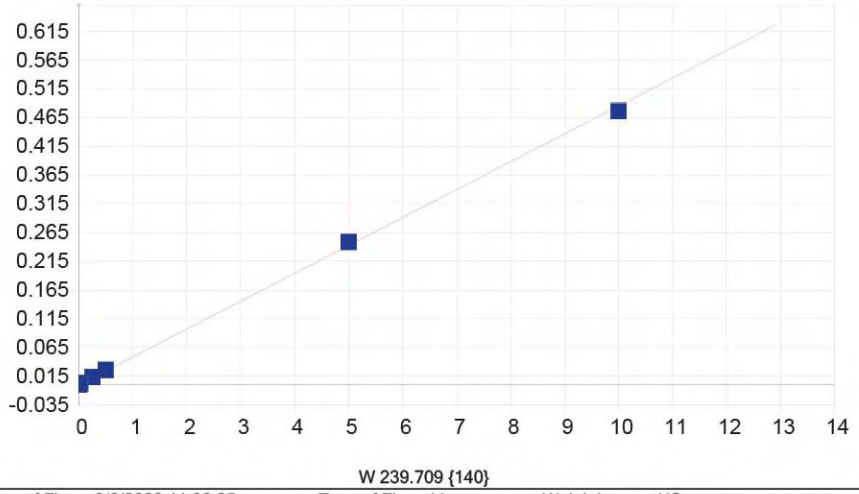


V 292.402 {115}

Date of Fit:	9/6/2023 11:02:25	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000589	Re-Slope:	1.000000
A1 (Gain):	0.082023	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999986	Status:	OK.
Std Error of Est:	0.000008		
Predicted MDL:	0.004289		
Predicted MQL:	0.014297		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00000	-.000	.000	.00059	.000	1
STD1 35069	.25000	.25507	.005	2.03	.02144	.000	1
STD2 35280	.50000	.49384	-.006	-1.23	.04096	.000	1
STD3 35650	5.0000	5.0486	.049	.971	.41329	.002	1
STD4 35745	10.000	9.9733	-.027	-.267	.81583	.002	1
STD5 35635	20.000	19.979	-.021	-.103	1.6338	.015	1
STD0.1 3519	.02500	.02363	-.001	-5.47	.00252	.000	1
STD0.03 351	.00800	.00913	.001	14.1	.00134	.000	1

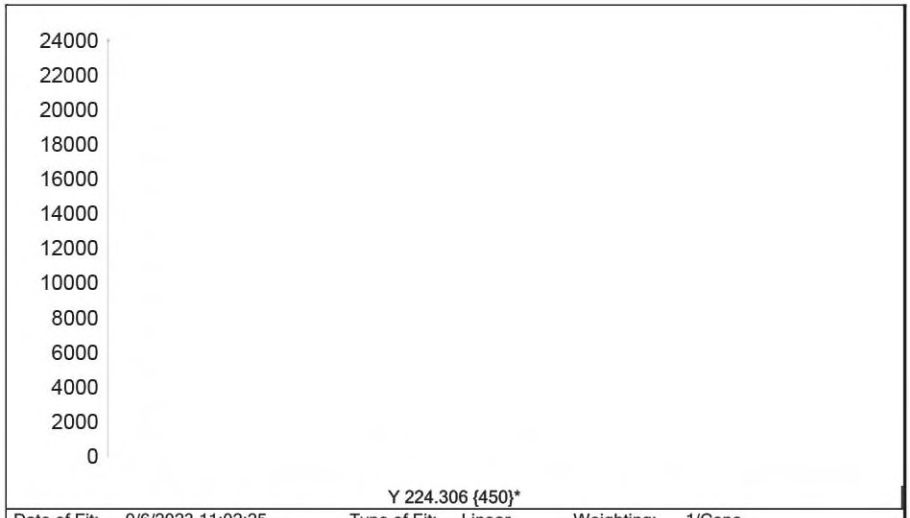


W 239.709 {140}

Date of Fit:	9/6/2023 11:02:25	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000146	Re-Slope:	1.000000
A1 (Gain):	0.048472	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998974	Status:	OK.
Std Error of Est:	0.000029		
Predicted MDL:	0.012588		
Predicted MQL:	0.041959		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	-.00002	-.000	.000	-.00015	.000	1
STD1 35069	.25000	.27036	.020	8.14	.01286	.000	1
STD2 35280	.50000	.52909	.029	5.82	.02531	.000	1
STD3 35650	5.0000	5.1194	.119	2.39	.24613	.001	1
STD4 35745	10.000	9.8052	-.195	-1.95	.47138	.003	1
STD0.1 3519	.02500	.04171	.017	66.8	.00187	.001	1
STD0.03 351	.00800	.01728	.009	116.	.00069	.000	1



Y 224.306 {450}*

Date of Fit:	9/6/2023 11:02:25	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.000000		Status:	Warning	Zero Gain
Std Error of Est:	0.000000				
Predicted MDL:	n/a				
Predicted MQL:	n/a				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00000	.000	.000	22327.	81.7	1

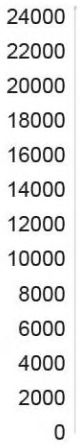


Y 360.073 { 94}*

Date of Fit:	9/6/2023 11:02:25	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.000000		Status:	Warning	Zero Gain

Std Error of Est:	0.000000
Predicted MDL:	n/a
Predicted MQL:	n/a

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00000	.000	.000	12114.	27.6	1

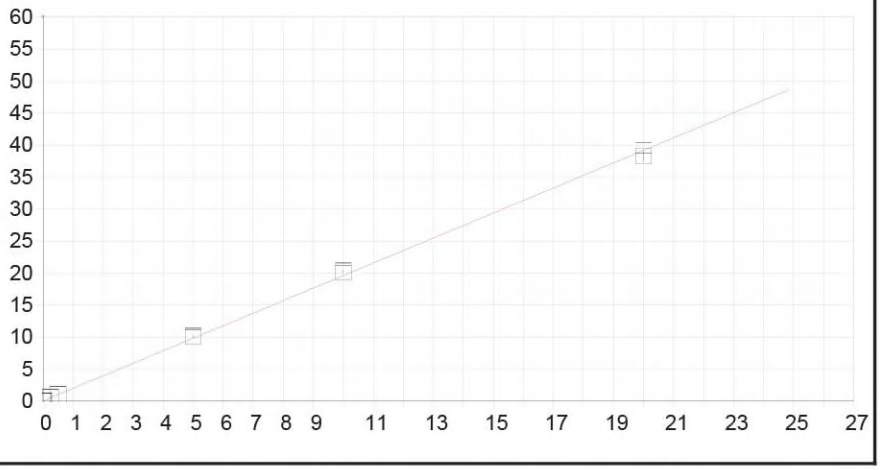


Y 377.433 { 89}*

Date of Fit:	9/6/2023 11:02:25	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.000000	Status:	Warning Zero Gain
Std Error of Est:	0.000000		
Predicted MDL:	n/a		
Predicted MQL:	n/a		

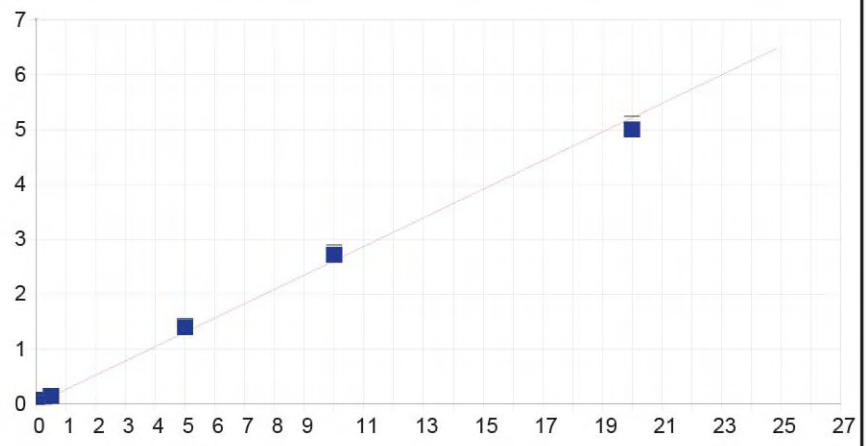
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00000	.000	.000	23277.	71.4	1



Zn 206.200 {463}

Date of Fit:	9/6/2023 11:02:25	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.011001		Re-Slope:	1.000000	
A1 (Gain):	1.957267		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999653		Status:	OK.	
Std Error of Est:	0.001007				
Predicted MDL:	0.000122				
Predicted MQL:	0.000406				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00000	.000	.000	.01101	.004	1
STD1 35069	.25000	.25193	.002	.772	.50409	.002	1
STD2 35280	.50000	.50512	.005	1.02	.99966	.002	1
STD3 35650	5.0000	5.1393	.139	2.79	10.070	.183	1
STD4 35745	10.000	10.311	.311	3.11	20.192	.260	1
STD5 35635	20.000	19.548	-.452	-2.26	38.272	.802	1
STD0.1 3519	.02500	.02195	-.003	-12.2	.05395	.001	1
STD0.03 351	.00800	.00571	-.002	-28.7	.02217	.003	1

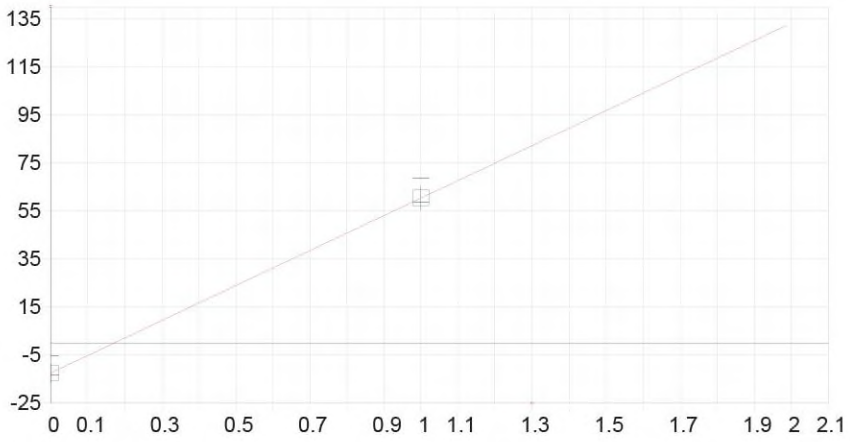


Zn 213.856 {458}

Date of Fit:	9/6/2023 11:02:25	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.001768		Re-Slope:	1.000000	
A1 (Gain):	0.260725		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.998891		Status:	OK.	
Std Error of Est:	0.000241				
Predicted MDL:	0.000161				
Predicted MQL:	0.000535				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00000	.000	.000	.00177	.001	1
STD1 35069	.25000	.27109	.021	8.44	.07279	.000	1
STD2 35280	.50000	.54733	.047	9.47	.14516	.000	1
STD3 35650	5.0000	5.3417	.342	6.83	1.4013	.022	1
STD4 35745	10.000	10.409	.409	4.09	2.7295	.030	1
STD5 35635	20.000	19.184	-.816	-4.08	5.0309	.085	1
STD0.1 3519	.02500	.02354	-.001	-5.83	.00794	.000	1

STD0.03 351	.00800	.00588	-.002	-26.5	.00331	.000	1



Date of Fit:	9/6/2023 11:02:25	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	-12.577612			Re-Slope:	1.000000
A1 (Gain):	72.882474			Y-int:	0.000000
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	1.000000		Status:	OK.	
Std Error of Est:	0.000000				
Predicted MDL:	0.072516				
Predicted MQL:	0.241720				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
ICIS 357019	.00000	.00000	.000	.000	-12.578	3.96	1
STD5 35635	1.0000	1.0000	.000	.000	60.305	5.01	1

Shipping and Receiving Documents

Eurofins Environmental Testing Northwest, LLC
5755 8th Street East
Tacoma, WA 98424

Chain of Custody Record

eurofins
Environment Testing

Client Information	Sampler: CF/CB	Lab PM: Tracy Dutton	Carrier Tracking No(s):	COC No: 1 of	
Client Contact: Christian Briggs	Phone: 231-409-0146	E-Mail: cbriggs@neiaw.com	State of Origin: WA	Page: Page 1 of 1	
Company: Liberty JV	PWSID:	**Analysis Requested**		Job #:	
Address: 9275 Sky Park Ct, Ste 100	Due Date Requested:			**Preservation Codes:** A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify); Other:	
City: San Diego	TAT Requested (days): standard				
State, Zip: CA 92123	Compliance Project: Δ Yes Δ No				
Phone: 231-409-0146	PO #: Purchase Order not required				
Email: cbriggs@neiaw.com	WO #:				
Project Name: NASWI FMR	Project #:				
Site: NASWI	SSOW#:				

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=wasteoil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Vinyl Chloride 8260DSIM	Total As, Mn 6010D	Diss As, Mn 6010D	RCRA metals 6010D + 7470A	NWTPH-Dx	NWTPH-Dx	VOCs by 8260D SIM	SVOCs by 8270E	PFAS, QSM Version 5.1, B-05	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X										X	
3-MW-2-2023	8/24/2023	1102	G	W	N	N		X	X							2	
N2-6C-2023	8/24/2023	1625	G	W	N	N		X	X							2	
N3-12-2023	8/24/2023	1340	G	W	N	Y	X	X	X							15	MS/MSD
DUP-2023	8/24/2023	1200	G	W	N	N	X	X	X							5	
EBlank-2023	8/24/2023	1436	G	W	N	N	X	X								4	
Trip Blank-20230824	—	—	—	W	N	N	X									2	
~~EBW-20230824~~	~~8/24/2023~~	1710	C	W	N					X	X	X	X	X	X		
				CB													

Therm. ID: A3 Cor: 5.3 ° Uncor: 5.3 °
Cooler Dsc: CB FedEx:
Packing: BNo UPS:
Cust. Seal: Yes X No Lab Courier
Blue Ice/ Wet, Dry, None Other: Sheet dlad.

