Chevron Environmental Management Company

Well Installation Report - 2022

Former Chevron Facility 309152
Fairbanks International Airport
Block 3, Lot 12
6223 Old Airport Road
Fairbanks, Alaska
ADEC File#: 100.38.206
ADEC Site Name: FIA - Block 3 Lot 12 - Saupe Enterprises
Hazard ID: 4314

February 15, 2023

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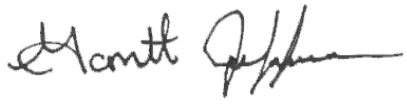

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Acronyms and Abbreviations

µg/L	microgram per liter
AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
Arcadis	Arcadis U.S., Inc.
AS	air sparge
bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, total xylenes
COPC	constituents of potential concern
DRO	diesel range organics
DUP	duplicate soil sample
EDB	1,2-dibromoethane
EDC	1,2-dichloroethane
Eurofins	Eurofins Laboratory
FIA	Fairbanks International Airport
FSG	Field Sampling Guidance
ft	foot or feet
GRO	gasoline range organics
ID	identification
IDW	investigation-derived waste
LNAPL	light non-aqueous phase liquid
mg/kg	milligram per kilogram
MTBE	methyl tert-butyl ether
NA	not applicable
Pace	Pace Analytical Laboratory
PAH	polycyclic aromatic hydrocarbon
QC	quality control
RDL	reported detection limit
RRO	residual-range organics
SCL	soil cleanup level
SVE	soil vapor extraction

TCLP	toxicity characteristic leaching procedure
the Site	Block 3, Lot 12 of Fairbanks International Airport at 6223 Old Airport Road, Fairbanks, Alaska
U.S.	United States
USEPA	United States Environmental Protection Agency
VOC	volatile organic compound

1 Introduction

On behalf of Chevron Environmental Management Company (CEMC), Arcadis U.S., Inc. (Arcadis) has prepared this *Well Installation Report - 2022* (report) for former Chevron Facility 309152, located at Block 3, Lot 12 of the Fairbanks International Airport (FIA) with an address of 6223 Old Airport Road, Fairbanks, Alaska (herein referred to as "the Site"; **Figures 1** and **2**). This report summarizes the soil and groundwater assessment activities performed at the adjacent property northwest of the Site (TL-2400 Section 24 T1S-R2W) to further evaluate the extent of downgradient petroleum hydrocarbon impacts. The work was completed in general accordance with the July 22, 2021 *Work Plan for Additional Assessment* (Work Plan; Arcadis 2021a) and November 23, 2021 *Addendum to Work Plan for Additional Assessment* (Work Plan Addendum; Arcadis 2021b). The Work Plan Addendum was prepared to address and provide responses to comments provided by Alaska Department of Environmental Conservation (ADEC) in a letter dated August 10, 2021, and was approved by ADEC in a letter dated February 16, 2022. Copies of the ADEC correspondence and the response to comments table are presented in **Appendix A**. A conceptual site model worksheet was prepared for the Site and is included in **Appendix B**.

2 Site Description and History

The Site is located at 6223 Old Airport Road in Fairbanks, Alaska (**Figure 1**). The latitude and longitude are 64.822711º north and 147.859278º west. The property is approximately 0.21 acres and is occupied by a warehouse building in the central portion along the road. The lot is unpaved with wooded area in the northwest portion of the property. The Site is bounded by Old Airport Road to the southeast, a warehouse company to the southwest, wooded area and a pond/marsh area to the northwest, and a wooded area owned by National Rent-a-Car to the northeast.

According to available information, Standard Oil Company of California (Chevron's predecessor), leased the Site from 1962 until 1985 for operation of a bulk fuel terminal. Eight aboveground storage tanks (ASTs), a fueling island, and a warehouse/office building were located onsite, for the storage and distribution of petroleum products supplying the airport. The tank farm was dismantled in approximately 1973, with the exception of the building. The Site is currently vacant, except for the warehouse building. The State of Alaska, Department of Transportation and Public Facilities, Fairbanks International Airport currently owns the property and CEMC has leased that portion of the property surrounding the warehouse since April 2020. The warehouse is currently leased by The Toy Company for car parts storage. We are aware of no current plans to redevelop the Site.

A limited site assessment was conducted on behalf of FIA in the fall of 2006. Field screening of soil and groundwater samples collected indicated the presence of petroleum impacts at the Site.

In July 2007, five monitoring wells (MW-1 through MW-5) were installed in identified potential source areas to further evaluate impacts and to adequately characterize groundwater flow direction. To further characterize the source area and delineate the area of impact, an additional six monitoring wells (MW-6 through MW-11) and one well used for light non-aqueous phase liquid (LNAPL) recovery (RW-1) were installed in July 2008.

In July 2009, two piezometer wells (PZ-1 and PZ-2) were installed at the shoreline of the off-site drainage basin pond to assess potential impacts to the pond.

In August 2010, additional assessment activities were conducted including advancing four soil borings (SB-1, SB-2, HA-1, and HA-2), installing two monitoring wells (MW-12 and MW 13), and performing an ecological evaluation.

In August 2011, additional assessment activities were conducted including advancing 14 soil borings (HA-3 through HA-16) to further characterize shallow soil petroleum hydrocarbon impacts onsite.

In August 2012, two multi-level soil vapor probes (SV-1 and SV-2), two sub-slab soil vapor probes (SSV-2 and SSV-3), and one groundwater monitoring well (MW-14) were installed and sampled at the Site. Three indoor air samples (IA-1, IA-2, and IA-3) and two outdoor ambient air samples (OA-1 and OA-2) were also collected in and around the onsite building.

In July and August 2013, two assessments were completed to delineate petroleum hydrocarbons northeast of the Site, on the former Hotfoot Property. A total of 11 borings (GP-1 through GP-11) were drilled to depths ranging between 18 and 25 feet (ft) below ground surface (bgs), monitoring wells MW-15 through MW-17 were installed in borings GP-9 through GP-11, respectively, and three hand auger borings (HA-17 through HA-19) were drilled during the assessment. In May 2014, another assessment was completed to further delineate offsite petroleum hydrocarbon impacts and LNAPL cross-gradient, east and northeast of the Site. During the May 2014 assessment, one soil boring (SB-10) and four monitoring wells (MW-18 through MW-21) were drilled/installed to approximately 21 to 22 ft bgs.

In May 2015, an additional assessment was completed to delineate surface soil (0 to 2 ft bgs) petroleum impacts at the Site. The soil data collected during the 2015 assessment was used to define the horizontal extent of contamination in surface soil and further evaluate possible remediation alternatives proposed in the 2015 Cleanup Plan (Arcadis 2015).

As proposed in the 2018 *Air Sparge (AS) and Soil Vapor Extraction Well Installation Work Plan* (Arcadis 2018), five existing monitoring wells (MW-2, MW-3, MW-4, MW-6, MW-9) and recovery well RW-1 were over-drilled and reconstructed as 4-inch-diameter soil vapor extraction (SVE) wells in preparation for future vapor extraction from locations with historically elevated COC concentrations.

In October 2019, shallow soil excavation activities were conducted at the Site that removed approximately 196 tons of petroleum hydrocarbon-impacted soil. Excavation activities were conducted in accordance with the 2019 *Shallow Soil Excavation and System Installation Work Plan* (Arcadis 2019). Also in October 2019, AS wells AS-01 through AS-15 were installed at the Site.

In September and October 2020, a concrete pad was installed at the Site in preparation for the installation of the SVE system. Following receipt of the applicable permits, the remediation system was installed at the Site in August 2022. Startup of the system is planned for spring 2023 and a system installation and startup report will be submitted to ADEC.

3 Objective

The objective of this investigation was to further delineate downgradient petroleum hydrocarbon impacts to the northwest of the Site. Discussion of the additional assessment activities and results is presented in Sections 4 and 5. In summary, based on the initial results, the extent of downgradient impacts has not been adequately delineated, and thus further investigation is recommended.

3.1 Constituents of Concern

Constituents of concern (COCs) for this Site and the associated ADEC cleanup levels for soil and groundwater are presented in **Table 3-1**, below, as well as the applicable laboratory analysis method and laboratory method detection limits.

Table 3-1. Soil and Groundwater Cleanup Levels for Site COCs

COC	Soil Cleanup Level (mg/kg)	Groundwater Cleanup Level (µg/L)	Laboratory Method	Method Detection Limit: Soil (mg/kg) / Groundwater (µg/L)
GRO	300	2,200	Alaska Method AK 101	0.5/10.0
DRO	250	1,500	Alaska Method AK 102	6.92/229.0
RRO	10,000	1,100	Alaska Method AK 103	13.8/403.0
Benzene	0.022	4.6	USEPA Method 8260D	0.000467/ 0.0941
Ethylbenzene	0.13	15	USEPA Method 8260D	0.000737/0.137
Toluene	6.7	1,100	USEPA Method 8260D	0.0013/0.278
Total Xylenes	1.5	190	USEPA Method 8260D	0.00088/0.174
Naphthalene	0.038	1.7	USEPA Method 8260D/8270E SIM	0.00488/1.0
EDB	0.00024	0.075	USEPA Method 8260/8011	0.000648/0.00536
EDC	0.0055	1.7	USEPA Method 8260D	0.000649/0.0819
Arsenic	0.20	0.52	USEPA Method 6020/6020	0.1/0.18
Chromium	0.089	0.35	USEPA Method 6020/6020	0.2965/1.24
Lead	NA	15	USEPA Method 6020/6020	0.099/0.849

Notes:
Cleanup Levels are from: 18 AAC 75 Oil and Other Hazardous Substances Pollution Control, rev. November 2021 (ADEC 2021); Table B1. Method Two – Soil Cleanup Levels (Migration to Groundwater), Table B2. Method Two – Petroleum Hydrocarbons Soil Cleanup Levels (Under 40 Inch Zone – Migration to Groundwater), and Table C. Groundwater Cleanup Levels.
µg/L = microgram per liter
AAC = Alaska Administrative Code
DRO = diesel-range organics
EDB = 1,2-dibromoethane
EDC = 1,2-dichloroethane
GRO = gasoline-range organics
mg/kg = milligram per kilogram
NA = not applicable
RRO = residual-range organics
USEPA = United States Environmental Protection Agency

4 Monitoring Well Installation and Sampling

The scope of work for this investigation included the installation of three permanent groundwater monitoring wells (MW-22 through MW-24) conducted from August 3 to 5, 2022; collection of soil samples during the installation; and development and baseline groundwater sampling of the newly installed monitoring wells on August 6, 2022. The approximate well locations are shown on **Figure 3**.

4.1 Pre-Field Activities

As required by the Occupational Safety and Health Administration (OSHA) 29, Code of Federal Regulations 1910.120 (Hazardous Waste Operations and Emergency Response), Arcadis prepared a Health and Safety Plan (HASP) to address the proposed well installation activities at the Site. Field staff reviewed the HASP prior to initiating field operations and work was conducted under the direction of a “Qualified Environmental Professional” and “Qualified Sampler” as defined in 18 Alaska Administrative Code (AAC) 75.333.

As required by the FIA, a building permit application was submitted and approved on May 18, 2022 for the installation of monitoring wells MW-22 through MW-24.

Prior to installation activities, Arcadis marked out the proposed monitoring well locations and contacted Alaska Digline, Inc. to identify public underground utilities in the work areas on July 26, 2022. In addition, GPRS, Inc. conducted a private utility locate on August 1, 2022 to further identify and confirm subsurface utilities or obstructions near the proposed well locations.

4.2 Monitoring Well Installation

From August 3 to 5, 2022, GeoTek Drilling installed three groundwater monitoring wells (MW-22 through MW-24) under Arcadis supervision. Details are discussed in the following sections.

4.2.1 Drilling and Soil Sampling Activities

Each well boring was initially advanced using a hand auger to soft-clear for any potential subsurface utilities. Although the Work Plan stated soft-clearing would be completed to 8 ft bgs, no evidence of utilities deeper than 5 ft bgs were identified during private utility locating, therefore soft-clearing using a hand auger was performed either to refusal or 5 ft bgs. After hitting refusal or clearing to 5 ft bgs with the hand auger, a Geoprobe direct push drilling rig was used to advance each boring to an approximate depth of 20 ft bgs. During advancement, subsurface materials were logged continuously for stratigraphic characteristics using the Unified Soil Classification System. Soil boring logs for MW-22 through MW-24 can be found in **Appendix C**.

Soil samples were field screened for volatile organic compounds (VOCs) using a photoionization detector (PID) and visually inspected for the presence of impacts. Soil samples were collected for chemical analysis from each of the three well borings (MW-22 through MW-24). Each soil core was inspected by Arcadis field staff, and analytical samples were collected at the following:

- One surface/near surface soil sample from 0 to 2 ft bgs
- One vadose zone soil sample above observed groundwater elevation seasonal high fluctuation
- One soil sample at the groundwater interface (within the observed seasonal fluctuation zone)

Sample depths are provided in **Table 4-1**, below. Note that soil samples were inadvertently not collected at the bottom of each well boring due to a field oversight; thus, this represents a work plan deviation. A field duplicate sample was collected from MW-3 at 4.5 ft bgs for quality assurance purposes.

Table 4-1. Well Boring Total Depths and Laboratory Analytical Sample Intervals

Location	Boring Type	Total Depth (ft bgs)	First Encountered Groundwater (ft bgs)	Laboratory Analytical Sample Intervals (ft bgs)
MW-22	Groundwater Monitoring Well	20	6	0.5-1, 4.5-5, and 5-5.5
MW-23	Groundwater Monitoring Well	20	10	0.5-1, 4.5-5, and 9.5-10
MW-24	Groundwater Monitoring Well	20	10	0.5-1, 4.5-5, and 9.5-10

Notes:
bgs = below ground surface
ft = foot or feet

Soil samples retained for laboratory analysis were collected using laboratory provided containers. After collection, all samples were immediately placed in an ice-chilled cooler for transport to Pace Analytical Laboratory (Pace) of Mt. Juliet, Tennessee via FedEx under chain-of-custody documentation. Soil samples were submitted for analysis of the following:

- Gasoline range organics (GRO) by Alaska Method AK 101
- Diesel range organics (DRO) by Alaska Method AK 102
- VOCs by United States Environmental Protection Agency (USEPA) Method 8260D
- Polycyclic aromatic hydrocarbons (PAHs) by USEPA Method 8270E-SIM

4.2.2 Monitoring Well Construction

After reaching total depth at each well boring location, monitoring wells were installed in accordance with ADEC's monitoring well guidance (ADEC 2013). Note that approximately the bottom foot of each borehole collapsed and thus the wells were set slightly above 20 ft bgs. The monitoring wells were constructed of 2-inch-diameter schedule 40 polyvinyl chloride with 0.01-inch factory-slotted screen and 2-inch solid schedule 40 polyvinyl chloride riser. The wells were set between approximately 18.2 ft bgs (MW-23) and 19.2 ft bgs (MW-24) with a 15-ft screen interval. The depth to water onsite is historically approximately 5 to 8 ft bgs. The wells were constructed with pre-pack sand pack (#10/20 silica sand) and additional sand pack was placed from the bottom of the borehole to approximately 1-2 ft above the screened interval. An interstitial hydrated bentonite seal above the well screen sand pack was installed up to approximately 1 ft bgs followed by pea gravel. Due to a lack of standpipe (stickup) material, each monitoring well was completed with a traffic-rated well box and concrete apron, thus representing a deviation from the Work Plan. Well construction logs are provided in **Appendix C** and well construction details are provided in **Table 1**.

4.2.3 Monitoring Well Development

Well development occurred a minimum of 24 hours after monitoring well installation on August 6, 2022. Per the ADEC monitoring well guidance (ADEC 2013), monitoring wells can be developed 24 hours after the well installation occurs to allow for the annular seal to set. However, the Work Plan stated development would not be performed until at least 48 hours following installation; thus, this represents a deviation. Well development was performed by surging the wells over the length of the screen interval using a surge block, bailing out sediment that accumulated in the bottom of the wells, and then purging the well until the water was relatively free of suspended sediments and/or until approximately 10 well volumes were removed. Purging was completed using down-hole pumps and purge water was containerized in U.S. Department of Transportation-approved 55-gallon steel drums and sampled for disposal.

4.2.4 Site Survey

Existing monitoring and remediation wells, including the new monitoring wells, were surveyed by a licensed surveyor from McLane Surveying on September 15, 2022. The locations were surveyed relative to site features and local datum. Survey data provided by McLane Surveying is provided in **Appendix D**.

4.3 Groundwater Sampling

Groundwater samples were collected from the new wells and preserved in accordance with Section 6 of the ADEC's Field Sampling Guidance (FSG, ADEC 2022). Low-flow sampling was conducted shortly after development using a submersible pump, polyethylene tubing, and flow-through cell. The depth to groundwater was not measured during the low-flow purging as the water level meter was unable to fit down the well casing with the submersible pump downhole. Flow rates and groundwater parameters (i.e., temperature, pH, conductivity, redox potential, dissolved oxygen, and turbidity) were monitored during purging. Measurements were recorded every 5 minutes during the purging process, and groundwater sampling was not initiated until the ADEC FSG (ADEC 2022) recommended stabilization parameters were observed.

Groundwater data and samples for analysis (in the appropriate laboratory-provided containers) were collected in the following sequence:

- In-field water quality measurements
- VOCs by USEPA Method 8260D
- GRO by Alaska Method AK 101
- DRO by Alaska Method AK 102
- Lead (dissolved) by USEPA Method 6010

Low-flow sample notes were integrated into the well development logs and completed during the sampling of each well. Well development and groundwater sampling logs are attached in **Appendix E**.

Groundwater samples from MW-22 through MW-24 were placed in laboratory-supplied bottles and labeled with the sample identification (ID); sealed in a resealable bag; and placed in a laboratory-provided, ice-chilled cooler. The samples were then transported under chain-of-custody protocol to Pace via FedEx. Samples were analyzed with a standard turnaround time of 10 business days.

After each use of the well development tools, sampling pump, and depth to water gauging tools, equipment decontamination was conducted in accordance with the quality control (QC) measures presented in Section 12.8 of the ADEC FSG (ADEC 2022).

5 Analytical Results

Analytical results for soil samples and groundwater samples collected during the investigation are summarized below.

5.1 Soil Sampling Results

Select petroleum hydrocarbon, VOC, and/or PAH constituents were detected in all the soil samples. The analytical results of the soil samples collected from well borings MW-22 through MW-24 were compared to ADEC Method Two Soil Cleanup Levels, Tables B1 and B2 commercial soil cleanup levels (SCLs) for migration to groundwater from 18 AAC 75.341 (ADEC 2021). Detected concentrations of COCs were above the SCLs for the locations listed in **Table 5-1**, below.

Table 5-1. Soil Sample Detections above ADEC Soil Cleanup Levels

Sample ID	Sample Type	Sample Depth (ft bgs)	Analyte	Sample Concentration	ADEC SCL Commercial	Units
MW-22	Soil	4.5-5	DRO	371	250	(mg/kg)
MW-23	Soil	4.5-5	DRO	672	250	(mg/kg)
MW-23 (DUP)	Soil	4.5-5	DRO	457	250	(mg/kg)
MW-23	Soil	9.5-10	Benzene	0.105	0.022	(mg/kg)
MW-23	Soil	9.5-10	Ethylbenzene	0.306	0.13	(mg/kg)
MW-23	Soil	9.5-10	Total Xylenes	4.35	1.5	(mg/kg)
MW-23	Soil	9.5-10	Naphthalene	1.07	0.038	(mg/kg)

Notes:
ADEC = Alaska Department of Environmental Conservation
bgs = below ground surface
DRO = diesel range organics
DUP = duplicate soil sample
ft = foot or feet
ID = identification
mg/kg = milligrams per kilogram
SCL = soil cleanup level for migration to groundwater

In addition to the detected COCs listed above, 1,2,4-trimethylbenzene (1,2,4-TMB) and 1,3,5-trimethylbenzene (1,3,5-TMB) were detected above the SCLs in soil sample MW-23 (9.5 to 10 ft bgs) at concentrations of 2.68 milligrams per kilogram (mg/kg) and 1.31 mg/kg, respectively. As mentioned above, there were additional petroleum hydrocarbon, VOC, and PAH constituents which were detected in the samples, but the concentrations did not exceed applicable SCLs. The duplicate sample results were similar to those of the primary sample.

A summary of soil analytical results for GRO; DRO; benzene, toluene, ethylbenzene, total xylenes (collectively BTEX); naphthalene; methyl tert-butyl ether (MTBE); 1,2-dichloroethane (EDC); and ethylene dibromide/1,2-dibromoethane (EDB) is provided in **Table 2** and on **Figure 4**. Results for additional VOCs and PAHs are provided in **Tables 3a** and **3b**. The full laboratory analytical reports and chain-of-custody documentation for the soil samples are provided in **Appendix F**.

5.2 Groundwater Sampling Results

Similar to the soil samples, petroleum hydrocarbon constituents and select petroleum-related VOCs were detected in all the wells. GRO, DRO, BTEX, and naphthalene were detected in all three wells (toluene was not detected in MW-24). MTBE and EDC were only detected in MW-23, and only at low concentrations. EDB and lead were not detected in any of the wells. The analytical results for the groundwater samples collected from MW-22 through MW-24 were compared to ADEC Method Groundwater Cleanup Levels, Tables C from 18 AAC 75.341 (ADEC 2021). Detected concentrations of COCs were above the groundwater cleanup levels for the locations listed in **Table 5-2**, below.

Table 5-2. Groundwater Detections above ADEC Groundwater Cleanup Levels

Sample ID	Sample Type	Analyte	Sample Concentration	ADEC Groundwater Cleanup Level	Units
MW-23	Groundwater	GRO	2,200	2,200	(µg/L)
MW-22	Groundwater	DRO	3,850	1,500	(µg/L)
MW-23	Groundwater	DRO	2,460	1,500	(µg/L)
MW-23 (DUP)	Groundwater	DRO	2,380	1,500	(µg/L)
MW-24	Groundwater	DRO	2,260	1,500	(µg/L)
MW-22	Groundwater	Benzene	53.3	4.6	(µg/L)
MW-23	Groundwater	Benzene	80.0	4.6	(µg/L)
MW-23 (DUP)	Groundwater	Benzene	75.8	4.6	(µg/L)
MW-24	Groundwater	Benzene	12.0	4.6	(µg/L)
MW-22	Groundwater	Ethylbenzene	17.1	15	(µg/L)
MW-22	Groundwater	Total Xylenes	595	190	(µg/L)
MW-23	Groundwater	Total Xylenes	1,070	190	(µg/L)
MW-23 (DUP)	Groundwater	Total Xylenes	1,050	190	(µg/L)
MW-24	Groundwater	Total Xylenes	268	190	(µg/L)
MW-22	Groundwater	Naphthalene	35.1 J	1.7	(µg/L)
MW-23	Groundwater	Naphthalene	4.68 J	1.7	(µg/L)
MW-23 (DUP)	Groundwater	Naphthalene	2.61 J	1.7	(µg/L)
MW-24	Groundwater	Naphthalene	18.9 J	1.7	(µg/L)

Notes:
µg/L = micrograms per liter
ADEC = Alaska Department of Environmental Conservation
bgs = below ground surface
DRO = diesel range organics
DUP = duplicate groundwater sample
GRO = gasoline range organics
ID = identification
J = The associated numerical value is an estimated concentration only

In addition to the detected COCs listed above, 1,2,4-TMB was detected above the ADEC Groundwater Cleanup Level (56 µg/L) in groundwater samples MW-22, MW-23, the associated duplicate for MW-23, and MW-24 at concentrations of 102 µg/L, 103 µg/L, 100 µg/L, and 63.4 µg/L, respectively. As mentioned above, there were additional petroleum hydrocarbon and VOC constituents which were detected in the samples, but the concentrations did not exceed applicable ADEC groundwater cleanup levels. The duplicate sample results were similar to those of the primary sample.

Groundwater analytical results for GRO, DRO, BTEX, naphthalene, MTBE, EDC, and EDB are provided in **Table 4** and on **Figure 5**. Results for additional VOCs and lead are provided in **Table 5**. The full laboratory analytical report and chain-of-custody documentation for the groundwater samples are provided in **Appendix F**.

6 Investigation-Derived Waste

Investigation-derived waste (IDW) generated during investigation activities included soil cuttings, decontamination water, and development and groundwater sampling purge water. All IDW derived from drilling and monitoring well installation was placed in new DOT-approved 55-gallon steel drums, appropriately labeled, and temporarily stored at the Site while characterization samples were collected and analyzed.

Soil cuttings were characterized by submitting waste samples to the Eurofins Laboratory (Eurofins) in West Sacramento, California and analyzing for the following:

- GRO (Alaska Method AK 101), DRO (Alaska Method AK 102), and RRO (Alaska Method AK 103)
- Toxicity characteristic leaching procedure (TCLP) Resource Conservation and Recovery Act (RCRA) eight metals (i.e., arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver; USEPA Method 1311/6010C, 7000 series)
- TCLP VOCs (USEPA Methods 1311 and 8260C) and TCLP semi-VOCs (USEPA Methods 1311 and 8270D)
- TCLP mercury (USEPA Method 7470A)
- Total solids
- Fluorinated alkyl substances (USEPA Method 537)

Additionally, decontamination and purge water samples were submitted to Eurofins for the following analysis:

- GRO (Alaska Method AK 101), DRO (Alaska Method AK 102), and RRO (Alaska Method AK 103)
- TCLP VOCs (USEPA Methods 1311 and 8260C)
- TLCP semi-VOCs (USEPA Methods 1311 and 8270D)
- TCLP RCRA eight metals (USEPA Methods 1311 and 6010C, 7000 series)
- TCLP mercury (USEPA Method 7470A)
- Ignitability
- pH (USEPA Method 9040 or USEPA Method 1110)
- Fluorinated alkyl substances (USEPA Method 537)

Due to technical issues by Eurofins, laboratory analytical results were lost for waste soil samples collected for GRO and VOCs along with wastewater samples collected for GRO. Waste soil was resampled for GRO and VOCs and wastewater for GRO to properly characterize the waste. The resamples arrived at the lab within 24 hours of shipping via FedEx submerged in ice; however, the samples were out of allowable temperature upon arrival. ADEC was contacted and the resamples were approved for use in characterizing waste for transport and/or disposal.

Following receipt of the laboratory analytical results, the ADEC Transport, Treatment, and Disposal Approval Form for Contaminated Media was submitted to ADEC and approved on October 7, 2022. All IDW was transported offsite by U.S. Ecology on October 12, 2022 for treatment and/or disposal. The IDW laboratory reports are provided in **Appendix F**. The approved ADEC Transport, Treatment, and Disposal Approval Forms for Contaminated Media and copies of the Non-Hazardous Waste Manifests are provided in **Appendix G**.

7 Quality Control

Field instruments were calibrated onsite on a daily basis per manufacturer's specifications. Field duplicate samples were collected for soil and groundwater per Section 12.6 of ADEC's 2022 FSG. Decontamination and equipment blank samples were collected for soil and groundwater sampling where equipment was decontaminated between sample collection. Equipment blank samples were collected in accordance with ADEC's 2022 FSG. Trip blanks were supplied by Pace but inadvertently not analyzed by the lab due to an oversight. The QC activities were documented in daily field notes included in **Appendix E**.

7.1 Laboratory Data Quality Assurance Summary

As required by ADEC's Technical Memorandum: Minimum Quality Assurance Requirements for Sample Handling, Reports and Laboratory Data (ADEC 2019), Arcadis completed a laboratory data review checklist for each of the laboratory reports generated for the soil and groundwater investigation. The full laboratory analytical reports and chain-of-custody documentation are provided in **Appendix F** and the ADEC data review checklists are included as **Appendix H**. The following quality assurance summary describes six parameters, related to the quality and usability of the data presented in this report.

7.1.1 Precision

Overall, the relative percent difference between the field duplicates and parent samples collected for soil and groundwater samples were within control limits, as documented in **Appendix H**. The precision of the data, as measured by laboratory QC indicators, suggest that the Data Quality Objectives were met with the exception of the following:

The laboratory control sample/duplicate were greater than the control limit for vinyl acetate. As a result, the analytical results for this compound in the groundwater samples collected from MW-22 and MW-23, duplicate sample DUP-1, and the equipment blank EB-1 were qualified as estimated.

7.1.2 Accuracy

The accuracy of the data, as measured by laboratory QC indicators, suggest that the Data Quality Objectives were met.

Continuing calibration for the compounds 1,2,3-trichlorobenzene, hexachloro-1,3-butadiene, naphthalene, vinyl acetate, and 1,2,4-trichlorobenzene exhibited a low bias recovery. As a result, the analytical results for these compounds in the groundwater samples collected from MW-22, MW-23, and MW-24, duplicate sample DUP-1, and the equipment blank EB-1 were qualified as estimated.

Continuing calibration for the compounds 1,2-dichloroethane, acrylonitrile, chloromethane and dichlorodifluoromethane exhibited a low bias recovery. As a result, the analytical results for these compounds in the soil samples collected from well borings MW-22 through MW-24 at sample depths 0.5 to 1 ft bgs, well borings MW-23 and MW-24 at sample depth 4.5 to 5 ft bgs, and well borings MW-23 and MW-24 at sample depths 9.5 to 10 ft bgs, and the duplicate sample DUP-1 were qualified as estimated.

Continuing calibration for the compounds 1,2,3-trichlorobenzene and naphthalene exhibited a low bias recovery. As a result, the analytical results for these compounds in the soil sample collected from well boring MW-22 at sample depth 4.5 to 5 ft bgs were qualified as estimated.

7.1.3 Representativeness

The data appear to be representative of site conditions and are generally consistent with historical groundwater monitoring and soil sampling results and expected impacts to groundwater and soil.

7.1.4 Comparability

The laboratory results are presented in the same units as previous reports to allow comparison. The target compounds were not detected in the equipment blank, or laboratory method blank with the below exceptions.

DRO was detected at an estimated concentration below the reporting limit (7.95 J mg/kg) in the method blank. Per the USEPA National Functional Guidelines for Organic Superfund Methods Data Review, EPA 540-R-20-005, (USEPA 2020), with reference to the historical USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, OSWER 9240.1-05A-P (USEPA 1999), a blank action level was established at five times the reported blank concentration. As a result, samples that had detections of DRO within this established blank action level (five times the reported blank concentration or 39.75 mg/kg), were qualified as non-detect at or above the reporting limit. The established blank action level for DRO (39.75 mg/kg) is below the ADEC migration to groundwater SCL for DRO (250 mg/kg). Accordingly, the DRO analytical results in the soil samples collected from well borings MW-22 through MW-24 at sample depth 0.5 to 1 ft bgs, well boring MW-22 at sample depth 5 to 5.5 ft bgs, and well boring MW-24 at sample depths 4.5 to 5 ft bgs and 9.5 to 10 ft bgs were qualified as non-detect (UB in the data validation report) at or above the reporting limit. These results are identified with a “B” in **Table 2**.

7.1.5 Completeness

The results appear to be valid and usable, and thus, the laboratory results have 100 percent completeness.

7.1.6 Sensitivity

The laboratory reported detection limits (RDLs) for select compounds (EDB, 1,2-DCA, acetone, 1,1,2,2-tetrachoroethane, 1,1,2-trichloroethane, 1,2,3-trichloropropane, bromomethane, bromodichloromethane, dibromochloromethane, hexachlorobutadiene, and vinyl chloride) were greater than the ADEC SCLs; however, the laboratory method detection limits (MDLs) were below the ADEC SCLs. All samples were non-detect for the respective constituents as shown in **Tables 2, 3a,** and **3b**.

The laboratory RDLs for select compounds (naphthalene, 1,2-DCA, 1,2,3-trichloropropane, bromodichloromethane, bromomethane, carbon tetrachloride, chloroform, EDB, 1,4-dichlorobenzene, hexachloro-1,3-butadiene, 2-hexanone, 1,1,2,2-tetrachloroethane, 1,2,4-trichlorobenzene, 1,1,2-trichloroethane, trichloroethene, and vinyl chloride) were greater than the ADEC GCLs; however, the MDLs were below the ADEC GCLs. All samples were non-detect for the respective constituents as shown in **Tables 4** and **5**.

The sensitivity of the analyses was adequate for the samples as detection limits were less than the ADEC SCLs and GCLs with the exceptions noted above.

8 Conclusions and Recommendations

In August 2022, additional assessment activities were conducted to further evaluate the extent of offsite, downgradient petroleum hydrocarbon impacts on the adjacent property northwest of the Site. Three additional groundwater monitoring wells (MW-22 through MW-24) were installed and sampled during the investigation. Based on the analytical results, exceedances of ADEC cleanup levels for certain COCs were observed in select soil samples as well as all the groundwater samples and therefore, the extent of offsite impacts has not been adequately defined.

Soil analytical results from the well borings indicated petroleum-impacted soil exceeding ADEC SCLs for migration to groundwater in well borings MW-22 and MW-23 at 4.5 to 5 ft bgs for DRO and MW-23 at 9.5 to 10 ft bgs for benzene, ethylbenzene, total xylenes, naphthalene, 1,2,4-TMB, and 1,3,5-TMB. Groundwater in nearby monitoring wells MW-7 and MW-8 has fluctuated between approximately 4 ft bgs at MW-8 to 12.5 ft bgs at MW-7. No exceedances were observed in the surface samples collected at 0.5 to 1 ft bgs from the current well borings; therefore, the exceedances at 4.5 and 9.5 ft bgs appear due to the presence of impacted groundwater that has migrated downgradient. No SCL exceedances were observed in the soil samples collected from boring MW-24.

The initial groundwater sample analytical results from newly installed monitoring wells MW-22 through MW-24 indicated petroleum impacts exceeding ADEC cleanup levels for GRO at MW-23, DRO, benzene, xylenes, naphthalene, and 1,2,4-TMB at all three wells, and ethylbenzene at MW-22. Continued monitoring of these wells will provide further data on groundwater quality and concentration trends.

Based on the results of the investigation, Arcadis recommends the following:

- Preparation and submittal of a Additional Investigation Work Plan to ADEC. The plan will propose additional monitoring well locations within accessible areas of the adjacent property northwest of the Site in an attempt to adequately delineate the extent of downgradient groundwater impacts.

8.1 Groundwater Sampling Program

Arcadis incorporated the newly installed monitoring wells (MW-22 through MW-24) into the existing groundwater monitoring program during the second semi-annual monitoring event in 2022. Wells will continue to be gauged and sampled on a semi-annual basis. Groundwater samples will be analyzed for the following:

- VOCs by USEPA Method 8260B
- GRO by Alaska Method AK101
- DRO and RRO by Alaska Methods AK102 and AK103
- DRO with silica gel cleanup by Alaska Method AK102

9 References

ADEC. 2013. Division of Spill Prevention and Response Contaminated Sites Program. Monitoring Well Guidance. September.

ADEC. 2019. Technical Memorandum: Minimum Quality Assurance Requirements for Sample Handling, Reports, and Laboratory Data. ADEC Division of Spill Prevention and Response Contaminated Sites Program. October.

ADEC. 2021. 18 AAC 75 Oil and Other Hazardous Substances Pollution Control. ADEC Division of Spill Prevention and Response Contaminated Sites Program. November 18.

ADEC. 2022. Field Sampling Guidance for Contaminated Sites and Leaking Underground Storage Tank Sites. ADEC Division of Spill Prevention and Response Contaminated Sites Program. January 22.