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For Months

Deliverable Requested: I, II, III, (IV) Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by: Christian Briggs	Date/Time: 8/24/23 / 1800	Company: LB JV	Received by: Date/Time: 8/25/23 0929 Company: EETN
Relinquished by:	Date/Time:	Company	Received by: Date/Time: Company
Relinquished by:	Date/Time:	Company	Received by: Company
Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:		Cooler Temper:

580-130928 Chain of Custody

9/8/2023 4:01 PM
Ver: 01/16/2019

Login Sample Receipt Checklist

Client: Nicklaus Engineering

Job Number: 580-130928-1

Login Number: 130928
List Number: 1
Creator: Groves, Elizabeth

List Source: Eurofins Seattle

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

DATA VALIDATION

FOR

NAVAL AIR STATION
WHIDBEY ISLAND

ORGANIC AND INORGANIC ANALYSIS DATA
IN AQUEOUS SAMPLES

Laboratory Sample Delivery Group (SDG) No. 580-130928-1

Analyses Performed By:

Eurofins Environmental Testing – Seattle
Tacoma, WA

For:

Nicklaus Engineering
San Diego, CA

Data Validation By:

ddms, inc.
St. Paul, Minnesota 55102

November 8, 2023

2158-0001
Whidbey Island\Whidbey Island DV report.docx

ddms
#
#

EXECUTIVE SUMMARY

Validation of the organic (vinyl chloride) and inorganic (total and dissolved arsenic and manganese only) analyses data prepared by Eurofins Seattle in Tacoma, Washington, for four aqueous samples, one equipment blank, and one trip blank from the Whidbey Island Site, has been completed by de maximis Data Management Solutions, Inc. (ddms). Stage 4 validation was performed on the data. The data were reported by the laboratory under SDG No. 580-130928-1. The following samples were reported:

3-MW-2-2023	N2-6C-2023	N3-12-2023	DUP-2023
EBlank-2023	Trip Blank-20230824		

Based on the validation effort, all results were determined to be valid as reported by the laboratory. This report should be considered part of the data package for all future distributions of the data.

#

ddms
#
#

INTRODUCTION

Analyses for the requested parameters were performed by the laboratory according to the following analytical methods:

Analytical Parameter	Method	Laboratory
Volatile Organic Compounds (VOCs)	SW846 Method 8260C SIM	Seattle
Metals	SW846 Method 6010D	Seattle

The laboratory applies flags to results of sample analyses to denote specific information regarding the analytical results. Based on the data review, laboratory flags may be retained, removed, or replaced with validation qualifiers.

ddms' validation was performed in conformance with the ddms' Standard Operating Procedures (SOPs) for the methods followed and the requirements of the analytical methods followed. Professional judgment was applied as necessary and appropriate.

The data validation process is intended to evaluate data on a technical basis rather than a contract compliance basis for chemical analyses conducted under the CLP. This requires that the data package be presented in accordance with the CLP requirements, so that sufficient supporting documentation is available to facilitate the validation effort. It is assumed that the data package represents the best efforts of the laboratory and has already been subjected to adequate quality review prior to submission for validation.

During the validation process, laboratory data are verified against all available supporting documentation. Based on the findings of the evaluation, qualifier codes may be added by the data validator. Validated results are, therefore, either qualified or unqualified. Unqualified results mean that the reported values may be used without reservation. Final validated results are annotated with the following codes as defined by the NFG:

U The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.

J The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

J+ The result is an estimated quantity, but the result may be biased high.

J- The result is an estimated quantity, but the result may be biased low.

NJ The analyte has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the sample.

#

UJ The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

R The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

All data users should note two facts. First, the "R" qualifier means that the laboratory-reported value is unusable. In other words, due to significant quality control problems, the analysis is invalid and provides no information as to whether the analyte is present or not. Rejected values should not appear on data tables because they cannot be relied upon, even as a last resort. Second, no concentration is guaranteed to be accurate even if all associated quality control is acceptable. Strict quality control conformance serves only to increase confidence in reported results; any analytical result will always contain some error.

The data user is also cautioned that the validation effort is based on the raw data printouts as provided by the laboratory. Software manipulation cannot be routinely detected during validation; unless otherwise stated in the report, these kinds of issues are outside the scope of this review.

I. Holding Times, Preservation, and Sample Integrity

The chain of custody (COC) record documents a sample collection date of August 24, 2023. The samples were received at the Eurofins Seattle laboratory on August 25, 2023.

The temperature on receipt at the laboratory, 5.3°C, was provided in the data package and were acceptable (<6°C). All of the samples were analyzed within the method-specified holding times.

II. Documentation

The following documentation issues were observed during the validation effort:

- Duplicate and serial dilution results for arsenic and manganese were reported to one more significant figure than the initial sample result.

The remainder of this report discusses the review effort for each of the parameters. The tables below document the quality control (QC) elements reviewed for each analysis parameter. Where a quality indicator was deemed acceptable after thorough review, no further discussion is included in this report. Detailed findings are included for each quality element that impacted the usability of the reported results. Additional information or explanation is included as needed, to provide support for decisions made, based on the validator's best professional judgment.

Where a result was qualified J+ and J, or J- and J, the J qualifier takes precedence. Where a result was qualified biased high and low for differing data quality excursions, the final qualifier is J, with indeterminate bias.

ddms
# #

III. VOCs

Review Element	Acceptable?
GC/MS Instrument Tunes	Y
Calibration - IC, ICV, CC	Y
Laboratory, Trip, and Equipment Blanks	Y
Surrogates	Y
Laboratory Control Sample (LCS)/LCS duplicate (LCSD)	Y
Field* and Laboratory Duplicates	Y
Matrix Spike (MS)/Matrix Spike Duplicate (MSD)*	Y
Internal Standard Responses	Y
Compound Identification	Y
Tentatively Identified Compounds (TICs)	N/A

N/A – not applicable
* N3-12-2023

No results required qualification based on a review of the data provided.

IX. ICP Metals (Method 6010D)

Review Element	Acceptable?
Calibrations - ICs, ICVs, CCVs	Y
Laboratory and Equipment Blanks	N
Interference Check Samples	Y
Laboratory Control Samples	Y
Field and Laboratory Duplicates	Y
Matrix Spike / Post Digestion Spikes	Y
Serial Dilution Analysis	Y
Analyte Quantitation	Y
Total versus Dissolved Results Comparison	Y

A. Blanks

Initial and continuing calibration blanks were analyzed at the proper frequencies. Preparation blanks were prepared and analyzed for the 6010D metals. Neither arsenic nor manganese were detected in any of the calibration blanks or the preparation blank. Manganese was detected in the equipment blank (0.0017 mg/L). Positive results reported for manganese were greater than five-times the concentrations detected in the equipment blank; therefore, no action was necessary.

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Appendix F:
Completed Site Inspection Checklists

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Naval Facilities Engineering Systems Command

NAS Whidbey Island
Oak Harbor, WA
OU 1, Area 5: Hoffman Road Landfill

LAND USE CONTROLS (LUCs) INSPECTION CHECKLIST

DATE(S) (MM|DD|YY): 09/25/2023

INSPECTOR(S): C. Foster, J. Sandige | COMPANY: Liberty JV

LAND USE CONTROLS:
Ensure that land use remains commercial and/or industrial, which includes a prohibition on development and use of this property for residential housing, elementary and secondary schools, child-care facilities and playgrounds.
Ensure that all disturbed or excavated soils at or from the area are properly categorized and disposed of, and that workers are protected during any such disturbance or excavation.
Prevent installation of on-site drinking water wells.
Deed restrictions in future property deeds.

INSPECTION CHECKLIST

HAS SITE OR ADJACENT LAND USE CHANGED SINCE LAST INSPECTION? ☐ YES ■ NO
INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/ ☐ SECURITY CHECK ☐ OTHER

FINDINGS:
Site includes gate at entrance, but not fully fenced

IS THERE VISUAL OR ADMINISTRATIVE EVIDENCE OF EXCAVATION OR SOIL DISTURBANCE? IF SO, DETERMINE IF SITE APPROVAL PROCESS HAS BEEN FOLLOWED. ☐ YES ■ NO
INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/ ☐ SECURITY CHECK ☐ OTHER

FINDINGS:

HAS ACCESS CONTROL BEEN MAINTAINED (REFER TO SECURITY INCIDENT REPORTS)? ■ YES ☐ NO ☐ NA
IS SIGNAGE INTACT AND READABLE? ■ YES ☐ NO ☐ NA
INSPECTION PERFORMED (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/ ☐ SECURITY CHECK ☐ OTHER

FINDINGS:

ADDITIONAL COMMENTS:
West and southwest boundaries unfenced, though bordered by steep sloped and/or heavily wooded areas. Site is within compliance of assigned land use controls.

I CERTIFY THAT THE CONDITIONS OF THE AREA ON THE INSPECTION DATES(S) WERE AS REPORTED ABOVE.

INSPECTOR SIGNATURE: Foster, Chelsea (USCF715440) Digitally signed by Foster, Chelsea (USCF715440) Date: 2023.10.26 16:14:43 -07'00'

Naval Facilities Engineering Systems Command

NAS Whidbey Island
Oak Harbor, WA
OU 1, Area 6: Current (1969-1980s) Landfill

LAND USE CONTROLS (LUCs) INSPECTION CHECKLIST

DATE(S) (MM|DD|YY): 9/22/23

INSPECTOR(S): C. Foster, J. Sandige | COMPANY: Liberty JV

LAND USE CONTROLS:
Ensure that land use remains commercial and/or industrial, which includes a prohibition on development and use of this property for residential housing, elementary and secondary schools, child-care facilities and playgrounds.
No downgradient well drilling except for monitoring wells and/or remediation system wells authorized by U.S. EPA and Ecology in approved plans.
Protect existing monitoring wells.
No use of groundwater from, or downgradient of, the area except for monitoring and remediation as approved by U.S. EPA and Ecology.
Review the Island County Public Health Hydrogeology Datasystem biannually for well installation activities and/or groundwater use within the 1-mile buffer of Area 6.
Prevention of any disturbance to the landfill cap, except as necessary for authorized cap maintenance activities.
Prevent installation of on-area drinking water wells by deed restrictions in future property deeds.

INSPECTION CHECKLIST

HAS SITE OR ADJACENT LAND USE CHANGED SINCE LAST INSPECTION? ☐ YES ■ NO
INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/ _____
☐ SECURITY CHECK ☐ OTHER _____
FINDINGS:

In-progress construction of Western treatment plant upgrades

IS THERE VISUAL EVIDENCE OF UNAUTHORIZED ON-SITE OR DOWNGRADIENT WELL INSTALLATION OR GROUNDWATER USE? ☐ YES ■ NO
INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/ _____
☐ SECURITY CHECK ☐ OTHER _____
■ WELL INSPECTIONS
FINDINGS: ☐ SEE WELL INSPECTION LOGS

HAVE ANY WELL CONSTRUCTION APPLICATIONS BEEN SUBMITTED TO OR APPROVED BY ISLAND COUNTY IN AREAS DOWNGRADIENT OF THE SITE? (ISLAND COUNTY CONTACT REQUIRED) ☐ YES ■ NO
INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ☐ SITE WALK ☐ INTERVIEW W/ _____
☐ SECURITY CHECK ■ OTHER well database
■ WELL INSPECTIONS
FINDINGS: ☐ SEE WELL INSPECTION LOGS

ARE ALL MONITORING WELLS IN GOOD CONDITION AND ACCESSIBLE? (REFER TO COMPLETED MONITORING WELL INSPECTION CHECKLISTS OR ANNUAL ON-SITE INSPECTIONS) ■ YES ☐ NO
INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/ _____
☐ SECURITY CHECK ☐ OTHER _____
■ WELL INSPECTIONS
FINDINGS: ■ SEE WELL INSPECTION LOGS

Some maintenance recommended

NAS Whidbey Island, Oak Harbor, WA **OU 1, Area 6: Current (1969-1980s) Landfill**

IS THERE VISUAL OR ADMINISTRATIVE EVIDENCE OF EXCAVATION OR SOIL DISTURBANCE? IF SO, DETERMINE IF SITE APPROVAL PROCESS HAS BEEN FOLLOWED. ■ YES ☐ NO

INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/
☐ SECURITY CHECK ☐ OTHER

FINDINGS:

Excavation associated with construction activities for treatment plant upgrades.

IS THERE VISUAL OR ADMINISTRATIVE EVIDENCE THAT THE LNDFILL CAP INTEGRITY HAS BEEN COMPROMISED? ☐ YES ■ NO

INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/ _____
☐ SECURITY CHECK ☐ OTHER _____

FINDINGS:

HAS ACCESS CONTROL BEEN MAINTAINED (REFER TO SECURITY INCIDENT REPORTS)? ■ YES ☐ NO ☐ NA

IS SIGNAGE INTACT AND READABLE? ■ YES ☐ NO ■ NA

INSPECTION PERFORMED (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/
■ SECURITY CHECK ☐ OTHER

FINDINGS:

Site is surrounded by a fence with a locked gate that is only open when workers are present on-site. Signage is not a land use control in this area but signs are present at some locations around the site.

ADDITIONAL COMMENTS:

Site is within compliance of assigned land use controls.

I CERTIFY THAT THE CONDITIONS OF THE AREA ON THE INSPECTION DATES(S) WERE AS REPORTED ABOVE.

INSPECTOR SIGNATURE: Foster, Chelsea (USCF715440)

Digitally signed by Foster, Chelsea (USCF715440)
Date: 2023.10.26 16:15:24 -07'00'

Naval Facilities Engineering Systems Command

NAS Whidbey Island
Oak Harbor, WA
OU 2, Area 2: Western Highlands Landfill

LAND USE CONTROLS (LUCs) INSPECTION CHECKLIST

DATE(S) (MM|DD|YY): 09/20/23

INSPECTOR(S): C. Foster, J. Sandige | COMPANY: Liberty JV

LAND USE CONTROLS:

Ensure that land use remains commercial and/or industrial, which includes a prohibition on development and use of this property for residential housing, elementary and secondary schools, child-care facilities, and playgrounds.
No use of groundwater from, or downgradient of, the area except for monitoring and remediation, except as approved by U.S. EPA and Ecology.
No downgradient well drilling except for monitoring wells and/or remediation system wells authorized by U.S. EPA and Ecology in approved plans.
Protect existing monitoring wells.
Use restrictions to prevent ground disturbance via digging and/or construction activities in the area of former construction debris landfill.
Possible deed restrictions in future property deeds.

INSPECTION CHECKLIST

HAS SITE OR ADJACENT LAND USE CHANGED SINCE LAST INSPECTION? ☐ YES ■ NO
INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/ ____
☐ SECURITY CHECK ☐ OTHER ____
FINDINGS:

IS THERE VISUAL EVIDENCE OF UNAUTHORIZED ON-SITE OR DOWNGRADIENT WELL INSTALLATION OR GROUNDWATER USE? ☐ YES ■ NO
INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/ ____
☐ SECURITY CHECK ☐ OTHER ____
■ WELL INSPECTIONS
FINDINGS: ☐ SEE WELL INSPECTION LOGS

HAVE ANY WELL CONSTRUCTION APPLICATIONS BEEN SUBMITTED TO OR APPROVED BY ISLAND COUNTY IN AREAS DOWNGRADIENT OF THE SITE? (ISLAND COUNTY CONTACT REQUIRED) ☐ YES ■ NO
INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ☐ SITE WALK ☐ INTERVIEW W/ ____
☐ SECURITY CHECK ■ OTHER well database
■ WELL INSPECTIONS
FINDINGS: ☐ SEE WELL INSPECTION LOGS

ARE ALL MONITORING WELLS IN GOOD CONDITION AND ACCESSIBLE? (REFER TO COMPLETED MONITORING WELL INSPECTION CHECKLISTS OR ANNUAL ON-SITE INSPECTIONS) ■ YES ☐ NO
INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ☐ SITE WALK ☐ INTERVIEW W/ ____
☐ SECURITY CHECK ☐ OTHER ____
■ WELL INSPECTIONS
FINDINGS: ■ SEE WELL INSPECTION LOGS

IS THERE VISUAL OR ADMINISTRATIVE EVIDENCE OF EXCAVATION OR SOIL DISTURBANCE? IF SO, DETERMINE IF SITE APPROVAL PROCESS HAS BEEN FOLLOWED. ☐ YES ■ NO
INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/
☐ SECURITY CHECK ☐ OTHER
FINDINGS: Monitoring wells installed for in-progress contaminant investigation

HAS ACCESS CONTROL BEEN MAINTAINED (REFER TO SECURITY INCIDENT REPORTS)? ■ YES ☐ NO ☐ NA
IS SIGNAGE INTACT AND READABLE? ■ YES ☐ NO ☐ NA
INSPECTION PERFORMED (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/
■ SECURITY CHECK ☐ OTHER
FINDINGS:
Signage is not a land use control in this area but signs are present at some locations around the site.

I CERTIFY THAT THE CONDITIONS OF THE AREA ON THE INSPECTION DATES(S) WERE AS REPORTED ABOVE.

INSPECTOR SIGNATURE: Foster, Chelsea (USCF715440) Digitally signed by Foster, Chelsea (USCF715440) Date: 2023.10.26 16:16:38 -07'00'

Naval Facilities Engineering Systems Command

NAS Whidbey Island
Oak Harbor, WA
OU 2, Area 3: 1969-1970 Landfill

LAND USE CONTROLS (LUCs) INSPECTION CHECKLIST

DATE(S) (MM|DD|YY): 09/20/23

INSPECTOR(S): C. Foster, J. Sandige | COMPANY: Liberty JV

LAND USE CONTROLS:
Ensure that land use remains commercial and/or industrial, which includes a prohibition on development and use of this property for residential housing, elementary and secondary schools, child-care facilities, and playgrounds.
No use of groundwater from, or downgradient of, the area except for monitoring and remediation, except as approved by U.S. EPA and Ecology.
No downgradient well drilling except for monitoring wells and/or remediation system wells authorized by U.S. EPA and Ecology in approved plans.
Protect existing monitoring wells.
Use restrictions to prevent ground disturbance via digging and/or construction activities in the area of former construction debris landfill.
Possible deed restrictions in future property deeds.
Possible groundwater use restrictions if monitoring results warrant.

INSPECTION CHECKLIST

HAS SITE OR ADJACENT LAND USE CHANGED SINCE LAST INSPECTION? ☐ YES ■ NO
INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/ _____
☐ SECURITY CHECK ☐ OTHER _____
FINDINGS:

IS THERE VISUAL EVIDENCE OF UNAUTHORIZED ON-SITE OR DOWNGRADIENT WELL INSTALLATION OR GROUNDWATER USE? ☐ YES ■ NO
INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/ _____
☐ SECURITY CHECK ☐ OTHER _____
■ WELL INSPECTIONS
FINDINGS: ☐ SEE WELL INSPECTION LOGS

HAVE ANY WELL CONSTRUCTION APPLICATIONS BEEN SUBMITTED TO OR APPROVED BY ISLAND COUNTY IN AREAS DOWNGRADIENT OF THE SITE? (ISLAND COUNTY CONTACT REQUIRED) ☐ YES ■ NO
INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ☐ SITE WALK ☐ INTERVIEW W/ _____
☐ SECURITY CHECK ■ OTHER well database
☐ WELL INSPECTIONS
FINDINGS: ☐ SEE WELL INSPECTION LOGS

ARE ALL MONITORING WELLS IN GOOD CONDITION AND ACCESSIBLE? (REFER TO COMPLETED MONITORING WELL INSPECTION CHECKLISTS OR ANNUAL ON-SITE INSPECTIONS) ■ YES ☐ NO
INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/ _____
■ SECURITY CHECK ☐ OTHER _____
■ WELL INSPECTIONS
FINDINGS: Maintain paths to monitoring wells ■ SEE WELL INSPECTION LOGS

IS THERE VISUAL OR ADMINISTRATIVE EVIDENCE OF EXCAVATION OR SOIL DISTURBANCE? IF SO, DETERMINE IF SITE APPROVAL PROCESS HAS BEEN FOLLOWED. ☐ YES ■ NO
INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/
☐ SECURITY CHECK ☐ OTHER
FINDINGS: Minor erosion on site

HAS ACCESS CONTROL BEEN MAINTAINED (REFER TO SECURITY INCIDENT REPORTS)? ■ YES ☐ NO ☐ NA
IS SIGNAGE INTACT AND READABLE? ■ YES ☐ NO ☐ NA
INSPECTION PERFORMED (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/
■ SECURITY CHECK ☐ OTHER
FINDINGS:

I CERTIFY THAT THE CONDITIONS OF THE AREA ON THE INSPECTION DATES(S) WERE AS REPORTED ABOVE.

INSPECTOR SIGNATURE: Foster, Chelsea (USCF715440) Digitally signed by Foster, Chelsea (USCF715440) Date: 2023.10.26 16:17:10 -07'00'

Naval Facilities Engineering Systems Command

NAS Whidbey Island
Oak Harbor, WA
OU 2, Area 4: Walker Barn Storage Area

LAND USE CONTROLS (LUCs) INSPECTION CHECKLIST

DATE(S) (MM|DD|YY): 09/20/23

INSPECTOR(S): C. Foster, J. Sandige | COMPANY: Liberty JV

LAND USE CONTROLS:
Ensure that land use remains commercial and/or industrial, which includes a prohibition on development and use of this property for residential housing, elementary and secondary schools, child-care facilities, and playgrounds.
No use of groundwater from, or downgradient of, the area except for monitoring and remediation, except as approved by U.S. EPA and Ecology.
No downgradient well drilling except for monitoring wells and/or remediation system wells authorized by U.S. EPA and Ecology in approved plans.
Protect existing monitoring wells.
Possible groundwater use restrictions if groundwater monitoring warrants

INSPECTION CHECKLIST

HAS SITE OR ADJACENT LAND USE CHANGED SINCE LAST INSPECTION? ☐ YES ■ NO
INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/ _____
☐ SECURITY CHECK ☐ OTHER _____
FINDINGS:

IS THERE VISUAL EVIDENCE OF UNAUTHORIZED ON-SITE OR DOWNGRADIENT WELL INSTALLATION OR GROUNDWATER USE? ☐ YES ■ NO
INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/ _____
☐ SECURITY CHECK ☐ OTHER _____
■ WELL INSPECTIONS
FINDINGS: ☐ SEE WELL INSPECTION LOGS

HAVE ANY WELL CONSTRUCTION APPLICATIONS BEEN SUBMITTED TO OR APPROVED BY ISLAND COUNTY IN AREAS DOWNGRADIENT OF THE SITE? (ISLAND COUNTY CONTACT REQUIRED) ☐ YES ■ NO
INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ☐ SITE WALK ☐ INTERVIEW W/ _____
☐ SECURITY CHECK ■ OTHER well database
■ WELL INSPECTIONS
FINDINGS: ☐ SEE WELL INSPECTION LOGS

ARE ALL MONITORING WELLS IN GOOD CONDITION AND ACCESSIBLE? (REFER TO COMPLETED MONITORING WELL INSPECTION CHECKLISTS OR ANNUAL ON-SITE INSPECTIONS) ■ YES ☐ NO
INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/ _____
☐ SECURITY CHECK ☐ OTHER _____
■ WELL INSPECTIONS
FINDINGS: ■ SEE WELL INSPECTION LOGS

Some maintenance recommended

HAS ACCESS CONTROL BEEN MAINTAINED (REFER TO SECURITY INCIDENT REPORTS)? ■ YES ☐ NO ☐ NA
IS SIGNAGE INTACT AND READABLE? ■ YES ☐ NO ☐ NA
INSPECTION PERFORMED (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/
■ SECURITY CHECK ☐ OTHER
FINDINGS:

Signage is not a land use control in this area but signs are present at some locations around the site.

ADDITIONAL COMMENTS:

Site is within compliance of assigned land use controls.

I CERTIFY THAT THE CONDITIONS OF THE AREA ON THE INSPECTION DATES(S) WERE AS REPORTED ABOVE.