Arcadis. 2015. 2015 Cleanup Plan, Former Chevron Facility #309152. February 24.

Arcadis. 2018. 2018 Air Sparge and Soil Vapor Extraction Well Installation Work Plan. Former Chevron Facility #309152. May 29.

Arcadis. 2019. 2019 Shallow Soil Excavation and System Installation Work Plan. Former Chevron Facility #309152. September 10.

Arcadis. 2020. First Semi-Annual 2020 Groundwater Monitoring Report, Former Chevron Facility 309152. August 17.

Arcadis. 2021a. Work Plan for Additional Assessment. Former Chevron Facility #309152. July 22.

Arcadis. 2021b. Addendum to Work Plan for Additional Assessment. Former Chevron Facility #309152. November 23.

USEPA. 1999. USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, OSWER 9240.1-05A-P. November.

USEPA. 2020. USEPA National Functional Guidelines for Organic Superfund Methods Data Review, EPA 540-R-20-005. November.

Tables

Table 1
Well Construction Details
Former Chevron Facility 309152
6223 Old Airport Road
Fairbanks, Alaska

Well ID	Date Installed	Survey Date	Coordinates		TOC (ft amsl)	Total Depth (ft bgs)	Casing Diameter (inches)	Slot Size (inches)	Screen Interval (ft bgs)	Filter Pack (ft bgs)
			Lattitude/Northing	Longitude/Easting						
MW-22	8/4/2022	9/15/2022	3959536.537	1350611.963	429.50	18.74	2.00	0.010	3.7-18.7	2.5-18.9
MW-23	8/4/2022	9/15/2022	3959597.877	1350668.598	430.60	18.20	2.00	0.010	3.2-18.2	1.5-18.3
MW-24	8/5/2022	9/15/2022	3959642.479	1350758.336	431.35	19.20	2.00	0.010	4.2-19.2	2.5-19.3

Notes:
amsl = above mean sea level
bgs = below ground surface
Northing/Easting = Alaska State Plane One 3 NAD83(2011)(EPOCH 2010) US Feet
ft - foot/feet
TOC = top of casing elevation (feet above mean sea level)

Table 2
Soil Analytical Results
Former Chevron Facility 309152
6223 Old Airport Road
Fairbanks, Alaska

Soil Boring	Sample Depth (feet bgs)	Date	GRO	DRO	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	MTBE	EDB	EDC	Naphthalene by 8270 E-SIM
ADEC Soil Cleanup Level													
Maximum Allowable Concentration			1,400	12,500	--	--	--	--	--	--	--	--	--
Human Health			1,400	10,250	11	200 (5,800)[1]	49	57 (490)[1]	29	670	0.42	5.5	29
Migration to Groundwater			300	250	0.022	6.7	0.13	1.5	0.038	0.40	0.00024	0.0055	0.038
MW-22	0.5-1	8/3/2022	<5.14	<206 B	<0.00116	<0.00580	<0.0029	**0.00426 J**	**0.00896 J**	<0.00116	***<0.00580***	<0.00290 J	<0.0206
	4.5-5	8/3/2022	<5.16	**371**	<0.00107	<0.00536	<0.00268	**0.00745**	**0.0304**	<0.00107	***<0.00536***	<0.00268	**0.0234 J**
	5-5.5	8/3/2022	<5.74	<214 B	<0.00230	<0.0115	<0.00574	<0.0149	**0.0342 J**	<0.00230	***<0.0115***	***<0.00574***	<0.0214
MW-23	0.5-1	8/3/2022	<6.37	<214 B	<0.00124	<0.00618	**0.000989 J**	**0.00719 J**	<0.0154	<0.00124	***<0.00618***	<0.00310 J	<0.0214
	4.5-5	8/3/2022	**26.4 [21.1]**	**672 [457]**	**0.0181 [0.014]**	**0.00566 J [0.00453 J]**	**0.0173 [0.0172]**	**0.167[0.151]**	<0.0167 [<0.0164]	<0.00134 [<0.00131]	***<0.00669 [<0.00656]***	<0.00334 J [<0.00328 J]	**0.00965 J [0.0171 J]**
	9.5-10	8/3/2022	**12.7**	**45.5 J**	**0.105**	**0.0175**	**0.306**	**4.35**	**1.07**	<0.00160	***<0.00802***	<0.00401 J	**0.373**
MW-24	0.5-1	8/3/2022	<8.19	<236 B	<0.00161	<0.00803	<0.00402	**0.00534 J**	<0.0200	<0.00161	***<0.00803***	<0.00402 J	<0.0236
	4.5-5	8/3/2022	<5.62	<225 B	<0.00128	<0.00638	<0.00319	**0.00172 J**	<0.0159	<0.00128	***<0.00638***	<0.00319 J	<0.0225
	9.5-10	8/3/2022	<5.44	<218 B	**0.00110 J**	**0.00522 J**	**0.00153 J**	**0.00504 J**	<0.0147	<0.00118	***<0.00590***	<0.00295 J	<0.0218

Notes:
All results are reported in milligrams per kilogram (mg/kg).
Screening Level for Ingestion, Under 40-Inch Zone, Table B2 Under 40-Inch Zone, (ADEC, 18 AAC 75.341) revised January 2022
Volatile Organic Compounds (VOCs) analzyed by USEPA Method 8260D
Bold = Detected above laboratory method detection limit (MDL)
Bold and Shaded = Value exceeds ADEC Groundwater Cleanup Level
Bold and Shaded = Value exceeds Maximum Allowable Concentration over Human Health
Bold and Shaded = Value exceeds Maximum Allowable Concentration Over Migration to Groundwater
Bold and *Italicized* = Constituent considered non-detect, however Laboratory RDL is greater than the ADEC Groundwater Cleanup Level
[1] = Screening level is based on a soil saturation concentration (Csat) using the equations set out in Procedures for Calculating Cleanup Levels, adopted by reference in 18 AAC 75.340 revised January 2022. The Csat value is listed first, followed by the human health risk-based cleanup level in parentheses (ADEC, 18 AAC 75.341) revised January 2022
<0.00290 = Not detected at or above the reported detection limit (RDL)
-- = Not analyzed/ Not measured/ Not Available
[ ] = Duplicate Result
ADEC = Alaska Department of Environmental Conservation
DRO = Total petroleum hydrocarbons, diesel range by LUFT GC/MS according to State of Alaska Method AK102.
EDB = Ethylene Dibromide (Dibromoethane)
EDC = 1,2-Dichloroethane
GC/MS = Gas chromatography/Mass Spectrometry
GRO = Total petroleum hydrocarbons, gasoline range by LUFT GC/MS according to United States Environmental Protection Agency (USEPA) Method AK101
J The identification of the analyte is acceptable; the reported value is an estimate.
LUFT = Leaking Underground Fuel Tank
MTBE = Methyl tert-butyl ether
MW = Groundwater monitoring well
B = Compound considered non-detect at the listed value due to associated blank contamination. Blank action level established at five times the reported blank concentrations is below the ADEC soil cleanup levels.

Table 3a
Additional Soil Analytical Results - VOCs
Former Chevron Facility 309152
6223 Old Airport Road
Fairbanks, Alaska

Soil Boring	Sample Depth (feet bgs)	Date	1,1 Dichloroethene	1,1,1,2-Tetrachloro-ethane	1,1,1-Trichloroethane	1,1-Dichloroethane	1,1-Dichloropropene	1,2,3-Trichloropropane	1,2,4-Trichloro-benzene	1,2-Dibromo-3-chloropropane (DBCP)	1,2-Dichlorobenzene (o-Dichlorobenzene)	1,2-Dichloropropane
ADEC Soil Cleanup Level												
Maximum Allowable Concentration			--	--	--	--	--	--	--	--	--	--
Human Health			--	21	360 (11,000)[1]	46	--	0.066	45	--	78 (1,600)[1]	17
Migration to Groundwater			--	0.022	32	0.092	--	3.1×10^{-5}	0.082	--	2.4	0.03
MW-22	0.5-1	8/3/2022	<0.00290	<0.00290	<0.00290	<0.00290	<0.00290	***<0.0145***	<0.0145	<0.0290	<0.00580	<0.00580
	4.5-5	8/3/2022	<0.00268	<0.00268	<0.00268	<0.00268	<0.00268	***<0.0134***	<0.0134	<0.0268	<0.00536	<0.00536
	5-5.5	8/3/2022	<0.00574	<0.00574	<0.00574	<0.00574	<0.00574	***<0.0287***	<0.0287	<0.0574	<0.0115	<0.0115
MW-23	0.5-1	8/3/2022	<0.00310	<0.00310	<0.00310	<0.00310	<0.00310	***<0.0154***	<0.0154	<0.0310	<0.00618	<0.00618
	4.5-5	8/3/2022	<0.00334 [<0.00328]	<0.00334 [<0.00328]	<0.00334 [<0.00328]	<0.00334 [<0.00328]	<0.00334 [<0.00328]	***<0.0167 [<0.0164]***	<0.0167 [<0.0164]	<0.0334 [<0.00328]	<0.00669 [<0.00656]	<0.00669 [<0.00656]
	9.5-10	8/3/2022	<0.00401	<0.00401	<0.00401	<0.00401	<0.00401	***<0.0200***	<0.0200	<0.0401	<0.00802	<0.00802
MW-24	0.5-1	8/3/2022	<0.00402	<0.00402	<0.00402	<0.00402	<0.00402	***<0.0200***	<0.0200	<0.0402	<0.00803	<0.00803
	4.5-5	8/3/2022	<0.00319	<0.00319	<0.00319	<0.00319	<0.00319	***<0.0159***	<0.0159	<0.0319	<0.00638	<0.00638
	9.5-10	8/3/2022	<0.00295	<0.00295	<0.00295	<0.00295	<0.00295	***<0.0147***	<0.0147	<0.0295	<0.00590	<0.00590

Notes:
All results are reported in milligrams per kilogram (mg/kg).

Screening Level for Ingestion, Under 40-Inch Zone, Table B2 Under 40-Inch Zone, (ADEC, 18 AAC 75.341) revised January 2022

Volatile Organic Compounds (VOCs) analzyed by USEPA Method 8260D

Bold = Detected above laboratory method detection limit (MDL)

Bold and Shaded = Value exceeds ADEC Groundwater Cleanup Level

Bold and Shaded = Value exceeds Maximum Allowable Concentration over Human Health

Bold and Shaded = Value exceeds Maximum Allowable Concentration Over Migration to Groundwater

Bold and *Italicized* = Constituent considered non-detect, however Laboratory RDL is greater than the ADEC Groundwater Cleanup Level

[1] = Screening level is based on a soil saturation concentration (Csat) using the equations set out in Procedures for Calculating Cleanup Levels, adopted by reference in 18 AAC 75.340 revised January 2022. The Csat value is listed first, followed by the human health risk-based cleanup level in parentheses (ADEC, 18 AAC 75.341) revised January 2022

<0.00290 = Not detected at or above the reported detection limit (RDL)

-- = Not analyzed/ Not measured/ Not Available

[ ] = Duplicate Result

ADEC = Alaska Department of Environmental Conservation

J = The identification of the analyte is acceptable; the reported value is an estimate.

MW = Groundwater monitoring well

Table 3a
Additional Soil Analytical Results - VOCs
Former Chevron Facility 309152
6223 Old Airport Road
Fairbanks, Alaska

Soil Boring	Sample Depth (feet bgs)	Date	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	2-Butanone (Methyl ethyl ketone)	p-Isopropyltoluene	4-Methyl-2-pentanone	Acetone	Bromobenzene	Bromoform	Bromomethane (Methyl bromide)	Carbon Tetrachloride
ADEC Soil Cleanup Level													
Maximum Allowable Concentration			--	--	--	--	--	--	--	--	--	--	--
Human Health			62 (1,400)[1]	--	21	2,3000 (38,000)[1]	--	2,200 (47,000)[1]	81,000	160 (290)[1]	240	10	9.1
Migration to Groundwater			2.3	--	0.037	15	--	18	38	0.36	0.10	0.024	0.021
MW-22	0.5-1	8/3/2022	<0.00580	<0.00580	<0.00580	<0.116	<0.00580	<0.0290	<0.0580	<0.0145	<0.0290	<0.0145	<0.00580
	4.5-5	8/3/2022	<0.00536	<0.00536	<0.00536	<0.107	<0.00536	<0.0268	<0.0536	<0.0134	<0.0268	<0.0134	<0.00536
	5-5.5	8/3/2022	<0.0115	<0.0115	<0.0115	<0.230	<0.0115	<0.0574	<0.115	<0.0287	<0.0574	***<0.0287***	<0.0115
MW-23	0.5-1	8/3/2022	<0.00618	<0.00618	<0.00618	<0.124	<0.00618	<0.0310	<0.0618	<0.0154	<0.0310	<0.0154	<0.00618
	4.5-5	8/3/2022	<0.00669 [<0.00656]	<0.00669 [<0.00656]	<0.00669 [<0.00656]	<0.134 [<0.131]	**0.0522[0.0426]**	<0.0334 [<0.0328]	<0.0669 [0.0916]	<0.0167 [<0.0164]	<0.0334 [<0.0328]	<0.0167 [<0.0164]	<0.00669 [<0.00656]
	9.5-10	8/3/2022	<0.00802	<0.00802	<0.00802	<0.160	**0.685**	<0.0401	<0.0802	<0.0200	<0.0401	<0.0200	<0.00802
MW-24	0.5-1	8/3/2022	<0.00803	<0.00803	<0.00803	<0.161	<0.00803	<0.0402	<0.0803	<0.0200	<0.0402	<0.0200	<0.00803
	4.5-5	8/3/2022	<0.00638	<0.00638	<0.00638	<0.128	<0.00638	<0.0319	<0.0638	<0.0159	<0.0319	<0.0159	<0.00638
	9.5-10	8/3/2022	<0.00590	<0.00590	<0.00590	<0.118	<0.00590	<0.0295	<0.0590	<0.0147	<0.0295	<0.0147	<0.00590

Notes:
All results are reported in milligrams per kilogram (mg/kg).

Screening Level for Ingestion, Under 40-Inch Zone, Table B2 Under 40-Inch Zone, (ADEC, 18 AAC 75.341) revised January 2022

Volatile Organic Compounds (VOCs) analzyed by USEPA Method 8260D

Bold = Detected above laboratory method detection limit (MDL)

Bold and Shaded = Value exceeds ADEC Groundwater Cleanup Level

Bold and Shaded = Value exceeds Maximum Allowable Concentration over Human Health

Bold and Shaded = Value exceeds Maximum Allowable Concentration Over Migration to Groundwater

Bold and *Italicized* = Constituent considered non-detect, however Laboratory RDL is greater than the ADEC Groundwater Cleanup Level

[1] = Screening level is based on a soil saturation concentration (Csat) using the equations set out in Procedures for Calculating Cleanup Levels, adopted by reference in 18 AAC 75.340 revised January 2022. The Csat value is listed first, followed by the human health risk-based cleanup level in parentheses (ADEC, 18 AAC 75.341) revised January 2022

<0.00290 = Not detected at or above the reported detection limit (RDL)

-- = Not analyzed/ Not measured/ Not Available

[ ] = Duplicate Result

ADEC = Alaska Department of Environmental Conservation

J = The identification of the analyte is acceptable; the reported value is an estimate.

MW = Groundwater monitoring well

Table 3a
Additional Soil Analytical Results - VOCs
Former Chevron Facility 309152
6223 Old Airport Road
Fairbanks, Alaska

Soil Boring	Sample Depth (feet bgs)	Date	Chlorobenzene	Chloroethane	Chloroform	Chloromethane (Methyl chloride)	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Dibromomethane (Methylene bromide)	Dichlorodifluoro-methane (Freon 12)	Isopropylbenzene	Methylene chloride (Dichloro-methane)
ADEC Soil Cleanup Level												
Maximum Allowable Concentration			--	--	--	--	--	--	--	--	--	--
Human Health			180(250)[1]	1,400 (20,000)[1]	4.0	170	200	--	31	150	54 (1700)[1]	460
Migration to Groundwater			0.46	72	0.0071	0.61	0.12	--	0.025	3.9	5.6	0.33
MW-22	0.5-1	8/3/2022	<0.00290	<0.00580	<0.00290	<0.0145 J	<0.00290	<0.00290	<0.00580	<0.00290 J	<0.00290	<0.0290
	4.5-5	8/3/2022	<0.00268	<0.00536	<0.00268	<0.0134	<0.00268	<0.00268	<0.00536	<0.00268	<0.00268	<0.0268
	5-5.5	8/3/2022	<0.00574	<0.0115	<0.00574	<0.0287	<0.00574	<0.00574	<0.0115	<0.00574	<0.00574	<0.0574
MW-23	0.5-1	8/3/2022	<0.00310	<0.00618	<0.00310	<0.0154 J	<0.00310	<0.00310	<0.00618	<0.00310 J	<0.00310	<0.0310
	4.5-5	8/3/2022	<0.00334 [<0.00328]	<0.00669 [<0.00656]	<0.00334 [<0.00328]	<0.0167 J[<0.0164 J]	<0.00334 [<0.00328]	<0.00334 [<0.00328]	<0.00669 [<0.00656]	<0.00334 J [<0.00328 J]	**0.0109 [0.0106]**	<0.0334 [<0.0328]
	9.5-10	8/3/2022	<0.00401	<0.00802	<0.00401	<0.0200 J	<0.00401	<0.00401	<0.00802	<0.00401 J	**0.124**	<0.0401
MW-24	0.5-1	8/3/2022	<0.00402	<0.00803	<0.00402	<0.0200 J	<0.00402	<0.00402	<0.00803	<0.00402 J	<0.00402	<0.0402
	4.5-5	8/3/2022	<0.00319	<0.00638	<0.00319	<0.0159 J	<0.00319	<0.00319	<0.00638	<0.00319 J	<0.00319	<0.0319
	9.5-10	8/3/2022	<0.00295	<0.00590	<0.00295	<0.0147 J	<0.00295	<0.00295	<0.00590	<0.00295 J	<0.00295	<0.0295

Notes:
All results are reported in milligrams per kilogram (mg/kg).

Screening Level for Ingestion, Under 40-Inch Zone, Table B2 Under 40-Inch Zone, (ADEC, 18 AAC 75.341) revised January 2022

Volatile Organic Compounds (VOCs) analzyed by USEPA Method 8260D

Bold = Detected above laboratory method detection limit (MDL)

Bold and Shaded = Value exceeds ADEC Groundwater Cleanup Level

Bold and Shaded = Value exceeds Maximum Allowable Concentration over Human Health

Bold and Shaded = Value exceeds Maximum Allowable Concentration Over Migration to Groundwater

Bold and *Italicized* = Constituent considered non-detect, however Laboratory RDL is greater than the ADEC Groundwater Cleanup Level

[1] = Screening level is based on a soil saturation concentration (Csat) using the equations set out in Procedures for Calculating Cleanup Levels, adopted by reference in 18 AAC 75.340 revised January 2022. The Csat value is listed first, followed by the human health risk-based cleanup level in parentheses (ADEC, 18 AAC 75.341) revised January 2022

<0.00290 = Not detected at or above the reported detection limit (RDL)

-- = Not analyzed/ Not measured/ Not Available

[ ] = Duplicate Result

ADEC = Alaska Department of Environmental Conservation

J = The identification of the analyte is acceptable; the reported value is an estimate.

MW = Groundwater monitoring well

Table 3a
Additional Soil Analytical Results - VOCs
Former Chevron Facility 309152
6223 Old Airport Road
Fairbanks, Alaska

Soil Boring	Sample Depth (feet bgs)	Date	n-Butylbenzene	n-Propylbenzene	o-Chlorotoluene	p-Chlorotoluene	sec-Butylbenzene	sec-Dichloropropane	Styrene	t-Butylbenzene	Tetrachloroethene	trans-1,2-Dichloroethene
ADEC Soil Cleanup Level												
Maximum Allowable Concentration			--	--	--	--	--	--	--	--	--	--
Human Health			20 (5000)[1]	52 (3,700)[1]	--	--	28 (10,000)[1]	--	180 (5,700)[1]	36 (10000)[1]	68 (95)[1]	960 (2000)[1]
Migration to Groundwater			23	9.1	--	--	42	--	10	11	0.19	1.3
MW-22	0.5-1	8/3/2022	<0.0145	<0.00580	<0.00290	<0.00580	<0.0145	<0.00290	<0.0145	<0.00580	<0.00290	<0.00580
	4.5-5	8/3/2022	<0.0134	<0.00536	<0.00268	<0.00536	<0.0134	<0.00268	<0.0134	<0.00536	<0.00268	<0.00536
	5-5.5	8/3/2022	<0.0287	<0.0115	<0.00574	<0.0115	<0.0287	<0.00574	<0.0287	<0.0115	<0.00574	<0.0115
MW-23	0.5-1	8/3/2022	<0.0154	<0.00618	<0.00310	<0.00618	<0.0154	<0.00310	<0.0154	<0.00618	<0.00310	<0.00618
	4.5-5	8/3/2022	<0.0167 [<0.0164]	**0.0231** [<0.00656]	<0.00334 [<0.00328]	<0.00656 [<0.00656]	**0.0415 [0.0314]**	<0.00334 [<0.00328]	<0.0167 [<0.0164]	**0.0133 [0.00947]**	<0.00334 [<0.00328]	<0.00669 [<0.00656]
	9.5-10	8/3/2022	**0.125**	**0.228**	<0.00401	<0.00802	**0.17**	<0.00401	<0.0200	**0.0208**	<0.00401	<0.00802
MW-24	0.5-1	8/3/2022	<0.0200	<0.00803	<0.00402	<0.00803	<0.0200	<0.00402	<0.0200	<0.00803	<0.00402	<0.00803
	4.5-5	8/3/2022	<0.0159	<0.00638	<0.00319	<0.00638	<0.0159	<0.00319	<0.0159	<0.00638	<0.00319	<0.00638
	9.5-10	8/3/2022	<0.0147	<0.00590	<0.00295	<0.00590	<0.0147	<0.00295	<0.0147	<0.00590	<0.00295	<0.00590

Notes:
All results are reported in milligrams per kilogram (mg/kg).

Screening Level for Ingestion, Under 40-Inch Zone, Table B2 Under 40-Inch Zone, (ADEC, 18 AAC 75.341) revised January 2022

Volatile Organic Compounds (VOCs) analzyed by USEPA Method 8260D

Bold = Detected above laboratory method detection limit (MDL)

Bold and Shaded = Value exceeds ADEC Groundwater Cleanup Level

Bold and Shaded = Value exceeds Maximum Allowable Concentration over Human Health

Bold and Shaded = Value exceeds Maximum Allowable Concentration Over Migration to Groundwater

Bold and *Italicized* = Constituent considered non-detect, however Laboratory RDL is greater than the ADEC Groundwater Cleanup Level

[1] = Screening level is based on a soil saturation concentration (Csat) using the equations set out in Procedures for Calculating Cleanup Levels, adopted by reference in 18 AAC 75.340 revised January 2022. The Csat value is listed first, followed by the human health risk-based cleanup level in parentheses (ADEC, 18 AAC 75.341) revised January 2022

<0.00290 = Not detected at or above the reported detection limit (RDL)

-- = Not analyzed/ Not measured/ Not Available

[ ] = Duplicate Result

ADEC = Alaska Department of Environmental Conservation

J = The identification of the analyte is acceptable; the reported value is an estimate.

MW = Groundwater monitoring well

Table 3a
Additional Soil Analytical Results - VOCs
Former Chevron Facility 309152
6223 Old Airport Road
Fairbanks, Alaska

Soil Boring	Sample Depth (feet bgs)	Date	trans-1,3-Dichloropropene	Trichloroethene (Trichloroethylene)	Trichlorofluoromethane (Freon 11)	Vinyl chloride (Chloroethene)	1,1,2-Trichlorotrifluoroethane (Freon 113)	1,2,3-Trichlorobenzene	Acrylonitrile	Diisopropyl ether	1,1,2,2-Tetrachloro-ethane
ADEC Soil Cleanup Level											
Maximum Allowable Concentration			--	--	--	--	--	--	--	--	--
Human Health			--	4.9	980 (30,000)[1]	0.65	740 (11,000)[1]	81	--	--	6.1
Migration to Groundwater			--	0.011	41	0.00080	310	0.15	--	--	0.0030
MW-22	0.5-1	8/3/2022	<0.00580	<0.00116	<0.00290	**<0.00290**	<0.00290	<0.0145	<0.0145 J	<0.00116	<0.00290
	4.5-5	8/3/2022	<0.00536	<0.00107	<0.00268	**<0.00268**	<0.00268	<0.0134 J	<0.0134	<0.00107	<0.00268
	5-5.5	8/3/2022	<0.0115	<0.00230	<0.00574	**<0.00574**	<0.00574	<0.0287 J	<0.0287	<0.00230	***<0.00574***
MW-23	0.5-1	8/3/2022	<0.00618	<0.00124	<0.00310	**<0.00310**	<0.00310	<0.0154	<0.0154 J	<0.00124	***<0.00310***
	4.5-5	8/3/2022	<0.00669 [<0.00656]	<0.00134 [<0.00131]	<0.00334 [<0.00328]	**<0.00334 [<0.00328]**	<0.00334 [<0.00328]	<0.0167 [<0.0164]	<0.0167 J [<0.0164 J]	<0.00134 [<0.00131]	***<0.00334 [<0.00328]***
	9.5-10	8/3/2022	<0.00802	<0.00160	<0.00401	**<0.00401**	<0.00401	<0.0200	<0.0200 J	<0.00160	***<0.00401***
MW-24	0.5-1	8/3/2022	<0.00803	<0.00161	<0.00402	**<0.00402**	<0.00402	<0.0200	<0.0200 J	<0.00161	***<0.00402***
	4.5-5	8/3/2022	<0.00638	<0.00128	<0.00319	**<0.00319**	<0.00319	<0.0159	<0.0159 J	<0.00128	***<0.00319***
	9.5-10	8/3/2022	<0.00590	<0.00118	<0.00295	**<0.00295**	<0.00295	<0.0147	<0.0147 J	<0.00118	<0.00295

Notes:
All results are reported in milligrams per kilogram (mg/kg).

Screening Level for Ingestion, Under 40-Inch Zone, Table B2 Under 40-Inch Zone, (ADEC, 18 AAC 75.341) revised January 2022

Volatile Organic Compounds (VOCs) analzyed by USEPA Method 8260D

Bold = Detected above laboratory method detection limit (MDL)

Bold and Shaded = Value exceeds ADEC Groundwater Cleanup Level

Bold and Shaded = Value exceeds Maximum Allowable Concentration over Human Health

Bold and Shaded = Value exceeds Maximum Allowable Concentration Over Migration to Groundwater

Bold and *Italicized* = Constituent considered non-detect, however Laboratory RDL is greater than the ADEC Groundwater Cleanup Level

[1] = Screening level is based on a soil saturation concentration (Csat) using the equations set out in Procedures for Calculating Cleanup Levels, adopted by reference in 18 AAC 75.340 revised January 2022. The Csat value is listed first, followed by the human health risk-based cleanup level in parentheses (ADEC, 18 AAC 75.341) revised January 2022

<0.00290 = Not detected at or above the reported detection limit (RDL)

-- = Not analyzed/ Not measured/ Not Available

[ ] = Duplicate Result

ADEC = Alaska Department of Environmental Conservation

J = The identification of the analyte is acceptable; the reported value is an estimate.

MW = Groundwater monitoring well

Table 3a
Additional Soil Analytical Results - VOCs
Former Chevron Facility 309152
6223 Old Airport Road
Fairbanks, Alaska

Soil Boring	Sample Depth (feet bgs)	Date	1,1,2-Trichloroethane	1,2,3-Trimethyl-benzene	1,2,4-Trimethyl-benzene	1,3,5-Trimethyl-benzene	Bromodichloro-methane	Dibromochloromethane	Hexachlorobutadiene
ADEC Soil Cleanup Level									
Maximum Allowable Concentration			--	--	--	--	--	--	--
Human Health			1.6	--	43 (280)[1]	37 (250)[1]	3.6	110	33 (10)[1]
Migration to Groundwater			0.0014	--	0.61	0.66	0.0043	0.0027	0.020
MW-22	0.5-1	8/3/2022	***<0.00290***	<0.00580	**0.00623**	**0.0027 J**	<0.00290	***<0.00290***	***<0.0290***
	4.5-5	8/3/2022	***<0.00268***	<0.00536	<0.00536	<0.00536	<0.00268	<0.00268	***<0.0268***
	5-5.5	8/3/2022	***<0.00574***	**0.027**	**0.0131**	<0.0115	***<0.00574***	***<0.00574***	***<0.0574***
MW-23	0.5-1	8/3/2022	***<0.00310***	<0.00618	<0.00618	<0.00618	<0.00310	***<0.00310***	***<0.0310***
	4.5-5	8/3/2022	***<0.00334 [<0.00328]***	**0.118 [0.0912]**	**0.173 [0.138]**	**0.229 [0.177]**	<0.00401[<0.00328]	***<0.00334 [<0.00328]***	***<0.0334 [<0.0328]***
	9.5-10	8/3/2022	***<0.00401***	**1.94**	**2.68**	**1.31**	<0.00401	***<0.00401***	***<0.0401***
MW-24	0.5-1	8/3/2022	***<0.00402***	<0.00803	<0.00803	<0.00803	<0.00402	***<0.00402***	***<0.0402***
	4.5-5	8/3/2022	***<0.00319***	<0.00638	<0.00638	<0.00638	<0.00319	***<0.00319***	***<0.0319***
	9.5-10	8/3/2022	***<0.00295***	<0.00590	**0.0019 J**	<0.00590	<0.00295	***<0.00295***	***<0.0295***

Notes:
All results are reported in milligrams per kilogram (mg/kg).

Screening Level for Ingestion, Under 40-Inch Zone, Table B2 Under 40-Inch Zone, (ADEC, 18 AAC 75.341) revised January 2022

Volatile Organic Compounds (VOCs) analzyed by USEPA Method 8260D

Bold = Detected above laboratory method detection limit (MDL)

Bold and Shaded = Value exceeds ADEC Groundwater Cleanup Level

Bold and Shaded = Value exceeds Maximum Allowable Concentration over Human Health

Bold and Shaded = Value exceeds Maximum Allowable Concentration Over Migration to Groundwater

Bold and *Italicized* = Constituent considered non-detect, however Laboratory RDL is greater than the ADEC Groundwater Cleanup Level

[1] = Screening level is based on a soil saturation concentration (Csat) using the equations set out in Procedures for Calculating Cleanup Levels, adopted by reference in 18 AAC 75.340 revised January 2022. The Csat value is listed first, followed by the human health risk-based cleanup level in parentheses (ADEC, 18 AAC 75.341) revised January 2022

<0.00290 = Not detected at or above the reported detection limit (RDL)

-- = Not analyzed/ Not measured/ Not Available

[ ] = Duplicate Result

ADEC = Alaska Department of Environmental Conservation

J = The identification of the analyte is acceptable; the reported value is an estimate.