INSPECTOR SIGNATURE: Foster, Chelsea (USCF715440)
Digitally signed by Foster, Chelsea (USCF715440)
Date: 2023.10.26 16:17:28 -07'00'

Naval Facilities Engineering Systems Command

NAS Whidbey Island
Oak Harbor, WA
OU 2, Area 29: Clover Valley Fire School

LAND USE CONTROLS (LUCs) INSPECTION CHECKLIST

DATE(S) (MM|DD|YY): 09/24/23

INSPECTOR(S): C. Foster, J. Sandige | COMPANY: Liberty JV

LAND USE CONTROLS:
No use of groundwater from, or downgradient of, the area except for monitoring and remediation, except as approved by U.S. EPA and Ecology.
No downgradient well drilling except for monitoring wells and/or remediation system wells authorized by U.S. EPA and Ecology in approved plans.
Protect existing monitoring wells.
Possible LUCs, if groundwater monitoring warrants

INSPECTION CHECKLIST

HAS SITE OR ADJACENT LAND USE CHANGED SINCE LAST INSPECTION? ☐ YES ■ NO
INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/ _____
☐ SECURITY CHECK ☐ OTHER _____
FINDINGS:

IS THERE VISUAL EVIDENCE OF UNAUTHORIZED ON-SITE OR DOWNGRADIENT WELL INSTALLATION OR GROUNDWATER USE? ☐ YES ■ NO
INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/ _____
☐ SECURITY CHECK ☐ OTHER _____
■ WELL INSPECTIONS
FINDINGS: ☐ SEE WELL INSPECTION LOGS

HAVE ANY WELL CONSTRUCTION APPLICATIONS BEEN SUBMITTED TO OR APPROVED BY ISLAND COUNTY IN AREAS DOWNGRADIENT OF THE SITE? (ISLAND COUNTY CONTACT REQUIRED) ☐ YES ■ NO
INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ☐ SITE WALK ☐ INTERVIEW W/ _____
☐ SECURITY CHECK ■ OTHER _____
■ WELL INSPECTIONS
FINDINGS: ■ SEE WELL INSPECTION LOGS well databse

ARE ALL MONITORING WELLS IN GOOD CONDITION AND ACCESSIBLE? (REFER TO COMPLETED MONITORING WELL INSPECTION CHECKLISTS OR ANNUAL ON-SITE INSPECTIONS) ■ YES ☐ NO
INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/ _____
☐ SECURITY CHECK ☐ OTHER _____
■ WELL INSPECTIONS
FINDINGS: ☐ SEE WELL INSPECTION LOGS

IS THERE VISUAL OR ADMINISTRATIVE EVIDENCE OF EXCAVATION OR SOIL DISTURBANCE? IF SO, DETERMINE IF SITE APPROVAL PROCESS HAS BEEN FOLLOWED. ☐ YES ■ NO
INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/
☐ SECURITY CHECK ☐ OTHER
FINDINGS:
Surficial erosional impacts

HAS ACCESS CONTROL BEEN MAINTAINED (REFER TO SECURITY INCIDENT REPORTS)? ■ YES ☐ NO ☐ NA
IS SIGNAGE INTACT AND READABLE? ☐ YES ■ NO ☐ NA
INSPECTION PERFORMED (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/
■ SECURITY CHECK ☐ OTHER
FINDINGS:
Signage faded and obscured

I CERTIFY THAT THE CONDITIONS OF THE AREA ON THE INSPECTION DATES(S) WERE AS REPORTED ABOVE.

INSPECTOR SIGNATURE: Foster, Chelsea (USCF715440)
Digitally signed by Foster, Chelsea (USCF715440)
Date: 2023.10.26 16:17:56 -07'00'

Naval Facilities Engineering Systems Command

NAS Whidbey Island
Oak Harbor, WA
OU 3, Area 16: Runway Ditches

LAND USE CONTROLS (LUCs) INSPECTION CHECKLIST

DATE(S) (MM|DD|YY): 09/26-27/2023

INSPECTOR(S): C. Foster, J. Sandige | COMPANY: Liberty JV

LAND USE CONTROLS:
Ensure that land use remains commercial and/or industrial, which includes a prohibition on development and use of this property for residential housing, elementary and secondary schools, child-care facilities, and playgrounds.
Limit adjoining ditch banks to disposal of dredged sediments meeting MTCA Industrial Soils criteria and/or industrial use.
Deed restrictions for industrial use.

INSPECTION CHECKLIST

HAS SITE OR ADJACENT LAND USE CHANGED SINCE LAST INSPECTION? ☐ YES ■ NO

INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/ ☐ SECURITY CHECK ☐ OTHER

FINDINGS:

HAS ACCESS CONTROL BEEN MAINTAINED (REFER TO SECURITY INCIDENT REPORTS)? ■ YES ☐ NO ☐ NA

IS SIGNAGE INTACT AND READABLE? ☐ YES ☐ NO ■ NA

INSPECTION PERFORMED (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/ ■ SECURITY CHECK ☐ OTHER

FINDINGS:

Airfield is secured by key card access gates, fully fenced, and patrolled.

ADDITIONAL COMMENTS:

I CERTIFY THAT THE CONDITIONS OF THE AREA ON THE INSPECTION DATES(S) WERE AS REPORTED ABOVE.

INSPECTOR SIGNATURE: Foster, Chelsea (USCF715440)
Digitally signed by Foster, Chelsea (USCF715440)
Date: 2023.10.26 16:18:11 -07'00'

Naval Facilities Engineering Systems Command

NAS Whidbey Island
Oak Harbor, WA
OU 4, Areas 48/49: Seaplane Base Landfill

LAND USE CONTROLS (LUCs) INSPECTION CHECKLIST

DATE(S) (MM|DD|YY): 09/21/23

INSPECTOR(S): C. Foster, J. Sandige | COMPANY: Liberty JV

LAND USE CONTROLS:
Ensure that land use remains commercial and/or industrial, which includes a prohibition on development and use of this property for residential housing, elementary and secondary schools, child-care facilities and playgrounds.
Use restrictions to prevent ground disturbance via excavation or other ground disturbing activities in the area of former construction debris landfill.

INSPECTION CHECKLIST

HAS SITE OR ADJACENT LAND USE CHANGED SINCE LAST INSPECTION? ☐ YES ■ NO
INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/
☐ SECURITY CHECK ☐ OTHER

FINDINGS:

IS THERE VISUAL OR ADMINISTRATIVE EVIDENCE OF EXCAVATION OR SOIL DISTURBANCE? IF SO, DETERMINE IF SITE APPROVAL PROCESS HAS BEEN FOLLOWED. ■ YES ☐ NO
INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/
☐ SECURITY CHECK ☐ OTHER

FINDINGS:
Increasing erosion along shoreline

HAS ACCESS CONTROL BEEN MAINTAINED (REFER TO SECURITY INCIDENT REPORTS)? ■ YES ☐ NO ☐ NA
IS SIGNAGE INTACT AND READABLE? ☐ YES ■ NO ☐ NA
INSPECTION PERFORMED (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/
■ SECURITY CHECK ☐ OTHER

FINDINGS:
Multiple faded signs

ADDITIONAL COMMENTS:
Site is within compliance of assigned land use controls. Shoreline erosion is occurring at the site. Signage is not required but is present on site.

I CERTIFY THAT THE CONDITIONS OF THE AREA ON THE INSPECTION DATES(S) WERE AS REPORTED ABOVE.

INSPECTOR SIGNATURE: Foster, Chelsea (USCF715440)
Digitally signed by Foster, Chelsea (USCF715440)
Date: 2023.10.26 16:18:34 -07'00'

Naval Facilities Engineering Systems Command

NAS Whidbey Island
Oak Harbor, WA
OU 5, Area 1: Former Beach Landfill

LAND USE CONTROLS (LUCs) INSPECTION CHECKLIST

DATE(S) (MM|DD|YY): 09/20/23

INSPECTOR(S): C. Foster, J. Sandige | COMPANY: Liberty JV

LAND USE CONTROLS:
Ensure that land use remains commercial and/or industrial, which includes a prohibition on development and use of this property for residential housing, elementary and secondary schools, child-care facilities, and playgrounds.
No use of groundwater from, or downgradient of, the area except for monitoring and remediation, except as approved by U.S. EPA and Ecology.
No downgradient well drilling except for monitoring wells and/or remediation system wells authorized by U.S. EPA and Ecology in approved plans.
Protect existing monitoring wells.
Use restrictions to prevent ground disturbance via disturbance and/or construction activities in the area of former debris landfill.
Ensure that shoreline armoring is in place and functioning as intended.
Annual visual inspection of the shoreline armoring and perform repairs, if warranted.

INSPECTION CHECKLIST

HAS SITE OR ADJACENT LAND USE CHANGED SINCE LAST INSPECTION? ☐ YES ■ NO
INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/ ☐ SECURITY CHECK ☐ OTHER
FINDINGS:

IS THERE VISUAL EVIDENCE OF UNAUTHORIZED ON-SITE OR DOWNGRADIENT WELL INSTALLATION OR GROUNDWATER USE? ☐ YES ■ NO
INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/ ☐ SECURITY CHECK ☐ OTHER ■ WELL INSPECTIONS ☐ SEE WELL INSPECTION LOGS
FINDINGS:

HAVE ANY WELL CONSTRUCTION APPLICATIONS BEEN SUBMITTED TO OR APPROVED BY ISLAND COUNTY IN AREAS DOWNGRADIENT OF THE SITE? (ISLAND COUNTY CONTACT REQUIRED) ☐ YES ■ NO
INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ☐ SITE WALK ☐ INTERVIEW W/ ☐ SECURITY CHECK ■ OTHER well database ■ WELL INSPECTIONS ☐ SEE WELL INSPECTION LOGS
FINDINGS:

ARE ALL MONITORING WELLS IN GOOD CONDITION AND ACCESSIBLE? (REFER TO COMPLETED MONITORING WELL INSPECTION CHECKLISTS OR ANNUAL ON-SITE INSPECTIONS) ☐ YES ■ NO
INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/ ☐ SECURITY CHECK ☐ OTHER ■ WELL INSPECTIONS ■ SEE WELL INSPECTION LOGS
FINDINGS: rusted locks, lids, and monuments

HAS ACCESS CONTROL BEEN MAINTAINED (REFER TO SECURITY INCIDENT REPORTS)? ■ YES ☐ NO ☐ NA
IS SIGNAGE INTACT AND READABLE? ☐ YES ■ NO ☐ NA
INSPECTION PERFORMED (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/ ■ SECURITY CHECK ☐ OTHER
FINDINGS: Faded signage

ADDITIONAL COMMENTS:

Silt fences knocked down, multiple monitoring wells in need of maitenance due to rust.

I CERTIFY THAT THE CONDITIONS OF THE AREA ON THE INSPECTION DATES(S) WERE AS REPORTED ABOVE.

INSPECTOR SIGNATURE: Foster, Chelsea (USCF715440)
Digitally signed by Foster, Chelsea (USCF715440)
Date: 2023.10.26 16:19:05 -07'00'

Naval Facilities Engineering Systems Command

NAS Whidbey Island
Oak Harbor, WA
OU 5, Area 31: Former Runway Fire Training School

LAND USE CONTROLS (LUCs) INSPECTION CHECKLIST

DATE(S) (MM|DD|YY): 09/27/23

INSPECTOR(S): C. Foster, J. Sandige | COMPANY: Liberty JV

LAND USE CONTROLS:
Ensure that land use remains commercial and/or industrial, which includes a prohibition on development and use of this property for residential housing, elementary and secondary schools, child-care facilities, and playgrounds.
No use of groundwater from, or downgradient of, the area except for monitoring and remediation, except as approved by U.S. EPA and Ecology.
No downgradient well drilling except for monitoring wells and/or remediation system wells authorized by U.S. EPA and Ecology in approved plans. Protect existing monitoring wells.
Use restrictions to prevent installation of drinking water wells.
Use restrictions to prevent residential development.

INSPECTION CHECKLIST

HAS SITE OR ADJACENT LAND USE CHANGED SINCE LAST INSPECTION? ☐ YES ■ NO
INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/ _____ ☐ SECURITY CHECK ☐ OTHER _____
FINDINGS:

IS THERE VISUAL EVIDENCE OF UNAUTHORIZED ON-SITE OR DOWNGRADIENT WELL INSTALLATION OR GROUNDWATER USE? ☐ YES ■ NO
INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/ _____ ☐ SECURITY CHECK ☐ OTHER _____ ■ WELL INSPECTIONS
FINDINGS: ☐ SEE WELL INSPECTION LOGS

HAVE ANY WELL CONSTRUCTION APPLICATIONS BEEN SUBMITTED TO OR APPROVED BY ISLAND COUNTY IN AREAS DOWNGRADIENT OF THE SITE? (ISLAND COUNTY CONTACT REQUIRED) ☐ YES ■ NO
INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/ _____ ☐ SECURITY CHECK ☐ OTHER _____ ■ WELL INSPECTIONS
FINDINGS: ☐ SEE WELL INSPECTION LOGS

ARE ALL MONITORING WELLS IN GOOD CONDITION AND ACCESSIBLE? (REFER TO COMPLETED MONITORING WELL INSPECTION CHECKLISTS OR ANNUAL ON-SITE INSPECTIONS) ■ YES ☐ NO
INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/ _____ ☐ SECURITY CHECK ☐ OTHER _____ ■ WELL INSPECTIONS
FINDINGS: ☐ SEE WELL INSPECTION LOGS

HAS ACCESS CONTROL BEEN MAINTAINED (REFER TO SECURITY INCIDENT REPORTS)? ■ YES ☐ NO ☐ NA
IS SIGNAGE INTACT AND READABLE? ■ YES ☐ NO ☐ NA
INSPECTION PERFORMED (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/ ■ SECURITY CHECK ☐ OTHER
FINDINGS: Airfield is secured by key card access gates, fully fenced, and patrolled.

ADDITIONAL COMMENTS:

Site is within compliance of assigned land use controls.

I CERTIFY THAT THE CONDITIONS OF THE AREA ON THE INSPECTION DATES(S) WERE AS REPORTED ABOVE.

INSPECTOR SIGNATURE: Foster, Chelsea (USCF715440)
Digitally signed by Foster, Chelsea (USCF715440)
Date: 2023.10.26 16:20:07 -07'00'

Naval Facilities Engineering Systems Command

NAS Whidbey Island
Oak Harbor, WA
OU 5, Area 52: Jet Engine Test Cell

LAND USE CONTROLS (LUCs) INSPECTION CHECKLIST

DATE(S) (MM|DD|YY): 09/20/2023

INSPECTOR(S): C. Foster, J. Sandige | COMPANY: Liberty JV

LAND USE CONTROLS:
Ensure that land use remains commercial and/or industrial, which includes a prohibition on development and use of this property for residential housing, elementary and secondary schools, child-care facilities, and playgrounds.
No use of groundwater from, or downgradient of, the area except for monitoring and remediation, except as approved by U.S. EPA and Ecology.
No downgradient well drilling except for monitoring wells and/or remediation system wells authorized by U.S. EPA and Ecology in approved plans.
Protect existing monitoring wells.
In the event of property transfer include (future) deed covenants to restrict land use and drinking water well construction.
Use restrictions to prevent installation of drinking water wells.
Use restrictions to prevent residential development.

INSPECTION CHECKLIST

HAS SITE OR ADJACENT LAND USE CHANGED SINCE LAST INSPECTION? ☐ YES ■ NO
INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/ ☐ SECURITY CHECK ☐ OTHER
FINDINGS:

IS THERE VISUAL EVIDENCE OF UNAUTHORIZED ON-SITE OR DOWNGRADIENT WELL INSTALLATION OR GROUNDWATER USE? ☐ YES ■ NO
INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/ ☐ SECURITY CHECK ☐ OTHER ■ WELL INSPECTIONS ☐ SEE WELL INSPECTION LOGS
FINDINGS:

HAVE ANY WELL CONSTRUCTION APPLICATIONS BEEN SUBMITTED TO OR APPROVED BY ISLAND COUNTY IN AREAS DOWNGRADIENT OF THE SITE? (ISLAND COUNTY CONTACT REQUIRED) ☐ YES ■ NO
INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ☐ SITE WALK ☐ INTERVIEW W/ ☐ SECURITY CHECK ■ OTHER Well database ■ WELL INSPECTIONS ☐ SEE WELL INSPECTION LOGS
FINDINGS:

ARE ALL MONITORING WELLS IN GOOD CONDITION AND ACCESSIBLE? (REFER TO COMPLETED MONITORING WELL INSPECTION CHECKLISTS OR ANNUAL ON-SITE INSPECTIONS) ☐ YES ☐ NO
INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ☐ SITE WALK ☐ INTERVIEW W/ ☐ SECURITY CHECK ☐ OTHER ☐ WELL INSPECTIONS ■ NA ☐ SEE WELL INSPECTION LOGS
FINDINGS:

One well on-site appeared in good condition, though not routinely sampled or within scope for these inspections.

HAS ACCESS CONTROL BEEN MAINTAINED (REFER TO SECURITY INCIDENT REPORTS)? ■ YES ☐ NO ☐ NA
IS SIGNAGE INTACT AND READABLE? ■ YES ☐ NO ☐ NA
INSPECTION PERFORMED (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/ ■ SECURITY CHECK ☐ OTHER
FINDINGS:

ADDITIONAL COMMENTS:

Site is within compliance of assigned land use controls.

I CERTIFY THAT THE CONDITIONS OF THE AREA ON THE INSPECTION DATES(S) WERE AS REPORTED ABOVE.

INSPECTOR SIGNATURE: Foster, Chelsea (USCF715440) Digitally signed by Foster, Chelsea (USCF715440) Date: 2023.10.26 16:20:35 -07'00'

Appendix G:
EPA and Washington Department of Ecology Comments and Navy Responses on Draft FYR Report

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Site: Naval Air Station – Whidbey Island
Document: Draft Sixth Five Year Review, Naval Air Station Whidbey Island, Oak Harbor, Washington, March 2024
Date: 6/18/2024
Reviewer: Binod Chaudhary

#	Location in Document (page, section, paragraph, etc.)	Comment	Response (Concur, Do not concur, Exception)	Back-check (Agree/Disagree)
		Ecology		
1	Sec. 2.4.1/ pg. 2-9	Can you please clarify why the amounts of contaminated soils removed from Area 39, Area 41, Area 44, and Area 48 are different than that documented in the fifth five-year review? Section 2.4.2 states that "no additional removal or remedial actions have been implemented following the initial remedy implementation at the OU 4 Areas".	Concur. During the preparation of this Sixth FYR, the quantities included in this section were checked for accuracy against the Remedial Action Report. It was found that values included in previous FYRs were inconsistent with values included in this report. The values were updated and the Remedial Action Report was cited in this section.	Agree
2	Table 2-1	*"Remedy complete in Areas 39, 41, and 44. Areas have been approved for unrestricted use and unlimited exposure."* Please include a reference for UU/UE approval of Areas 39, 41 and 44.	Concur. The text has been revised as follows: "Remedy complete in Areas 39, 41, and 44 *and OU 4 was officially deleted from the Superfund NPL in September 1995 (TEC, 2004)*. Areas have been approved for unrestricted use and unlimited exposure *(Navy, 2007)*."	Agree
3	Table 2-1	Please include chlorinated PAHs in COCs column instead of just PAHs.	Do not concur. The ROD for OU 4 identifies PAHs as a contaminant of concern.	Agree
4	Sec. 3.2.9.1/ pg. 3-25	*"Provide and initial overview of potential contaminant migration pathways from…"*Make editorial error correction on the above highlight.	Concur. Editorial error has been corrected.	Agree

5	Table 4-12	Some of the LUC inspections items have been discontinued during this FYR period. Please describe in section 4.3.1.8, why those LUC inspections are not applicable anymore.	Do not concur. In Section 4.3, the report states: "*As a result, LUC evaluations and the resulting recommendations recently have been based solely on whether a LUC for the site in question was violated by the conditions observed at the time of inspections, without evaluating non-LUC items (e.g., housekeeping issues). This has resulted in some apparent inconsistency in inspection results, with the more recent results adhering to decision document requirements for each site.*"	Disagree Our comment is about justifications for why those components of LUCs are not applicable anymore. Therefore, please include rationale for "LUC inspection summary question is not applicable to area" after 2021 for access control maintained and 2019 for signage intact and readable LUC Inspection Summaries. Ecology believes that rationale for removing this component of LUCs might be in the annual reports.
6	Sec. 5.4/ pg. 5-8	*"The boundary for OU 4 Areas 48/49 is adjacent to Crescent Harbor and could potentially be vulnerable to future climate change impacts (e.g., rising sea levels and more intense storms) that could deteriorate the shoreline. However, this is not a*	Do not concur. As explained in the 2023 Land Use Controls Inspection Report, "the erosional surfaces observed were exclusively sandy gravelly soils; no landfill debris was observed to be eroding from the site." Because landfill debris is not eroding, this is	Disagree Statement made in 2023 LUC inspection report

		protectiveness issue at this time, and the shoreline is monitored and documented during annual LUC inspections." According to 2023 Land Use Controls Inspection Report, there are shoreline erosions at OU 4 Areas 48/49. Can you please clarify how the erosion is not a protectiveness issue at this time? Ecology believes that the shoreline should be protected from further erosion to prevent migration of wastes materials.	not a protectiveness issue at this time. LUC inspections will continue on an annual basis and the Navy will evaluate conditions and consider the need for action in this area.	about eroded materials is inconsistent with 2022 and previous inspection reports where these materials have been identified as construction material debris or landfill materials. Also, 2023 inspection report states that approximately 300 feet of the site shoreline appeared to have eroded since the 2022 inspection. Therefore, Ecology reiterates that this issue should be identified as a protective issue and recommended for actions to address this issue with a target date.
7	Sec. 5.6.2.2/ pg. 5-13	Include recent changes in PFAS exposure parameters i.e. national primary drinking water standards (NPDWSs) and number of drinking water wells that contain PFAS above NPDWSs where no responses	Do not concur. The cutoff for new information to be included in the sixth FYR is one year (August 2023) prior to signature date (August 2024). EPA's May 10, 2024, announcement of the new PFAS MCLs is	Disagree Ecology believes that this section

#	Location in Document (page, section, paragraph, etc.)	Comment	Response (Concur, Do not concur, Exception)	Back-check (Agree/Disagree)
		Ecology		
		actions have been taken due to higher action levels.	not within this reporting window. The PFAS MCLs will not potentially be in effect until June 25, 2024. Therefore, the PFAS MCLs will be addressed in upcoming CERCLA PFAS documents and the next FYR (starting in FY29) but not in this FYR. Additionally, the PFAS MCLs and the new RSLs are appropriately not part of the protectiveness determinations.	includes changes in exposure parameters and the changes in exposure parameter will be effective before the finalization of this report. Therefore, Ecology reiterates that changes in PFAS exposure parameters need to be included for a proper assessment of exposure parameters and validity of current exposure parameters.

#	Location in Document (page, section, paragraph, etc.)	Comment	Response (Concur, Do not concur, Exception)	Back-check (Agree/Disagree)
		Ecology		
8	Table 5-6	Include the most conservative MTCA values of various COCs for current cleanup levels such as for Chromium (VI) Method B direct contact cancer value is less than noncancer value.	Concur. A review of the current CULs in Table 5-6 and the MTCA values shows that hexavalent chromium was the only chemical where the lower of the possible values was not listed. The current CUL for hexavalent chromium has been updated in the report to be the cancer-based Method B direct contact value, and the text discussion has also been updated accordingly (Section 5.6.1.4 page 5-6).	Agree
9	Table 6-1	Include phases (i.e. RI or RI and FS) of PFAS investigations for different OUs that will be completed by milestone dates.	Do not concur. This recommendation milestone date has been simplified to "Varies by site". The FYR recommendations state "Ongoing PFAS investigations and evaluations are being conducted through the CERCLA process to refine the PFAS CSM and assess potential exposure risks. Findings from ongoing PFAS investigations and evaluations will be addressed in the next FYR to determine whether the current remedies will continue to be protective with respect to PFAS in the future." PFAS will continue to be addressed through the CERCLA process.	Agree
10	Table 6-1	Please include PFAS issues and associated recommendations for OU 1 Area 6. Also, include the areas where treated water from GETR system has been discharged and identify those areas in the recommendation if those areas are not currently included on ongoing PFAS investigation and evaluation.	Do not concur. The FYR is not the appropriate document for this recommendation and analysis. The fieldwork of the initial Phase of the Area 6 PFAS RI has been completed and the report is currently being prepared. These comments would be appropriate as part of the RI review.	Agree

#	Location in Document (page, section, paragraph, etc.)	Comment	Response (Concur, Do not concur, Exception)	Back-check (Agree/Disagree)
		Ecology		
11	Appendix F	*From sec. 4.3/ pg. 4-21: "The completed site-specific LUC inspection checklists and photographs for the CERCLA Areas inspected in 2023 are presented in Appendix F."* Please include photographs that were taken during the site inspection.	Do not concur. The inclusion of site photographs is redundant with the LUC Inspection Report (Liberty JV 2024). Additionally, the EPA-approved template lists photographs as an optional appendix, and to only include when photos help inform the remedy protectiveness.	Agree

Site: Naval Air Station – Whidbey Island
Document: Draft Sixth Five Year Review, Naval Air Station Whidbey Island, Oak Harbor, Washington, March 2024
Date: April 30, 2024
Reviewers: Chan Pongkhamsing, Lea Kane, Thomas Adler, Richard Mednick, Cal Brier-Anderson

#	Location in Document (page, section, paragraph, etc.)	Comment	Response (Concur, Do not concur, Exception)
		USEPA Region 10	
1.	Executive Summary, Page iii, 2nd paragraph, 2nd sentence	"An" should be replaced with "A" for "An FYR…"	Concur. The editorial change has been made as requested.
2.	Executive Summary, Page iv: last sentence of top paragraph:	Clarify that the residents on municipal water supply pertain to those above the vinyl chloride and 1,4-dioxane plume. This may mislead readers to interpreting that it's for all of Area 6 plumes. For example, add "above the 1,4-dioxane and vinyl chloride plume".	Concur. The text has been revised as follows: "Residenti*al dwellings within the footprint of impacted groundwater (vinyl chloride and 1,4-dioxane) are connected to a* municipal water supply (i.e., not well water) or have been connected to a deeper water well (i.e., 6-DW-38B); therefore, the exposure of human receptors to groundwater is an incomplete pathway."