MW = Groundwater monitoring well

Table 3b
Additional Soil Analytical Results - PAHs
Former Chevron Facility 309152
6223 Old Airport Road
Fairbanks, Alaska

Soil Boring	Sample Depth (feet bgs)	Date	1-Methyl-naphthalene	2-Methyl-Naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a) anthracene	Benzo(a)pyrene	Benzo(b) fluoranthene	Benzo(g,h,i) perylene	Benzo(k) fluoranthene	Chrysene
ADEC Soil Cleanup Level													
Maximum Allowable Concentration			--	--	--	--	--	--	--	--	--	--	--
Human Health			68 (190)[1]	310	4,600	2,300	23,000	14	1.5	15	2,300	150	1,500
Migration to Groundwater			0.41	1.3	37	18	390	0.70	1.9	20	15,000	190	600
MW-22	0.5-1	8/3/2022	<0.0206	<0.0206	<0.00617	<0.00617	<0.00617	<0.00617	<0.00617	<0.00617	<0.00617	<0.00617	<0.00617
	4.5-5	8/3/2022	**0.0512 J**	**0.0714 J**	<0.0310	<0.0310	<0.0310	<0.0310	**0.0805**	**0.106**	**0.0917**	<0.0310	**0.0472**
	5-5.5	8/3/2022	**0.00600 J**	**0.00673 J**	<0.00641	<0.00641	**0.00361 J**	**0.0158**	**0.0224**	**0.0240**	**0.0298**	**0.00600 J**	**0.0203**
MW-23	0.5-1	8/3/2022	<0.0214	<0.0214	<0.00642	<0.00642	<0.00642	<0.00642	<0.00642	<0.00642	<0.00642	<0.00642	<0.00642
	4.5-5	8/3/2022	**0.0217 J [0.0804]**	**0.0495 [0.115]**	**0.0374 [0.0978]**	<0.00696 [<0.00689]	**0.0152 [0.00931]**	**0.00889 [0.00384 J]**	**0.00241 J** [<0.00689]	**0.00487 J [0.00216 J]**	**0.00260 J [0.00209 J]**	<0.00696 [<0.00689]	**0.00771[0.00290 J]**
	9.5-10	8/3/2022	**0.322**	**0.417**	**0.203**	<0.00764	**0.0163**	**0.0186**	**0.00786**	**0.0131**	**0.00255 J**	**0.00534 J**	**0.0266**
MW-24	0.5-1	8/3/2022	<0.0236	<0.0236	<0.00707	<0.00707	<0.00707	<0.00707	<0.00707	<0.00707	<0.00707	<0.00707	<0.00707
	4.5-5	8/3/2022	<0.0225	<0.0225	<0.00674	<0.00674	<0.00674	**0.00413 J**	**0.00446 J**	**0.00527 J**	**0.00400 J**	<0.00674	**0.00495 J**
	9.5-10	8/3/2022	<0.0218	<0.0218	<0.00653	<0.00653	<0.00653	**0.00259 J**	**0.00366 J**	**0.00514 J**	**0.00504 J**	<0.00653	**0.00363 J**

Notes:
All results are reported in milligrams per kilogram (mg/kg).
Screening Level for Ingestion, Under 40-Inch Zone, Table B2 Under 40-Inch Zone, (ADEC, 18 AAC 75.341) revised January 2022
Polycycic Aromatic Hydrocardons (PAHs) analzyed by USEPA Method 8270D
Bold = Detected above laboratory method detection limit (MDL)
Bold and Shaded = Value exceeds ADEC Groundwater Cleanup Level
Bold and Shaded = Value exceeds Maximum Allowable Concentration over Human Health
Bold and Shaded = Value exceeds Maximum Allowable Concentration Over Migration to Groundwater
Bold and *Italicized* = Constituent considered non-detect, however Laboratory RDL is greater than the ADEC Groundwater Cleanup Level
[1] = Screening level is based on a soil saturation concentration (Csat) using the equations set out in Procedures for Calculating Cleanup Levels, adopted by reference in 18 AAC 75.340 revised January 2022. The Csat value is listed first, followed by the human health risk-based cleanup level in parentheses (ADEC, 18 AAC 75.341) revised January 2022
<0.00290 = Not detected at or above the reported detection limit (RDL)
-- = Not analyzed/ Not measured/ Not Available
[ ] = Duplicate Result
ADEC = Alaska Department of Environmental Conservation
J = The identification of the analyte is acceptable; the reported value is an estimate.
MW = Groundwater monitoring well

Table 3b
Additional Soil Analytical Results - PAHs
Former Chevron Facility 309152
6223 Old Airport Road
Fairbanks, Alaska

Soil Boring	Sample Depth (feet bgs)	Date	Dibenz(a,h) anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd) Pyrene	Phenanthrene	Pyrene	2-Chloronaphthalene
ADEC Soil Cleanup Level									
Maximum Allowable Concentration			--	--	--	--	--	--	--
Human Health			1.5	3,100	3,100	15	2,300	2,300	6200
Migration to Groundwater			6.3	590	36	65	39	87	26
MW-22	0.5-1	8/3/2022	<0.00617	<0.00617	<0.00617	<0.00617	<0.00617	<0.00617	<0.0206
	4.5-5	8/3/2022	**0.0346**	**0.0243 J**	<0.0310	**0.0386**	**0.0371**	**0.0724**	<0.103
	5-5.5	8/3/2022	**0.00916**	**0.0341**	<0.00641	**0.0135**	**0.0241**	**0.0435**	<0.0214
MW-23	0.5-1	8/3/2022	<0.00642	<0.00642	<0.00642	<0.00642	<0.00642	<0.00642	<0.0214
	4.5-5	8/3/2022	<0.00696 [<0.00689]	**0.0684 [0.0336]**	**0.047[0.0565]**	<0.00696[<0.00689]	**0.148 [0.0951]**	**0.0559[0.0284]**	<0.0232 [<0.0230]
	9.5-10	8/3/2022	<0.00764	**0.0961**	**0.0726**	**0.00324 J**	**0.0868**	**0.0865**	<0.0255
MW-24	0.5-1	8/3/2022	<0.00707	<0.00707	<0.00707	<0.00707	<0.00707	<0.00707	<0.0236
	4.5-5	8/3/2022	<0.00674	**0.00817**	<0.00674	**0.00393 J**	**0.00418 J**	**0.00953**	<0.0225
	9.5-10	8/3/2022	<0.00653	**0.00625 J**	<0.00653	**0.00276 J**	**0.00371 J**	**0.00921**	<0.0218

Notes:
All results are reported in milligrams per kilogram (mg/kg).
Screening Level for Ingestion, Under 40-Inch Zone, Table B2 Under 40-Inch Zone, (ADEC, 18 AAC 75.341) revised January 2022
Polycyclic Aromatic Hydrocardons (PAHs) analzyed by USEPA Method 8270D
Bold = Detected above laboratory method detection limit (MDL)
Bold and Shaded = Value exceeds ADEC Groundwater Cleanup Level
Bold and Shaded = Value exceeds Maximum Allowable Concentration over Human Health
Bold and Shaded = Value exceeds Maximum Allowable Concentration Over Migration to Groundwater
Bold and *Italicized* = Constituent considered non-detect, however Laboratory RDL is greater than the ADEC Groundwater Cleanup Level
[1] = Screening level is based on a soil saturation concentration (Csat) using the equations set out in Procedures for Calculating Cleanup Levels, adopted by reference in 18 AAC 75.340 revised January 2022. The Csat value is listed first, followed by the human health risk-based cleanup level in parentheses (ADEC, 18 AAC 75.341) revised January 2022
<0.00290 = Not detected at or above the reported detection limit (RDL)
-- = Not analyzed/ Not measured/ Not Available
[ ] = Duplicate Result
ADEC = Alaska Department of Environmental Conservation
J = The identification of the analyte is acceptable; the reported value is an estimate.
MW = Groundwater monitoring well

Table 4
Groundwater Gauging and Analytical Results
Former Chevron Facility 309152
6223 Old Airport Road
Fairbanks, Alaska

Well ID	Sample Date	TOC (ft)	Datum	DTW (ft bTOC)	LNAPL Thickness (ft)	Groundswater Elevation (ft)	GRO	DRO	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	MTBE	EDB	EDC
ADEC Groundwater Cleanup Levels							**2,200**	**1,500**	**4.6**	**1,100**	**15**	**190**	**1.7**	**140**	**0.075**	**1.7**
MW-22	8/6/2022	429.50	NAVD88	6.90	0.00	422.60	**1,370**	**3,850**	**53.3**	**0.422 J**	**17.1**	**595**	**35.1 J**	<0.500	<0.0206	<0.500
MW-23	8/6/2022	430.60	NAVD88	7.99	0.00	422.61	**2,200 [1,990]**	**2,460 [2,380]**	**80.0 [75.8]**	**0.764** [<5.00]	**4.39 [3.82 J]**	**1,070 [1,050]**	**4.68 J [2.61 J]**	**0.309 J** [<5.00]	<0.0206 J [<0.0204]	**0.958** ***[<5.00]***
MW-24	8/6/2022	431.35	NAVD88	8.66	0.00	422.69	**1,050**	**2,260**	**12.0**	<5.00	**5.23**	**268**	**18.8 J**	<5.00	<0.0208	***<5.00***
EB-1	8/3/2022	--	--	--	--	--	<100	<888	<0.500	<0.500	<0.500	<1.50	***<2.5***	<0.500	<0.0204	<0.500

Notes:
All results are reported in Micrograms per liter (µg/L).
Samples analyzed by USEPA Method 8260D:
Benzene, Toluene, Ethylbenzene and Total xylenes (collectively BTEX)
MTBE = Methyl tert-butyl ether
EDC = 1,2-Dichloroethane
If LNAPL is present, GW Elevation is corrected according to the following formula (TOC elevation - DTW) + (0.8 x LNAPL thickness)
Screening Level for Ingestion, Table C. Groundwater Cleanup Levels, (ADEC, 18 AAC 75.341) revised January 2022
Bold = Detected above laboratory method detection limit (MDL),
Bold and Shaded = Value exceeds ADEC Groundwater Cleanup Level
Bold and *Italicized* = Constituent considered non-detect, however
Laboratory RDL is greater than the ADEC Groundwater Cleanup Level
<1.00 = Not detected at or above the reported detection limit (RDL)
-- = Not analyzed/ Not measured/ Not Available
[ ] = Duplicate Result
µg/L = Micrograms per liter
ADEC = Alaska Department of Environmental Conservation
DRO = Total petroleum hydrocarbons, diesel range by LUFT GC/MS according to State of Alaska Method AK102.
DTW = Depth to groundwater
EDB = Ethylene Dibromide by USEPA Method 8011.
ft = Feet relative to NAVD88
ft bTOC = Feet below top of casing
GC/MS = Gas chromatography/Mass Spectrometry
GRO = Total petroleum hydrocarbons, gasoline range by LUFT GC/MS according to United States Environmental Protection Agency (USEPA) Method AK101
GW Elev = Groundwater elevation
ID = Identification
J = The associated numerical value is an estimated concentration only
LNAPL = Light Non-Aqueous Phase Liquid
LUFT = Leaking Underground Fuel Tank
MW = Groundwater monitoring well
NAVD88 = North American Vertical Datum of 1988
TOC = Top of casing

Table 5
Additional Groundwater Analytical Results - Lead and VOCs
Former Chevron Facility 309152
6223 Old Airport Road
Fairbanks, Alaska

Well ID	Sample Date	Lead	1,2,3-Trichloropropane	Acetone	Acrylonitrile	Bromobenzene	Bromodichloromethane	Bromochloromethane	Bromoform	Bromomethane	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chlorodibromomethane	Chloroethane
ADEC Groundwater Cleanup Level		**15**	**0.0075**	**14,000**	**--**	**62**	**1.3**	**8.7**	**33**	**7.5**	**1,000**	**2,000**	**690**	**810**	**4.6**	**78**	**8.7**	**21,000**
MW-22	8/6/2022	<2.00	***<0.250***	<25.0	<5.00	<0.500	<0.500	<0.500	<0.500	<2.50	**0.952**	**2.65**	**0.478 J**	<0.500	<0.500	<0.500	<0.500	<2.50
MW-23	8/6/2022	<2.00 [<2.00]	***<0.250 [<0.250]***	<25.0 [<250]	<5.00 [<50.0]	<0.500 [<5.00]	<0.500 **[*<5.00*]**	<0.500 [<5.00]	<0.500 [<5.00]	<2.50 **[*<25.0*]**	<0.500 [<5.00]	**1.98 [2.25 J]**	**0.654** [<5.00]	<0.500 [<5.00]	<0.500 ***[<5.00]***	<0.500 [<5.00]	<0.500 [<5.00]	<2.50 [<25.0]
MW-24	8/6/2022	<2.00	***<0.250***	<250	<50.0	<5.00	***<5.00***	<5.00	<5.00	***<25.0***	<5.00	**2.13 J**	<5.00	<5.00	***<5.00***	<5.00	<5.00	<25.0
EB-1	8/3/2022	<2.00	<0.00500	<25.0	<5.00	<0.500	<0.500	<0.500	<0.500	<2.50	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<2.50

Well ID	Sample Date	2-Chloroethyl vinyl ether	Chloroform	Chloromethane	2-Chlorotoluene	4-Chlorotoluene	1,2-Dibromo-3-Chloropropane	1,2-Dibromoethane	Dibromomethane	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,2-Dichloropropane
ADEC Groundwater Cleanup Level		**--**	**2.2**	**190**	**--**	**--**	**--**	**0.075**	**8.3**	**300**	**300**	**4.8**	**200**	**28**	**280**	**36**	**360**	**8.2**
MW-22	8/6/2022	<50.0	<0.500	<1.25	<0.500	<0.500	<2.50	***<0.500***	<0.500	<0.500	<0.500	<0.500	<2.50	<0.500	<0.500	<0.500	<0.500	<0.500
MW-23	8/6/2022	<50.0 [<500]	<0.500 **[*<5.00*]**	<1.25 [<12.5]	<0.500 [<5.00]	<0.500 [<5.00]	<2.50 [<25.0]	***<0.500 [<5.00]***	<0.500 [<5.00]	<0.500 [<5.00]	<0.500 [<5.00]	<0.500 **[*<5.00*]**	<2.50 [<25.0]	<0.500 [<5.00]	<0.500 [<5.00]	<0.500 [<5.00]	<0.500 [<5.00]	<0.500 [<5.00]
MW-24	8/6/2022	<500	***<5.00***	<12.5	<5.00	<5.00	<25.0	***<5.00***	<5.00	<5.00	<5.00	***<5.00***	<25.0	<5.00	<5.00	<5.00	<5.00	<5.00
EB-1	8/3/2022	<50.0	<0.500	<1.25	<0.500	<0.500	<2.50	***<0.500***	<0.500	<0.500	<0.500	<0.500	<2.50	<0.500	<0.500	<0.500	<0.500	<0.500

Well ID	Sample Date	1,1-Dichloropropene	1,3-Dichloropropane	cis-1,3-Dichloropropene	trans-1,3-Dichloropropene	trans-1,4-Dichloro-2-butene	2,2-Dichloropropane	Di-isopropyl ether	Hexachloro-1,3-butadiene	2-Hexanone	n-Hexane	Iodomethane	Isopropylbenzene	p-Isopropyltoluene	2-Butanone (MEK)	Methylene Chloride	4-Methyl-2-pentanone (MIBK)	n-Propylbenzene
ADEC Groundwater Cleanup Level		**--**	**--**	**--**	**--**	**--**	**--**	**--**	**1.4**	**38**	**1,500**	**--**	**450**	**--**	**5,600**	**110**	**6,300**	**660**
MW-22	8/6/2022	<0.500	<1.00	<0.500	<0.500	<5.00	<0.500	<0.500	<1.00 J	<5.00	**6.75**	<5.00	**6.78**	<0.500	<5.00	<2.50	<5.00	**11.7**
MW-23	8/6/2022	<0.500 [<5.00]	<1.00 [<10.0]	<0.500 [<5.00]	<0.500 [<5.00]	<5.00 [<50.0]	<0.500 [<5.00]	<0.500 [<5.00]	<1.00 J **[*< 10.0 J*]**	<5.00 **[*<50.0*]**	**4.35 J** [<50.0]	<5.00 [<50.0]	**6.54 [6.40]**	<0.500 [<5.00]	<5.00 [<50.0]	<2.50 [<25.0]	<5.00 [<50.0]	**4.75 [4.75]**
MW-24	8/6/2022	<5.00	<10.0	<5.00	<5.00	<50.0	<5.00	<5.00	***<10.0 J***	**<50.0**	<50.0	<50.0	**4.18 J**	**2.50 J**	<50.0	<25.0	<50.0	**5.40**
EB-1	8/3/2022	<0.500	<1.00	<0.500	<0.500	<5.00	<0.500	<0.500	<1.00 J	<5.00	<5.00	<5.00	<0.500	<0.500	<5.00	<2.50	<0.500	<0.500

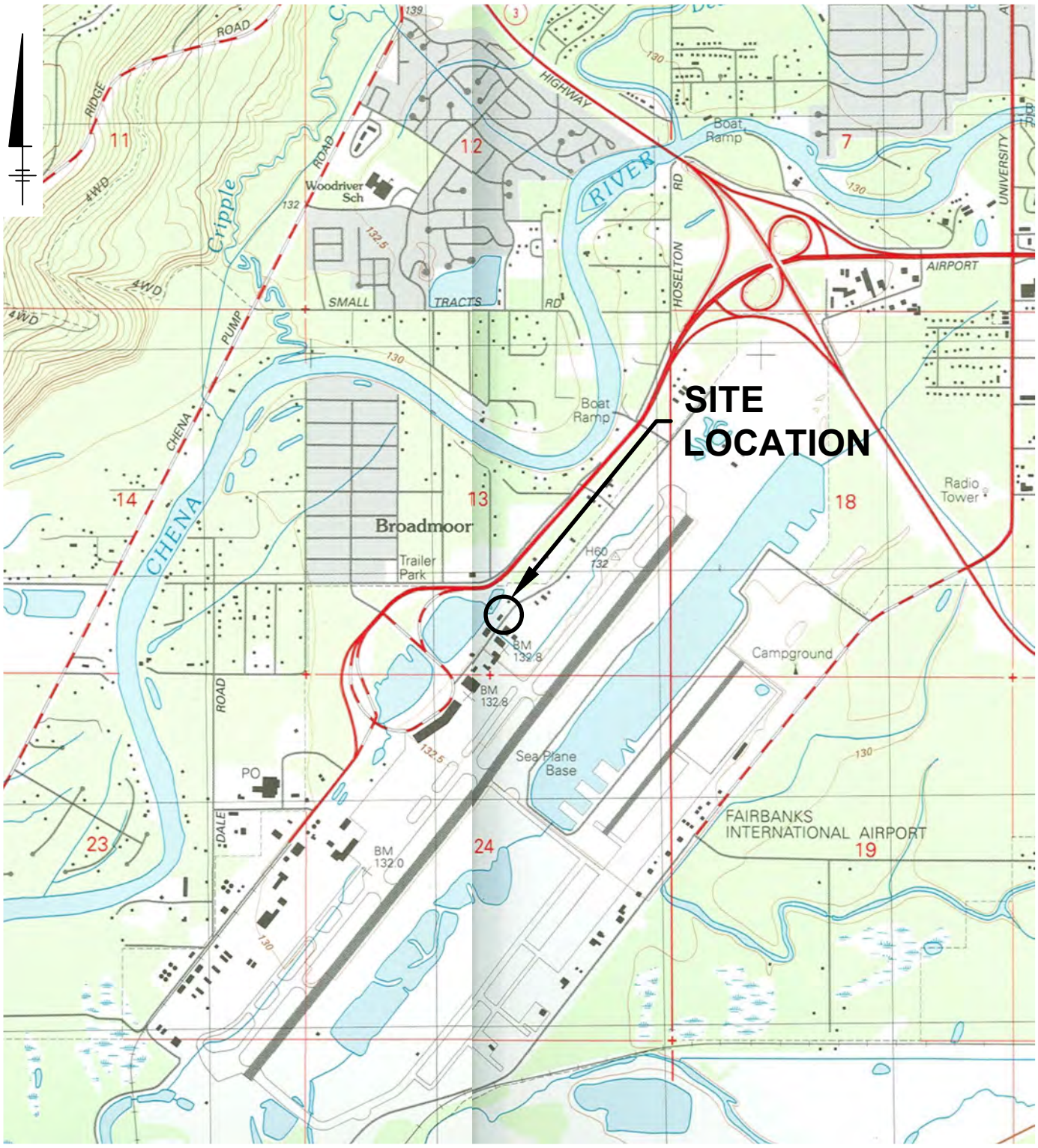
Well ID	Sample Date	Styrene	1,1,1,2-Tetrachloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichlorotrifluoroethane	Tetrachloroethene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,3-Trichloropropane	1,2,4-Trimethylbenzene	1,2,3-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl acetate	Vinyl chloride
ADEC Groundwater Cleanup Level		**1,200**	**5.7**	**0.76**	**10,000**	**41**	**7.0**	**4.0**	**8,000**	**0.41**	**2.8**	**5,200**	**0.0075**	**56**	**--**	**60**	**410**	**0.19**
MW-22	8/6/2022	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500 J	<1.00 J	<0.500	***<0.500***	<0.500	<2.5	***<2.50***	**102**	**44.3**	**27.9**	<5.00 J	***<0.500***
MW-23	8/6/2022	<0.500 [<5.00]	<0.500 [<5.00]	<0.500 ***[<5.00]***	<0.500 [<5.00]	<0.500 [<5.00]	<0.500 J [<5.00 J]	<1.00 J **[*<10.0 J*]**	<0.500 [<5.00]	***<0.500 [<5.00]***	<0.500 **[*<5.00*]**	<2.50 [<25.0]	***<2.50 [<25.0]***	**103 [100]**	**58.7 [56.7]**	**28.7 [27.7]**	<5.00 J [<50.0 J]	***<0.500 [<5.00]***
MW-24	8/6/2022	<5.00	<5.00	***<5.00***	<5.00	<5.00	<5.00 J	***<10.0 J***	<5.00	***<5.00***	***<5.00***	<25.0	***<25.0***	**63.4**	**32.6**	**15.8**	<50.0 J	***<5.00***
EB-1	8/3/2022	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500 J	<1.00 J	<0.500	***<0.500***	<0.500	<2.5	***<2.5***	<0.500	<0.500	<0.500	<5.00 J	***<0.500***

Notes:
All results are reported in Micrograms per liter (µg/L).
Bold = Detected above laboratory method detection limit (MDL)
Bold and Shaded = Value exceeds ADEC Groundwater Cleanup Level
Bold and *Italicized* = Constituent considered non-detect, however Laboratory RDL is greater than the ADEC

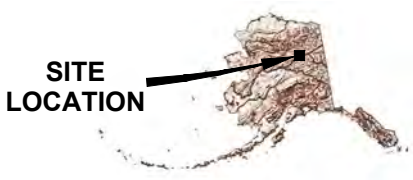
Volatile Organic Compounds (VOCs) analzyed by USEPA Method 8260D
Dissolved Lead analzyed by USEPA Method 6020B
Screening Level for Ingestion, Table C. Groundwater Cleanup Levels, (ADEC, 18 AAC 75.341) revised January 2022
<1.00 = Not detected at or above the reported detection limit (RDL)
-- = Not analyzed/ Not measured/ Not Available

[ ] = Duplicate Result
ADEC = Alaska Department of Environmental Conservation
EB = Equipment Blank
ID = Identification
J = The associated numerical value is an estimated concentration only
MW = Groundwater monitoring well

Figures



SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLE: FAIRBANKS (D-2) SW, AK., 1992, FAIRBANKS NORTH STAR BOROUGH, SECTION: 13, TOWNSHIP: 1S, RANGE: 2W



0 2000' 4000'

APPROXIMATE GRAPHIC SCALE

FORMER CHEVRON FACILITY #309152
6223 OLD AIRPORT ROAD, FAIRBANKS, ALASKA
WELL INSTALLATION REPORT - 2022

SITE LOCATION MAP

ARCADIS

FIGURE
1

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WIR2022-X-TITLE

IMAGES:
ALASKA.jpg
Arcadis Logo_2021.PNG
Fairbanks-SW.jpg
Fairbanks-SW2.jpg
Arcadis Logo_2021.PNG

LEGEND:

SITE BOUNDARY

0' 200' 400'

APPROXIMATE GRAPHIC SCALE

Source: Aerial photograph provided by Google Earth Pro, 2009.

FORMER CHEVRON FACILITY #309152
6223 OLD AIRPORT ROAD, FAIRBANKS, ALASKA
WELL INSTALLATION REPORT - 2022

AERIAL PHOTOGRAPH

ARCADIS

FIGURE
2

XREFS:
AGAR2022-X-TITLE
WIR2022-X-TITLE

IMAGES:
Aerial.jpg
Arcadis Logo_2021.PNG
Arcadis Logo_2021.PNG

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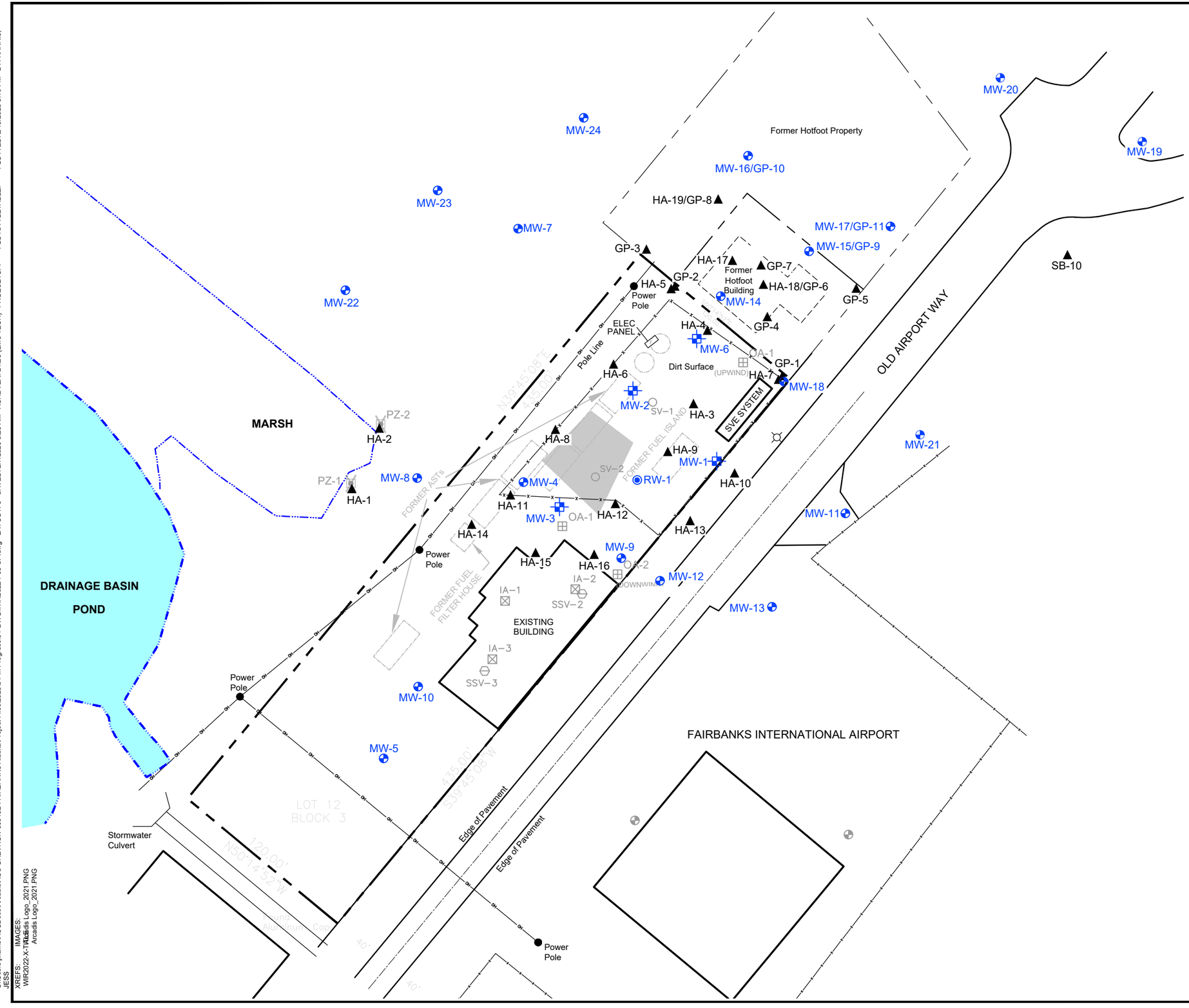


LEGEND

- PROPERTY BOUNDARY
- MW-7 GROUNDWATER MONITORING WELL
- RW-1 RECOVERY WELL
- PZ-2 DESTROYED PIEZOMETER
- GP-5 SOIL BORING
- MW-2 BAILDOWN TEST LOCATION
- SV–1 SOIL VAPOR PROBE LOCATIONS (SV)
- SSV–2 SUB-SLAB SOIL VAPOR PROBE LOCATION (SSV)
- AI–3 INDOOR AMBIENT AIR LOCATIONS (IA)
- OA-1 OUTDOOR AMBIENT AIR LOCATIONS (OA)
- USPS SITE MONITORING WELLS: ADEC FILE NO. 100.38.277
- LIGHT POLE
- 2019 EXCAVATED AREA (DEPTH: 2 FT)
- OH OVERHEAD LINES
- USPS UNITED STATES POSTAL SERVICE
- ASTs ABOVEGROUND SURFACE TANKS

N

0 60' 120'

GRAPHIC SCALE

SOURCE:
1. Base map provided by 'KARABELNIKOFF SURVEYING' (904) 337-3434. Survey date Sept. 17, 2007, drawing date Sept. 26, 2007, map full scale. Offsite well and boring survey information provided by McClane Consulting Inc. Field work date Aug. 6, 2014.
2. Former Hotfoot property and boring locations digitized from 'OASIS ENVIRONMENTAL', 825 W 8th Ave. #200, Anchorage, AK. Map drawn 1"=50', map date Jan. 2007.

FORMER CHEVRON FACILITY #309152
6223 OLD AIRPORT ROAD, FAIRBANKS, ALASKA
WELL INSTALLATION REPORT - 2022

SITE PLAN

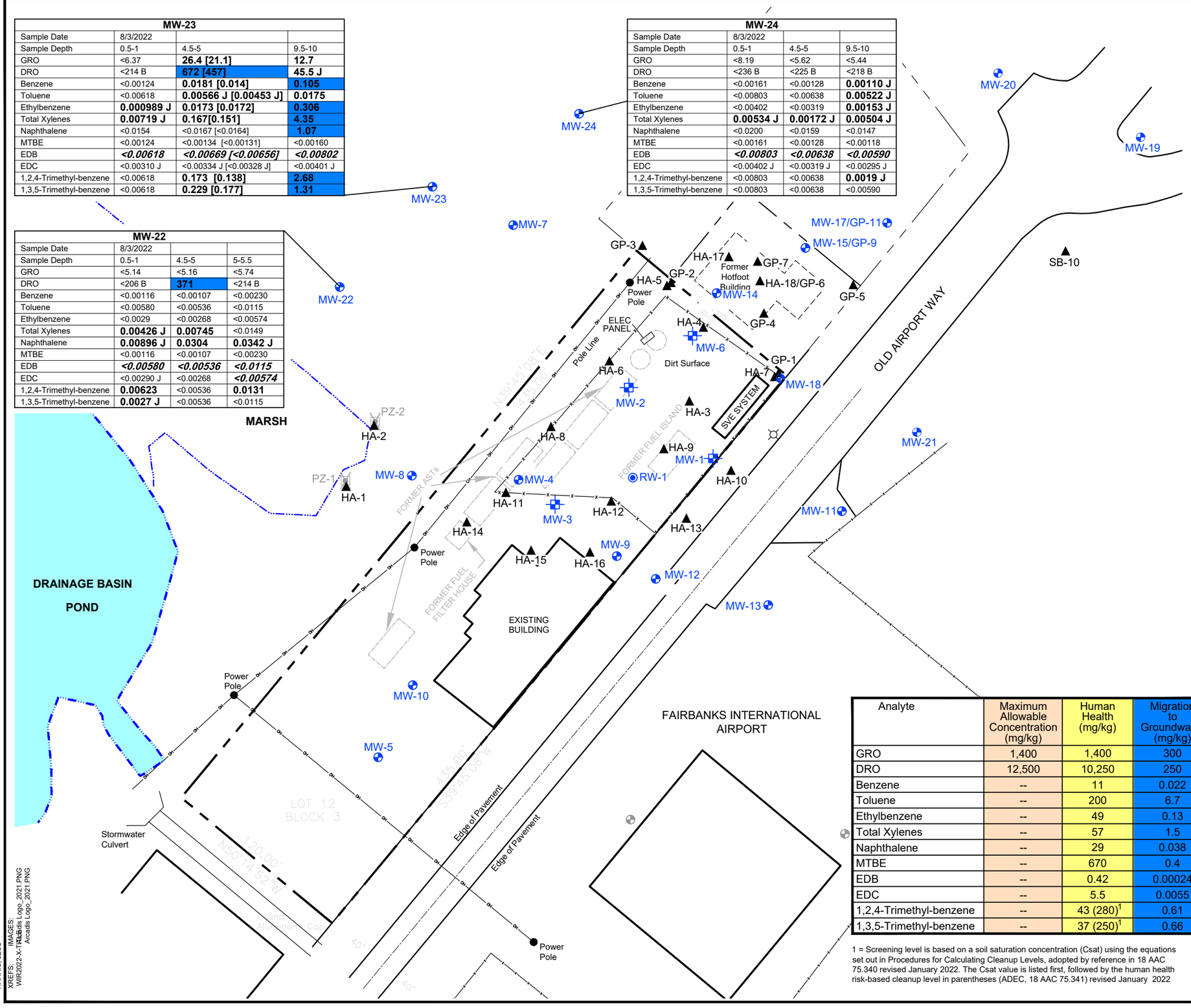
ARCADIS

FIGURE
3

MW-23			
Sample Date	8/3/2022		
Sample Depth	0.5-1	4.5-5	9.5-10
GRO	<6.37	**26.4 [21.1]**	**12.7**
DRO	<214 B	**672 [457]**	**45.5 J**
Benzene	<0.00124	**0.0181 [0.014]**	**0.105**
Toluene	<0.00618	**0.00566 J [0.00453 J]**	**0.0175**
Ethylbenzene	**0.000989 J**	**0.0173 [0.0172]**	**0.306**
Total Xylenes	**0.00719 J**	**0.167[0.151]**	**4.35**
Naphthalene	<0.0154	<0.0167 [<0.0164]	**1.07**
MTBE	<0.00124	<0.00134 [<0.00131]	<0.00160
EDB	***<0.00618***	***<0.00669 [<0.00656]***	***<0.00802***
EDC	<0.00310 J	<0.00334 J [<0.00328 J]	<0.00401 J
1,2,4-Trimethyl-benzene	<0.00618	**0.173 [0.138]**	**2.68**
1,3,5-Trimethyl-benzene	<0.00618	**0.229 [0.177]**	**1.31**

MW-24			
Sample Date	8/3/2022		
Sample Depth	0.5-1	4.5-5	9.5-10
GRO	<8.19	<5.62	<5.44
DRO	<236 B	<225 B	<218 B
Benzene	<0.00161	<0.00128	**0.00110 J**
Toluene	<0.00803	<0.00638	**0.00522 J**
Ethylbenzene	<0.00402	<0.00319	**0.00153 J**
Total Xylenes	**0.00534 J**	**0.00172 J**	**0.00504 J**
Naphthalene	<0.0200	<0.0159	<0.0147
MTBE	<0.00161	<0.00128	<0.00118
EDB	***<0.00803***	***<0.00638***	***<0.00590***
EDC	<0.00402 J	<0.00319 J	<0.00295 J
1,2,4-Trimethyl-benzene	<0.00803	<0.00638	**0.0019 J**
1,3,5-Trimethyl-benzene	<0.00803	<0.00638	<0.00590

MW-22			
Sample Date	8/3/2022		
Sample Depth	0.5-1	4.5-5	5-5.5
GRO	<5.14	<5.16	<5.74
DRO	<206 B	**371**	<214 B
Benzene	<0.00116	<0.00107	<0.00230
Toluene	<0.00580	<0.00536	<0.0115
Ethylbenzene	<0.0029	<0.00268	<0.00574
Total Xylenes	**0.00426 J**	**0.00745**	<0.0149
Naphthalene	**0.00896 J**	**0.0304**	**0.0342 J**
MTBE	<0.00116	<0.00107	<0.00230
EDB	***<0.00580***	***<0.00536***	***<0.0115***
EDC	<0.00290 J	<0.00268	***<0.00574***
1,2,4-Trimethyl-benzene	**0.00623**	<0.00536	**0.0131**
1,3,5-Trimethyl-benzene	**0.0027 J**	<0.00536	<0.0115



LEGEND

- PROPERTY BOUNDARY
- MW-7 — GROUNDWATER MONITORING WELL
- RW-1 — RECOVERY WELL
- PZ-2 — DESTROYED PIEZOMETER
- GP-5 — SOIL BORING
- MW-2 — BAILDOWN TEST LOCATION
- USPS SITE MONITORING WELLS: ADEC FILE NO. 100.38.277
- LIGHT POLE
- OH — OVERHEAD LINES
- **BOLD** — VALUE EXCEEDS LABORATORY METHOD DETECTION LIMIT (MDL)
- **BOLD** — VALUE EXCEEDS ADEC SCLs
- *<0.00802* — CONSIDERED NON-DETECT, HOWEVER LABORATORY RDL IS GREATER THAN THE ADEC GROUNDWATER CLEANUP LEVEL
- [0.0172] — DUPLICATE SAMPLE RESULTS
- <8.19 — NOT DETECTED AT OR ABOVE THE REPORTED DETECTION LIMIT
- ADEC SCLs — ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION SOIL CLEANUP LEVELS FOR MIGRATION TO GROUNDWATER
- J — THE COMPOUND WAS POSITIVELY IDENTIFIED; THE ASSOCIATED NUMERICAL VALUE IS AN ESTIMATED CONCENTRATION ONLY
- B — COMPOUND CONSIDERED NON-DETECT AT THE LISTED VALUE DUE TO ASSOCIATED BLANK CONTAMINATION
- mg/kg — MILLIGRAMS PER KILOGRAM
- GRO — TOTAL PETROLEUM HYDROCARBONS GASOLINE RANGE ORGANICS
- DRO — TOTAL PETROLEUM HYDROCARBONS DIESEL RANGE ORGANICS
- MTBE — METHYL TERT-BUTYL ETHER
- EDB — 1,2-DIBROMOETHANE
- EDC — 1,2-DICHLOROETHANE

SOURCE:

1. Base map provided by 'KARABELNIKOFF SURVEYING' (904) 337-3434. Survey date Sept. 17, 2007, drawing date Sept. 26, 2007, map full scale. Offsite well and boring survey information provided by McClane Consulting Inc. Field work date Aug. 6, 2014.
2. Former Hotfoot property and boring locations digitized from 'OASIS ENVIRONMENTAL', 825 W 8th Ave. #200, Anchorage, AK. Map drawn 1"=50', map date Jan. 2007.