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		USEPA Region 10	
3.	Executive Summary, Page iv:	It is stated that because known off-site drinking water exposures have been addressed and on-site LUCs prevent exposure to groundwater, the Navy considers OU 2, OU 3, and OU 5 Area 31 to be protective in the short-term. As alluded to in Richard's comment above, this protectiveness determination is based on the 70 ng/L MCL and does not account for off-site exposures between 70 ng/L and the current 4 ng/L MCL. When the toxicity value has changed and it is unclear whether the current remedy at a site is protective or whether the selected remedy can achieve the new risk-based cleanup level, the protectiveness determination should be "Not Protective".	Do not concur. The cutoff for new information to be included in the sixth FYR is one year (August 2023) prior to signature date (August 2024). EPA's May 10, 2024, announcement of the new PFAS MCLs is not within this reporting window. The PFAS MCLs will not potentially be in effect until June 25, 2024. Therefore, the PFAS MCLs will be addressed in upcoming CERCLA PFAS documents and the next FYR (starting in FY29) but not in this FYR. Additionally, the PFAS MCLs and the new RSLs are appropriately not part of the protectiveness determinations.
4.	FYR Summary Form, pg. v:	EPA considers triggering date and due date is from when EPA concurs on the FYR, not when Navy signs it. Therefore, trigger date should be 9/24/2019 and due date as 9/23/24.	Do not concur. Directly from the Department of the Navy Environmental Restoration Program Manual 2018, "Subsequent five-year reviews shall be signed no later than five years after the signature date of the previous five-year review report." This report is due for Navy signature no later than August 26, 2024, as the previous FYR was signed on August 26, 2019.
5.	Review and Approval, pg. vii:	Consider having all FFA parties co-sign. This would include EPA and Ecology.	Do not concur. The Navy solely signs it as it is a Navy document. The EPA and Ecology can individually concur or not concur via separate correspondence on the FYR.
6.	Acronyms and Abbreviations:	Add RPM as it's used throughout the report.	Concur. RPM has been added to the acronyms list.

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		USEPA Region 10	
7.	1.0 Intro, pg 1-1:	EPA and Navy need to agreed on trigger and due dates as each agency is using a different date. Navy using signature of commander and EPA using concurrence letter on the FYR. Chan to bring up for discussion.	See response to USEPA Comment #4.
8.	Table 1-2 – last column, pg. 1-5	It is unclear why this section only summarizes removal actions performed prior to the RODs (with some exceptions). Please revise, or at a minimum clarify what this section represents and remove any removal actions performed after RODs: "1. Removal actions performed prior to ROD implementation. Remedial actions performed after the RODs were signed are presented in Section 2.0 of this FYR."	Concur. The header of this column has been updated to "Pre-ROD Remedial Actions" to be more consistent with EPA guidance for FYRs. Content in this column has been reduced to only include actions that took place prior to ROD implementation. The information previously included in this column that took place after the respective ROD was signed is included in Section 2 of the FYR.

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		USEPA Region 10	
9.	Section 2.1.1.2, Page 2-2	Fourth Bullet regarding remedy requirements for OU 1 Area 6 – Monitoring groundwater in the shallow, intermediate, and deep aquifers to assess the effectiveness of the groundwater treatment system: The current monitoring network only monitors the shallow aquifer. EPA recommends sampling intermediate wells within Area 6 at least every 5 years to demonstrate that this remedy requirement is being met.	Do not concur. As stated in Section 6.2.4 of the ROD (Navy, Ecology, and EPA, 1993a), intermediate wells were monitored between 1991 and 2006, and although 1,1,1-trichloroethane (TCA), toluene, and trichloroethene (TCE) were detected along the western site boundary, all were detected at concentrations that were less than the federal and state screening criteria. It was determined that no vinyl chloride, semivolatile organic compounds, pesticides, or herbicides were detected in any of the on-site intermediate aquifer wells. In addition, five deep aquifer wells were sampled in Area 6 between 1991 and 2002, including one background well. Sampling results indicated that the deep aquifer has not been contaminated by the operations at OU 1. Also, the 2019 RODA states, "Groundwater data show that the upper aquifer is the only aquifer impacted by former actions at the site." Therefore, monitoring the intermediate and deep aquifers is not necessary. Additionally, this comment would be more appropriately addressed in the annual LTM Reports.
10.	Section 2.1.1.2, Page 2-3, First Paragraph, Last Sentence	Provide volumes within the context of the complete five-year period, which ends in August 2023. Currently, data is only up to March 2022.	The text has been revised as follows: "The system extracted and treated *65,833,465* ~~79,832,824~~ gallons of groundwater from 1 April 202*2* ~~1~~ to 31 March 2023~~2~~. As of *31* ~~21~~ March 202*3* ~~2~~, the cumulative volume of water treated since operations began is approximately 2.*21* ~~14~~ billion gallons (EA, 2023*c* ~~a~~)."

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11.	Section 2.1.1.2, Page 2-3, Second to last paragraph	regarding infiltration of stormwater through the waste – thereby preventing contamination of the aquifer from waste leaching from the landfill (FWEC, 1997a) How has the addition of discharges from a second GETR system to the swale influenced infiltration upgradient of the landfill? Can the discharged effluent contact waste as it infiltrates to the water table? Concentrations of 1-4-dioxane in landfill and along the landfill boundaries have increasing trends at the end of the five-year review period, following the start-up of the second GETR.	Exception. The current Area 6 remedy is still being implemented. Once the remedy identified in the 2019 RODA is fully implemented, these comments can be appropriately addressed in the LTM Annual Report and O&M reports. Regarding "Can the discharged effluent contact waste as it infiltrates to the water table?", an engineered cap is in place on the Area 6 landfill; therefore, effluent would not infiltrate through the waste.
12.	Table 2-1, pg. 2-15:	This report would benefit from adding to table 2-1 a column to identify which Ous, and which media are known to, or likely to also be contaminated with PFAS. This will not only be helpful for tracking, but it will facilitate making the case that there are unlikely to be current exposures to PFAS.	Do not concur. The purpose of Section 2 of a FYR is to discuss the response action with respect to the contaminants of concern in the ROD or DD for an area. PFAS were not a part of the ROD for any OUs in this FYR. PFAS are discussed in subsequent sections, including in Section 6.0 Issues/Recommendations. PFAS will continue to be addressed through the CERCLA process and ultimately will be included in a ROD amendment or ESD if warranted.
13.	In several parts of Section 3	the Navy refers to "project action levels" (PALs) for various PFOS compounds without explaining how those PALs were derived. The Navy needs to provide the basis for each of the PALs, both for purpose of transparency and so that EPA may confirm whether it agrees with those determinations.	Do not concur. Discussion of PAL development is included in the work plan and report documents associated with the referenced PFAS investigations, which are subject to EPA review and input. The PFAS information included in this FYR is to evaluate its impact on protectiveness relative to PALs defined elsewhere.

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14.	In several parts of Section 3	the Navy refers to further investigation or cleanup actions for PFOS compounds as dependent on the PALs, but many of those PALs, even if they were initially substantiated properly, are now affected by the recently promulgated MCLs. The Navy needs to account for these changes and explain what they would mean in terms of additional investigations, cleanup actions, and protectiveness determinations.	See response to USEPA Comment #3.
15.	In several parts of Section 3	the Navy refers to 70 ng/L as the basis for taking action to address PFOA and PFAS, and in at least once instance (3.2.10) the Navy states that this level is EPA's lifetime drinking water health advisory – which has not been true for many years. The Navy needs to remove or explain the statement about the lifetime drinking water health advisory as EPA no longer stands behind that number and the reference suggests otherwise. Explain why Navy chose to use 70 ppt as action level.. cite DoD policy. The Navy also needs to account for the expected upcoming MCLs of 4 ng/L for PFOS and PFOA and what that standard will mean for its past determinations and actions going forward.	See response to USEPA Comment #3.

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16.	Starting in Section 3.2.1, pg. 3-6:	The report notes that the Western groundwater extraction network for Area 6 was shut down in August 2023 and will be offline until Summer 2024. Please discuss how this will impact plume migration. How will the western plume be contained and monitored during the extended period of downtime?	The FYR does not appear to be the appropriate document for this comment. The West AOP GETR Remedial Action Management Plan that EPA approved in June 2023 would have been the appropriate document to comment and discuss the system downtime. The current remedy, determined in the 2019 RODA, is still being implemented. The Navy and our design engineer subcontractor performed an internal analysis of potential plume migration during the Western System downtime. One year of system downtime was arbitrarily chosen for this internal analysis and was shown to be an acceptable shutdown period with regard to plume migration. The Navy has continued and will continue groundwater monitoring at Area 6 throughout the RODA process. Additionally, please note the RODA Remedial Action Objectives (RAOs) do not include plume containment.

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		USEPA Region 10	
17.	Section 3.2.1 OU 1 ROD Amendment, Page 3-7:	This section references the installation and sampling of five monitoring wells downgradient of OU 1 Area 6 in December 2022 and January 2023. A) This section should reference the approved work plan that details the scope of work for downgradient well installation. B) Additionally, because this work was performed in this five-year review cycle, the details of work completed to date and results should be presented in this report, including boring logs and well construction details for the new monitoring wells, and a map showing the locations of the new monitoring wells.	A) The reference to the EPA-approved work plan has been added (page 3-7 and References). B) Do not concur. The cutoff for new information to be included in the sixth FYR is one year (August 2023) prior to signature date (August 2024). Although the first phase of field work was completed, the draft document for this work has not been issued because there have been additional phases of investigation. Additionally, due to CUI privacy concerns, a map showing the locations of the new monitoring wells will not be provided in any public document, such as the FYR. The Final Downgradient Delineation Report will be issued during and can be commented on during the next FYR period.
18.	Section 3.2.4:	Include information on how the missing well 6-I-2 was communicated to the landowner, local government agency and/or Washington state (DOH/DOE)?	Do not concur. This information is presented in the *Final Technical Memorandum 2020 Well Decommissioning Report North End Holdings Naval Air Station Whidbey Island, Oak Harbor Washington* dated March 2020 (EA Engineering, Science, and Technology, Inc., 2020)

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19.	Section 3.2.5, Page 3-9:	"without unscheduled interruptions" – Is this a true statement? Hasn't there been times when interruptions happened due to mechanical issues and replacement parts had supply chain issues?	Concur. This sentence is qualified with the word "most" and is present in each of the annual technical memorandum (TM) reports over this FYR period. There were occasional shutdowns. This section was amended with non-routine maintenance events on page 3-11 as follows: Non-routine maintenance was conducted on production wells and their associated lines each year during this FYR period. *Non-routine maintenance includes repairs to pumps, vault piping, electrical components, programming, or any other non-scheduled work required to maintain the wells, pumps, and influent and effluent lines, as well as any unscheduled work conducted within the well vault fenced areas.* LTM contractors performed non-routine maintenance on all production wells in the system in accordance with the current O&M manual at the time of maintenance. Details of repairs and other maintenance actions performed can be found in the annual technical memoranda for the system (Sealaska, 2019, 2020b; EA, 2021a, 2023a, 2024).

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20.	Section 3.2.5, Page 3-9, First Paragraph	Figures of flow rates indicate that the treatment plant was offline for about 15-25% of the time during each reporting period, including two- month long periods of no operation. This is a significant amount of downtime considering estimated groundwater flow velocities at Area 6 (320 to 640 feet per year; Dinicola et al. 2000). Please discuss these downtime periods and suggest ways to prevent this sort of downtime in the future for both AOP plants. We do understand this was a transition period for the air stripper and that it has been decommissioned.	The FYR does not appear to be the appropriate document for this comment. The O&M report would be the relevant document to address this comment. The original Western System operated many years past its expected lifespan. Discussion of the air stripping system and its operation is not applicable to the new AOP systems. The new AOP systems are designed to eliminate frequent and extended shutdown times.
21.	Section 3.2.5:	For the five-year period, and individual O&M periods described in the sub- bullets, discuss system downtime in terms of precent uptime: i.e "The treatment system operated XX% of the time during the five-year period, with XX% of downtime related to non-routine shutdowns."	Do not concur. A summary of O&M activities is included in Section 3, and an evaluation of the O&M is presented in Section 5. Calculations of percent uptime or downtime are not documented in the O&M reports and are not readily available for inclusion in the FYR Report. Once the remedy identified in the 2019 ROD Amendment is fully implemented, the O&M Annual Reports will be updated to provide this information.
22.	Section 3.2.5, Page 3-17:	A summary of operations from March 2023 to August 2023 is missing.	Do not concur. The cutoff for new information to be included in the FYR is one year (August 2023) prior to signature date (August 2024). Although the field work was completed, the draft document for this work has not been issued because of the task order project schedule. The O&M Report containing this information will be issued during and can be commented on during the next FYR period.