Analyte	Maximum Allowable Concentration (mg/kg)	Human Health (mg/kg)	Migration to Groundwater (mg/kg)
GRO	1,400	1,400	300
DRO	12,500	10,250	250
Benzene	--	11	0.022
Toluene	--	200	6.7
Ethylbenzene	--	49	0.13
Total Xylenes	--	57	1.5
Naphthalene	--	29	0.038
MTBE	--	670	0.4
EDB	--	0.42	0.00024
EDC	--	5.5	0.0055
1,2,4-Trimethyl-benzene	--	43 (280)[1]	0.61
1,3,5-Trimethyl-benzene	--	37 (250)[1]	0.66

1 = Screening level is based on a soil saturation concentration (Csat) using the equations set out in Procedures for Calculating Cleanup Levels, adopted by reference in 18 AAC 75.340 revised January 2022. The Csat value is listed first, followed by the human health risk-based cleanup level in parentheses (ADEC, 18 AAC 75.341) revised January 2022

0 60' 120'

GRAPHIC SCALE

FORMER CHEVRON FACILITY #309152
6223 OLD AIRPORT ROAD, FAIRBANKS, ALASKA
WELL INSTALLATION REPORT - 2022

SOIL ANALYTICAL RESULTS AUGUST 2022

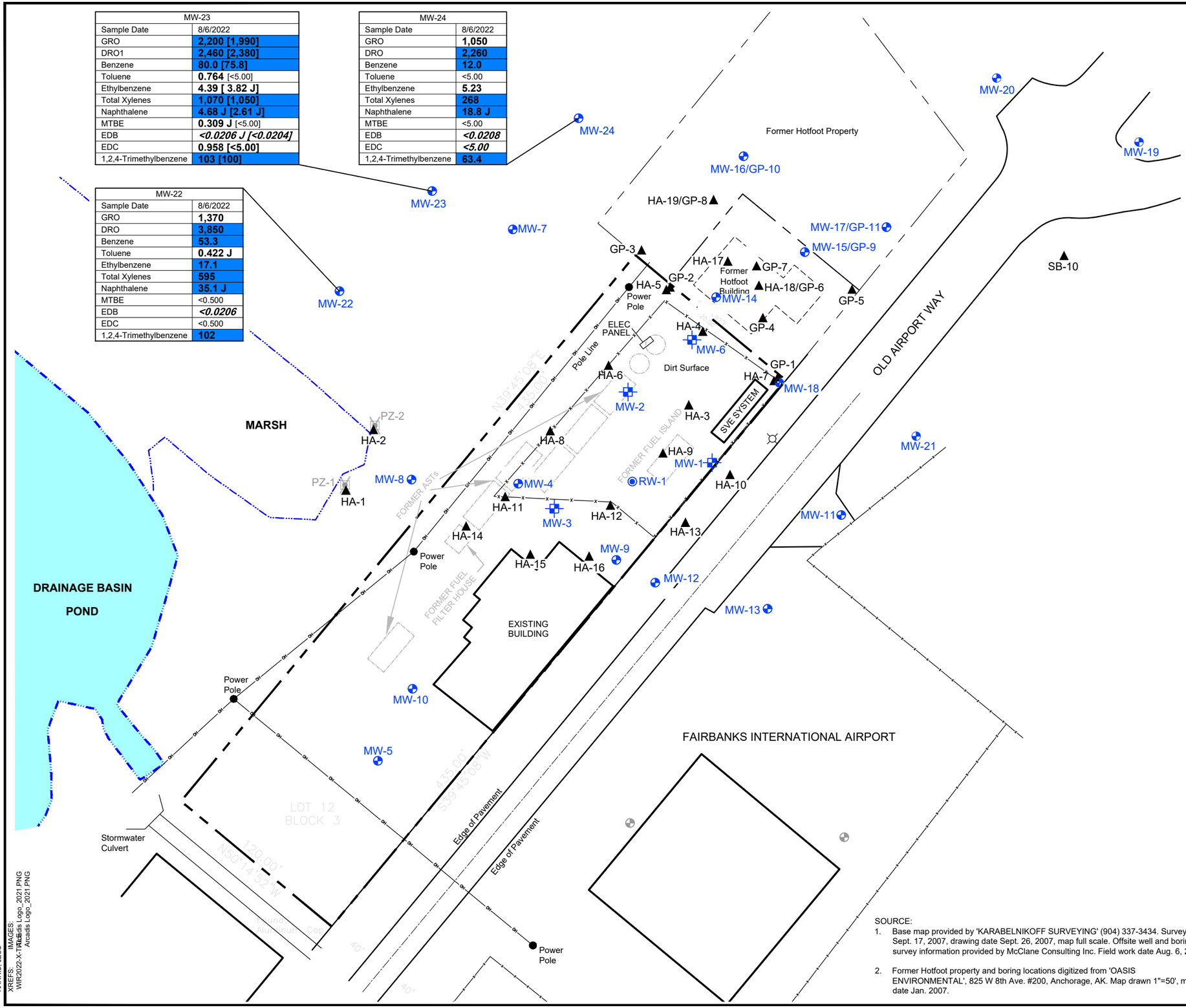
ARCADIS

FIGURE 4

MW-23	
Sample Date	8/6/2022
GRO	**2,200 [1,990]**
DRO1	**2,460 [2,380]**
Benzene	**80.0 [75.8]**
Toluene	**0.764** [<5.00]
Ethylbenzene	**4.39 [3.82 J]**
Total Xylenes	**1,070 [1,050]**
Naphthalene	**4.68 J [2.61 J]**
MTBE	**0.309 J** [<5.00]
EDB	***<0.0206 J [<0.0204]***
EDC	**0.958 [<5.00]**
1,2,4-Trimethylbenzene	**103 [100]**

MW-24	
Sample Date	8/6/2022
GRO	**1,050**
DRO	**2,260**
Benzene	**12.0**
Toluene	<5.00
Ethylbenzene	**5.23**
Total Xylenes	**268**
Naphthalene	**18.8 J**
MTBE	<5.00
EDB	***<0.0208***
EDC	***<5.00***
1,2,4-Trimethylbenzene	**63.4**

MW-22	
Sample Date	8/6/2022
GRO	**1,370**
DRO	**3,850**
Benzene	**53.3**
Toluene	**0.422 J**
Ethylbenzene	**17.1**
Total Xylenes	**595**
Naphthalene	**35.1 J**
MTBE	<0.500
EDB	***<0.0206***
EDC	<0.500
1,2,4-Trimethylbenzene	**102**



LEGEND

	PROPERTY BOUNDARY
MW-7	GROUNDWATER MONITORING WELL
RW-1	RECOVERY WELL
PZ-2	DESTROYED PIEZOMETER
GP-5	SOIL BORING
MW-2	BAILDOWN TEST LOCATION
	USPS SITE MONITORING WELLS: ADEC FILE NO. 100.38.277
	LIGHT POLE
OH	OVERHEAD LINES
BOLD	VALUE EXCEEDS LABORATORY METHOD DETECTION LIMIT (MDL)
BOLD	VALUE EXCEEDS ADEC GROUNDWATER CLEANUP LEVEL
<5.00	CONSIDERED NON-DETECT, HOWEVER LABORATORY RDL IS GREATER THAN THE ADEC GROUNDWATER CLEANUP LEVEL
[2,380]	DUPLICATE SAMPLE RESULTS
<5.00	NOT DETECTED AT OR ABOVE THE REPORTED DETECTION LIMIT
ADEC	ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
J	THE COMPOUND WAS POSITIVELY IDENTIFIED; THE ASSOCIATED NUMERICAL VALUE IS AN ESTIMATED CONCENTRATION ONLY
µg/L	MICROGRAMS PER LITER
TRPH	TOTAL RECOVERABLE PETROLEUM HYDROCARBONS
GRO	TOTAL PETROLEUM HYDROCARBONS GASOLINE RANGE ORGANICS
DRO	TOTAL PETROLEUM HYDROCARBONS DIESEL RANGE ORGANICS
PRO	TOTAL PETROLEUM HYDROCARBONS RESIDUAL RANGE ORGANICS
MTBE	METHYL TERT-BUTYL ETHER
EDB	1,2-DIBROMOETHANE
EDC	1,2-DICHLOROETHANE

Concentration in µg/L

Analyte	ADEC Groundwater Cleanup Levels
GRO	2,200
DRO	1,500
Benzene	4.6
Toluene	1,100
Ethylbenzene	15
Total Xylenes	190
Naphthalene	1.7
MTBE	140
EDB	0.075
EDC	1.7
1,2,4-Trimethylbenzene	56

0 60' 120'

GRAPHIC SCALE

N

SOURCE:
1. Base map provided by 'KARABELNIKOFF SURVEYING' (904) 337-3434. Survey date Sept. 17, 2007, drawing date Sept. 26, 2007, map full scale. Offsite well and boring survey information provided by McClane Consulting Inc. Field work date Aug. 6, 2014.
2. Former Hotfoot property and boring locations digitized from 'OASIS ENVIRONMENTAL', 825 W 8th Ave. #200, Anchorage, AK. Map drawn 1"=50', map date Jan. 2007.

FORMER CHEVRON FACILITY #309152
6223 OLD AIRPORT ROAD, FAIRBANKS, ALASKA
WELL INSTALLATION REPORT - 2022

GROUNDWATER ANALYTICAL RESULTS AUGUST 2022

ARCADIS

FIGURE 5

C:\Users\jharris\ACCDocs\Arcadis\AUS-CHEVRON-309152-FAIRBANKS Alaska\Project Files\2023\01-In Progress\01-DWG\WIR2022-F05-GWAR AUG22.dwg LAYOUT: 5 SAVED: 2/6/2023 2:20 PM ACADVER: 24.2S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: ---- PLOTTED: 2/13/2023 5:16 PM BY: HARRIS, JESS
XREFS: IMAGES: Arcadis Logo_2021.PNG
WIR2022-X-TITLE Arcadis Logo_2021.PNG

Appendix A

ADEC Correspondence

THE STATE of ALASKA
GOVERNOR MIKE DUNLEAVY

Department of Environmental Conservation

SPILL PREVENTION & RESPONSE
Contaminated Sites Program

610 University Avenue
Fairbanks, Alaska 99709
Main: 907.451.2143
Fax: 907.451.2155
www.dec.alaska.gov

File: 100.38.206

August 10, 2021

Chevron Environmental Management Company
ATTN: James Kiernan
6001 Bollinger Canyon Road
San Ramon, CA 94583

RE: FIA - Block 3 Lot 12 - Saupe Enterprises

Dear Mr. Kiernan:

The Alaska Department of Environmental Conservation (ADEC) has reviewed the *Work Plan for Additional Assessment* at FIA – Block 3 Lot 12 – Saupe Enterprises dated July 22, 2021. This work plan proposes to advance three groundwater monitoring wells to further define the extent of contamination downgradient of the site. Please review the enclosed table commenting on the work plan.

Please do not hesitate to contact me at (907) 451-2144 or rebekah.reams@alaska.gov if you have any questions or concerns regarding the contents of this letter.

Sincerely,

Rebekah Reams
Environmental Program Specialist

Attachments/Enclosures: DEC Comment Table

cc (via email): Robert Burgess, ADEC
Alex Shook, Arcadis
Theresa Harvey, ADOT&PF

DEC Comments to the *Work Plan for Additional Assessment* for FIA - Block 3 Lot 12 - Saupe Enterprises

Reviewer: Rebekah Reams, Alaska Department of Environmental Conservation, Contaminated Sites Program

Comment No.	Pg. #	Section	Comment / Recommendations	Response
1.	1-1	Introduction	Please update the QEP reference in the introduction of the report to 18 AAC 75.333, the current reference is no longer accurate.	This reference has been updated in the work plan addendum.
2.	3-2	Constituents of Potential Concern	Please note that Contaminants of Potential Concern (COPCs) are not equivalent to Contaminants of Concern (COCs). COPCs are contaminants likely to be present at a site due to the source(s) identified at the site. Site COCs are all analytes that have been detected above current DEC cleanup levels at any point in the site's history. After site COPCs have been determined, samples are collected and analyzed to identify the site COCs. Please update the title and/or contents of this section of the work plan to accurately represent site COCs, COPCs, or indicate that the table reports the proposed analyses to be completed under the sampling plan, as applicable.	This section has been updated in the work plan addendum to reflect that the analytes listed are Contaminants of Concern (COCs) and not Contaminants of Potential Concern (COPCs).
3.	4-1	Proposed Site Assessment Activities	Please provide more information regarding where additional wells will be installed if evidence of contamination is identified in MW-22 through MW-24 (i.e. approximate distance and direction of step out wells).	If necessary, an additional well will be installed approximately 100 feet northeast of MW-24.

4.	4-1	Proposed Site Assessment Activities	The DEC recommends moving one of the proposed monitoring well locations or adding an additional monitoring well to the north-northwest of MW-16 in order to define the extent of the plume in this direction. Recent sampling events have indicated that contaminant concentrations in MW-16 continue to exceed groundwater cleanup levels.	The location of proposed monitoring well MW-24 has been moved to a new proposed location north-northwest of MW-16. The new proposed location of MW-24 is shown on Figure 10.
5.	5-1	Soil Sample Collection Methods	Please include analysis for the full suite of VOCs in place of individual VOC analytes for soil samples. Additional VOCs, including 1,2,4-trimethybenzene and 1,3,5-trimethylbenzene, have exceeded current cleanup levels and have not been fully evaluated at the site.	This section has been edited in the work plan addendum to include the analyzation of full suite VOCs for soil samples.
6.	5-1	Soil Sample Collection Methods	The work plan indicates that the bottom soil sample collected from each boring will be held by the laboratory pending the results of the upper samples. What results in the upper sample depths will indicate the need for the bottom sample to be analyzed? (i.e. contaminant concentrations detected, contaminant concentrations exceeded migration to groundwater cleanup levels, etc.).	This section has been edited in the work plan addendum to indicate that the bottom soil sample will be analyzed only if soil contaminant concentrations detected exceed ADEC Method 2 Petroleum Hydrocarbon Soil Cleanup Levels for Migration to Groundwater in the upper sample depths.
7.	6-1	Groundwater Sampling Procedures	Please include analysis for full suite VOCs and lead in groundwater samples. Several VOCs have been detected above groundwater cleanup levels and lead is considered a COPC at the site due to the historic presence of aviation gasoline and has not been analyzed during previous groundwater sampling events.	This section has been edited in the work plan addendum to include the analyzation of full suite VOCs and lead for groundwater samples.
8.	7-1	IDW	In order to characterize waste, DEC requests that containerized waste be analyzed for site COCs and PFAS under standard analytical methods. Please plan to analyze waste characterization samples for VOCs and PAHs under standard analytical methods (i.e. 8260, 8270) in addition to the GRO, DRO, RRO, and PFAS analysis proposed in the work plan. Please ensure that PFAS analysis is completed at an ADEC approved laboratory under method 537.1.	Containerized waste be analyzed for site COCs and PFAS under standard analytical methods. PFAS analysis will be completed at an ADEC approved laboratory under method 537.1.

9.		Table 1	Please ensure analytical results are highlighted appropriately based on the key provided for Table 1. There are several detections and elevated detection limits that exceed groundwater cleanup levels, but are not currently highlighted.	Table 1 has been edited and included in the work plan addendum to correct these errors.
0.		Table 2	The following data is available for soil samples collected at the site; however, the data summary table indicates that this information is not applicable/not available. Please include the following results in the data summary table: • Lead results from the July 2007 monitoring well installation. • EDB and EDC results from the August 2011 soil sampling event. • EDB and EDC results from the August 2012 monitoring well installation.	These analytical results have been added to the data summary tables.
11.		Table 3	Please include the results for PAH soil samples collected during the July 2007 sampling event in Table 3.	These analytical results have been added to the data summary tables.
12.		Table 2, Table 3	Please correct the typos in the "Location" column on *Table 2, Page 1 of 14* and on *Table 3, Page 9 of 14*.	The typos in the "Location" column on *Table 2, Page 1 of 14* and on *Table 3, Page 9 of 14* have been corrected.
13.		General	While the DEC is not requesting PAH analysis be completed at this time, please note that several PAHs are considered to be site COCs and must be delineated in soil and groundwater prior to site closure.	The work plan addendum has been edited to include the analyzation of PAHs for soil samples.
14.		General	Please include a Conceptual Site Model (CSM) that summarized current site conditions and exposure pathways.	A Conceptual Site Model has been included as Attachment 4.
15.		General	Please note whether wells installed under this work plan will be added to the long term groundwater sampling schedule.	Wells installed under this work plan will be added to the long-term groundwater sampling schedule.

THE STATE of ALASKA
GOVERNOR MIKE DUNLEAVY

Department of Environmental Conservation

SPILL PREVENTION & RESPONSE
Contaminated Sites Program

610 University Avenue
Fairbanks, Alaska 99709
Main: 907.451.2143
Fax: 907.451.2155
www.dec.alaska.gov

File: 100.38.206

February 16, 2022

Chevron Environmental Management and Real Estate Company
ATTN: James Kiernan
6001 Bollinger Canyon Road
San Ramon, CA 94583

RE: FIA - Block 3 Lot 12 - Saupe Enterprises

Dear Mr. Kiernan:

The Alaska Department of Environmental Conservation (ADEC) has reviewed the Addendum to the Work Plan for Additional Assessment submitted by Arcadis on December 8, 2021. This work plan proposes to advance additional groundwater monitoring wells to further define the extent of contamination downgradient of the site.

This work plan is approved; however, please note the following response to comments:

Comment #2: Note there are additional Contaminants of Concern present at this site. Contaminants of concern include all analytes that have been detected above cleanup levels at a site.

Comment #9: Note that *Table 1: Historical Groundwater Gauging and Analytical Results* still includes many entries that are not consistent with the key provided at the end of the table, please ensure these are corrected in future deliverables.

Comment #11: Thank you for updating Table 3 to include PAH sample results. Note that naphthalene results exceeded cleanup levels at several sample locations, but are not highlighted in the data summary table. Please review this table and verify exceedances are accurately highlighted in future deliverables.

Comment #14: Please note that in addition to the media and receptors identified in the Conceptual Site Model, ADEC considers surface soil and air to be potentially impacted media and site visitors and trespassers to be potential receptors at this site. Additionally, ingestion of groundwater must be considered a potentially complete pathway for future receptors since no determination under 18 AAC 75.350 has been made that groundwater in the area is not a currently or reasonably expected future source of drinking water.

Do not hesitate to contact me at (907) 451-2144 or rebekah.reams@alaska.gov if you have any questions or concerns regarding the contents of this letter.

Sincerely,

Rebekah Reams
Environmental Program Specialist

cc (via email): Robert Burgess, ADEC
Alex Shook, Arcadis
Elise Thomas, FAI

Appendix B

ADEC Human Health Conceptual Site Model Worksheet

Print Form

Appendix A - Human Health Conceptual Site Model Scoping Form and Standardized Graphic

Site Name: Former Chevron Facility 309152 - FIA Block 3, Lot 12

File Number: 100.38.206

Completed by: Arcadis U.S., Inc.

Introduction

The form should be used to reach agreement with the Alaska Department of Environmental Conservation (DEC) about which exposure pathways should be further investigated during site characterization. From this information, summary text about the CSM and a graphic depicting exposure pathways should be submitted with the site characterization work plan and updated as needed in later reports.

General Instructions: Follow the italicized instructions in each section below.

1. General Information:

Sources *(check potential sources at the site)*

- ☐ USTs
- ☒ ASTs
- ☒ Dispensers/fuel loading racks
- ☐ Drums
- ☐ Vehicles
- ☐ Landfills
- ☐ Transformers
- ☒ Other: Associated Piping

Release Mechanisms *(check potential release mechanisms at the site)*

- ☒ Spills
- ☒ Leaks
- ☐ Direct discharge
- ☐ Burning
- ☐ Other:

Impacted Media *(check potentially-impacted media at the site)*

- ☒ Surface soil (0-2 feet bgs*)
- ☒ Subsurface soil (>2 feet bgs)
- ☒ Air
- ☐ Sediment
- ☒ Groundwater
- ☐ Surface water
- ☐ Biota
- ☐ Other:

Receptors *(check receptors that could be affected by contamination at the site)*

- ☐ Residents (adult or child)
- ☒ Commercial or industrial worker
- ☒ Construction worker
- ☐ Subsistence harvester (i.e. gathers wild foods)
- ☐ Subsistence consumer (i.e. eats wild foods)
- ☒ Site visitor
- ☒ Trespasser
- ☒ Recreational user
- ☐ Farmer
- ☐ Other:

* bgs - below ground surface

2. Exposure Pathways: *(The answers to the following questions will identify complete exposure pathways at the site. Check each box where the answer to the question is "yes".)*

a) Direct Contact -

1. Incidental Soil Ingestion

Are contaminants present or potentially present in surface soil between 0 and 15 feet below the ground surface? (Contamination at deeper depths may require evaluation on a site-specific basis.) ☒

If the box is checked, label this pathway complete: Complete

Comments:

2. Dermal Absorption of Contaminants from Soil

Are contaminants present or potentially present in surface soil between 0 and 15 feet below the ground surface? (Contamination at deeper depths may require evaluation on a site specific basis.) ☒

Can the soil contaminants permeate the skin (see Appendix B in the guidance document)? ☒

If both boxes are checked, label this pathway complete: Complete

Comments:

b) Ingestion -

1. Ingestion of Groundwater

Have contaminants been detected or are they expected to be detected in the groundwater, or are contaminants expected to migrate to groundwater in the future? ☒

Could the potentially affected groundwater be used as a current or future drinking water source? Please note, only leave the box unchecked if DEC has determined the ground-water is not a currently or reasonably expected future source of drinking water according to 18 AAC 75.350. ☒

If both boxes are checked, label this pathway complete: Complete

Comments:

2. Ingestion of Surface Water

Have contaminants been detected or are they expected to be detected in surface water, or are contaminants expected to migrate to surface water in the future? ☐

Could potentially affected surface water bodies be used, currently or in the future, as a drinking water source? Consider both public water systems and private use (i.e., during residential, recreational or subsistence activities). ☐

If both boxes are checked, label this pathway complete: Incomplete

Comments:

3. Ingestion of Wild and Farmed Foods

Is the site in an area that is used or reasonably could be used for hunting, fishing, or harvesting of wild or farmed foods? ☐

Do the site contaminants have the potential to bioaccumulate (see Appendix C in the guidance document)? ☐

Are site contaminants located where they would have the potential to be taken up into biota? (i.e. soil within the root zone for plants or burrowing depth for animals, in groundwater that could be connected to surface water, etc.) ☐

If all of the boxes are checked, label this pathway complete: Incomplete

Comments:

c) Inhalation-

1. Inhalation of Outdoor Air

Are contaminants present or potentially present in surface soil between 0 and 15 feet below the ground surface? (Contamination at deeper depths may require evaluation on a site specific basis.) ☒

Are the contaminants in soil volatile (see Appendix D in the guidance document)? ☒

If both boxes are checked, label this pathway complete: Complete

Comments:

2. Inhalation of Indoor Air

Are occupied buildings on the site or reasonably expected to be occupied or placed on the site in an area that could be affected by contaminant vapors? (within 30 horizontal or vertical feet of petroleum contaminated soil or groundwater; within 100 feet of non-petroleum contaminted soil or groundwater; or subject to "preferential pathways," which promote easy airflow like utility conduits or rock fractures) ☒

Are volatile compounds present in soil or groundwater (see Appendix D in the guidance document)? ☒

If both boxes are checked, label this pathway complete: Complete

Comments:

3. **Additional Exposure Pathways:** *(Although there are no definitive questions provided in this section, these exposure pathways should also be considered at each site. Use the guidelines provided below to determine if further evaluation of each pathway is warranted.)*

Dermal Exposure to Contaminants in Groundwater and Surface Water

Dermal exposure to contaminants in groundwater and surface water may be a complete pathway if:

- Climate permits recreational use of waters for swimming.
- Climate permits exposure to groundwater during activities, such as construction.
- Groundwater or surface water is used for household purposes, such as bathing or cleaning.

Generally, DEC groundwater cleanup levels in 18 AAC 75, Table C, are deemed protective of this pathway because dermal absorption is incorporated into the groundwater exposure equation for residential uses.

Check the box if further evaluation of this pathway is needed: ☐

Comments:

This pathway is considered complete for future construction workers in the event they would become exposed to groundwater at the Site during de-watering of an excavation or a similar event. However, further evaluation, outside of what has already been proposed, is not needed.

Inhalation of Volatile Compounds in Tap Water

Inhalation of volatile compounds in tap water may be a complete pathway if:

- The contaminated water is used for indoor household purposes such as showering, laundering, and dish washing.
- The contaminants of concern are volatile (common volatile contaminants are listed in Appendix D in the guidance document.)

DEC groundwater cleanup levels in 18 AAC 75, Table C are protective of this pathway because the inhalation of vapors during normal household activities is incorporated into the groundwater exposure equation.

Check the box if further evaluation of this pathway is needed: ☐

Comments:

Inhalation of Fugitive Dust

Inhalation of fugitive dust may be a complete pathway if:

- Nonvolatile compounds are found in the top 2 centimeters of soil. The top 2 centimeters of soil are likely to be dispersed in the wind as dust particles.
- Dust particles are less than 10 micrometers (Particulate Matter - PM_{10}). Particles of this size are called respirable particles and can reach the pulmonary parts of the lungs when inhaled.

DEC human health soil cleanup levels in Table B1 of 18 AAC 75 are protective of this pathway because the inhalation of particulates is incorporated into the soil exposure equation.

Check the box if further evaluation of this pathway is needed: ☐

Comments:

Direct Contact with Sediment

This pathway involves people's hands being exposed to sediment, such as during some recreational, subsistence, or industrial activity. People then incidentally ingest sediment from normal hand-to-mouth activities. In addition, dermal absorption of contaminants may be of concern if the the contaminants are able to permeate the skin (see Appendix B in the guidance document). This type of exposure should be investigated if:

- Climate permits recreational activities around sediment.
- The community has identified subsistence or recreational activities that would result in exposure to the sediment, such as clam digging.

Generally, DEC direct contact soil cleanup levels in 18 AAC 75, Table B1, are assumed to be protective of direct contact with sediment.

Check the box if further evaluation of this pathway is needed: ☒

Comments:

Contaminated groundwater can potentially migrate into the marsh/pond as gradient flow direction has been observed to move towards the retention pond.

4. Other Comments *(Provide other comments as necessary to support the information provided in this form.)*

HUMAN HEALTH CONCEPTUAL SITE MODEL GRAPHIC FORM

Site: Former Chevron Facility 309152 - FIA Block 3, Lot 12
File Number: 100.38.206

Completed By: Arcadis U.S., Inc.
Date Completed: 02/03/2023

***Instructions*: Follow the numbered directions below. Do not consider contaminant concentrations or engineering/land use controls when describing pathways.**

(1) *Check the media that could be directly affected by the release.*

(2) *For each medium identified in (1), follow the top arrow and check possible transport mechanisms. Check additional media under (1) if the media acts as a secondary source.*

Media	Transport Mechanisms
☑ Surface Soil (0-2 ft bgs)	☑ Direct release to surface soil — check soil ☑ Migration to subsurface — check soil ☑ Migration to groundwater — check groundwater ☐ Volatilization — check air ☐ Runoff or erosion — check surface water ☐ Uptake by plants or animals — check biota ☐ Other (list):
☑ Subsurface Soil (2-15 ft bgs)	☑ Direct release to subsurface soil — check soil ☑ Migration to groundwater — check groundwater ☑ Volatilization — check air ☐ Uptake by plants or animals — check biota ☐ Other (list):
☑ Ground-water	☑ Direct release to groundwater — check groundwater ☑ Volatilization — check air ☑ Flow to surface water body — check surface water ☑ Flow to sediment — check sediment ☐ Uptake by plants or animals — check biota ☐ Other (list):
☐ Surface Water	☐ Direct release to surface water — check surface water ☐ Volatilization — check air ☐ Sedimentation — check sediment ☐ Uptake by plants or animals — check biota ☐ Other (list):
☐ Sediment	☐ Direct release to sediment — check sediment ☐ Resuspension, runoff, or erosion — check surface water ☐ Uptake by plants or animals — check biota ☐ Other (list):

(3) *Check all exposure media identified in (2).*

(4) *Check all pathways that could be complete. The pathways identified in this column **must** agree with Sections 2 and 3 of the Human Health CSM Scoping Form.*

(5) *Identify the receptors potentially affected by each exposure pathway: Enter "C" for current receptors, "F" for future receptors, "C/F" for both current and future receptors, or "I" for insignificant exposure.*

Current & Future Receptors

Exposure Media	Exposure Pathway/Route	Residents (adults or children)	Commercial or industrial workers	Site visitors, trespassers, or recreational users	Construction workers	Farmers or subsistence harvesters	Subsistence consumers	Other
☑ soil	☑ Incidental Soil Ingestion	I	C/F	C/F	C/F	I	I	
	☑ Dermal Absorption of Contaminants from Soil	I	C/F	C/F	C/F	I	I	
	☐ Inhalation of Fugitive Dust							
☑ groundwater	☑ Ingestion of Groundwater	I	C/F	I	C/F	I	I	
	☑ Dermal Absorption of Contaminants in Groundwater	I	C/F	I	C/F	I	I	
	☐ Inhalation of Volatile Compounds in Tap Water							
☑ air	☑ Inhalation of Outdoor Air	I	C/F	C/F	C/F	I	I	
	☑ Inhalation of Indoor Air	I	C/F	C/F	C/F	I	I	
	☐ Inhalation of Fugitive Dust							
☑ surface water	☑ Ingestion of Surface Water	I	C/F	C/F	C/F	I	I	
	☑ Dermal Absorption of Contaminants in Surface Water	I	C/F	C/F	C/F	I	I	
	☐ Inhalation of Volatile Compounds in Tap Water							
☑ sediment	☑ Direct Contact with Sediment	I	I	C/F	C/F	I	I	
☐ biota	☐ Ingestion of Wild or Farmed Foods							

Revised, 10/01/2010

Appendix C

Soil Boring and Construction Logs

ARCADIS

Soil Boring and Construction Log

Boring No.: MW-22

Sheet: 1 of 1

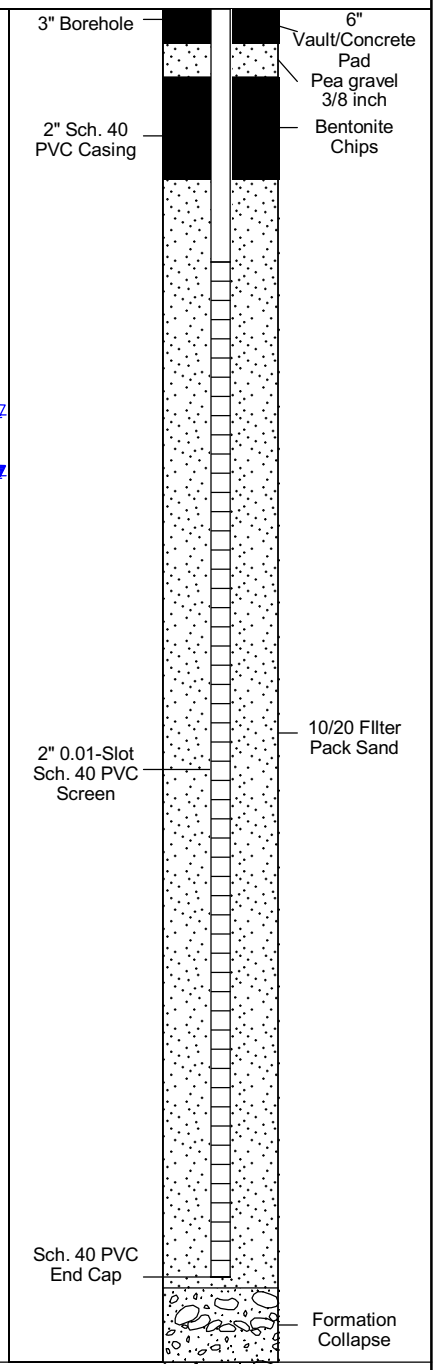
Client Name: Chevron Environmental Management Company
Project Number: 30064227
Project Name: COP5 West 309152 AK Fairbanks

Date Started: 08-03-2022
Date Completed: 08-04-2022
Total Depth: 20.0 ft bgs

Logger: Evan Wujcik
Reviewer: Gantt Jeffers

Depth (feet)	Sample ID	Rec. (ft)	PID (ppm)	Blow Counts	Graphic	Description	Drilling Fluid and Notes
1	MW-22-S-0.5-1	3	0.0			(0-3 ft) Well Graded Sand with Gravel (SW), very fine to very coarse, subangular to subround; little small to very large pebbles, subround to round; trace granules, subangular to subround; trace silt; well sorted; dry; 10YR 4/3 - brown.	(0-3 ft) Hand augered for utility clearance.
2			0.0				
3			0.5				
4		2	7.6			(3-5.5 ft) Change in angularity of sand, subround to round.	(3 ft) Encountered hand auger refusal. Switch to direct push drilling.
5	MW-22-S-4.5-5 MW-22-S-5-5.5		0.0				
6		5	0.0			(5.5-14 ft) Silt (ML), medium plasticity, rapid dilatancy; little very fine to fine sand, subangular to subround; trace granules, subround to round; trace small to medium pebbles, subround to round; poorly sorted; wet; very soft; 10YR 4/2 - dark grayish brown.	
7							
8			0.3				
9							
10			17.4				
11							
12		5	4.3				
13							
14			12.5			(14-18 ft) Well Graded Sand (SW), very fine to very coarse, subangular to subround; trace silt; poorly sorted; wet; 10YR 4/2 - dark grayish brown.	
15							
16			5.4				
17		5					
18			8.7			(18-20 ft) Well Graded Gravel with Sand (GW), granules to large pebbles, subangular to round; some very fine to coarse sand, subangular to subround; well sorted; wet; 10YR 4/2 - dark grayish brown.	
19							
20						20 ft. bgs End of Boring	
21							

Construction Details



Drilling Co.: GeoTek
Driller: Tom Belli
Drilling Method: Direct-Push
Drill Rig: Geoprobe
Remarks: Additional Field Personnel: Gantt Jeffers. ft. bgs = feet below ground surface; "/in. = inches; ppm = parts per million; PVC = Polyvinyl chloride; NA = not available / applicable.

Sampling Method: Hand Auger/Acetate Sleeve
Sampling Dimensions: Continuous
First Encountered Water (ft bgs): 6
Static Water Level (ft bgs): 6.90
Top of Casing Elev: 429.50
Surface Elev: 429.70
North Coor: 3959536.54
East Coor: 1350611.96

SOIL BORING AND CONSTRUCTION LOG C:\USERS\PJEFFERS\ONEDRIVE - ARCADIS\DOCUMENTS\GINT LIBRARY\GINT PROJECT.GPJ GINT DATA TEMPLATE.GDT 11/15/22

ARCADIS

Soil Boring and Construction Log

Boring No.: MW-23

Sheet: 1 of 1

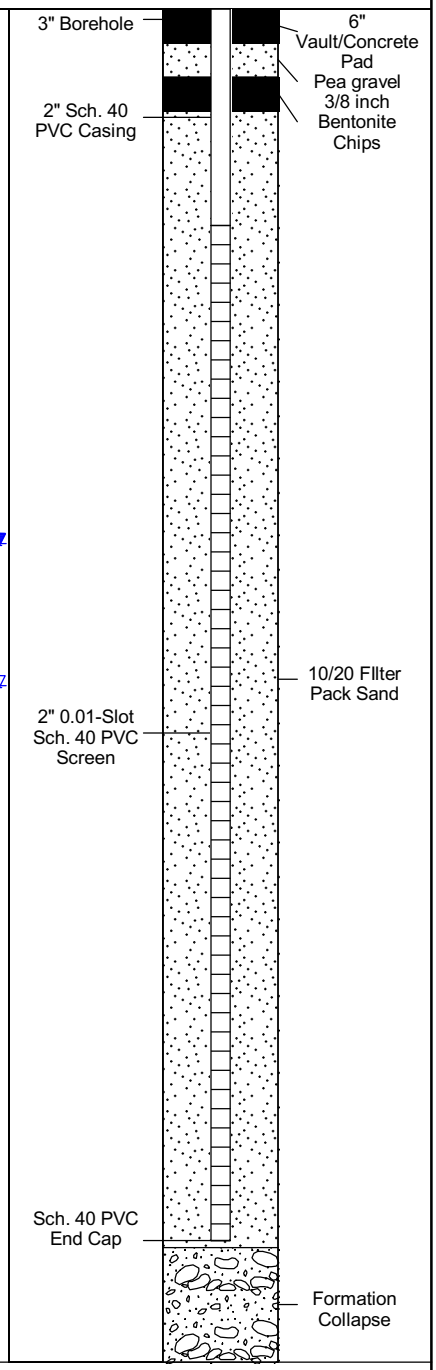
Client Name: Chevron Environmental Management Company
Project Number: 30064227
Project Name: COP5_West_309152_AK_Fairbanks

Date Started: 08-03-2022
Date Completed: 08-04-2022
Total Depth: 20.0 ft bgs

Logger: Evan Wujcik
Reviewer: Gantt Jeffers

Depth (feet)	Sample ID	Rec. (ft)	PID (ppm)	Blow Counts	Graphic	Description	Drilling Fluid and Notes
0			0.0				(0-5 ft) Hand augered for utility clearance.
1	MW-23-S-0.5-1	5	0.5			(0-3 ft) Well Graded Sand with Gravel (SW), very fine to very coarse, subangular to subround; little small to very large pebbles, subround to round; trace granules, subangular to subround; trace silt; poorly sorted; dry; 10YR 3/3 - dark brown.	
2			10.1				
3			14.0			(3-10 ft) Silty Sand (SM), very fine to very coarse, subangular to subround; little silt; trace granules, subround to round; trace small to medium pebbles, subround to round; poorly sorted; dry to moist; 10YR 4/2 - dark grayish brown; mild odor.	
4			125.0				
5	MW-23-S-4.5-5		19.9				(5 ft) Switch to direct push drilling.
6		4.8					
7			41.5				
8							
9			68.8				
10	MW-23-S-9.5-10		5.7			(10-16 ft) Well Graded Sand with Silt (SW-SM), very fine to very coarse, subangular to subround; little silt; poorly sorted; wet; 10YR 4/2 - dark grayish brown.	
11							
12		4.8	1.8				
13							
14			0.2				
15							
16		5	7.1			(16-19 ft) Well Graded Sand (SW), very fine to very coarse, subangular to subround; trace silt; poorly sorted; wet; 10YR 4/2 - dark grayish brown.	
17							
18			8.5				
19						(19-20 ft) Well Graded Sand with Gravel (SW), very fine to very coarse, subangular to subround; little small to large pebbles, subangular to subround; trace granules, subangular to subround; trace silt; poorly sorted; wet; 10YR 4/2 - dark grayish brown.	
20							20 ft. bgs End of Boring
21							

Construction Details



Drilling Co.: GeoTek
Driller: Tom Belli
Drilling Method: Direct-Push
Drill Rig: Geoprobe
Remarks: Additional Field Personnel: Gantt Jeffers. ft. bgs = feet below ground surface; "/in. = inches; ppm = parts per million; PVC = Polyvinyl chloride; NA = not available / applicable.

Sampling Method: Hand Auger/Acetate Sleeve
Sampling Dimensions: Continuous
First Encountered Water (ft bgs): 10
Static Water Level (ft bgs): 7.90
Top of Casing Elev: 430.60
Surface Elev: 430.90
North Coor: 3959597.88
East Coor: 1350668.60

SOIL BORING AND CONSTRUCTION LOG C:\USERS\PJEFFERS\ONEDRIVE - ARCADIS\DOCUMENTS\GINT LIBRARY\GINT PROJECT.GPJ GINT DATA TEMPLATE.GDT 11/15/22

ARCADIS

Soil Boring and Construction Log

Boring No.: MW-24

Sheet: 1 of 1

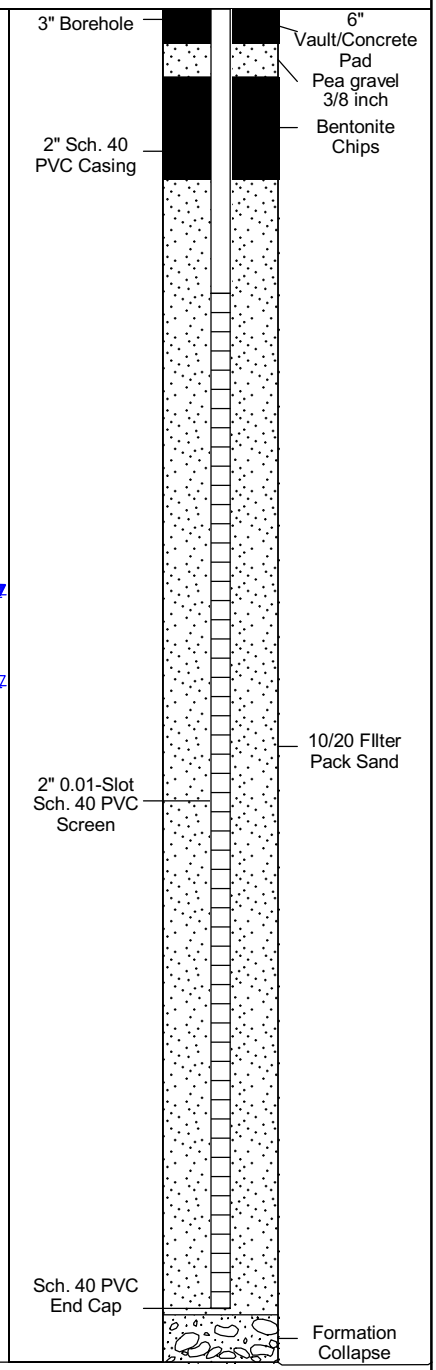
Client Name: Chevron Environmental Management Company
Date Started: 08-03-2022
Logger: Evan Wujcik

Project Number: 30064227
Date Completed: 08-05-2022
Reviewer: Gantt Jeffers

Project Name: COP5_West_309152_AK_Fairbanks
Total Depth: 20.0 ft bgs

Depth (feet)	Sample ID	Rec. (ft)	PID (ppm)	Blow Counts	Graphic	Description	Drilling Fluid and Notes
1	MW-24-S-0.5-1	4.9	3.2			(0-9 ft) Well Graded Sand with Gravel (SW), very fine to very coarse, subangular to subround; little small to very large pebbles, subround to round; trace granules, subround to round; trace silt; poorly sorted; dry; 10YR 5/3 - brown.	(0-4.9 ft) Hand augered for utility clearance.
2			2.4				
3			1.2				
4							
5	MW-24-W-4.5-5		0.1				(4.9 ft) Encountered hand auger refusal. Switch to direct push drilling.
6		5					
7			0.5				
8							
9			1.1				
10	MW-24-S-9.5-10					(9-14 ft) Silty Sand (SM), very fine to very coarse, subangular to subround; little silt; poorly sorted; moist to wet; 10YR 4/2 - dark grayish brown.	
11			0.7				
12		5					
13			8.6				
14							
15			1.9			(14-19 ft) Well Graded Sand (SW), very fine to very coarse, subangular to subround; trace silt; poorly sorted; wet; 10YR 4/2 - dark grayish brown.	
16							
17		5	1.1				
18							
19			6.9				
20						(19-20 ft) Well Graded Sand with Gravel (SW), very fine to very coarse, subangular to subround; little small to large pebbles, subround to round; trace granules, subangular to subround; trace silt; poorly sorted; wet; 10YR 4/2 - dark grayish brown.	
21						20 ft. bgs End of Boring	

Construction Details



Drilling Co.: GeoTek
Driller: Tom Belli
Drilling Method: Direct-Push
Drill Rig: Geoprobe
Remarks: Additional Field Personnel: Gantt Jeffers. ft. bgs = feet below ground surface; "/in. = inches; ppm = parts per million; PVC = Polyvinyl chloride; NA = not available / applicable.

Sampling Method: Hand Auger/Acetate Sleeve
Sampling Dimensions: Continuous
First Encountered Water (ft bgs): 10
Static Water Level (ft bgs): 8.66
Top of Casing Elev: 431.35
Surface Elev: 431.80
North Coor: 3959642.48
East Coor: 1350758.34

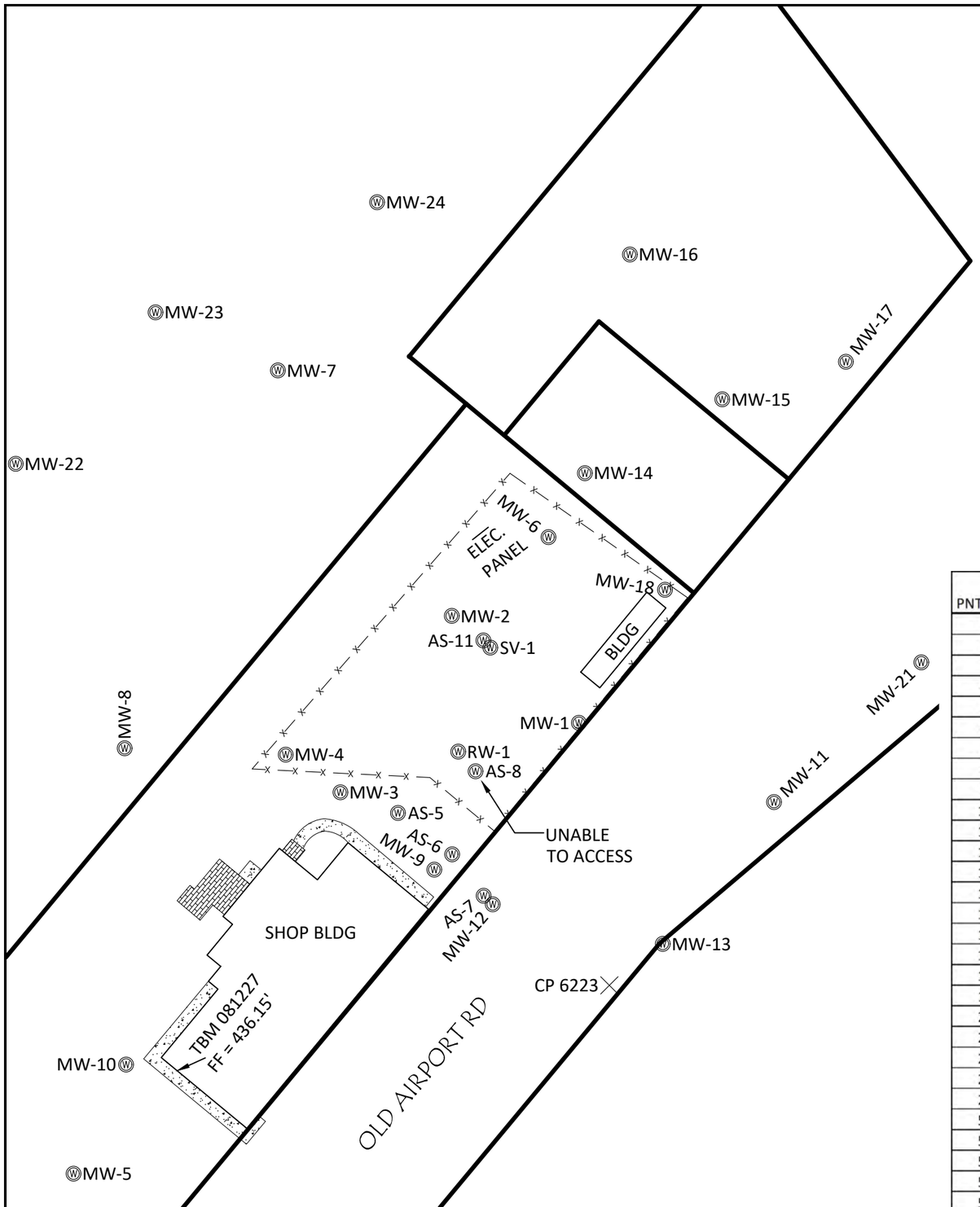
Appendix D

Well Survey Data

CHEVRON SITE 309152
6223 Old Airport Rd
Fairbanks, AK
ARCADIS

9/15/2022
223012_CHEV_309152.xlsx
HORIZONTAL DATUM: NAD83(2011) ASP ZONE 3
VERTICAL DATUM: NAVD88

PNT. NO.	ASP NORTHING	ASP EASTING	ELEV. GRND	ELEV. RIM CASING	ELEV. PVC	LAT. (DMS) N	LONG. (DMS) W	DESCRIPTOR
1	3959431.59	1350840.08	436.6	436.55	436.17	N 64° 49' 21.91"	W 147° 51' 32.54"	MW-1
2	3959474.92	1350788.60	434.2	434.26	435.29	N 64° 49' 22.33"	W 147° 51' 33.76"	MW-2
3	3959403.45	1350743.48	435.5	435.45	434.90	N 64° 49' 21.61"	W 147° 51' 34.75"	MW-3
4	3959418.70	1350721.33	435.1		435.77	N 64° 49' 21.75"	W 147° 51' 35.27"	MW-4
5	3959248.96	1350635.39	435.5	435.55	435.37	N 64° 49' 20.06"	W 147° 51' 37.14"	MW-5
6	3959506.82	1350827.77	435.0		435.84	N 64° 49' 22.65"	W 147° 51' 32.87"	MW-6
7	3959574.37	1350718.17	431.0	433.85	433.78	N 64° 49' 23.28"	W 147° 51' 35.45"	MW-7
8	3959421.29	1350656.10	426.9	429.75	429.71	N 64° 49' 21.76"	W 147° 51' 36.78"	MW-8
9	3959372.11	1350781.51	436.0	436.00	435.44	N 64° 49' 21.31"	W 147° 51' 33.85"	MW-9
10	3959293.16	1350656.68	435.6	435.56	435.14	N 64° 49' 20.50"	W 147° 51' 36.68"	MW-10
11	3959399.49	1350919.13	435.6	435.52	435.17	N 64° 49' 21.62"	W 147° 51' 30.69"	MW-11
12	3959358.07	1350805.18	436.4	436.40	436.16	N 64° 49' 21.18"	W 147° 51' 33.30"	MW-12
13	3959342.05	1350874.05	434.6	434.60	434.37	N 64° 49' 21.04"	W 147° 51' 31.69"	MW-13
14	3959532.73	1350842.51	430.5	433.56	433.04	N 64° 49' 22.91"	W 147° 51' 32.55"	MW-14
15	3959562.65	1350898.17	430.5	430.54	430.08	N 64° 49' 23.22"	W 147° 51' 31.29"	MW-15
16	3959621.33	1350860.75	429.7	429.75	429.33	N 64° 49' 23.79"	W 147° 51' 32.19"	MW-16
17	3959577.86	1350948.23	431.3	431.34	431.24	N 64° 49' 23.38"	W 147° 51' 30.14"	MW-17
18	3959485.49	1350874.96	436.6	436.56	436.07	N 64° 49' 22.45"	W 147° 51' 31.77"	MW-18
19	3959668.05	1351137.97	UNDER NEW PAVEMENT			N 64° 49' 24.33"	W 147° 51' 25.82"	MW-19
20	3959716.41	1351073.38	431.0	431.00	430.44	N 64° 49' 24.78"	W 147° 51' 27.34"	MW-20
21	3959456.09	1350978.78	437.2	437.25	436.74	N 64° 49' 22.20"	W 147° 51' 29.35"	MW-21
22	3959536.54	1350611.96	429.7	429.74	429.50	N 64° 49' 22.88"	W 147° 51' 37.88"	MW-22
23	3959597.88	1350668.60	430.9	430.94	430.60	N 64° 49' 23.50"	W 147° 51' 36.61"	MW-23
24	3959642.48	1350758.34	431.8	431.77	431.35	N 64° 49' 23.97"	W 147° 51' 34.57"	MW-24
51	3959462.07	1350804.21	436.5	436.52		N 64° 49' 22.20"	W 147° 51' 33.39"	SV-1
55	3959395.08	1350766.80	435.9	435.91	435.15	N 64° 49' 21.53"	W 147° 51' 34.21"	AS-5
56	3959378.32	1350788.75	436.2	436.22	435.49	N 64° 49' 21.38"	W 147° 51' 33.69"	AS-6
57	3959361.53	1350801.49	436.4	436.39	435.53	N 64° 49' 21.21"	W 147° 51' 33.38"	AS-7
58	3959411.98	1350798.21		436.00		N 64° 49' 21.71"	W 147° 51' 33.49"	AS-8
61	3959464.98	1350801.39	435.5	435.53	435.28	N 64° 49' 22.23"	W 147° 51' 33.46"	AS-11
71	3959419.93	1350791.21	436.4		437.07	N 64° 49' 21.79"	W 147° 51' 33.66"	RW-1



NORTH

GRAPHIC SCALE

0 25 50 100

1 inch = 50 ft.

SURVEY CONTROL

1. BASIS OF HORIZONTAL:
ALASKA STATE PLANE ZONE 3
NAD83(2011) (EPOCH 2010) US FEET
2. VERTICAL CONTROL:
(NAVD88) GEOID12b

PNT. NO.	ASP NORTHING	ASP EASTING	ELEV. GRND	ELEV. RIM CASING	ELEV. PVC	LAT. (DMS) N	LONG. (DMS) W	DESCRIPTOR
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71	3959419.93	1350791.21	436.4		437.07	N 64° 49' 21.79"	W 147° 51' 33.66"	RW-1

REV	DATE	DESCRIPTION	BY
1	9/16/2022	SUBMITTAL	JAH

ARCADIS

FORMER CHEVRON FACILITY
#309152 - 6223 OLD AIRPORT RD

JOB NO. 223012

FIELD BOOK NO. 22-13

FIELD WORK DATE: SEPT. 2022

McLANE Consulting Inc
ENGINEERING - TESTING
SURVEYING - MAPPING
P.O. BOX 468
SOLDOTNA, AK. 99669
VOICE: (907) 283-4218
FAX: (907) 283-3265
WWW.MCLANECG.COM

DRAWN BY: JAH

CHECKED BY: BGB

HORZ. SCALE: 1" = 50'

VERT. SCALE: N/A

SHEET: 1

Appendix E

Field Data

ARCADIS | Design & Consultancy for natural and built assets

Daily Log

Project Name Saupe 309152 Project Number 30064227 Page 1 of ___

Site Location 6223 Old Airport Rd Fairbanks, AK Date 8.3.22

Field Personnel E. Wojcik (EW), G. Teffers (GF), Geotek Drilling (GD)

Time	Description of Activities
0800	GF on site when EW arrives on site
	Call w/ GD that work will begin around noon due to needed
	to pick up supplies,
	Call w/ APM to discuss the delay and options
0845	EW mobilize to get hand auger
0900	EW back on site to begin hand augering
	Permits approved
0945	GD arrive onsite to stage equipment
	Complete HASP review and H+S tailgate meeting
1020	GD offsite to resume setting equipment
	Drilling helper (Warren) stayed to resume HA
1030	Sample MW-24 0.5-1'
1120	Refusal on MW-24 @ 3ft 9in
	Discussion w/ APM and PM that HA is going to 5'
	instead of 8'
1130	Transition to MW-23 to begin HA until GD returns w/
	more tools
1150	Sample MW-23 0.5-1'
1210	GD arrive on site
	MW 23 HA to 5', ready to drill
	GD set up on MW-23
1250	Sample MW 23 4.5-5
1315	Sample MW 23 9.5-10
1320	GD Finish drilling MW-23 to 20' bgs

ARCADIS | Design & Consultancy for natural and built assets

Daily Log

Project Name_____ Project Number_____ Page ____ of ____

Site Location_____ Date_____

Field Personnel_____

Time	Description of Activities
1330	Discussion w/ team about using a Ligger auger to set wells in, decided another HA boring needs dug next to well boring
1400	GD moved to mw-24 to try to finish HA boring
1420	GD also HA MW-22 (start time)
1430	Sample mw-22 0.5-1
1440	Call w/ APM, mw 24 refusal at 4' 9". Cleared to use drill rig
1510	Sample mw-24 4.5-5
1520	Sample mw-24 9.5-10
1520	Sample EB-1 from shoe
1540	Call w/ APM about timeline and well development
1550	GD move to mw-22 to finish HA
1630	Refusal reached at 3.5 ft bgs at mw-22
	Dug another boring
	↳ Refusal reached at 2.9 ft bgs at mw-22
	Call w/ APM to get variance
1730	
1730	Variance approved drilling continued
1745	Sample mw-22 4.5-5
1750	Sample mw-22 5-5.5 (water interface)
1805	Geotek mobilize offsite
1830	Arcadis offsite
	All wells drilled to 20 ft bgs. All soil samples
	collected, Dup 1 collected, EB 1 collected

ARCADIS Design & Consultancy for natural and built assets

Daily Log

Project Name Saupe 309152 Project Number 30064227 Page 1 of ___

Site Location 6223 Old Airport Rd Fairbanks, AK Date 8/4/22

Field Personnel E. Wojcik (EW), Cook Drilling (GD)

Time	Description of Activities
0820	EW arrive on site
	Open permit to work
0850	GD on site
0910	Complete HASP review and tailgate meeting
0915	Start installing MW-23
1030	Issues w/ 3 1/4 in casings and PVC screen.
	Could not set well w/out pulling casing w/ PVC well.
1100	Work paused to get clarification on how to proceed.
	GD want to use auger to set wells Calls w/ project
	team to approve scope changes.
1200	GD mobilize offsite to get supplies
1245	GD arrive back on site. Going to try the DT one more time
	w/ surging the well w/ water
1450	MW 23 installed
	~~Tot~~ TD 18.3
	See Fulcrum for well construction details
1520	Mobilize / start installing MW-22
1740	Installed MW-22
	TD 19.3
1800	MW-23 finished w/ concrete
1820	MW-22 finish w/ Concrete
1840	Site cleaned up and work wrapped up
1850	EW and GD offsite

ARCADIS | Design & Consultancy for natural and built assets

Daily Log

Project Name Saupe 309150 Project Number 30064227 Page 1 of 1

Site Location 6223 Old Airport Rd Fairbanks, AK Date 8/5/22

Field Personnel E. Wojcik (EW), Geotek Drilling (GD)

Time	Description of Activities
0730	EW and GD arrive on site
~~0740~~	Review HASP and tailgate meeting
0800	Begin installing MW-24
	~~TD 19.4~~
0850	Installed MW-24
	TD 19.4
1010	Finish MW-24 w/ concrete
1020	Begin site clean up and equipment loading
1120	GD offsite to clear trailer to load drill rig when they return
1230	GD arrive on site
	Resume site pick up
1300	Waste drum w/ soil cuttings stored on south side of
	on site building where other waste is currently on site
	Previos waste on site includes 5 supersacks w/ soil
	and 1 55 gal. drum in overpack (contents purge water)
	Waste generated during this event: 1 55 gal drum
	(contents soil cuttings) 75% full
1400	GD offsite, EW offsite
	site cleaned and equipment picked up

ARCADIS Design & Consultancy for natural and built assets

Daily Log

Project Name 30952 - Saupe Project Number 36064227 Page 1 of 1

Site Location 6223 Old Airport Rd, Fairbanks AK Date 8/6/2022

Field Personnel Minda Moe

Time	Description of Activities
0643	ANA onsite to prepare for work
0701	Called Thomas, found out I am staged on main site and he's in the field by the wells, heading back there.
0711	Calibrated (zero gas) PID; GTA helper is on a supply run
0731	GTA helper onsite, will tailgate
0751	Completed review of HASP/hazards/JSAs, texted PTW to Gantt (PTW approver)
0757	PTW approval
0800	Called Evan to find out well names
0813	Starting on MW-23, see well dev log
0840	Thomas going to store for supplies, need a connector for pump.
1117	Sampling MW-23 + DUP-1
1202	Starting on MW-22, see well dev log
1430	Sampling MW-22
1455	Starting on MW-24, see well dev log
1800	Sampling MW-24
1830	GTA + ANA offsite, secured drums, texted Gantt to close PTW.
817 1312	ANA onsite to collect waste samples
1323	IDW-S-082022
1354	IDW-W-082022
1427	ANA offsite

ARCADIS

Well Development Record

Project Name: 309152 - Saupe

PG 1 of 1

Date(s): 8/6/22 Project #: 30064227 Arcadis Oversight: Mindy Moe ARCADIS Job Title: AFS Geo II

Well ID: MW-22 Total Depth (ft bTOC): 19.3 TOC (abgs): -2.25 Screen Interval (ft bgs): 4.3-19.3

DTW (ft bTOC): ~~5.49~~ 4.95 Water column in well (ft): ~~13.81~~ 14.35 Diameter of well (in.): 2" Gallons in well: ~~2.25~~ 2.36

Rig operator: Thomas B Rig type: Human Bailer make and size: 1" Plastic Water added: NA

Surge block make and size: 6" metal Pump make and size: 18" Proactive Water source: NA

Time	Task	GPM	DTW (ft btoc)	TD ft btoc	Temp °C	pH	ORP (mV)	Cond. (mS/cm)	Turb NTU	DO (mg/L)	Notes/Gallons Removed/Water Clarity
1202	Tag		18.56	~~5.49~~ 4.95							Very soft bottom
1203	Bail			~~5.49~~ 4.93							2 gal
1211	Tag		5.3	18.54							
1217	Surge										30 min
1248	Tag		5.62	18.54							
1250											putting pump in
1300	Pump										Pump on - 23 gal
1355											Switching to LF
1402											Pump on
1405		600 mL/min			7.40	7.39	-127	0.737	OVER	1.31	
1408					6.14	7.29	-128	0.746	829	0.32	
1411					5.59	7.18	-130	0.754	321	0.00	
1414					5.60	7.05	-127	0.755	175	0.00	
1417					5.80	6.97	-127	0.755	102	0.00	
1420					5.72	6.91	-128	0.755	78.5	0.00	
1423					5.62	6.89	-126	0.756	36.7	0.00	
1426	↓	↓			5.86	6.87	-126	0.756	37.0	0.00	
1430											Sample
1446	Tag		4.93	18.54							

Turbine

Sample ID and Time: MW-22 1430

Total gallons removed at completion of development: 25 gal

Arcadis Staff: Mindy Moe

* could not fit water level meter in well when pump was @ Top of water column to sample

ARCADIS Design & Consultancy for natural and built assets

Well Development Record

Project Name: 309152-Sample — PG 1 of 1

Date(s): 8/16/22 — Project #: 30064227 — Arcadis Oversight: Minda Moe — ARCADIS Job Title: AES Gen II

Well ID: MW-23 — Total Depth (ft bTOC): 18 — TOC (abgs): ~3.5 — Screen Interval (ft bgs): 3-18

DTW (ft bTOC): 6.14 — Water column in well (ft): 12 — Diameter of well (in.): 2 — Gallons in well: 1.96

Rig operator: Thomas B. — Rig type: Human — Bailer make and size: 1' — Water added: NA

Surge block make and size: 5" — Pump make and size: — Water source: NA

Time	Task	GPM	DTW (ft btoc)	TD ft btoc	Temp °C	pH	ORP (mV)	Cond. (mS/cm)	Turb NTU	DO (mg/L)	Notes/Gallons Removed/Water Clarity
0813	Tag	—	6.14	17.23							Very soft
0814	Bail										1 gal
0818	Tag		7.1	17.7							soft bottom
0817	Bail										1 gal
0825	Tag	—	6.7	17.9							
0827	Surge										30 minutes
0858	Tag	—	5.64	17.54							
0859	Bail										2 gal
0915	Tag	—	7.25	17.31							
0922											Setting pump
0935	Pump										Pump on
1024	↓										Switching to LF, 17 gal
1035	Purge	200mL/min			7.99	7.28	-125	1.05	OVER	4.23	
1040					7.44	7.10	-135	1.67	OVER	2.26	
1045					5.17	7.06	-136	1.12	870	0.60	
1050					5.15	7.14	-145	1.13	320	0.00	
1053					5.74	7.14	-149	1.12	197	0.00	
1056					6.41	7.13	-151	1.12	166	0.00	
1059					6.26	7.21	-151	1.12	142	0.00	
1102					6.61	7.14	-152	1.12	84.4	0.00	
1105					7.14	7.12	-152	1.11	89.6	0.00	
1108					7.45	7.10	-154	1.11	71.4	0.00	
1111	↓	↓			7.52	7.10	-154	1.11	7.39	0.00	
MS/MSD 1117											Sample
1156	Tag	—	6.04	17.9							

Sample ID and Time: MW-23 1117

Total gallons removed at completion of development: 20 gal

Arcadis Staff: Minda Moe

* could not fit water level meter in well when pump was @ top of water column to sample

ARCADIS

Well Development Record

PG 1 of 1

Project Name: 30815z-Saype

Date(s): 8/16/22 Project #: 30064227 Arcadis Oversight: Minda Moe ARCADIS Job Title: AFS Geo II

Well ID: MW-24 Total Depth (ft bTOC): 19.4 TOC (abgs): -3.75 Screen Interval (ft bgs): 4.4-19.4

DTW (ft bTOC): 6.82 Water colmun in well (ft): 12.48 Diameter of well (in.): 2" Gallons in well: 2.04

Rig operator: Thomas B. Rig type: Human Bailer make and size: 1' plastic Water added: NA

Surge block make and size: 6" metal Pump make and size: 18" Proactive Water source: NA

Time	Task	GPM	DTW (ft btoc)	TD ft btoc	Temp °C	pH	ORP (mV)	Cond. (mS/cm)	Turb NTU	DO (mg/L)	Notes/Gallons Removed/Water Clarity
1455	Tag	—	6.82	19.3 (C)							questionable Tag
1503	Bail	—	6.99	18.73							2 gal
1514	~~Surge~~ Tag		↓	↓							
1516	Surge	—	7.14	18.75							solid Tag
1549	Tag	—	↓	↓							↓
1550											Running pump down
1558	Pump										Pump on - 2 gpm
1605		—	6.72								switching to 2 gpm
1710											Pump on
1713		800 ml/min			7.22	7.05	-98	0.679	OVER	2.31	
1716					6.55	6.83	-98	0.692	OVER	0.32	
1719					6.16	7.09	-119	0.704	648	0.00	
1722					6.05	7.07	-122	0.711	334	0.00	
1725					6.41	7.23	-132	0.716	179	0.00	
1728					7.16	7.02	-123	0.718	126	0.00	
1731					7.65	7.19	-134	0.713	111	0.00	
1734					8.39	7.13	-133	0.715	83.6	0.00	
1737					8.96	7.15	-135	0.709	83.9	0.00	
1740					8.00	6.92	-125	0.715	149	0.00	Horiba turned off
1743					6.60	7.22	-123	0.722	517	0.00	Horiba restarted
1746					6.15	7.28	-136	0.722	335	0.00	
1749					6.59	7.19	-134	0.720	158	0.00	
1752					8.01	7.22	-138	0.718	72.1	0.00	
1755					8.65	7.18	-139	0.714	80.4	0.00	
1758	↓	↓			9.79	7.16	-141	0.720	64.5	0.00	
1800											Sample
1815	Tag	—	6.80	18.75							

Sample ID and Time: MW-24 1800

Total gallons removed at completion of development: 30

Arcadis Staff: Minda Moe

* Temp swinging due to sun/clouds intermittent, disregard
* could not fit water level meter in well when pump was @ top of water column to sample

Appendix F

Laboratory Analytical Reports

ANALYTICAL REPORT

August 19, 2022

Arcadis - Chevron - AK

Sample Delivery Group:	L1522335
Samples Received:	08/05/2022
Project Number:	30064227 07.42
Description:	309152
Site:	501 EAST 30TH AVE, FAIRBANKS
Report To:	Erika Midkiff/Sydney Clark/Nick Wood 880 H St. Anchorage, AK 99501

Entire Report Reviewed By:

Brian Ford

Project Manager

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MW-24-S-0.5-1_220803 L1522335-01 Solid

Collected by: E. W | Collected date/time: 08/03/22 10:30 | Received date/time: 08/05/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1907557	1	08/10/22 08:02	08/10/22 08:11	CMK	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG1908093	2.78	08/03/22 10:30	08/10/22 05:12	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1907699	1.21	08/03/22 10:30	08/09/22 00:28	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG1907345	1	08/08/22 16:49	08/09/22 03:37	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1909236	1	08/12/22 09:34	08/12/22 18:02	DSH	Mt. Juliet, TN

MW-23-S-0.5-1_220803 L1522335-02 Solid

Collected by: E. W | Collected date/time: 08/03/22 11:50 | Received date/time: 08/05/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1907557	1	08/10/22 08:02	08/10/22 08:11	CMK	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG1908093	2.38	08/03/22 11:50	08/10/22 05:38	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1907699	1.09	08/03/22 11:50	08/09/22 00:46	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG1907345	1	08/08/22 16:49	08/09/22 03:50	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1907009	1	08/08/22 09:09	08/09/22 02:06	AGW	Mt. Juliet, TN

MW-23-S-4.5-5_220803 L1522335-03 Solid

Collected by: E. W | Collected date/time: 08/03/22 12:50 | Received date/time: 08/05/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1907557	1	08/10/22 08:02	08/10/22 08:11	CMK	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG1908093	2	08/03/22 12:50	08/10/22 06:05	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1907699	1	08/03/22 12:50	08/09/22 01:05	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG1907345	1	08/08/22 16:49	08/09/22 04:15	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1909236	1	08/12/22 09:34	08/12/22 18:20	DSH	Mt. Juliet, TN

DUP-1_220803 L1522335-04 Solid

Collected by: E. W | Collected date/time: 08/03/22 00:00 | Received date/time: 08/05/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1907557	1	08/10/22 08:02	08/10/22 08:11	CMK	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG1908093	2	08/03/22 00:00	08/10/22 06:31	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1907699	1	08/03/22 00:00	08/09/22 01:23	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG1907345	1	08/08/22 16:49	08/09/22 04:02	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1909236	1	08/12/22 09:34	08/12/22 18:38	DSH	Mt. Juliet, TN

MW-23-S-9.5-10_220803 L1522335-05 Solid

Collected by: E. W | Collected date/time: 08/03/22 13:15 | Received date/time: 08/05/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1907557	1	08/10/22 08:02	08/10/22 08:11	CMK	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG1911247	2	08/03/22 13:15	08/16/22 06:11	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1907699	1	08/03/22 13:15	08/09/22 01:42	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG1909501	1	08/11/22 21:08	08/12/22 09:05	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1909236	1	08/12/22 09:34	08/12/22 16:15	DSH	Mt. Juliet, TN

MW-22-S-0.5-1_220803 L1522335-06 Solid

Collected by: E. W | Collected date/time: 08/03/22 14:30 | Received date/time: 08/05/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1907557	1	08/10/22 08:02	08/10/22 08:11	CMK	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG1911247	2	08/03/22 14:30	08/16/22 06:48	FKG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1907699	1.1	08/03/22 14:30	08/09/22 02:01	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1909280	1.1	08/03/22 14:30	08/11/22 20:43	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG1907345	1	08/08/22 16:49	08/09/22 04:28	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1907009	1	08/08/22 09:09	08/09/22 02:26	AGW	Mt. Juliet, TN

MW-24-S-4.5-5_220803 L1522335-07 Solid

Collected by: E. W | Collected date/time: 08/03/22 15:10 | Received date/time: 08/05/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1907557	1	08/10/22 08:02	08/10/22 08:11	CMK	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG1908093	2	08/03/22 15:10	08/10/22 06:58	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1907699	1	08/03/22 15:10	08/09/22 02:19	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1909280	1	08/03/22 15:10	08/11/22 21:02	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG1907345	1	08/08/22 16:49	08/09/22 04:41	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1909236	1	08/12/22 09:34	08/12/22 18:56	DSH	Mt. Juliet, TN

MW-24-S-9.5-10_220803 L1522335-08 Solid

Collected by: E. W | Collected date/time: 08/03/22 15:20 | Received date/time: 08/05/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1907557	1	08/10/22 08:02	08/10/22 08:11	CMK	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG1908093	2	08/03/22 15:20	08/10/22 07:24	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1907699	1	08/03/22 15:20	08/09/22 02:38	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG1907345	1	08/08/22 16:49	08/09/22 04:53	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1909236	1	08/12/22 09:34	08/12/22 19:31	DSH	Mt. Juliet, TN

MW-22-S-4.5-5_220803 L1522335-09 Solid

Collected by: E. W | Collected date/time: 08/03/22 17:45 | Received date/time: 08/05/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1907557	1	08/10/22 08:02	08/10/22 08:11	CMK	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG1911247	2	08/03/22 17:45	08/16/22 07:14	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1907703	1	08/03/22 17:45	08/09/22 06:46	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1910644	1	08/03/22 17:45	08/14/22 20:36	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG1907345	1	08/08/22 16:49	08/09/22 05:06	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1909236	5	08/12/22 09:34	08/12/22 21:18	DSH	Mt. Juliet, TN

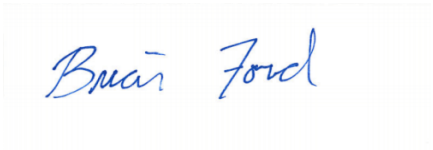
MW-22-S-5-5.5_220803 L1522335-10 Solid

Collected by: E. W | Collected date/time: 08/03/22 17:50 | Received date/time: 08/05/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1907557	1	08/10/22 08:02	08/10/22 08:11	CMK	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG1911247	2	08/03/22 17:50	08/16/22 07:40	FKG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1907703	2	08/03/22 17:50	08/09/22 07:06	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG1907345	1	08/08/22 16:49	08/09/22 05:19	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1909236	1	08/12/22 09:34	08/12/22 21:00	DSH	Mt. Juliet, TN

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Unless qualified or notated within the narrative below, all sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Brian Ford
Project Manager

Volatile Organic Compounds (GC/MS) by Method 8260D

The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Method sensitivity check is acceptable.