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		USEPA Region 10	
23.	Section 3.2.5.5, Page 3-17:	The 2022 to 2023 O&M report shows treatment plant offline between August and September 2022. Please discuss this downtime in the report.	See response to USEPA Comment #19 and #20.
24.	Section 3.2.6 & General TPH at Area 31:	EPA is not confident that the TPH/Mn plume has been adequately delineated? Recommend additional investigation for further delineation.	Do not concur. Two additional monitoring wells were added to the LTM for this area during this FYR period. Monitoring wells MW31-34 and MW-AF-MW-635 were added to the LTM for Area 31 and sampled in 2022; no exceedances of COCs were detected in either of these wells. This 2022 event, included in this FYR, showed a decrease in TPH and Mn at multiple monitoring locations.
25.	Section 3.2.7:	Include discussion of treatment system operations through August 2023. Current section only includes O&M performed from October 2021 and September 2022. This section should include the same level of detail as Section 3.2.5.	Do not concur. The cutoff for new information to be included in the FYR is one year (August 2023) prior to signature date (August 2024). Although the field work was completed, the document for this work has not been issued because of the task order project schedule. The O&M Report containing this information will be issued during and can be commented on during the next FYR period.
26.	Section 3.2.7.1:	"RPM" is not defined in the acronyms and abbreviations section.	See response to USEPA Comment #6.

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		USEPA Region 10	
27.	Section 4.2:	This is an appropriate section to include emerging contaminant (PFAS) information. Include a concise summary of the scope of the investigation to date, and the results should be screened as set forth in the latest EPA and DOD guidance (e.g. DOD 2019, EPA 2019, DOD 2020, etc.)	Do not concur. PFAS are not COCs in any of the DDs for the OUs in this FYR. The purpose of Section 4.2 is to discuss data collected regarding the COCs. PFAS are an emerging contaminant, and during this FYR period, they did not have enforceable remedial goals (see comment #3). The remedial actions (investigations) for PFAS that took place during this FYR period are summarized in Section 3.0, Progress Since the Last FYR. The impact on protectiveness is reviewed in Section 5, Question C for each OU. If and when PFAS are included in a DD or ESD, the data will be reviewed.

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28.	Section 4.2.1:	Data review sections should also include an evaluation of plume capture during the five-year period. Is the remedy sufficient for plume containment? Discuss any extended downtime and impact on plume containment. Increasing COC concentrations at plume boundaries should be demonstrated to be contained by the remedy.	Do not concur. The current Area 6 remedy is still being implemented. Once the remedy identified in the 2019 RODA is fully implemented, these comments can be appropriately addressed in the LTM Annual Report and O&M reports. The RODA Remedial Action Objectives (RAOs) for groundwater are: "Given the refined understanding of the site conditions relative to groundwater and limitations of technologies available to effectively address large, dilute, 1,4-dioxane and TCE plumes, the FFS established the following RAOs for an integrated groundwater remedy, which will supersede the 1993 OU 1 ROD groundwater RAOs: • Reduce the potential TCE, 1,1,1-TCA, 1,1-DCE, vinyl chloride, and 1,4-dioxane risk to current and future groundwater users downgradient of the site. • Actively remediate TCE, 1,1,1-TCA, 1,1-DCE, vinyl chloride, and 1,4-dioxane in the western and southern plume followed by monitored natural attenuation (MNA) until RGs are met." The RODA RAOs do not include plume containment.

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		USEPA Region 10	
29.	Section 4.2.1, Pg. 4-5:	Clarify "domestic well" as it is used multiple times throughout FYR. Are they private residential wells that have been decommissioned and now only used for sampling?	Concur. Section 4.2.1.5 has been updated to state, "Groundwater sample collection at one private ~~(domestic)~~ *drinking water* well (6-DW-48) north of NE 16th Avenue was conducted during semiannual sampling events." Well 6-DW-38 is a private drinking water well that is still used.
30.	Section 4.2.1.1, Page 4-5, First Paragraph	"groundwater contamination is predominantly contained within the shallow aquifer". Please cite the document that demonstrates COCs are below CULs in the deeper aquifers. EPA recommends monitoring the intermediate aquifer at least every 3-5 years (depends on vertical gradient) to continue to demonstrate plume containment.	Concur. The following citations for LTM reports have been added: "At OU 1 Area 6, groundwater contamination is predominantly contained within the shallow aquifer in two distinct plumes *(Sealaska, 2020b, 2020c; EA, 2021b, 2023b, 2024)*:" Please also see response to USEPA Comment #9.
31.	Section 4.2.1.1, Page 4-5, First Paragraph	"As shown on Figure 4-1, groundwater elevations fluctuate between the summer (September 2018) and winter (February 2023) sampling events.": Please provide a hydrograph for wells across the site for the past 20 years to support this statement. Discuss how groundwater levels have changed over the monitoring period (decreasing? increasing?). How does this change compare to long term trends in water table at the site. Discuss vertical gradients during the five-year period.	The FYR does not appear to be the appropriate document for this comment. The LTM report would be the relevant document to address this comment. These discussions are not in the LTM reports and are not readily available for inclusion in the FYR Report.
32.	Section 4.2.1.2, Page 4-6, extent of TCE Plume:	See EPA comments on the Draft Annual 2022-2023 Groundwater Long-Term Monitoring at OU 1 Area 6. Additional evaluation of the monitoring well network is needed for Area 6 to confirm the monitoring network is sufficient at the toe of the TCE plume, especially now that PW-5 has been offline since August 2023.	Exception. This recommendation will be considered during the next FYR cycle in context with the site dataset and the groundwater model.

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33.	Section 4.2.1.2:	There are several references to Table C-1 for demonstration of progress toward remedial goals. Provide COC concentrations vs time graphs in Appendix C to better demonstrate continued progress during the five-year period, in addition to progress since the post-rod maximum.	Do not concur. Data collected during this FYR period are provided in Appendix C for reference and evaluation. Comparison to post-ROD maximums is appropriate to demonstrate overall changes in concentration since remedial action was completed. The LTM reports contain figures depicting contaminant concentrations over time (EA, 2024).
34.	Section 4.2.1.2, Page 4-7, Vinyl Chloride Results:		
a.		A) Wells at the toe and the periphery of the plume should be analyzed such that concentrations below 0.5 µg/L but above 0.029 µg/L can be detected. b) On the figures or in the report text, discuss how non-detects above the reporting limit were using in contouring.	A) In accordance with ROD Amendment No. 1 (DON 2019), the DON scoped EPA Method 8260D analysis using a low-level implementation to select wells in order to achieve a limit of detection and limit of quantitation no greater than the vinyl chloride RG of 0.029 µg/L. Well selection was based on location of well and laboratory capabilities. Select wells (typically 6-DW-48, 6-DW-38, 6-S-3, 6-S-16, 6-S-17, 6-S-27, 6-S-42, and MW-3B) have been chosen to delineate the southern and eastern edge of the vinyl chloride plume boundary. Other wells located in or south of the southern portion of Area 6 not included for low-level analysis are wells with recent historical concentrations of vinyl chloride that are greater than 0.1 µg/L or have concentrations of other site VOCs that may be too high for low-level analysis. B) Exception. This information is noted in the LTM Reports and this level of detailed is not necessary in the FYR.

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			The 2022-2023 LTM report states: "It is noted that limits of detection for non-detected sample results are below the project RGs with the exception of vinyl chloride for samples from wells PW-1, PW-2, PW-3, PW-6, PW-7, PW-8, 6-S-6, 6-S-10, 6-S-14, 6-S-24, 6-S-25, 6-S-30, 6-S-31, 6-S-43, 6-S-44, 6-S-49, 6-S-50, 6-S-51, 6-S-52, 6-S-53, 6-S-54, N6-37, and N6-38 for both sampling events, well 6-S-29 for the September 2022 event only, and wells PW-4, PW-5, PW-9 for the February 2023 event only." The listed wells are not at the toe nor the periphery of the plume. Therefore, none of the wells along the periphery of the plume had vinyl chloride detection limits above the RG during the February 2023 sampling event.

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b.		"However, the plume remained within the 1,000-foot exclusion area surrounding the boundary of OU 1 Area 6 (Appendix D)" – this statement cannot be made since the plume is not delineated to the south of 6-DW-38, where vinyl chloride is still above the CULs. Add the 1,000-foot exclusion area to Figure 4-5, similar to Figure 4-6.	Do not concur. As stated in Section 4.2.1, Page 4-8, paragraph 3, "The downgradient delineation has included installation and sampling of seven new groundwater monitoring wells downgradient of 6-DW-38. Vinyl chloride and 1,4-dioxane were not detected in any groundwater samples from the seven new monitoring wells, which are located south of West Cemetery Road and east of State Route 20." Additionally, it should be noted that vinyl chloride exceeded the RG once in 6-DW-38 in February 2023 and the September 2023 result was less than the RG. The 1,000-foot boundary has been added to Figure 4-5. Additionally, due to CUI privacy concerns, a map showing the locations of the new monitoring wells will not be provided in any FYR.

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c.		"During this FYR period, the groundwater plume decreased in aerial extent (not due to seasonal fluctuations)." – Remove this statement or provide better justification. This statement is not supported by Figure 4-5.	Concur. The paragraph has been revised as follows: "The vinyl chloride plume is part of the southern plume at OU 1 Area 6. The vinyl chloride groundwater plume ~~appeared to~~ originate*d* from beneath the landfill and *appears to* extends off site to the south beyond State Route 20 (Figure 4-5). ~~However, t~~The plume remained within the 1,000-foot exclusion area surrounding the boundary of OU 1 Area 6 (Appendix D), per WAC 173-160-171.3.b.vi for landfills and as entered in the Island County Public Health Hydrogeology Data System. During this FYR period, the groundwater plume ~~decreased~~ *appears to have increased* in aerial extent (not due to seasonal fluctuations) *(Figure 4-5*). During February 2023, vinyl chloride exceed*ed*~~ing~~ the RG (0.029 µg/L) in wells 6-S-3, 6-S-17, 6-S-19, 6-S-29, MW-9, MW-10, and 6-DW-38 at detected concentrations ranging from 0.0293 µg/L to 0.93 µg/L. The maximum vinyl chloride concentration occurred in well MW-10, *located* at the landfill cap. *At location 6-DW-38, only one exceedance of the vinyl chloride RG occurred during this FYR period, in February 2023 (Appendix C, Table C-3)*. Figure 4-5 shows that vinyl chloride concentrations greater than the RG exist south of the Area 6 boundary and State Route ~~20 (Appendix C, Table C-1).~~

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35.	Section 4.2.1.2, Page 4-8, 1-4-dioxane:		
a.		1-4-dioxane detection is above the CUL in furthest downgradient monitoring well. Monitoring well 6-DW-38 is screened at a deeper elevation than the other wells in the shallow monitoring well network. EPA recommends evaluating the site hydrostratigraphy to assess whether the COC plume is deeper in this area, as well as sampling deeper groundwater, starting with available deeper monitoring wells in the shallow aquifer (MW-1, 6-S-40, MW-8) and intermediate aquifer wells.	Exception. On page 4-8, paragraph 2, the FYR includes information regarding the Navy's actions to delineate the southern plume. This paragraph also states, " Additional investigation will confirm the exceedance in well 6-DW-38 as well as the plume extent in the surrounding area."
b.		Include figure showing locations of P-1 through P-4 referenced in the last paragraph. Is this area flooded year-round?	Concur. Well locations P-1 through P-2 have been added to Figure 4-1 and a reference to this figure has been added at this text location in Section 4.2.1.2. For context, in late 2014, a mitigation project by the Navy included damming a natural bog to the north of Area 6 that contains piezometers P-1 to P-4 to encourage development of a wetland. By the start of the winter sampling event in January/February 2015, significant ponding had occurred, including ponded water near the base of the piezometers. P-1 through P-4 have been consistently underwater since and have not been sampled during this FYR period.

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36.	Section 4.2.1.3, Page 4-8:	This section should include discussion of increasing concentration trends relative to plume boundaries and groundwater capture.	Concur. The following text has been added to Section 4.2.1.3: "*None of the wells with detections above the RG in the most recent round of sampling and with increasing trends (i.e., vinyl chloride in MW-10 and 1,4-dioxane in 6-S-16, 6-S-17, MW-9, MW-10, and MW-11) are located along the periphery of the groundwater plume (Figures 4-5 and 4-6).*"
37.	Section 4.2.1.3:	Include a review of timeseries graphs to capture more short-term increasing concentration trends for plume periphery wells, which may indicate a reduction in plume capture: e.g. recent detections of 1,4-dioxane at 6-S-27 and MW-3B. EPA recommends adding MW-6 to the sampling network for 1-4-dioxane in consideration of recent detections of 1,4-dioxane at 6-S-27 and MW-3B.	Exception. Appendix C includes tables of all monitoring well data from this FYR period, which show recent detections in the mentioned wells. The recent LTM report contains figures showing concentrations of COCs over time (EA, 2024). The Navy acknowledges EPA comment regarding MW-6 and will take it under consideration with the LTM not under the FYR.

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38.	Section 4.2.1.3.5:	Additional discussion of observed trends and remedy performance is needed in this section:	
a.		Discuss where the wells with increasing concentration trends are located. Are these increasing concentrations captured/contained by the remedy? What is contributing to increasing concentrations of 1-4-dioxane in these wells?	Concur. The text has been revised as follows: "Six of these wells (6-S-6, 6-S-7, 6-S-43, MW-7, N6-37, and N6-38) exhibit decreasing trends, four of these wells (6-S-17, MW-9, MW-10, and MW-11) exhibit increasing trends, and the remaining wells show no statistically significant concentration trends. *The four wells with increasing trends are located within the NAS Whidbey Island boundary, near the center of the plume and upgradient of the Southern GETR System extraction wells (Figure 4-6). Although the cause of the increasing trends is unknown, the Western GETR System will also address 1,4-dioxane in groundwater when construction to convert the system to AOP treatment is complete.*" (EA, 2024) The Southern GETR extraction wells have been added to Figure 4-6.

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b.		1,4-dioxane was detected several times at 6-S-27, including 2x where the concentrations were above the SL. This well is on the periphery of the monitoring network. 1,4-dioxane has also increased above SLs at MW-3B over the past 3 monitoring events, which is located downgradient of 6-S-27. Please discuss and demonstrate that this portion of the plume is captured downgradient by the current southern GETS operations.	Exception. The current Area 6 remedy is still being implemented. Once the remedy identified in the 2019 ROD Amendment is fully implemented, these comments can be appropriately addressed in the LTM Annual Report and O&M reports. Please note per the ROD Amendment the selected remedy is an integrated remedy that will comprise of an active treatment component, MNA (passive treatment), and ICs. The extraction wells associated with the Southern GETR system have been added to Figure 4-6 to demonstrate this capture zone. Extraction wells for the Southern GETR system are present as far south as the intersection of NE 16th Avenue and West Cemetery Road (just north of 6-S-49). The most downgradient extraction well is downgradient of MW-3B. Continued operation of the Southern GETR System would capture the plume. The Navy will continue to implement the ROD Amendment remedy. In the meantime, LUCs are in place to protect receptors from use of the contaminated groundwater.

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39.	Sections 4.2.1.4 and 4.2.1.6:	Please revise these sections to be comprehensive of the entire five-year review period.	Exception. The Original Western GETR System operations during this FYR period are summarized in Section 3.2.5. The Southern GETR System operations during this FYR period are summarized in Section 3.2.7. The data associated with Sections 4.2.1.4 through 4.2.1.6 are presented in Appendix C. The purpose of the data associated with these sections is not to meet regulatory compliance requirements (remedy is still being implemented), but to evaluate performance of the GETR Systems. The level of detail included is appropriate to evaluate protectiveness; further detail will be available in forthcoming O&M reports that present data and findings.
40.	Section 4.2.2.1, Page 4-14, Background Evaluation for As and Mn:	EPA has never received an evaluation report. If memo to file is to be proposed, EPA will need this background eval report.	Concur. FYR states "A Memorandum to File must be prepared to formally propose and document the calculated background concentrations as cleanup levels for arsenic and manganese in groundwater at OU 2 (i.e., 10 µg/L and 497 µg/L, respectively)."
41.	Section 4.2.2.3, Page 4-16, Last sentence:	Data collected to date suggests the vertical migration is occurring. EPA recommends collection of confirmation samples in 2024 and discussion of next steps to be taken if vertical migration of contaminants is confirmed.	Exception. Per the ROD, this sampling is not required. The Navy has sampled and plans to continue sampling groundwater at OU 2 Areas 2/3 on a five-year cycle to evaluate vertical migration.

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42.	Section 4.2.4.1, Pages 4-18 and 4-19:	See EPA comments on 2022-2023 Area 31 monitoring report and review text accordingly.	The sentence "The 2022–2023 annual groundwater monitoring report indicates that natural attenuation may be occurring in groundwater in the vicinity of the former free product distribution at wells MW-31-09A and OWS-1, ~~and at well OWS-3, which is located 40 feet downgradient of the former free product distribution area,~~ based on the observed anaerobic conditions (low dissolved oxygen and negative oxidation reduction potential)." was revised.
43.	Section 4.2.4.1, Pages 4-18 and 4-19:	Include hydrographs and discuss groundwater elevations over time. Provide timeseries graphs and an analytical results table to support discussion of recent results and groundwater concentration trends.	Exception. Appendix C presents analytical results tables to support the discussion. The FYR relies on evaluation presented in LTM and other reports. Time series graphs are presented in the 2022-2023 LTM report (EA, 2024).
44.	Section 4.2.4.1, Page 4-18, discussion of groundwater gradient direction:	The monitoring network is insufficient to establish groundwater gradient directions south of the main plume area. An additional monitoring well to the south of OWS-1 should be used to better evaluate gradients and plume boundaries.	Do not concur. Monitoring wells were added to the LTM program in 2022. See response to EPA comment #24.

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45.	End of section 4.3, Page 4-21.	I believe we've discuss including these "housekeeping issues" in the LUC work plan/inspection. Some of these housekeeping issues are important to the integrity of these LUCs.	Do not concur. In Section 4.3, the FYR report states: "*As a result, LUC evaluations and the resulting recommendations recently have been based solely on whether a LUC for the site in question was violated by the conditions observed at the time of inspections, without evaluating non-LUC items (e.g., housekeeping issues). This has resulted in some apparent inconsistency in inspection results, with the more recent results adhering to decision document requirements for each site.*"
46.	Figure 4-5:	The isoconcentration contour line at the toe of the plume should be dashed where not bounded.	Concur. However, as indicated by references on the figures and in the report, the contour lines presented on the FYR figures are directly from the referenced final LTM reports and not altered for the purpose of the FYR. Requested revisions to isoconcentration contour lines should be made to the LTM reports which are source documents to this FYR.
47.	Figure 4-6:	The contour line at the top left portion of the September 2018 contour map should be removed. Plume contours should be dashed on the western side of MW-3B (February 2023).	See response to USEPA Comment #46.

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48.	Section 5.0 Technical Assessment:	The organization of this technical assessment seems to be confusing. For example, Section 5.5 provides answers to Questions A, B and C, but then Section 5.6 addresses ROD assumptions, which falls within Question B, and Section 5.7 addresses Question C. In previous Sections (5.1 – 5.4) it is not always clear which questions is being addressed. As noted above, the FYR Guidance specifies that new contaminants/sources must be addressed in Technical Question B. In some instances, there are references to PFAS in Questions B and C. We recommend that each question be clearly marked, and answers separated by question. It would be more efficient and less repetitive to retain the discussion in B and remove the discussion in C.	Do not concur. Because there are several OUs in this FYR, this layout was used in the previous FYR Report and was carried through to this FYR. The preparers of the report feel that it is easier to understand the technical assessment if all three questions are answered for a single OU before moving onto the next OU. This is the purpose of Sections 5.1 through 5.5. Table 5-1 also provides a quick reference summary of the technical assessment for all areas in this FYR. Section 5.6 and 5.7 provide details supporting the technical assessment for Questions B and C, respectively. The headings of these sections have been revised to clarify the intent of each section.
49.	Section 5.1.2, Page 5-2, regarding remedy function:	One of the primary goals of the Area 6 remedy is "Extracting groundwater in the shallow aquifer beneath Area 6 using extraction wells to minimize the spread of the contaminated plume." The five-year review report needs to discuss remedy performance in terms of containment in addition to contaminant concentration reduction. Please evaluate plume containment/capture in Section 4 and add a brief discussion of containment in the first paragraph of Section 5.1.2.	See response to USEPA Comment #28.

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50.	Section 5.2.1, Page 5-4, Second Paragraph:	Results presented are inconsistent with data presented in Section 4.2.2.1. Revise the last two sentences to be consistent with data and conclusions presented in Section 4.2.2.1.	Concur. The text has been revised as follows: "*Based on the results from the August 2023 groundwater sampling event, total and dissolved arsenic were not detected above the RG at the intermediate wells 3-MW-2 or N2-6C. However, total and dissolved arsenic were above the proposed background concentrations in well N3-12, which is screened in a perched aquifer zone. Total and dissolved manganese were detected above the proposed background concentrations at wells N2-6C and N3-12 (Table 4-3). Monitoring well N3-12 contained the highest detected concentrations of both total arsenic and total manganese at 41 and 1,900 µg/L, respectively.* ~~Based on the results of the background evaluation using data collected in July 2018 (Battelle, 2019), arsenic concentrations in the perched aquifer zone are elevated above background levels, but not affected the intermediate aquifer zone (which has lower arsenic concentrations ranging from 6.5 to 14 µg/L). Total manganese concentrations in groundwater at Areas 2/3 are consistent with naturally occurring background levels.~~"

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51.	Section 5.6.1	the Navy explains it has reviewed past identified ARARs and determined nothing needs to change based on any updates to those ARARs. Is this analysis conducted in a table format? If so, it would be good to include in this section. Also, the Navy needs to determine whether there are new ARARs (not just consider changes to old established ARARs) which need to be accounted for in the FYR in terms of making a protectiveness determination.	Concur. The ARARs are presented in Tables 5-2 through 5-9, and evaluation is discussed throughout Section 5.6. The following statement has been added to the text in Section 5.6.1: "*No new or additional ARARs were identified since the Fifth FYR*. In addition, because MTCA Method A and B cleanup values represent risk-based concentrations calculated using the methods and procedures outlined in MTCA, they are not considered ARARs under CERCLA."
52.	Section 5.7.1	the Navy refers to firefighting areas as a basis for investigating PFAS compounds. But landfills are also often associated with PFAS compounds, and the Navy has several landfills on Whidbey Island. The Navy should recognize this potential source of PFAS compounds in the FYR and undertake investigations accordingly.	Do not concur. The FYR is not the appropriate document for this comment. PFAS were not a part of the ROD for any OUs in this FYR. PFAS are discussed in subsequent sections, including in Section 6.0 Issues/Recommendations. The NASWI PFAS PA/SIs have this information. PFAS will continue to be addressed through the CERCLA process and ultimately will be included in a ROD amendment or ESD if warranted.
53.	Section 6.1	Under "Emerging Chemicals": Include how PFOS and PFOA MCLs will be addressed going forward and what that standard will mean for its past determinations?	See response to USEPA Comment #3.

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54.	Section 6.1	See EPA recommendations above and include those recommendations in this section. Here are some examples:	Do not concur. Navy acknowledges and will consider USEPA's recommendations, but these items will not be added to the FYR under the recommendations section as they are not related to protectiveness. Comments a through h have been addressed in previous comment responses.
a.	Comment #9:	EPA recommends sampling intermediate wells within Area 6 at least every 5 years to demonstrate that this remedy requirement is being met.	
b.	#20:	Discuss these downtime periods and suggest ways to prevent this sort of downtime in the future for both AOP plants.	
c.	#30:	Monitor the Area 6 intermediate aquifer at least every 3-5 years (depending on vertical gradient) to continue to demonstrate plume containment.	
d.	#37:	Add MW-6 to the Area 6 sampling network for 1-4-dioxane in consideration of recent detections of 1,4-dioxane at 6-S-27 and MW-3B.	
e.	#36:	Background Evaluation for As and Mn: Provide evaluation report and Memo to File for EPA review.	
f.	#41:	Collection of confirmation samples in 2024 and discussion of next steps to be taken if vertical migration of contaminants is confirmed.	
g.	#44:	The monitoring network is insufficient to establish groundwater gradient directions south of the main plume area. An additional monitoring well to the south of OWS-1 should be used to better evaluate gradients and plume boundaries.	

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h.	General:	Complete the Federal Facility Agreement Amendment to include PFAS and SMP. Putting it in this section will ensure we continue to pursue this amendment and effectively monitor this task.	
55.	Pages E-62 & E-63	Pages E-62 & E-63 are upside down. Please ensure that other supporting documents are properly oriented.	Concur. These pages have been formatted to proper alignment.