Batch	Lab Sample ID	Analytes
WG1907699	L1522335-01	1,2-Dichloroethane, Acrylonitrile, Chloromethane and Dichlorodifluoromethane
WG1907699	L1522335-02	1,2-Dichloroethane, Acrylonitrile, Chloromethane and Dichlorodifluoromethane
WG1907699	L1522335-03	1,2-Dichloroethane, Acrylonitrile, Chloromethane and Dichlorodifluoromethane
WG1907699	L1522335-04	1,2-Dichloroethane, Acrylonitrile, Chloromethane and Dichlorodifluoromethane
WG1907699	L1522335-05	1,2-Dichloroethane, Acrylonitrile, Chloromethane and Dichlorodifluoromethane
WG1907699	L1522335-06	1,2-Dichloroethane, Acrylonitrile, Chloromethane and Dichlorodifluoromethane
WG1907699	L1522335-07	1,2-Dichloroethane, Acrylonitrile, Chloromethane and Dichlorodifluoromethane
WG1907699	L1522335-08	1,2-Dichloroethane, Acrylonitrile, Chloromethane and Dichlorodifluoromethane
WG1907703	L1522335-09	1,2,3-Trichlorobenzene
WG1907703	L1522335-10	1,2,3-Trichlorobenzene and Naphthalene

The associated batch QC was above the established quality control range for accuracy.

Batch	Lab Sample ID	Analytes
WG1907703	(LCS) R3826068-1, L1522335-09, 10	1,2,3-Trichloropropane and 1,2-Dichloroethane

Semi-Volatile Organic Compounds (GC) by Method AK102

Surrogate recovery limits have been exceeded; values are outside lower control limits.

Batch	Analyte	Lab Sample ID
WG1909501	o-Terphenyl	(MS) R3825514-4, (MSD) R3825514-5

The sample matrix interfered with the ability to make any accurate determination; spike value is low.

Batch	Lab Sample ID	Analytes
WG1909501	(MS) R3825514-4, (MSD) R3825514-5	AK102 DRO C10-C25

The associated batch QC was outside the established quality control range for precision.

Batch	Lab Sample ID	Analytes
WG1909501	(MSD) R3825514-5	AK102 DRO C10-C25

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

The sample matrix interfered with the ability to make any accurate determination; spike value is high.

Batch	Lab Sample ID	Analytes
WG1909236	(MS) R3825747-3, (MSD) R3825747-4	Acenaphthene, Anthracene, Benzo(g,h,i)perylene, Benzo(k)fluoranthene, Chrysene, Dibenz(a,h)anthracene, Fluorene, Indeno(1,2,3-cd)pyrene and Phenanthrene

The sample concentration is too high to evaluate accurate spike recoveries.

Batch	Lab Sample ID	Analytes
WG1909236	(MS) R3825747-3, (MSD) R3825747-4	Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Fluoranthene and Pyrene

The associated batch QC was outside the established quality control range for precision.

Batch	Lab Sample ID	Analytes
WG1909236	(MSD) R3825747-4	Benzo(a)anthracene and Benzo(k)fluoranthene

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	84.8		1	08/10/2022 08:11	WG1907557

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHGAK C6 to C10	U		3.11	8.19	2.78	08/10/2022 05:12	WG1908093
(S) a,a,a-Trifluorotoluene(FID)	*87.0*			*50.0-150*		*08/10/2022 05:12*	WG1908093

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0587	0.0803	1.21	08/09/2022 00:28	WG1907699
Acrylonitrile	U	C3	0.00580	0.0200	1.21	08/09/2022 00:28	WG1907699
Benzene	U		0.000750	0.00161	1.21	08/09/2022 00:28	WG1907699
Bromobenzene	U		0.00145	0.0200	1.21	08/09/2022 00:28	WG1907699
Bromodichloromethane	U		0.00116	0.00402	1.21	08/09/2022 00:28	WG1907699
Bromoform	U		0.00188	0.0402	1.21	08/09/2022 00:28	WG1907699
Bromomethane	U		0.00316	0.0200	1.21	08/09/2022 00:28	WG1907699
n-Butylbenzene	U		0.00843	0.0200	1.21	08/09/2022 00:28	WG1907699
sec-Butylbenzene	U		0.00462	0.0200	1.21	08/09/2022 00:28	WG1907699
tert-Butylbenzene	U		0.00313	0.00803	1.21	08/09/2022 00:28	WG1907699
Carbon tetrachloride	U		0.00145	0.00803	1.21	08/09/2022 00:28	WG1907699
Chlorobenzene	U		0.000337	0.00402	1.21	08/09/2022 00:28	WG1907699
Chlorodibromomethane	U		0.000983	0.00402	1.21	08/09/2022 00:28	WG1907699
Chloroethane	U		0.00273	0.00803	1.21	08/09/2022 00:28	WG1907699
Chloroform	U		0.00166	0.00402	1.21	08/09/2022 00:28	WG1907699
Chloromethane	U	C3	0.00698	0.0200	1.21	08/09/2022 00:28	WG1907699
2-Chlorotoluene	U		0.00139	0.00402	1.21	08/09/2022 00:28	WG1907699
4-Chlorotoluene	U		0.000722	0.00803	1.21	08/09/2022 00:28	WG1907699
1,2-Dibromo-3-Chloropropane	U		0.00626	0.0402	1.21	08/09/2022 00:28	WG1907699
1,2-Dibromoethane	U		0.00104	0.00402	1.21	08/09/2022 00:28	WG1907699
Dibromomethane	U		0.00121	0.00803	1.21	08/09/2022 00:28	WG1907699
1,2-Dichlorobenzene	U		0.000682	0.00803	1.21	08/09/2022 00:28	WG1907699
1,3-Dichlorobenzene	U		0.000964	0.00803	1.21	08/09/2022 00:28	WG1907699
1,4-Dichlorobenzene	U		0.00112	0.00803	1.21	08/09/2022 00:28	WG1907699
Dichlorodifluoromethane	U	C3	0.00259	0.00402	1.21	08/09/2022 00:28	WG1907699
1,1-Dichloroethane	U		0.000788	0.00402	1.21	08/09/2022 00:28	WG1907699
1,2-Dichloroethane	U	C3	0.00104	0.00402	1.21	08/09/2022 00:28	WG1907699
1,1-Dichloroethene	U		0.000973	0.00402	1.21	08/09/2022 00:28	WG1907699
cis-1,2-Dichloroethene	U		0.00118	0.00402	1.21	08/09/2022 00:28	WG1907699
trans-1,2-Dichloroethene	U		0.00167	0.00803	1.21	08/09/2022 00:28	WG1907699
1,2-Dichloropropane	U		0.00228	0.00803	1.21	08/09/2022 00:28	WG1907699
1,1-Dichloropropene	U		0.00130	0.00402	1.21	08/09/2022 00:28	WG1907699
1,3-Dichloropropane	U		0.000804	0.00803	1.21	08/09/2022 00:28	WG1907699
cis-1,3-Dichloropropene	U		0.00122	0.00402	1.21	08/09/2022 00:28	WG1907699
trans-1,3-Dichloropropene	U		0.00183	0.00803	1.21	08/09/2022 00:28	WG1907699
2,2-Dichloropropane	U		0.00222	0.00402	1.21	08/09/2022 00:28	WG1907699
Di-isopropyl ether	U		0.000658	0.00161	1.21	08/09/2022 00:28	WG1907699
Ethylbenzene	U		0.00118	0.00402	1.21	08/09/2022 00:28	WG1907699
Hexachloro-1,3-butadiene	U		0.00964	0.0402	1.21	08/09/2022 00:28	WG1907699
Isopropylbenzene	U		0.000682	0.00402	1.21	08/09/2022 00:28	WG1907699
p-Isopropyltoluene	U		0.00410	0.00803	1.21	08/09/2022 00:28	WG1907699
2-Butanone (MEK)	U		0.102	0.161	1.21	08/09/2022 00:28	WG1907699
Methylene Chloride	U		0.0107	0.0402	1.21	08/09/2022 00:28	WG1907699
4-Methyl-2-pentanone (MIBK)	U		0.00366	0.0402	1.21	08/09/2022 00:28	WG1907699

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Methyl tert-butyl ether	U		0.000561	0.00161	1.21	08/09/2022 00:28	WG1907699
Naphthalene	U		0.00783	0.0200	1.21	08/09/2022 00:28	WG1907699
n-Propylbenzene	U		0.00153	0.00803	1.21	08/09/2022 00:28	WG1907699
Styrene	U		0.000368	0.0200	1.21	08/09/2022 00:28	WG1907699
1,1,1,2-Tetrachloroethane	U		0.00153	0.00402	1.21	08/09/2022 00:28	WG1907699
1,1,2,2-Tetrachloroethane	U		0.00112	0.00402	1.21	08/09/2022 00:28	WG1907699
1,1,2-Trichlorotrifluoroethane	U		0.00121	0.00402	1.21	08/09/2022 00:28	WG1907699
Tetrachloroethene	U		0.00143	0.00402	1.21	08/09/2022 00:28	WG1907699
Toluene	U		0.00208	0.00803	1.21	08/09/2022 00:28	WG1907699
1,2,3-Trichlorobenzene	U		0.0118	0.0200	1.21	08/09/2022 00:28	WG1907699
1,2,4-Trichlorobenzene	U		0.00706	0.0200	1.21	08/09/2022 00:28	WG1907699
1,1,1-Trichloroethane	U		0.00149	0.00402	1.21	08/09/2022 00:28	WG1907699
1,1,2-Trichloroethane	U		0.000958	0.00402	1.21	08/09/2022 00:28	WG1907699
Trichloroethene	U		0.000938	0.00161	1.21	08/09/2022 00:28	WG1907699
Trichlorofluoromethane	U		0.00133	0.00402	1.21	08/09/2022 00:28	WG1907699
1,2,3-Trichloropropane	U		0.00260	0.0200	1.21	08/09/2022 00:28	WG1907699
1,2,4-Trimethylbenzene	U		0.00253	0.00803	1.21	08/09/2022 00:28	WG1907699
1,2,3-Trimethylbenzene	U		0.00253	0.00803	1.21	08/09/2022 00:28	WG1907699
Vinyl chloride	U		0.00186	0.00402	1.21	08/09/2022 00:28	WG1907699
1,3,5-Trimethylbenzene	U		0.00321	0.00803	1.21	08/09/2022 00:28	WG1907699
Xylenes, Total	0.00534	J	0.00141	0.0104	1.21	08/09/2022 00:28	WG1907699
(S) Toluene-d8	*108*			*75.0-131*		*08/09/2022 00:28*	WG1907699
(S) 4-Bromofluorobenzene	*98.8*			*67.0-138*		*08/09/2022 00:28*	WG1907699
(S) 1,2-Dichloroethane-d4	*82.9*			*70.0-130*		*08/09/2022 00:28*	WG1907699

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	21.2	J	8.16	236	1	08/09/2022 03:37	WG1907345
(S) o-Terphenyl	*78.7*			*50.0-150*		*08/09/2022 03:37*	WG1907345

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00271	0.00707	1	08/12/2022 18:02	WG1909236
Acenaphthene	U		0.00246	0.00707	1	08/12/2022 18:02	WG1909236
Acenaphthylene	U		0.00255	0.00707	1	08/12/2022 18:02	WG1909236
Benzo(a)anthracene	U		0.00204	0.00707	1	08/12/2022 18:02	WG1909236
Benzo(a)pyrene	U		0.00211	0.00707	1	08/12/2022 18:02	WG1909236
Benzo(b)fluoranthene	U		0.00180	0.00707	1	08/12/2022 18:02	WG1909236
Benzo(g,h,i)perylene	U		0.00209	0.00707	1	08/12/2022 18:02	WG1909236
Benzo(k)fluoranthene	U		0.00253	0.00707	1	08/12/2022 18:02	WG1909236
Chrysene	U		0.00274	0.00707	1	08/12/2022 18:02	WG1909236
Dibenz(a,h)anthracene	U		0.00203	0.00707	1	08/12/2022 18:02	WG1909236
Fluoranthene	U		0.00268	0.00707	1	08/12/2022 18:02	WG1909236
Fluorene	U		0.00242	0.00707	1	08/12/2022 18:02	WG1909236
Indeno(1,2,3-cd)pyrene	U		0.00213	0.00707	1	08/12/2022 18:02	WG1909236
Naphthalene	U		0.00481	0.0236	1	08/12/2022 18:02	WG1909236
Phenanthrene	U		0.00272	0.00707	1	08/12/2022 18:02	WG1909236
Pyrene	U		0.00236	0.00707	1	08/12/2022 18:02	WG1909236
1-Methylnaphthalene	U		0.00529	0.0236	1	08/12/2022 18:02	WG1909236
2-Methylnaphthalene	U		0.00503	0.0236	1	08/12/2022 18:02	WG1909236
2-Chloronaphthalene	U		0.00549	0.0236	1	08/12/2022 18:02	WG1909236
(S) Nitrobenzene-d5	*58.8*			*14.0-149*		*08/12/2022 18:02*	WG1909236
(S) 2-Fluorobiphenyl	*70.7*			*34.0-125*		*08/12/2022 18:02*	WG1909236

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) p-Terphenyl-d14	*72.9*			*23.0-120*		*08/12/2022 18:02*	WG1909236

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.5		1	08/10/2022 08:11	WG1907557

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHGAK C6 to C10	U		2.42	6.37	2.38	08/10/2022 05:38	WG1908093
(S) a,a,a-Trifluorotoluene(FID)	*87.8*			*50.0-150*		*08/10/2022 05:38*	WG1908093

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0452	0.0618	1.09	08/09/2022 00:46	WG1907699
Acrylonitrile	U	C3	0.00446	0.0154	1.09	08/09/2022 00:46	WG1907699
Benzene	U		0.000578	0.00124	1.09	08/09/2022 00:46	WG1907699
Bromobenzene	U		0.00111	0.0154	1.09	08/09/2022 00:46	WG1907699
Bromodichloromethane	U		0.000896	0.00310	1.09	08/09/2022 00:46	WG1907699
Bromoform	U		0.00145	0.0310	1.09	08/09/2022 00:46	WG1907699
Bromomethane	U		0.00244	0.0154	1.09	08/09/2022 00:46	WG1907699
n-Butylbenzene	U		0.00649	0.0154	1.09	08/09/2022 00:46	WG1907699
sec-Butylbenzene	U		0.00356	0.0154	1.09	08/09/2022 00:46	WG1907699
tert-Butylbenzene	U		0.00242	0.00618	1.09	08/09/2022 00:46	WG1907699
Carbon tetrachloride	U		0.00111	0.00618	1.09	08/09/2022 00:46	WG1907699
Chlorobenzene	U		0.000260	0.00310	1.09	08/09/2022 00:46	WG1907699
Chlorodibromomethane	U		0.000757	0.00310	1.09	08/09/2022 00:46	WG1907699
Chloroethane	U		0.00210	0.00618	1.09	08/09/2022 00:46	WG1907699
Chloroform	U		0.00127	0.00310	1.09	08/09/2022 00:46	WG1907699
Chloromethane	U	C3	0.00538	0.0154	1.09	08/09/2022 00:46	WG1907699
2-Chlorotoluene	U		0.00107	0.00310	1.09	08/09/2022 00:46	WG1907699
4-Chlorotoluene	U		0.000557	0.00618	1.09	08/09/2022 00:46	WG1907699
1,2-Dibromo-3-Chloropropane	U		0.00482	0.0310	1.09	08/09/2022 00:46	WG1907699
1,2-Dibromoethane	U		0.000801	0.00310	1.09	08/09/2022 00:46	WG1907699
Dibromomethane	U		0.000928	0.00618	1.09	08/09/2022 00:46	WG1907699
1,2-Dichlorobenzene	U		0.000525	0.00618	1.09	08/09/2022 00:46	WG1907699
1,3-Dichlorobenzene	U		0.000742	0.00618	1.09	08/09/2022 00:46	WG1907699
1,4-Dichlorobenzene	U		0.000866	0.00618	1.09	08/09/2022 00:46	WG1907699
Dichlorodifluoromethane	U	C3	0.00199	0.00310	1.09	08/09/2022 00:46	WG1907699
1,1-Dichloroethane	U		0.000607	0.00310	1.09	08/09/2022 00:46	WG1907699
1,2-Dichloroethane	U	C3	0.000802	0.00310	1.09	08/09/2022 00:46	WG1907699
1,1-Dichloroethene	U		0.000750	0.00310	1.09	08/09/2022 00:46	WG1907699
cis-1,2-Dichloroethene	U		0.000908	0.00310	1.09	08/09/2022 00:46	WG1907699
trans-1,2-Dichloroethene	U		0.00128	0.00618	1.09	08/09/2022 00:46	WG1907699
1,2-Dichloropropane	U		0.00176	0.00618	1.09	08/09/2022 00:46	WG1907699
1,1-Dichloropropene	U		0.00100	0.00310	1.09	08/09/2022 00:46	WG1907699
1,3-Dichloropropane	U		0.000619	0.00618	1.09	08/09/2022 00:46	WG1907699
cis-1,3-Dichloropropene	U		0.000936	0.00310	1.09	08/09/2022 00:46	WG1907699
trans-1,3-Dichloropropene	U		0.00141	0.00618	1.09	08/09/2022 00:46	WG1907699
2,2-Dichloropropane	U		0.00170	0.00310	1.09	08/09/2022 00:46	WG1907699
Di-isopropyl ether	U		0.000507	0.00124	1.09	08/09/2022 00:46	WG1907699
Ethylbenzene	0.000989	J	0.000911	0.00310	1.09	08/09/2022 00:46	WG1907699
Hexachloro-1,3-butadiene	U		0.00742	0.0310	1.09	08/09/2022 00:46	WG1907699
Isopropylbenzene	U		0.000525	0.00310	1.09	08/09/2022 00:46	WG1907699
p-Isopropyltoluene	U		0.00315	0.00618	1.09	08/09/2022 00:46	WG1907699
2-Butanone (MEK)	U		0.0785	0.124	1.09	08/09/2022 00:46	WG1907699
Methylene Chloride	U		0.00821	0.0310	1.09	08/09/2022 00:46	WG1907699
4-Methyl-2-pentanone (MIBK)	U		0.00283	0.0310	1.09	08/09/2022 00:46	WG1907699

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Methyl tert-butyl ether	U		0.000432	0.00124	1.09	08/09/2022 00:46	WG1907699
Naphthalene	U		0.00604	0.0154	1.09	08/09/2022 00:46	WG1907699
n-Propylbenzene	U		0.00118	0.00618	1.09	08/09/2022 00:46	WG1907699
Styrene	U		0.000284	0.0154	1.09	08/09/2022 00:46	WG1907699
1,1,1,2-Tetrachloroethane	U		0.00117	0.00310	1.09	08/09/2022 00:46	WG1907699
1,1,2,2-Tetrachloroethane	U		0.000860	0.00310	1.09	08/09/2022 00:46	WG1907699
1,1,2-Trichlorotrifluoroethane	U		0.000933	0.00310	1.09	08/09/2022 00:46	WG1907699
Tetrachloroethene	U		0.00111	0.00310	1.09	08/09/2022 00:46	WG1907699
Toluene	U		0.00161	0.00618	1.09	08/09/2022 00:46	WG1907699
1,2,3-Trichlorobenzene	U		0.00907	0.0154	1.09	08/09/2022 00:46	WG1907699
1,2,4-Trichlorobenzene	U		0.00545	0.0154	1.09	08/09/2022 00:46	WG1907699
1,1,1-Trichloroethane	U		0.00115	0.00310	1.09	08/09/2022 00:46	WG1907699
1,1,2-Trichloroethane	U		0.000739	0.00310	1.09	08/09/2022 00:46	WG1907699
Trichloroethene	U		0.000723	0.00124	1.09	08/09/2022 00:46	WG1907699
Trichlorofluoromethane	U		0.00102	0.00310	1.09	08/09/2022 00:46	WG1907699
1,2,3-Trichloropropane	U		0.00201	0.0154	1.09	08/09/2022 00:46	WG1907699
1,2,4-Trimethylbenzene	U		0.00195	0.00618	1.09	08/09/2022 00:46	WG1907699
1,2,3-Trimethylbenzene	U		0.00195	0.00618	1.09	08/09/2022 00:46	WG1907699
Vinyl chloride	U		0.00143	0.00310	1.09	08/09/2022 00:46	WG1907699
1,3,5-Trimethylbenzene	U		0.00247	0.00618	1.09	08/09/2022 00:46	WG1907699
Xylenes, Total	0.00719	J	0.00109	0.00803	1.09	08/09/2022 00:46	WG1907699
(S) Toluene-d8	*111*			*75.0-131*		*08/09/2022 00:46*	WG1907699
(S) 4-Bromofluorobenzene	*101*			*67.0-138*		*08/09/2022 00:46*	WG1907699
(S) 1,2-Dichloroethane-d4	*80.8*			*70.0-130*		*08/09/2022 00:46*	WG1907699

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	12.4	J	7.40	214	1	08/09/2022 03:50	WG1907345
(S) o-Terphenyl	*82.0*			*50.0-150*		*08/09/2022 03:50*	WG1907345

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00246	0.00642	1	08/09/2022 02:06	WG1907009
Acenaphthene	U		0.00224	0.00642	1	08/09/2022 02:06	WG1907009
Acenaphthylene	U		0.00231	0.00642	1	08/09/2022 02:06	WG1907009
Benzo(a)anthracene	U		0.00185	0.00642	1	08/09/2022 02:06	WG1907009
Benzo(a)pyrene	U		0.00192	0.00642	1	08/09/2022 02:06	WG1907009
Benzo(b)fluoranthene	U		0.00164	0.00642	1	08/09/2022 02:06	WG1907009
Benzo(g,h,i)perylene	U		0.00189	0.00642	1	08/09/2022 02:06	WG1907009
Benzo(k)fluoranthene	U		0.00230	0.00642	1	08/09/2022 02:06	WG1907009
Chrysene	U		0.00248	0.00642	1	08/09/2022 02:06	WG1907009
Dibenz(a,h)anthracene	U		0.00184	0.00642	1	08/09/2022 02:06	WG1907009
Fluoranthene	U		0.00243	0.00642	1	08/09/2022 02:06	WG1907009
Fluorene	U		0.00219	0.00642	1	08/09/2022 02:06	WG1907009
Indeno(1,2,3-cd)pyrene	U		0.00194	0.00642	1	08/09/2022 02:06	WG1907009
Naphthalene	U		0.00437	0.0214	1	08/09/2022 02:06	WG1907009
Phenanthrene	U		0.00247	0.00642	1	08/09/2022 02:06	WG1907009
Pyrene	U		0.00214	0.00642	1	08/09/2022 02:06	WG1907009
1-Methylnaphthalene	U		0.00480	0.0214	1	08/09/2022 02:06	WG1907009
2-Methylnaphthalene	U		0.00457	0.0214	1	08/09/2022 02:06	WG1907009
2-Chloronaphthalene	U		0.00499	0.0214	1	08/09/2022 02:06	WG1907009
(S) Nitrobenzene-d5	*55.8*			*14.0-149*		*08/09/2022 02:06*	WG1907009
(S) 2-Fluorobiphenyl	*56.2*			*34.0-125*		*08/09/2022 02:06*	WG1907009

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) p-Terphenyl-d14	*55.4*			*23.0-120*		*08/09/2022 02:06*	WG1907009

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	86.2		1	08/10/2022 08:11	WG1907557

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHGAK C6 to C10	26.4		2.20	5.80	2	08/10/2022 06:05	WG1908093
(S) a,a,a-Trifluorotoluene(FID)	*84.6*			*50.0-150*		*08/10/2022 06:05*	WG1908093

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0488	0.0669	1	08/09/2022 01:05	WG1907699
Acrylonitrile	U	C3	0.00483	0.0167	1	08/09/2022 01:05	WG1907699
Benzene	0.0181		0.000625	0.00134	1	08/09/2022 01:05	WG1907699
Bromobenzene	U		0.00120	0.0167	1	08/09/2022 01:05	WG1907699
Bromodichloromethane	U		0.000970	0.00334	1	08/09/2022 01:05	WG1907699
Bromoform	U		0.00156	0.0334	1	08/09/2022 01:05	WG1907699
Bromomethane	U		0.00263	0.0167	1	08/09/2022 01:05	WG1907699
n-Butylbenzene	U		0.00702	0.0167	1	08/09/2022 01:05	WG1907699
sec-Butylbenzene	0.0415		0.00385	0.0167	1	08/09/2022 01:05	WG1907699
tert-Butylbenzene	0.0133		0.00261	0.00669	1	08/09/2022 01:05	WG1907699
Carbon tetrachloride	U		0.00120	0.00669	1	08/09/2022 01:05	WG1907699
Chlorobenzene	U		0.000281	0.00334	1	08/09/2022 01:05	WG1907699
Chlorodibromomethane	U		0.000818	0.00334	1	08/09/2022 01:05	WG1907699
Chloroethane	U		0.00227	0.00669	1	08/09/2022 01:05	WG1907699
Chloroform	U		0.00138	0.00334	1	08/09/2022 01:05	WG1907699
Chloromethane	U	C3	0.00582	0.0167	1	08/09/2022 01:05	WG1907699
2-Chlorotoluene	U		0.00116	0.00334	1	08/09/2022 01:05	WG1907699
4-Chlorotoluene	U		0.000602	0.00669	1	08/09/2022 01:05	WG1907699
1,2-Dibromo-3-Chloropropane	U		0.00522	0.0334	1	08/09/2022 01:05	WG1907699
1,2-Dibromoethane	U		0.000867	0.00334	1	08/09/2022 01:05	WG1907699
Dibromomethane	U		0.00100	0.00669	1	08/09/2022 01:05	WG1907699
1,2-Dichlorobenzene	U		0.000568	0.00669	1	08/09/2022 01:05	WG1907699
1,3-Dichlorobenzene	U		0.000802	0.00669	1	08/09/2022 01:05	WG1907699
1,4-Dichlorobenzene	U		0.000936	0.00669	1	08/09/2022 01:05	WG1907699
Dichlorodifluoromethane	U	C3	0.00215	0.00334	1	08/09/2022 01:05	WG1907699
1,1-Dichloroethane	U		0.000657	0.00334	1	08/09/2022 01:05	WG1907699
1,2-Dichloroethane	U	C3	0.000868	0.00334	1	08/09/2022 01:05	WG1907699
1,1-Dichloroethene	U		0.000810	0.00334	1	08/09/2022 01:05	WG1907699
cis-1,2-Dichloroethene	U		0.000982	0.00334	1	08/09/2022 01:05	WG1907699
trans-1,2-Dichloroethene	U		0.00139	0.00669	1	08/09/2022 01:05	WG1907699
1,2-Dichloropropane	U		0.00190	0.00669	1	08/09/2022 01:05	WG1907699
1,1-Dichloropropene	U		0.00108	0.00334	1	08/09/2022 01:05	WG1907699
1,3-Dichloropropane	U		0.000670	0.00669	1	08/09/2022 01:05	WG1907699
cis-1,3-Dichloropropene	U		0.00101	0.00334	1	08/09/2022 01:05	WG1907699
trans-1,3-Dichloropropene	U		0.00152	0.00669	1	08/09/2022 01:05	WG1907699
2,2-Dichloropropane	U		0.00185	0.00334	1	08/09/2022 01:05	WG1907699
Di-isopropyl ether	U		0.000548	0.00134	1	08/09/2022 01:05	WG1907699
Ethylbenzene	0.0173		0.000986	0.00334	1	08/09/2022 01:05	WG1907699
Hexachloro-1,3-butadiene	U		0.00802	0.0334	1	08/09/2022 01:05	WG1907699
Isopropylbenzene	0.0109		0.000568	0.00334	1	08/09/2022 01:05	WG1907699
p-Isopropyltoluene	0.0522		0.00341	0.00669	1	08/09/2022 01:05	WG1907699
2-Butanone (MEK)	U		0.0849	0.134	1	08/09/2022 01:05	WG1907699
Methylene Chloride	U		0.00888	0.0334	1	08/09/2022 01:05	WG1907699
4-Methyl-2-pentanone (MIBK)	U		0.00305	0.0334	1	08/09/2022 01:05	WG1907699

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Methyl tert-butyl ether	U		0.000468	0.00134	1	08/09/2022 01:05	WG1907699
Naphthalene	U		0.00653	0.0167	1	08/09/2022 01:05	WG1907699
n-Propylbenzene	0.0231		0.00127	0.00669	1	08/09/2022 01:05	WG1907699
Styrene	U		0.000306	0.0167	1	08/09/2022 01:05	WG1907699
1,1,1,2-Tetrachloroethane	U		0.00127	0.00334	1	08/09/2022 01:05	WG1907699
1,1,2,2-Tetrachloroethane	U		0.000929	0.00334	1	08/09/2022 01:05	WG1907699
1,1,2-Trichlorotrifluoroethane	U		0.00101	0.00334	1	08/09/2022 01:05	WG1907699
Tetrachloroethene	U		0.00120	0.00334	1	08/09/2022 01:05	WG1907699
Toluene	0.00566	J	0.00174	0.00669	1	08/09/2022 01:05	WG1907699
1,2,3-Trichlorobenzene	U		0.00980	0.0167	1	08/09/2022 01:05	WG1907699
1,2,4-Trichlorobenzene	U		0.00588	0.0167	1	08/09/2022 01:05	WG1907699
1,1,1-Trichloroethane	U		0.00123	0.00334	1	08/09/2022 01:05	WG1907699
1,1,2-Trichloroethane	U		0.000798	0.00334	1	08/09/2022 01:05	WG1907699
Trichloroethene	U		0.000781	0.00134	1	08/09/2022 01:05	WG1907699
Trichlorofluoromethane	U		0.00111	0.00334	1	08/09/2022 01:05	WG1907699
1,2,3-Trichloropropane	U		0.00217	0.0167	1	08/09/2022 01:05	WG1907699
1,2,4-Trimethylbenzene	0.173		0.00211	0.00669	1	08/09/2022 01:05	WG1907699
1,2,3-Trimethylbenzene	0.118		0.00211	0.00669	1	08/09/2022 01:05	WG1907699
Vinyl chloride	U		0.00155	0.00334	1	08/09/2022 01:05	WG1907699
1,3,5-Trimethylbenzene	0.229		0.00267	0.00669	1	08/09/2022 01:05	WG1907699
Xylenes, Total	0.167		0.00118	0.00869	1	08/09/2022 01:05	WG1907699
(S) Toluene-d8	*108*			*75.0-131*		*08/09/2022 01:05*	WG1907699
(S) 4-Bromofluorobenzene	*98.3*			*67.0-138*		*08/09/2022 01:05*	WG1907699
(S) 1,2-Dichloroethane-d4	*81.9*			*70.0-130*		*08/09/2022 01:05*	WG1907699

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	672		8.03	232	1	08/09/2022 04:15	WG1907345
(S) o-Terphenyl	*88.0*			*50.0-150*		*08/09/2022 04:15*	WG1907345

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	0.0152		0.00267	0.00696	1	08/12/2022 18:20	WG1909236
Acenaphthene	0.0374		0.00242	0.00696	1	08/12/2022 18:20	WG1909236
Acenaphthylene	U		0.00251	0.00696	1	08/12/2022 18:20	WG1909236
Benzo(a)anthracene	0.00889		0.00201	0.00696	1	08/12/2022 18:20	WG1909236
Benzo(a)pyrene	0.00241	J	0.00208	0.00696	1	08/12/2022 18:20	WG1909236
Benzo(b)fluoranthene	0.00487	J	0.00177	0.00696	1	08/12/2022 18:20	WG1909236
Benzo(g,h,i)perylene	0.00260	J	0.00205	0.00696	1	08/12/2022 18:20	WG1909236
Benzo(k)fluoranthene	U		0.00249	0.00696	1	08/12/2022 18:20	WG1909236
Chrysene	0.00771		0.00269	0.00696	1	08/12/2022 18:20	WG1909236
Dibenz(a,h)anthracene	U		0.00200	0.00696	1	08/12/2022 18:20	WG1909236
Fluoranthene	0.0684		0.00263	0.00696	1	08/12/2022 18:20	WG1909236
Fluorene	0.0470		0.00238	0.00696	1	08/12/2022 18:20	WG1909236
Indeno(1,2,3-cd)pyrene	U		0.00210	0.00696	1	08/12/2022 18:20	WG1909236
Naphthalene	0.00965	J	0.00473	0.0232	1	08/12/2022 18:20	WG1909236
Phenanthrene	0.148		0.00268	0.00696	1	08/12/2022 18:20	WG1909236
Pyrene	0.0559		0.00232	0.00696	1	08/12/2022 18:20	WG1909236
1-Methylnaphthalene	0.0217	J	0.00521	0.0232	1	08/12/2022 18:20	WG1909236
2-Methylnaphthalene	0.0495		0.00495	0.0232	1	08/12/2022 18:20	WG1909236
2-Chloronaphthalene	U		0.00541	0.0232	1	08/12/2022 18:20	WG1909236
(S) Nitrobenzene-d5	*18.4*			*14.0-149*		*08/12/2022 18:20*	WG1909236
(S) 2-Fluorobiphenyl	*43.8*			*34.0-125*		*08/12/2022 18:20*	WG1909236

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) p-Terphenyl-d14	*62.2*			*23.0-120*		*08/12/2022 18:20*	WG1909236

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	87.0		1	08/10/2022 08:11	WG1907557

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHGAK C6 to C10	21.1		2.18	5.75	2	08/10/2022 06:31	WG1908093
(S) a,a,a-Trifluorotoluene(FID)	*85.5*			*50.0-150*		*08/10/2022 06:31*	WG1908093

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	0.0916		0.0479	0.0656	1	08/09/2022 01:23	WG1907699
Acrylonitrile	U	C3	0.00474	0.0164	1	08/09/2022 01:23	WG1907699
Benzene	0.0140		0.000613	0.00131	1	08/09/2022 01:23	WG1907699
Bromobenzene	U		0.00118	0.0164	1	08/09/2022 01:23	WG1907699
Bromodichloromethane	U		0.000951	0.00328	1	08/09/2022 01:23	WG1907699
Bromoform	U		0.00153	0.0328	1	08/09/2022 01:23	WG1907699
Bromomethane	U		0.00258	0.0164	1	08/09/2022 01:23	WG1907699
n-Butylbenzene	U		0.00689	0.0164	1	08/09/2022 01:23	WG1907699
sec-Butylbenzene	0.0314		0.00378	0.0164	1	08/09/2022 01:23	WG1907699
tert-Butylbenzene	0.00947		0.00256	0.00656	1	08/09/2022 01:23	WG1907699
Carbon tetrachloride	U		0.00118	0.00656	1	08/09/2022 01:23	WG1907699
Chlorobenzene	U		0.000275	0.00328	1	08/09/2022 01:23	WG1907699
Chlorodibromomethane	U		0.000803	0.00328	1	08/09/2022 01:23	WG1907699
Chloroethane	U		0.00223	0.00656	1	08/09/2022 01:23	WG1907699
Chloroform	U		0.00135	0.00328	1	08/09/2022 01:23	WG1907699
Chloromethane	U	C3	0.00571	0.0164	1	08/09/2022 01:23	WG1907699
2-Chlorotoluene	U		0.00113	0.00328	1	08/09/2022 01:23	WG1907699
4-Chlorotoluene	U		0.000590	0.00656	1	08/09/2022 01:23	WG1907699
1,2-Dibromo-3-Chloropropane	U		0.00512	0.0328	1	08/09/2022 01:23	WG1907699
1,2-Dibromoethane	U		0.000850	0.00328	1	08/09/2022 01:23	WG1907699
Dibromomethane	U		0.000984	0.00656	1	08/09/2022 01:23	WG1907699
1,2-Dichlorobenzene	U		0.000558	0.00656	1	08/09/2022 01:23	WG1907699
1,3-Dichlorobenzene	U		0.000787	0.00656	1	08/09/2022 01:23	WG1907699
1,4-Dichlorobenzene	U		0.000918	0.00656	1	08/09/2022 01:23	WG1907699
Dichlorodifluoromethane	U	C3	0.00211	0.00328	1	08/09/2022 01:23	WG1907699
1,1-Dichloroethane	U		0.000644	0.00328	1	08/09/2022 01:23	WG1907699
1,2-Dichloroethane	U	C3	0.000851	0.00328	1	08/09/2022 01:23	WG1907699
1,1-Dichloroethene	U		0.000795	0.00328	1	08/09/2022 01:23	WG1907699
cis-1,2-Dichloroethene	U		0.000963	0.00328	1	08/09/2022 01:23	WG1907699
trans-1,2-Dichloroethene	U		0.00136	0.00656	1	08/09/2022 01:23	WG1907699
1,2-Dichloropropane	U		0.00186	0.00656	1	08/09/2022 01:23	WG1907699
1,1-Dichloropropene	U		0.00106	0.00328	1	08/09/2022 01:23	WG1907699
1,3-Dichloropropane	U		0.000657	0.00656	1	08/09/2022 01:23	WG1907699
cis-1,3-Dichloropropene	U		0.000993	0.00328	1	08/09/2022 01:23	WG1907699
trans-1,3-Dichloropropene	U		0.00150	0.00656	1	08/09/2022 01:23	WG1907699
2,2-Dichloropropane	U		0.00181	0.00328	1	08/09/2022 01:23	WG1907699
Di-isopropyl ether	U		0.000538	0.00131	1	08/09/2022 01:23	WG1907699
Ethylbenzene	0.0172		0.000967	0.00328	1	08/09/2022 01:23	WG1907699
Hexachloro-1,3-butadiene	U		0.00787	0.0328	1	08/09/2022 01:23	WG1907699
Isopropylbenzene	0.0106		0.000558	0.00328	1	08/09/2022 01:23	WG1907699
p-Isopropyltoluene	0.0426		0.00335	0.00656	1	08/09/2022 01:23	WG1907699
2-Butanone (MEK)	U		0.0833	0.131	1	08/09/2022 01:23	WG1907699
Methylene Chloride	U		0.00871	0.0328	1	08/09/2022 01:23	WG1907699
4-Methyl-2-pentanone (MIBK)	U		0.00299	0.0328	1	08/09/2022 01:23	WG1907699

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Methyl tert-butyl ether	U		0.000459	0.00131	1	08/09/2022 01:23	WG1907699
Naphthalene	U		0.00640	0.0164	1	08/09/2022 01:23	WG1907699
n-Propylbenzene	U		0.00125	0.00656	1	08/09/2022 01:23	WG1907699
Styrene	U		0.000300	0.0164	1	08/09/2022 01:23	WG1907699
1,1,1,2-Tetrachloroethane	U		0.00124	0.00328	1	08/09/2022 01:23	WG1907699
1,1,2,2-Tetrachloroethane	U		0.000912	0.00328	1	08/09/2022 01:23	WG1907699
1,1,2-Trichlorotrifluoroethane	U		0.000989	0.00328	1	08/09/2022 01:23	WG1907699
Tetrachloroethene	U		0.00118	0.00328	1	08/09/2022 01:23	WG1907699
Toluene	0.00453	J	0.00171	0.00656	1	08/09/2022 01:23	WG1907699
1,2,3-Trichlorobenzene	U		0.00962	0.0164	1	08/09/2022 01:23	WG1907699
1,2,4-Trichlorobenzene	U		0.00577	0.0164	1	08/09/2022 01:23	WG1907699
1,1,1-Trichloroethane	U		0.00121	0.00328	1	08/09/2022 01:23	WG1907699
1,1,2-Trichloroethane	U		0.000783	0.00328	1	08/09/2022 01:23	WG1907699
Trichloroethene	U		0.000766	0.00131	1	08/09/2022 01:23	WG1907699
Trichlorofluoromethane	U		0.00108	0.00328	1	08/09/2022 01:23	WG1907699
1,2,3-Trichloropropane	U		0.00213	0.0164	1	08/09/2022 01:23	WG1907699
1,2,4-Trimethylbenzene	0.138		0.00207	0.00656	1	08/09/2022 01:23	WG1907699
1,2,3-Trimethylbenzene	0.0912		0.00207	0.00656	1	08/09/2022 01:23	WG1907699
Vinyl chloride	U		0.00152	0.00328	1	08/09/2022 01:23	WG1907699
1,3,5-Trimethylbenzene	0.177		0.00262	0.00656	1	08/09/2022 01:23	WG1907699
Xylenes, Total	0.151		0.00115	0.00853	1	08/09/2022 01:23	WG1907699
(S) Toluene-d8	*111*			*75.0-131*		*08/09/2022 01:23*	WG1907699
(S) 4-Bromofluorobenzene	*70.4*			*67.0-138*		*08/09/2022 01:23*	WG1907699
(S) 1,2-Dichloroethane-d4	*83.6*			*70.0-130*		*08/09/2022 01:23*	WG1907699

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	457		7.95	230	1	08/09/2022 04:02	WG1907345
(S) o-Terphenyl	*95.1*			*50.0-150*		*08/09/2022 04:02*	WG1907345

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	0.00931		0.00264	0.00689	1	08/12/2022 18:38	WG1909236
Acenaphthene	0.0978		0.00240	0.00689	1	08/12/2022 18:38	WG1909236
Acenaphthylene	U		0.00248	0.00689	1	08/12/2022 18:38	WG1909236
Benzo(a)anthracene	0.00384	J	0.00199	0.00689	1	08/12/2022 18:38	WG1909236
Benzo(a)pyrene	U		0.00206	0.00689	1	08/12/2022 18:38	WG1909236
Benzo(b)fluoranthene	0.00216	J	0.00176	0.00689	1	08/12/2022 18:38	WG1909236
Benzo(g,h,i)perylene	0.00209	J	0.00203	0.00689	1	08/12/2022 18:38	WG1909236
Benzo(k)fluoranthene	U		0.00247	0.00689	1	08/12/2022 18:38	WG1909236
Chrysene	0.00290	J	0.00267	0.00689	1	08/12/2022 18:38	WG1909236
Dibenz(a,h)anthracene	U		0.00198	0.00689	1	08/12/2022 18:38	WG1909236
Fluoranthene	0.0336		0.00261	0.00689	1	08/12/2022 18:38	WG1909236
Fluorene	0.0565		0.00236	0.00689	1	08/12/2022 18:38	WG1909236
Indeno(1,2,3-cd)pyrene	U		0.00208	0.00689	1	08/12/2022 18:38	WG1909236
Naphthalene	0.0171	J	0.00469	0.0230	1	08/12/2022 18:38	WG1909236
Phenanthrene	0.0951		0.00265	0.00689	1	08/12/2022 18:38	WG1909236
Pyrene	0.0284		0.00230	0.00689	1	08/12/2022 18:38	WG1909236
1-Methylnaphthalene	0.0804		0.00516	0.0230	1	08/12/2022 18:38	WG1909236
2-Methylnaphthalene	0.115		0.00491	0.0230	1	08/12/2022 18:38	WG1909236
2-Chloronaphthalene	U		0.00536	0.0230	1	08/12/2022 18:38	WG1909236
(S) Nitrobenzene-d5	*78.8*			*14.0-149*		*08/12/2022 18:38*	WG1909236
(S) 2-Fluorobiphenyl	*67.6*			*34.0-125*		*08/12/2022 18:38*	WG1909236

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) p-Terphenyl-d14	*70.2*			*23.0-120*		*08/12/2022 18:38*	WG1909236

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	78.5		1	08/10/2022 08:11	WG1907557

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHGAK C6 to C10	12.7		2.42	6.37	2	08/16/2022 06:11	WG1911247
(S) a,a,a-Trifluorotoluene(FID)	*83.6*			*50.0-150*		*08/16/2022 06:11*	WG1911247

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0585	0.0802	1	08/09/2022 01:42	WG1907699
Acrylonitrile	U	C3	0.00579	0.0200	1	08/09/2022 01:42	WG1907699
Benzene	0.105		0.000749	0.00160	1	08/09/2022 01:42	WG1907699
Bromobenzene	U		0.00144	0.0200	1	08/09/2022 01:42	WG1907699
Bromodichloromethane	U		0.00116	0.00401	1	08/09/2022 01:42	WG1907699
Bromoform	U		0.00188	0.0401	1	08/09/2022 01:42	WG1907699
Bromomethane	U		0.00316	0.0200	1	08/09/2022 01:42	WG1907699
n-Butylbenzene	0.125		0.00842	0.0200	1	08/09/2022 01:42	WG1907699
sec-Butylbenzene	0.170		0.00462	0.0200	1	08/09/2022 01:42	WG1907699
tert-Butylbenzene	0.0208		0.00313	0.00802	1	08/09/2022 01:42	WG1907699
Carbon tetrachloride	U		0.00144	0.00802	1	08/09/2022 01:42	WG1907699
Chlorobenzene	U		0.000337	0.00401	1	08/09/2022 01:42	WG1907699
Chlorodibromomethane	U		0.000981	0.00401	1	08/09/2022 01:42	WG1907699
Chloroethane	U		0.00273	0.00802	1	08/09/2022 01:42	WG1907699
Chloroform	U		0.00165	0.00401	1	08/09/2022 01:42	WG1907699
Chloromethane	U	C3	0.00698	0.0200	1	08/09/2022 01:42	WG1907699
2-Chlorotoluene	U		0.00139	0.00401	1	08/09/2022 01:42	WG1907699
4-Chlorotoluene	U		0.000722	0.00802	1	08/09/2022 01:42	WG1907699
1,2-Dibromo-3-Chloropropane	U		0.00625	0.0401	1	08/09/2022 01:42	WG1907699
1,2-Dibromoethane	U		0.00104	0.00401	1	08/09/2022 01:42	WG1907699
Dibromomethane	U		0.00120	0.00802	1	08/09/2022 01:42	WG1907699
1,2-Dichlorobenzene	U		0.000681	0.00802	1	08/09/2022 01:42	WG1907699
1,3-Dichlorobenzene	U		0.000962	0.00802	1	08/09/2022 01:42	WG1907699
1,4-Dichlorobenzene	U		0.00112	0.00802	1	08/09/2022 01:42	WG1907699
Dichlorodifluoromethane	U	C3	0.00258	0.00401	1	08/09/2022 01:42	WG1907699
1,1-Dichloroethane	U		0.000787	0.00401	1	08/09/2022 01:42	WG1907699
1,2-Dichloroethane	U	C3	0.00104	0.00401	1	08/09/2022 01:42	WG1907699
1,1-Dichloroethene	U		0.000972	0.00401	1	08/09/2022 01:42	WG1907699
cis-1,2-Dichloroethene	U		0.00118	0.00401	1	08/09/2022 01:42	WG1907699
trans-1,2-Dichloroethene	U		0.00167	0.00802	1	08/09/2022 01:42	WG1907699
1,2-Dichloropropane	U		0.00228	0.00802	1	08/09/2022 01:42	WG1907699
1,1-Dichloropropene	U		0.00130	0.00401	1	08/09/2022 01:42	WG1907699
1,3-Dichloropropane	U		0.000803	0.00802	1	08/09/2022 01:42	WG1907699
cis-1,3-Dichloropropene	U		0.00121	0.00401	1	08/09/2022 01:42	WG1907699
trans-1,3-Dichloropropene	U		0.00183	0.00802	1	08/09/2022 01:42	WG1907699
2,2-Dichloropropane	U		0.00221	0.00401	1	08/09/2022 01:42	WG1907699
Di-isopropyl ether	U		0.000657	0.00160	1	08/09/2022 01:42	WG1907699
Ethylbenzene	0.306		0.00118	0.00401	1	08/09/2022 01:42	WG1907699
Hexachloro-1,3-butadiene	U		0.00962	0.0401	1	08/09/2022 01:42	WG1907699
Isopropylbenzene	0.124		0.000681	0.00401	1	08/09/2022 01:42	WG1907699
p-Isopropyltoluene	0.685		0.00409	0.00802	1	08/09/2022 01:42	WG1907699
2-Butanone (MEK)	U		0.102	0.160	1	08/09/2022 01:42	WG1907699
Methylene Chloride	U		0.0106	0.0401	1	08/09/2022 01:42	WG1907699
4-Methyl-2-pentanone (MIBK)	U		0.00366	0.0401	1	08/09/2022 01:42	WG1907699

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Methyl tert-butyl ether	U		0.000561	0.00160	1	08/09/2022 01:42	WG1907699
Naphthalene	1.07		0.00783	0.0200	1	08/09/2022 01:42	WG1907699
n-Propylbenzene	0.228		0.00152	0.00802	1	08/09/2022 01:42	WG1907699
Styrene	U		0.000367	0.0200	1	08/09/2022 01:42	WG1907699
1,1,1,2-Tetrachloroethane	U		0.00152	0.00401	1	08/09/2022 01:42	WG1907699
1,1,2,2-Tetrachloroethane	U		0.00111	0.00401	1	08/09/2022 01:42	WG1907699
1,1,2-Trichlorotrifluoroethane	U		0.00121	0.00401	1	08/09/2022 01:42	WG1907699
Tetrachloroethene	U		0.00144	0.00401	1	08/09/2022 01:42	WG1907699
Toluene	0.0175		0.00208	0.00802	1	08/09/2022 01:42	WG1907699
1,2,3-Trichlorobenzene	U		0.0118	0.0200	1	08/09/2022 01:42	WG1907699
1,2,4-Trichlorobenzene	U		0.00706	0.0200	1	08/09/2022 01:42	WG1907699
1,1,1-Trichloroethane	U		0.00148	0.00401	1	08/09/2022 01:42	WG1907699
1,1,2-Trichloroethane	U		0.000957	0.00401	1	08/09/2022 01:42	WG1907699
Trichloroethene	U		0.000936	0.00160	1	08/09/2022 01:42	WG1907699
Trichlorofluoromethane	U		0.00133	0.00401	1	08/09/2022 01:42	WG1907699
1,2,3-Trichloropropane	U		0.00260	0.0200	1	08/09/2022 01:42	WG1907699
1,2,4-Trimethylbenzene	2.68		0.00253	0.00802	1	08/09/2022 01:42	WG1907699
1,2,3-Trimethylbenzene	1.94		0.00253	0.00802	1	08/09/2022 01:42	WG1907699
Vinyl chloride	U		0.00186	0.00401	1	08/09/2022 01:42	WG1907699
1,3,5-Trimethylbenzene	1.31		0.00321	0.00802	1	08/09/2022 01:42	WG1907699
Xylenes, Total	4.35		0.00141	0.0104	1	08/09/2022 01:42	WG1907699
(S) Toluene-d8	*110*			*75.0-131*		*08/09/2022 01:42*	WG1907699
(S) 4-Bromofluorobenzene	*98.2*			*67.0-138*		*08/09/2022 01:42*	WG1907699
(S) 1,2-Dichloroethane-d4	*82.7*			*70.0-130*		*08/09/2022 01:42*	WG1907699

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	45.5	J	8.82	255	1	08/12/2022 09:05	WG1909501
(S) o-Terphenyl	*50.0*			*50.0-150*		*08/12/2022 09:05*	WG1909501

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	0.0163		0.00293	0.00764	1	08/12/2022 16:15	WG1909236
Acenaphthene	0.203		0.00266	0.00764	1	08/12/2022 16:15	WG1909236
Acenaphthylene	U		0.00275	0.00764	1	08/12/2022 16:15	WG1909236
Benzo(a)anthracene	0.0186		0.00220	0.00764	1	08/12/2022 16:15	WG1909236
Benzo(a)pyrene	0.00786		0.00228	0.00764	1	08/12/2022 16:15	WG1909236
Benzo(b)fluoranthene	0.0131		0.00195	0.00764	1	08/12/2022 16:15	WG1909236
Benzo(g,h,i)perylene	0.00255	J	0.00225	0.00764	1	08/12/2022 16:15	WG1909236
Benzo(k)fluoranthene	0.00534	J	0.00274	0.00764	1	08/12/2022 16:15	WG1909236
Chrysene	0.0266		0.00296	0.00764	1	08/12/2022 16:15	WG1909236
Dibenz(a,h)anthracene	U		0.00219	0.00764	1	08/12/2022 16:15	WG1909236
Fluoranthene	0.0961		0.00289	0.00764	1	08/12/2022 16:15	WG1909236
Fluorene	0.0726		0.00261	0.00764	1	08/12/2022 16:15	WG1909236
Indeno(1,2,3-cd)pyrene	0.00324	J	0.00231	0.00764	1	08/12/2022 16:15	WG1909236
Naphthalene	0.373		0.00520	0.0255	1	08/12/2022 16:15	WG1909236
Phenanthrene	0.0868		0.00294	0.00764	1	08/12/2022 16:15	WG1909236
Pyrene	0.0865		0.00255	0.00764	1	08/12/2022 16:15	WG1909236
1-Methylnaphthalene	0.322		0.00572	0.0255	1	08/12/2022 16:15	WG1909236
2-Methylnaphthalene	0.417		0.00544	0.0255	1	08/12/2022 16:15	WG1909236
2-Chloronaphthalene	U		0.00594	0.0255	1	08/12/2022 16:15	WG1909236
(S) Nitrobenzene-d5	*65.1*			*14.0-149*		*08/12/2022 16:15*	WG1909236
(S) 2-Fluorobiphenyl	*75.7*			*34.0-125*		*08/12/2022 16:15*	WG1909236

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) p-Terphenyl-d14	*80.1*			*23.0-120*		*08/12/2022 16:15*	WG1909236

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	97.3		1	08/10/2022 08:11	WG1907557

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHGAK C6 to C10	U		1.95	5.14	2	08/16/2022 06:48	WG1911247
(S) a,a,a-Trifluorotoluene(FID)	*84.1*			*50.0-150*		*08/16/2022 06:48*	WG1911247

Sample Narrative:

L1522335-06 WG1911247: Lowest possible dilution due to sample foaming.

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0423	0.0580	1.1	08/09/2022 02:01	WG1907699
Acrylonitrile	U	C3	0.00418	0.0145	1.1	08/09/2022 02:01	WG1907699
Benzene	U		0.000542	0.00116	1.1	08/09/2022 02:01	WG1907699
Bromobenzene	U		0.00104	0.0145	1.1	08/09/2022 02:01	WG1907699
Bromodichloromethane	U		0.000840	0.00290	1.1	08/09/2022 02:01	WG1907699
Bromoform	U		0.00136	0.0290	1.1	08/09/2022 02:01	WG1907699
Bromomethane	U		0.00229	0.0145	1.1	08/09/2022 02:01	WG1907699
n-Butylbenzene	U		0.00609	0.0145	1.1	08/09/2022 02:01	WG1907699
sec-Butylbenzene	U		0.00334	0.0145	1.1	08/09/2022 02:01	WG1907699
tert-Butylbenzene	U		0.00227	0.00580	1.1	08/09/2022 02:01	WG1907699
Carbon tetrachloride	U		0.00104	0.00580	1.1	08/09/2022 02:01	WG1907699
Chlorobenzene	U		0.000243	0.00290	1.1	08/09/2022 02:01	WG1907699
Chlorodibromomethane	U		0.000709	0.00290	1.1	08/09/2022 02:01	WG1907699
Chloroethane	U		0.00197	0.00580	1.1	08/09/2022 02:01	WG1907699
Chloroform	U		0.00119	0.00290	1.1	08/09/2022 02:01	WG1907699
Chloromethane	U	C3	0.00505	0.0145	1.1	08/09/2022 02:01	WG1907699
2-Chlorotoluene	U		0.00100	0.00290	1.1	08/09/2022 02:01	WG1907699
4-Chlorotoluene	U		0.000522	0.00580	1.1	08/09/2022 02:01	WG1907699
1,2-Dibromo-3-Chloropropane	U		0.00452	0.0290	1.1	08/09/2022 02:01	WG1907699
1,2-Dibromoethane	U		0.000751	0.00290	1.1	08/09/2022 02:01	WG1907699
Dibromomethane	U		0.000869	0.00580	1.1	08/09/2022 02:01	WG1907699
1,2-Dichlorobenzene	U		0.000493	0.00580	1.1	08/09/2022 02:01	WG1907699
1,3-Dichlorobenzene	U		0.000695	0.00580	1.1	08/09/2022 02:01	WG1907699
1,4-Dichlorobenzene	U		0.000811	0.00580	1.1	08/09/2022 02:01	WG1907699
Dichlorodifluoromethane	U	C3	0.00187	0.00290	1.1	08/09/2022 02:01	WG1907699
1,1-Dichloroethane	U		0.000569	0.00290	1.1	08/09/2022 02:01	WG1907699
1,2-Dichloroethane	U	C3	0.000752	0.00290	1.1	08/09/2022 02:01	WG1907699
1,1-Dichloroethene	U		0.000703	0.00290	1.1	08/09/2022 02:01	WG1907699
cis-1,2-Dichloroethene	U		0.000850	0.00290	1.1	08/09/2022 02:01	WG1907699
trans-1,2-Dichloroethene	U		0.00120	0.00580	1.1	08/09/2022 02:01	WG1907699
1,2-Dichloropropane	U		0.00164	0.00580	1.1	08/09/2022 02:01	WG1907699
1,1-Dichloropropene	U		0.000938	0.00290	1.1	08/09/2022 02:01	WG1907699
1,3-Dichloropropane	U		0.000581	0.00580	1.1	08/09/2022 02:01	WG1907699
cis-1,3-Dichloropropene	U		0.000878	0.00290	1.1	08/09/2022 02:01	WG1907699
trans-1,3-Dichloropropene	U		0.00132	0.00580	1.1	08/09/2022 02:01	WG1907699
2,2-Dichloropropane	U		0.00160	0.00290	1.1	08/09/2022 02:01	WG1907699
Di-isopropyl ether	U		0.000475	0.00116	1.1	08/09/2022 02:01	WG1907699
Ethylbenzene	U		0.000855	0.00290	1.1	08/09/2022 02:01	WG1907699
Hexachloro-1,3-butadiene	U		0.00695	0.0290	1.1	08/09/2022 02:01	WG1907699
Isopropylbenzene	U		0.000493	0.00290	1.1	08/09/2022 02:01	WG1907699
p-Isopropyltoluene	U		0.00296	0.00580	1.1	08/11/2022 20:43	WG1909280

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2-Butanone (MEK)	U		0.0737	0.116	1.1	08/09/2022 02:01	WG1907699
Methylene Chloride	U		0.00769	0.0290	1.1	08/09/2022 02:01	WG1907699
4-Methyl-2-pentanone (MIBK)	U		0.00264	0.0290	1.1	08/09/2022 02:01	WG1907699
Methyl tert-butyl ether	U		0.000406	0.00116	1.1	08/09/2022 02:01	WG1907699
Naphthalene	0.00896	J	0.00566	0.0145	1.1	08/11/2022 20:43	WG1909280
n-Propylbenzene	U		0.00111	0.00580	1.1	08/09/2022 02:01	WG1907699
Styrene	U		0.000266	0.0145	1.1	08/09/2022 02:01	WG1907699
1,1,1,2-Tetrachloroethane	U		0.00110	0.00290	1.1	08/09/2022 02:01	WG1907699
1,1,2,2-Tetrachloroethane	U		0.000806	0.00290	1.1	08/09/2022 02:01	WG1907699
1,1,2-Trichlorotrifluoroethane	U		0.000873	0.00290	1.1	08/09/2022 02:01	WG1907699
Tetrachloroethene	U		0.00104	0.00290	1.1	08/09/2022 02:01	WG1907699
Toluene	U		0.00151	0.00580	1.1	08/09/2022 02:01	WG1907699
1,2,3-Trichlorobenzene	U		0.00849	0.0145	1.1	08/09/2022 02:01	WG1907699
1,2,4-Trichlorobenzene	U		0.00510	0.0145	1.1	08/09/2022 02:01	WG1907699
1,1,1-Trichloroethane	U		0.00107	0.00290	1.1	08/09/2022 02:01	WG1907699
1,1,2-Trichloroethane	U		0.000692	0.00290	1.1	08/09/2022 02:01	WG1907699
Trichloroethene	U		0.000676	0.00116	1.1	08/09/2022 02:01	WG1907699
Trichlorofluoromethane	U		0.000959	0.00290	1.1	08/09/2022 02:01	WG1907699
1,2,3-Trichloropropane	U		0.00188	0.0145	1.1	08/09/2022 02:01	WG1907699
1,2,4-Trimethylbenzene	0.00623		0.00183	0.00580	1.1	08/11/2022 20:43	WG1909280
1,2,3-Trimethylbenzene	U		0.00183	0.00580	1.1	08/11/2022 20:43	WG1909280
Vinyl chloride	U		0.00135	0.00290	1.1	08/09/2022 02:01	WG1907699
1,3,5-Trimethylbenzene	0.00270	J	0.00232	0.00580	1.1	08/11/2022 20:43	WG1909280
Xylenes, Total	0.00426	J	0.00102	0.00753	1.1	08/11/2022 20:43	WG1909280
(S) Toluene-d8	*105*			*75.0-131*		*08/09/2022 02:01*	WG1907699
(S) Toluene-d8	*99.1*			*75.0-131*		*08/11/2022 20:43*	WG1909280
(S) 4-Bromofluorobenzene	*97.7*			*67.0-138*		*08/09/2022 02:01*	WG1907699
(S) 4-Bromofluorobenzene	*97.4*			*67.0-138*		*08/11/2022 20:43*	WG1909280
(S) 1,2-Dichloroethane-d4	*80.4*			*70.0-130*		*08/09/2022 02:01*	WG1907699
(S) 1,2-Dichloroethane-d4	*94.9*			*70.0-130*		*08/11/2022 20:43*	WG1909280

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	23.6	J	7.11	206	1	08/09/2022 04:28	WG1907345
(S) o-Terphenyl	*94.7*			*50.0-150*		*08/09/2022 04:28*	WG1907345

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00236	0.00617	1	08/09/2022 02:26	WG1907009
Acenaphthene	U		0.00215	0.00617	1	08/09/2022 02:26	WG1907009
Acenaphthylene	U		0.00222	0.00617	1	08/09/2022 02:26	WG1907009
Benzo(a)anthracene	U		0.00178	0.00617	1	08/09/2022 02:26	WG1907009
Benzo(a)pyrene	U		0.00184	0.00617	1	08/09/2022 02:26	WG1907009
Benzo(b)fluoranthene	U		0.00157	0.00617	1	08/09/2022 02:26	WG1907009
Benzo(g,h,i)perylene	U		0.00182	0.00617	1	08/09/2022 02:26	WG1907009
Benzo(k)fluoranthene	U		0.00221	0.00617	1	08/09/2022 02:26	WG1907009
Chrysene	U		0.00239	0.00617	1	08/09/2022 02:26	WG1907009
Dibenz(a,h)anthracene	U		0.00177	0.00617	1	08/09/2022 02:26	WG1907009
Fluoranthene	U		0.00233	0.00617	1	08/09/2022 02:26	WG1907009
Fluorene	U		0.00211	0.00617	1	08/09/2022 02:26	WG1907009
Indeno(1,2,3-cd)pyrene	U		0.00186	0.00617	1	08/09/2022 02:26	WG1907009
Naphthalene	U		0.00419	0.0206	1	08/09/2022 02:26	WG1907009
Phenanthrene	U		0.00237	0.00617	1	08/09/2022 02:26	WG1907009

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Pyrene	U		0.00206	0.00617	1	08/09/2022 02:26	WG1907009
1-Methylnaphthalene	U		0.00462	0.0206	1	08/09/2022 02:26	WG1907009
2-Methylnaphthalene	U		0.00439	0.0206	1	08/09/2022 02:26	WG1907009
2-Chloronaphthalene	U		0.00479	0.0206	1	08/09/2022 02:26	WG1907009
(S) Nitrobenzene-d5	*46.2*			*14.0-149*		*08/09/2022 02:26*	WG1907009
(S) 2-Fluorobiphenyl	*53.5*			*34.0-125*		*08/09/2022 02:26*	WG1907009
(S) p-Terphenyl-d14	*54.8*			*23.0-120*		*08/09/2022 02:26*	WG1907009

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	89.0		1	08/10/2022 08:11	WG1907557

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHGAK C6 to C10	U		2.14	5.62	2	08/10/2022 06:58	WG1908093
(S) a,a,a-Trifluorotoluene(FID)	*83.0*			*50.0-150*		*08/10/2022 06:58*	WG1908093

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0466	0.0638	1	08/09/2022 02:19	WG1907699
Acrylonitrile	U	C3	0.00460	0.0159	1	08/09/2022 02:19	WG1907699
Benzene	U		0.000596	0.00128	1	08/09/2022 02:19	WG1907699
Bromobenzene	U		0.00115	0.0159	1	08/09/2022 02:19	WG1907699
Bromodichloromethane	U		0.000925	0.00319	1	08/09/2022 02:19	WG1907699
Bromoform	U		0.00149	0.0319	1	08/09/2022 02:19	WG1907699
Bromomethane	U		0.00251	0.0159	1	08/09/2022 02:19	WG1907699
n-Butylbenzene	U		0.00670	0.0159	1	08/09/2022 02:19	WG1907699
sec-Butylbenzene	U		0.00367	0.0159	1	08/09/2022 02:19	WG1907699
tert-Butylbenzene	U		0.00249	0.00638	1	08/09/2022 02:19	WG1907699
Carbon tetrachloride	U		0.00115	0.00638	1	08/09/2022 02:19	WG1907699
Chlorobenzene	U		0.000268	0.00319	1	08/09/2022 02:19	WG1907699
Chlorodibromomethane	U		0.000781	0.00319	1	08/09/2022 02:19	WG1907699
Chloroethane	U		0.00217	0.00638	1	08/09/2022 02:19	WG1907699
Chloroform	U		0.00131	0.00319	1	08/09/2022 02:19	WG1907699
Chloromethane	U	C3	0.00555	0.0159	1	08/09/2022 02:19	WG1907699
2-Chlorotoluene	U		0.00110	0.00319	1	08/09/2022 02:19	WG1907699
4-Chlorotoluene	U		0.000574	0.00638	1	08/09/2022 02:19	WG1907699
1,2-Dibromo-3-Chloropropane	U		0.00497	0.0319	1	08/09/2022 02:19	WG1907699
1,2-Dibromoethane	U		0.000826	0.00319	1	08/09/2022 02:19	WG1907699
Dibromomethane	U		0.000957	0.00638	1	08/09/2022 02:19	WG1907699
1,2-Dichlorobenzene	U		0.000542	0.00638	1	08/09/2022 02:19	WG1907699
1,3-Dichlorobenzene	U		0.000765	0.00638	1	08/09/2022 02:19	WG1907699
1,4-Dichlorobenzene	U		0.000893	0.00638	1	08/09/2022 02:19	WG1907699
Dichlorodifluoromethane	U	C3	0.00205	0.00319	1	08/09/2022 02:19	WG1907699
1,1-Dichloroethane	U		0.000626	0.00319	1	08/09/2022 02:19	WG1907699
1,2-Dichloroethane	U	C3	0.000828	0.00319	1	08/09/2022 02:19	WG1907699
1,1-Dichloroethene	U		0.000773	0.00319	1	08/09/2022 02:19	WG1907699
cis-1,2-Dichloroethene	U		0.000936	0.00319	1	08/09/2022 02:19	WG1907699
trans-1,2-Dichloroethene	U		0.00133	0.00638	1	08/09/2022 02:19	WG1907699
1,2-Dichloropropane	U		0.00181	0.00638	1	08/09/2022 02:19	WG1907699
1,1-Dichloropropene	U		0.00103	0.00319	1	08/09/2022 02:19	WG1907699
1,3-Dichloropropane	U		0.000639	0.00638	1	08/09/2022 02:19	WG1907699
cis-1,3-Dichloropropene	U		0.000965	0.00319	1	08/09/2022 02:19	WG1907699
trans-1,3-Dichloropropene	U		0.00145	0.00638	1	08/09/2022 02:19	WG1907699
2,2-Dichloropropane	U		0.00176	0.00319	1	08/09/2022 02:19	WG1907699
Di-isopropyl ether	U		0.000523	0.00128	1	08/09/2022 02:19	WG1907699
Ethylbenzene	U		0.000940	0.00319	1	08/09/2022 02:19	WG1907699
Hexachloro-1,3-butadiene	U		0.00765	0.0319	1	08/09/2022 02:19	WG1907699
Isopropylbenzene	U		0.000542	0.00319	1	08/09/2022 02:19	WG1907699
p-Isopropyltoluene	U		0.00325	0.00638	1	08/09/2022 02:19	WG1907699
2-Butanone (MEK)	U		0.0810	0.128	1	08/09/2022 02:19	WG1907699
Methylene Chloride	U		0.00847	0.0319	1	08/09/2022 02:19	WG1907699
4-Methyl-2-pentanone (MIBK)	U		0.00291	0.0319	1	08/09/2022 02:19	WG1907699

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Methyl tert-butyl ether	U		0.000446	0.00128	1	08/09/2022 02:19	WG1907699
Naphthalene	U		0.00622	0.0159	1	08/11/2022 21:02	WG1909280
n-Propylbenzene	U		0.00121	0.00638	1	08/09/2022 02:19	WG1907699
Styrene	U		0.000292	0.0159	1	08/09/2022 02:19	WG1907699
1,1,1,2-Tetrachloroethane	U		0.00121	0.00319	1	08/09/2022 02:19	WG1907699
1,1,2,2-Tetrachloroethane	U		0.000886	0.00319	1	08/09/2022 02:19	WG1907699
1,1,2-Trichlorotrifluoroethane	U		0.000962	0.00319	1	08/09/2022 02:19	WG1907699
Tetrachloroethene	U		0.00114	0.00319	1	08/09/2022 02:19	WG1907699
Toluene	U		0.00166	0.00638	1	08/09/2022 02:19	WG1907699
1,2,3-Trichlorobenzene	U		0.00935	0.0159	1	08/09/2022 02:19	WG1907699
1,2,4-Trichlorobenzene	U		0.00561	0.0159	1	08/09/2022 02:19	WG1907699
1,1,1-Trichloroethane	U		0.00118	0.00319	1	08/09/2022 02:19	WG1907699
1,1,2-Trichloroethane	U		0.000761	0.00319	1	08/09/2022 02:19	WG1907699
Trichloroethene	U		0.000745	0.00128	1	08/09/2022 02:19	WG1907699
Trichlorofluoromethane	U		0.00105	0.00319	1	08/09/2022 02:19	WG1907699
1,2,3-Trichloropropane	U		0.00207	0.0159	1	08/09/2022 02:19	WG1907699
1,2,4-Trimethylbenzene	U		0.00202	0.00638	1	08/09/2022 02:19	WG1907699
1,2,3-Trimethylbenzene	U		0.00202	0.00638	1	08/09/2022 02:19	WG1907699
Vinyl chloride	U		0.00148	0.00319	1	08/09/2022 02:19	WG1907699
1,3,5-Trimethylbenzene	U		0.00255	0.00638	1	08/09/2022 02:19	WG1907699
Xylenes, Total	0.00172	J	0.00112	0.00829	1	08/11/2022 21:02	WG1909280
(S) Toluene-d8	*110*			*75.0-131*		*08/09/2022 02:19*	WG1907699
(S) Toluene-d8	*99.5*			*75.0-131*		*08/11/2022 21:02*	WG1909280
(S) 4-Bromofluorobenzene	*99.3*			*67.0-138*		*08/09/2022 02:19*	WG1907699
(S) 4-Bromofluorobenzene	*97.8*			*67.0-138*		*08/11/2022 21:02*	WG1909280
(S) 1,2-Dichloroethane-d4	*81.0*			*70.0-130*		*08/09/2022 02:19*	WG1907699
(S) 1,2-Dichloroethane-d4	*86.6*			*70.0-130*		*08/11/2022 21:02*	WG1909280

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	20.6	J	7.78	225	1	08/09/2022 04:41	WG1907345
(S) o-Terphenyl	*95.4*			*50.0-150*		*08/09/2022 04:41*	WG1907345

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00259	0.00674	1	08/12/2022 18:56	WG1909236
Acenaphthene	U		0.00235	0.00674	1	08/12/2022 18:56	WG1909236
Acenaphthylene	U		0.00243	0.00674	1	08/12/2022 18:56	WG1909236
Benzo(a)anthracene	0.00413	J	0.00194	0.00674	1	08/12/2022 18:56	WG1909236
Benzo(a)pyrene	0.00446	J	0.00201	0.00674	1	08/12/2022 18:56	WG1909236
Benzo(b)fluoranthene	0.00527	J	0.00172	0.00674	1	08/12/2022 18:56	WG1909236
Benzo(g,h,i)perylene	0.00400	J	0.00199	0.00674	1	08/12/2022 18:56	WG1909236
Benzo(k)fluoranthene	U		0.00242	0.00674	1	08/12/2022 18:56	WG1909236
Chrysene	0.00495	J	0.00261	0.00674	1	08/12/2022 18:56	WG1909236
Dibenz(a,h)anthracene	U		0.00193	0.00674	1	08/12/2022 18:56	WG1909236
Fluoranthene	0.00817		0.00255	0.00674	1	08/12/2022 18:56	WG1909236
Fluorene	U		0.00230	0.00674	1	08/12/2022 18:56	WG1909236
Indeno(1,2,3-cd)pyrene	0.00393	J	0.00203	0.00674	1	08/12/2022 18:56	WG1909236
Naphthalene	U		0.00459	0.0225	1	08/12/2022 18:56	WG1909236
Phenanthrene	0.00418	J	0.00260	0.00674	1	08/12/2022 18:56	WG1909236
Pyrene	0.00953		0.00225	0.00674	1	08/12/2022 18:56	WG1909236
1-Methylnaphthalene	U		0.00505	0.0225	1	08/12/2022 18:56	WG1909236
2-Methylnaphthalene	U		0.00480	0.0225	1	08/12/2022 18:56	WG1909236

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2-Chloronaphthalene	U		0.00524	0.0225	1	08/12/2022 18:56	WG1909236
(S) Nitrobenzene-d5	*53.1*			*14.0-149*		*08/12/2022 18:56*	WG1909236
(S) 2-Fluorobiphenyl	*64.1*			*34.0-125*		*08/12/2022 18:56*	WG1909236
(S) p-Terphenyl-d14	*66.0*			*23.0-120*		*08/12/2022 18:56*	WG1909236

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	91.9		1	08/10/2022 08:11	WG1907557

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHGAK C6 to C10	U		2.07	5.44	2	08/10/2022 07:24	WG1908093
(S) a,a,a-Trifluorotoluene(FID)	*87.1*			*50.0-150*		*08/10/2022 07:24*	WG1908093

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0431	0.0590	1	08/09/2022 02:38	WG1907699
Acrylonitrile	U	C3	0.00426	0.0147	1	08/09/2022 02:38	WG1907699
Benzene	0.00110	J	0.000551	0.00118	1	08/09/2022 02:38	WG1907699
Bromobenzene	U		0.00106	0.0147	1	08/09/2022 02:38	WG1907699
Bromodichloromethane	U		0.000855	0.00295	1	08/09/2022 02:38	WG1907699
Bromoform	U		0.00138	0.0295	1	08/09/2022 02:38	WG1907699
Bromomethane	U		0.00232	0.0147	1	08/09/2022 02:38	WG1907699
n-Butylbenzene	U		0.00619	0.0147	1	08/09/2022 02:38	WG1907699
sec-Butylbenzene	U		0.00340	0.0147	1	08/09/2022 02:38	WG1907699
tert-Butylbenzene	U		0.00230	0.00590	1	08/09/2022 02:38	WG1907699
Carbon tetrachloride	U		0.00106	0.00590	1	08/09/2022 02:38	WG1907699
Chlorobenzene	U		0.000248	0.00295	1	08/09/2022 02:38	WG1907699
Chlorodibromomethane	U		0.000722	0.00295	1	08/09/2022 02:38	WG1907699
Chloroethane	U		0.00201	0.00590	1	08/09/2022 02:38	WG1907699
Chloroform	U		0.00122	0.00295	1	08/09/2022 02:38	WG1907699
Chloromethane	U	C3	0.00513	0.0147	1	08/09/2022 02:38	WG1907699
2-Chlorotoluene	U		0.00102	0.00295	1	08/09/2022 02:38	WG1907699
4-Chlorotoluene	U		0.000531	0.00590	1	08/09/2022 02:38	WG1907699
1,2-Dibromo-3-Chloropropane	U		0.00460	0.0295	1	08/09/2022 02:38	WG1907699
1,2-Dibromoethane	U		0.000765	0.00295	1	08/09/2022 02:38	WG1907699
Dibromomethane	U		0.000885	0.00590	1	08/09/2022 02:38	WG1907699
1,2-Dichlorobenzene	U		0.000501	0.00590	1	08/09/2022 02:38	WG1907699
1,3-Dichlorobenzene	U		0.000708	0.00590	1	08/09/2022 02:38	WG1907699
1,4-Dichlorobenzene	U		0.000826	0.00590	1	08/09/2022 02:38	WG1907699
Dichlorodifluoromethane	U	C3	0.00190	0.00295	1	08/09/2022 02:38	WG1907699
1,1-Dichloroethane	U		0.000579	0.00295	1	08/09/2022 02:38	WG1907699
1,2-Dichloroethane	U	C3	0.000766	0.00295	1	08/09/2022 02:38	WG1907699
1,1-Dichloroethene	U		0.000715	0.00295	1	08/09/2022 02:38	WG1907699
cis-1,2-Dichloroethene	U		0.000866	0.00295	1	08/09/2022 02:38	WG1907699
trans-1,2-Dichloroethene	U		0.00123	0.00590	1	08/09/2022 02:38	WG1907699
1,2-Dichloropropane	U		0.00168	0.00590	1	08/09/2022 02:38	WG1907699
1,1-Dichloropropene	U		0.000955	0.00295	1	08/09/2022 02:38	WG1907699
1,3-Dichloropropane	U		0.000591	0.00590	1	08/09/2022 02:38	WG1907699
cis-1,3-Dichloropropene	U		0.000893	0.00295	1	08/09/2022 02:38	WG1907699
trans-1,3-Dichloropropene	U		0.00135	0.00590	1	08/09/2022 02:38	WG1907699
2,2-Dichloropropane	U		0.00163	0.00295	1	08/09/2022 02:38	WG1907699
Di-isopropyl ether	U		0.000484	0.00118	1	08/09/2022 02:38	WG1907699
Ethylbenzene	0.00153	J	0.000870	0.00295	1	08/09/2022 02:38	WG1907699
Hexachloro-1,3-butadiene	U		0.00708	0.0295	1	08/09/2022 02:38	WG1907699
Isopropylbenzene	U		0.000501	0.00295	1	08/09/2022 02:38	WG1907699
p-Isopropyltoluene	U		0.00301	0.00590	1	08/09/2022 02:38	WG1907699
2-Butanone (MEK)	U		0.0749	0.118	1	08/09/2022 02:38	WG1907699
Methylene Chloride	U		0.00783	0.0295	1	08/09/2022 02:38	WG1907699
4-Methyl-2-pentanone (MIBK)	U		0.00269	0.0295	1	08/09/2022 02:38	WG1907699

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Methyl tert-butyl ether	U		0.000413	0.00118	1	08/09/2022 02:38	WG1907699
Naphthalene	U		0.00576	0.0147	1	08/09/2022 02:38	WG1907699
n-Propylbenzene	U		0.00112	0.00590	1	08/09/2022 02:38	WG1907699
Styrene	U		0.000270	0.0147	1	08/09/2022 02:38	WG1907699
1,1,1,2-Tetrachloroethane	U		0.00112	0.00295	1	08/09/2022 02:38	WG1907699
1,1,2,2-Tetrachloroethane	U		0.000820	0.00295	1	08/09/2022 02:38	WG1907699
1,1,2-Trichlorotrifluoroethane	U		0.000890	0.00295	1	08/09/2022 02:38	WG1907699
Tetrachloroethene	U		0.00106	0.00295	1	08/09/2022 02:38	WG1907699
Toluene	0.00522	J	0.00153	0.00590	1	08/09/2022 02:38	WG1907699
1,2,3-Trichlorobenzene	U		0.00865	0.0147	1	08/09/2022 02:38	WG1907699
1,2,4-Trichlorobenzene	U		0.00519	0.0147	1	08/09/2022 02:38	WG1907699
1,1,1-Trichloroethane	U		0.00109	0.00295	1	08/09/2022 02:38	WG1907699
1,1,2-Trichloroethane	U		0.000704	0.00295	1	08/09/2022 02:38	WG1907699
Trichloroethene	U		0.000689	0.00118	1	08/09/2022 02:38	WG1907699
Trichlorofluoromethane	U		0.000976	0.00295	1	08/09/2022 02:38	WG1907699
1,2,3-Trichloropropane	U		0.00191	0.0147	1	08/09/2022 02:38	WG1907699
1,2,4-Trimethylbenzene	0.00190	J	0.00186	0.00590	1	08/09/2022 02:38	WG1907699
1,2,3-Trimethylbenzene	U		0.00186	0.00590	1	08/09/2022 02:38	WG1907699
Vinyl chloride	U		0.00137	0.00295	1	08/09/2022 02:38	WG1907699
1,3,5-Trimethylbenzene	U		0.00236	0.00590	1	08/09/2022 02:38	WG1907699
Xylenes, Total	0.00504	J	0.00104	0.00767	1	08/09/2022 02:38	WG1907699
(S) Toluene-d8	*111*			*75.0-131*		*08/09/2022 02:38*	WG1907699
(S) 4-Bromofluorobenzene	*97.9*			*67.0-138*		*08/09/2022 02:38*	WG1907699
(S) 1,2-Dichloroethane-d4	*78.6*			*70.0-130*		*08/09/2022 02:38*	WG1907699

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	66.3	J	7.53	218	1	08/09/2022 04:53	WG1907345
(S) o-Terphenyl	*90.4*			*50.0-150*		*08/09/2022 04:53*	WG1907345

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00250	0.00653	1	08/12/2022 19:31	WG1909236
Acenaphthene	U		0.00227	0.00653	1	08/12/2022 19:31	WG1909236
Acenaphthylene	U		0.00235	0.00653	1	08/12/2022 19:31	WG1909236
Benzo(a)anthracene	0.00259	J	0.00188	0.00653	1	08/12/2022 19:31	WG1909236
Benzo(a)pyrene	0.00366	J	0.00195	0.00653	1	08/12/2022 19:31	WG1909236
Benzo(b)fluoranthene	0.00514	J	0.00166	0.00653	1	08/12/2022 19:31	WG1909236
Benzo(g,h,i)perylene	0.00504	J	0.00193	0.00653	1	08/12/2022 19:31	WG1909236
Benzo(k)fluoranthene	U		0.00234	0.00653	1	08/12/2022 19:31	WG1909236
Chrysene	0.00363	J	0.00252	0.00653	1	08/12/2022 19:31	WG1909236
Dibenz(a,h)anthracene	U		0.00187	0.00653	1	08/12/2022 19:31	WG1909236
Fluoranthene	0.00625	J	0.00247	0.00653	1	08/12/2022 19:31	WG1909236
Fluorene	U		0.00223	0.00653	1	08/12/2022 19:31	WG1909236
Indeno(1,2,3-cd)pyrene	0.00276	J	0.00197	0.00653	1	08/12/2022 19:31	WG1909236
Naphthalene	U		0.00444	0.0218	1	08/12/2022 19:31	WG1909236
Phenanthrene	0.00371	J	0.00251	0.00653	1	08/12/2022 19:31	WG1909236
Pyrene	0.00921		0.00218	0.00653	1	08/12/2022 19:31	WG1909236
1-Methylnaphthalene	U		0.00489	0.0218	1	08/12/2022 19:31	WG1909236
2-Methylnaphthalene	U		0.00465	0.0218	1	08/12/2022 19:31	WG1909236
2-Chloronaphthalene	U		0.00507	0.0218	1	08/12/2022 19:31	WG1909236
(S) Nitrobenzene-d5	*61.1*			*14.0-149*		*08/12/2022 19:31*	WG1909236
(S) 2-Fluorobiphenyl	*58.7*			*34.0-125*		*08/12/2022 19:31*	WG1909236

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) p-Terphenyl-d14	*66.2*			*23.0-120*		*08/12/2022 19:31*	WG1909236

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	96.9		1	08/10/2022 08:11	WG1907557

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHGAK C6 to C10	U		1.96	5.16	2	08/16/2022 07:14	WG1911247
(S) a,a,a-Trifluorotoluene(FID)	*80.4*			*50.0-150*		*08/16/2022 07:14*	WG1911247

Sample Narrative:

L1522335-09 WG1911247: Lowest possible dilution due to sample foaming.

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0391	0.0536	1	08/09/2022 06:46	WG1907703
Acrylonitrile	U		0.00387	0.0134	1	08/09/2022 06:46	WG1907703
Benzene	U		0.000500	0.00107	1	08/09/2022 06:46	WG1907703
Bromobenzene	U		0.000964	0.0134	1	08/09/2022 06:46	WG1907703
Bromodichloromethane	U		0.000777	0.00268	1	08/09/2022 06:46	WG1907703
Bromoform	U		0.00125	0.0268	1	08/09/2022 06:46	WG1907703
Bromomethane	U		0.00211	0.0134	1	08/09/2022 06:46	WG1907703
n-Butylbenzene	U		0.00562	0.0134	1	08/09/2022 06:46	WG1907703
sec-Butylbenzene	U		0.00309	0.0134	1	08/09/2022 06:46	WG1907703
tert-Butylbenzene	U		0.00209	0.00536	1	08/09/2022 06:46	WG1907703
Carbon tetrachloride	U		0.000962	0.00536	1	08/09/2022 06:46	WG1907703
Chlorobenzene	U		0.000225	0.00268	1	08/09/2022 06:46	WG1907703
Chlorodibromomethane	U		0.000656	0.00268	1	08/09/2022 06:46	WG1907703
Chloroethane	U		0.00182	0.00536	1	08/09/2022 06:46	WG1907703
Chloroform	U		0.00110	0.00268	1	08/09/2022 06:46	WG1907703
Chloromethane	U		0.00466	0.0134	1	08/09/2022 06:46	WG1907703
2-Chlorotoluene	U		0.000927	0.00268	1	08/09/2022 06:46	WG1907703
4-Chlorotoluene	U		0.000482	0.00536	1	08/09/2022 06:46	WG1907703
1,2-Dibromo-3-Chloropropane	U		0.00418	0.0268	1	08/09/2022 06:46	WG1907703
1,2-Dibromoethane	U		0.000694	0.00268	1	08/09/2022 06:46	WG1907703
Dibromomethane	U		0.000803	0.00536	1	08/09/2022 06:46	WG1907703
1,2-Dichlorobenzene	U		0.000455	0.00536	1	08/09/2022 06:46	WG1907703
1,3-Dichlorobenzene	U		0.000643	0.00536	1	08/09/2022 06:46	WG1907703
1,4-Dichlorobenzene	U		0.000750	0.00536	1	08/09/2022 06:46	WG1907703
Dichlorodifluoromethane	U		0.00172	0.00268	1	08/09/2022 06:46	WG1907703
1,1-Dichloroethane	U		0.000526	0.00268	1	08/09/2022 06:46	WG1907703
1,2-Dichloroethane	U	J4	0.000695	0.00268	1	08/09/2022 06:46	WG1907703
1,1-Dichloroethene	U		0.000649	0.00268	1	08/09/2022 06:46	WG1907703
cis-1,2-Dichloroethene	U		0.000786	0.00268	1	08/09/2022 06:46	WG1907703
trans-1,2-Dichloroethene	U		0.00111	0.00536	1	08/09/2022 06:46	WG1907703
1,2-Dichloropropane	U		0.00152	0.00536	1	08/09/2022 06:46	WG1907703
1,1-Dichloropropene	U		0.000867	0.00268	1	08/09/2022 06:46	WG1907703
1,3-Dichloropropane	U		0.000537	0.00536	1	08/09/2022 06:46	WG1907703
cis-1,3-Dichloropropene	U		0.000811	0.00268	1	08/09/2022 06:46	WG1907703
trans-1,3-Dichloropropene	U		0.00122	0.00536	1	08/09/2022 06:46	WG1907703
2,2-Dichloropropane	U		0.00148	0.00268	1	08/09/2022 06:46	WG1907703
Di-isopropyl ether	U		0.000439	0.00107	1	08/09/2022 06:46	WG1907703
Ethylbenzene	U		0.000790	0.00268	1	08/09/2022 06:46	WG1907703
Hexachloro-1,3-butadiene	U		0.00643	0.0268	1	08/09/2022 06:46	WG1907703
Isopropylbenzene	U		0.000455	0.00268	1	08/09/2022 06:46	WG1907703
p-Isopropyltoluene	U		0.00273	0.00536	1	08/09/2022 06:46	WG1907703

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2-Butanone (MEK)	U		0.0680	0.107	1	08/09/2022 06:46	WG1907703
Methylene Chloride	U		0.00711	0.0268	1	08/09/2022 06:46	WG1907703
4-Methyl-2-pentanone (MIBK)	U		0.00244	0.0268	1	08/09/2022 06:46	WG1907703
Methyl tert-butyl ether	U		0.000375	0.00107	1	08/09/2022 06:46	WG1907703
Naphthalene	0.0304		0.00523	0.0134	1	08/14/2022 20:36	WG1910644
n-Propylbenzene	U		0.00102	0.00536	1	08/09/2022 06:46	WG1907703
Styrene	U		0.000245	0.0134	1	08/09/2022 06:46	WG1907703
1,1,1,2-Tetrachloroethane	U		0.00102	0.00268	1	08/09/2022 06:46	WG1907703
1,1,2,2-Tetrachloroethane	U		0.000745	0.00268	1	08/09/2022 06:46	WG1907703
1,1,2-Trichlorotrifluoroethane	U		0.000808	0.00268	1	08/09/2022 06:46	WG1907703
Tetrachloroethene	U		0.000960	0.00268	1	08/09/2022 06:46	WG1907703
Toluene	U		0.00139	0.00536	1	08/09/2022 06:46	WG1907703
1,2,3-Trichlorobenzene	U	C3	0.00785	0.0134	1	08/09/2022 06:46	WG1907703
1,2,4-Trichlorobenzene	U		0.00471	0.0134	1	08/09/2022 06:46	WG1907703
1,1,1-Trichloroethane	U		0.000989	0.00268	1	08/09/2022 06:46	WG1907703
1,1,2-Trichloroethane	U		0.000640	0.00268	1	08/09/2022 06:46	WG1907703
Trichloroethene	U		0.000626	0.00107	1	08/09/2022 06:46	WG1907703
Trichlorofluoromethane	U		0.000886	0.00268	1	08/09/2022 06:46	WG1907703
1,2,3-Trichloropropane	U	J4	0.00174	0.0134	1	08/09/2022 06:46	WG1907703
1,2,4-Trimethylbenzene	U		0.00169	0.00536	1	08/09/2022 06:46	WG1907703
1,2,3-Trimethylbenzene	U		0.00169	0.00536	1	08/09/2022 06:46	WG1907703
Vinyl chloride	U		0.00124	0.00268	1	08/09/2022 06:46	WG1907703
1,3,5-Trimethylbenzene	U		0.00214	0.00536	1	08/09/2022 06:46	WG1907703
Xylenes, Total	0.00745		0.000943	0.00696	1	08/14/2022 20:36	WG1910644
(S) Toluene-d8	*102*			*75.0-131*		*08/09/2022 06:46*	WG1907703
(S) Toluene-d8	*109*			*75.0-131*		*08/14/2022 20:36*	WG1910644
(S) 4-Bromofluorobenzene	*77.2*			*67.0-138*		*08/09/2022 06:46*	WG1907703
(S) 4-Bromofluorobenzene	*104*			*67.0-138*		*08/14/2022 20:36*	WG1910644
(S) 1,2-Dichloroethane-d4	*112*			*70.0-130*		*08/09/2022 06:46*	WG1907703
(S) 1,2-Dichloroethane-d4	*87.9*			*70.0-130*		*08/14/2022 20:36*	WG1910644

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	371		7.14	206	1	08/09/2022 05:06	WG1907345
(S) o-Terphenyl	*102*			*50.0-150*		*08/09/2022 05:06*	WG1907345

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.0119	0.0310	5	08/12/2022 21:18	WG1909236
Acenaphthene	U		0.0108	0.0310	5	08/12/2022 21:18	WG1909236
Acenaphthylene	U		0.0112	0.0310	5	08/12/2022 21:18	WG1909236
Benzo(a)anthracene	U		0.00893	0.0310	5	08/12/2022 21:18	WG1909236
Benzo(a)pyrene	0.0805		0.00924	0.0310	5	08/12/2022 21:18	WG1909236
Benzo(b)fluoranthene	0.106		0.00790	0.0310	5	08/12/2022 21:18	WG1909236
Benzo(g,h,i)perylene	0.0917		0.00914	0.0310	5	08/12/2022 21:18	WG1909236
Benzo(k)fluoranthene	U		0.0110	0.0310	5	08/12/2022 21:18	WG1909236
Chrysene	0.0472		0.0120	0.0310	5	08/12/2022 21:18	WG1909236
Dibenz(a,h)anthracene	0.0346		0.00888	0.0310	5	08/12/2022 21:18	WG1909236
Fluoranthene	0.0243	J	0.0117	0.0310	5	08/12/2022 21:18	WG1909236
Fluorene	U		0.0106	0.0310	5	08/12/2022 21:18	WG1909236
Indeno(1,2,3-cd)pyrene	0.0386		0.00934	0.0310	5	08/12/2022 21:18	WG1909236
Naphthalene	0.0234	J	0.0211	0.103	5	08/12/2022 21:18	WG1909236
Phenanthrene	0.0371		0.0119	0.0310	5	08/12/2022 21:18	WG1909236

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Pyrene	0.0724		0.0103	0.0310	5	08/12/2022 21:18	WG1909236
1-Methylnaphthalene	0.0512	J	0.0232	0.103	5	08/12/2022 21:18	WG1909236
2-Methylnaphthalene	0.0714	J	0.0221	0.103	5	08/12/2022 21:18	WG1909236
2-Chloronaphthalene	U		0.0241	0.103	5	08/12/2022 21:18	WG1909236
(S) Nitrobenzene-d5	*67.4*			*14.0-149*		*08/12/2022 21:18*	WG1909236
(S) 2-Fluorobiphenyl	*74.0*			*34.0-125*		*08/12/2022 21:18*	WG1909236
(S) p-Terphenyl-d14	*70.0*			*23.0-120*		*08/12/2022 21:18*	WG1909236

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.6		1	08/10/2022 08:11	WG1907557

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHGAK C6 to C10	U		2.18	5.74	2	08/16/2022 07:40	WG1911247
(S) a,a,a-Trifluorotoluene(FID)	*80.9*			*50.0-150*		*08/16/2022 07:40*	WG1911247

Sample Narrative:

L1522335-10 WG1911247: Lowest possible dilution due to sample foaming.

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0838	0.115	2	08/09/2022 07:06	WG1907703
Acrylonitrile	U		0.00829	0.0287	2	08/09/2022 07:06	WG1907703
Benzene	U		0.00107	0.00230	2	08/09/2022 07:06	WG1907703
Bromobenzene	U		0.00207	0.0287	2	08/09/2022 07:06	WG1907703
Bromodichloromethane	U		0.00166	0.00574	2	08/09/2022 07:06	WG1907703
Bromoform	U		0.00269	0.0574	2	08/09/2022 07:06	WG1907703
Bromomethane	U		0.00452	0.0287	2	08/09/2022 07:06	WG1907703
n-Butylbenzene	U		0.0121	0.0287	2	08/09/2022 07:06	WG1907703
sec-Butylbenzene	U		0.00661	0.0287	2	08/09/2022 07:06	WG1907703
tert-Butylbenzene	U		0.00448	0.0115	2	08/09/2022 07:06	WG1907703
Carbon tetrachloride	U		0.00207	0.0115	2	08/09/2022 07:06	WG1907703
Chlorobenzene	U		0.000482	0.00574	2	08/09/2022 07:06	WG1907703
Chlorodibromomethane	U		0.00140	0.00574	2	08/09/2022 07:06	WG1907703
Chloroethane	U		0.00390	0.0115	2	08/09/2022 07:06	WG1907703
Chloroform	U		0.00236	0.00574	2	08/09/2022 07:06	WG1907703
Chloromethane	U		0.00998	0.0287	2	08/09/2022 07:06	WG1907703
2-Chlorotoluene	U		0.00199	0.00574	2	08/09/2022 07:06	WG1907703
4-Chlorotoluene	U		0.00103	0.0115	2	08/09/2022 07:06	WG1907703
1,2-Dibromo-3-Chloropropane	U		0.00895	0.0574	2	08/09/2022 07:06	WG1907703
1,2-Dibromoethane	U		0.00149	0.00574	2	08/09/2022 07:06	WG1907703
Dibromomethane	U		0.00172	0.0115	2	08/09/2022 07:06	WG1907703
1,2-Dichlorobenzene	U		0.000975	0.0115	2	08/09/2022 07:06	WG1907703
1,3-Dichlorobenzene	U		0.00138	0.0115	2	08/09/2022 07:06	WG1907703
1,4-Dichlorobenzene	U		0.00161	0.0115	2	08/09/2022 07:06	WG1907703
Dichlorodifluoromethane	U		0.00370	0.00574	2	08/09/2022 07:06	WG1907703
1,1-Dichloroethane	U		0.00113	0.00574	2	08/09/2022 07:06	WG1907703
1,2-Dichloroethane	U	J4	0.00149	0.00574	2	08/09/2022 07:06	WG1907703
1,1-Dichloroethene	U		0.00139	0.00574	2	08/09/2022 07:06	WG1907703
cis-1,2-Dichloroethene	U		0.00169	0.00574	2	08/09/2022 07:06	WG1907703
trans-1,2-Dichloroethene	U		0.00239	0.0115	2	08/09/2022 07:06	WG1907703
1,2-Dichloropropane	U		0.00326	0.0115	2	08/09/2022 07:06	WG1907703
1,1-Dichloropropene	U		0.00186	0.00574	2	08/09/2022 07:06	WG1907703
1,3-Dichloropropane	U		0.00115	0.0115	2	08/09/2022 07:06	WG1907703
cis-1,3-Dichloropropene	U		0.00173	0.00574	2	08/09/2022 07:06	WG1907703
trans-1,3-Dichloropropene	U		0.00262	0.0115	2	08/09/2022 07:06	WG1907703
2,2-Dichloropropane	U		0.00317	0.00574	2	08/09/2022 07:06	WG1907703
Di-isopropyl ether	U		0.000941	0.00230	2	08/09/2022 07:06	WG1907703
Ethylbenzene	U		0.00169	0.00574	2	08/09/2022 07:06	WG1907703
Hexachloro-1,3-butadiene	U		0.0138	0.0574	2	08/09/2022 07:06	WG1907703
Isopropylbenzene	U		0.000975	0.00574	2	08/09/2022 07:06	WG1907703
p-Isopropyltoluene	U		0.00585	0.0115	2	08/09/2022 07:06	WG1907703

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2-Butanone (MEK)	U		0.146	0.230	2	08/09/2022 07:06	WG1907703
Methylene Chloride	U		0.0153	0.0574	2	08/09/2022 07:06	WG1907703
4-Methyl-2-pentanone (MIBK)	U		0.00523	0.0574	2	08/09/2022 07:06	WG1907703
Methyl tert-butyl ether	U		0.000803	0.00230	2	08/09/2022 07:06	WG1907703
Naphthalene	0.0342	C3	0.0112	0.0287	2	08/09/2022 07:06	WG1907703
n-Propylbenzene	U		0.00218	0.0115	2	08/09/2022 07:06	WG1907703
Styrene	U		0.000526	0.0287	2	08/09/2022 07:06	WG1907703
1,1,1,2-Tetrachloroethane	U		0.00218	0.00574	2	08/09/2022 07:06	WG1907703
1,1,2,2-Tetrachloroethane	U		0.00160	0.00574	2	08/09/2022 07:06	WG1907703
1,1,2-Trichlorotrifluoroethane	U		0.00173	0.00574	2	08/09/2022 07:06	WG1907703
Tetrachloroethene	U		0.00205	0.00574	2	08/09/2022 07:06	WG1907703
Toluene	U		0.00298	0.0115	2	08/09/2022 07:06	WG1907703
1,2,3-Trichlorobenzene	U	C3	0.0169	0.0287	2	08/09/2022 07:06	WG1907703
1,2,4-Trichlorobenzene	U		0.0101	0.0287	2	08/09/2022 07:06	WG1907703
1,1,1-Trichloroethane	U		0.00212	0.00574	2	08/09/2022 07:06	WG1907703
1,1,2-Trichloroethane	U		0.00137	0.00574	2	08/09/2022 07:06	WG1907703
Trichloroethene	U		0.00134	0.00230	2	08/09/2022 07:06	WG1907703
Trichlorofluoromethane	U		0.00189	0.00574	2	08/09/2022 07:06	WG1907703
1,2,3-Trichloropropane	U	J4	0.00372	0.0287	2	08/09/2022 07:06	WG1907703
1,2,4-Trimethylbenzene	0.0131		0.00363	0.0115	2	08/09/2022 07:06	WG1907703
1,2,3-Trimethylbenzene	0.0270		0.00363	0.0115	2	08/09/2022 07:06	WG1907703
Vinyl chloride	U		0.00266	0.00574	2	08/09/2022 07:06	WG1907703
1,3,5-Trimethylbenzene	U		0.00459	0.0115	2	08/09/2022 07:06	WG1907703
Xylenes, Total	U		0.00202	0.0149	2	08/09/2022 07:06	WG1907703
(S) Toluene-d8	*108*			*75.0-131*		*08/09/2022 07:06*	WG1907703
(S) 4-Bromofluorobenzene	*91.1*			*67.0-138*		*08/09/2022 07:06*	WG1907703
(S) 1,2-Dichloroethane-d4	*110*			*70.0-130*		*08/09/2022 07:06*	WG1907703

Sample Narrative:

L1522335-10 WG1907703: Lowest possible dilution due to sample foaming.

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	67.0	J	7.39	214	1	08/09/2022 05:19	WG1907345
(S) o-Terphenyl	*99.6*			*50.0-150*		*08/09/2022 05:19*	WG1907345

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	0.00361	J	0.00246	0.00641	1	08/12/2022 21:00	WG1909236
Acenaphthene	U		0.00223	0.00641	1	08/12/2022 21:00	WG1909236
Acenaphthylene	U		0.00231	0.00641	1	08/12/2022 21:00	WG1909236
Benzo(a)anthracene	0.0158		0.00185	0.00641	1	08/12/2022 21:00	WG1909236
Benzo(a)pyrene	0.0224		0.00191	0.00641	1	08/12/2022 21:00	WG1909236
Benzo(b)fluoranthene	0.0240		0.00163	0.00641	1	08/12/2022 21:00	WG1909236
Benzo(g,h,i)perylene	0.0298		0.00189	0.00641	1	08/12/2022 21:00	WG1909236
Benzo(k)fluoranthene	0.00600	J	0.00230	0.00641	1	08/12/2022 21:00	WG1909236
Chrysene	0.0203		0.00248	0.00641	1	08/12/2022 21:00	WG1909236
Dibenz(a,h)anthracene	0.00916		0.00184	0.00641	1	08/12/2022 21:00	WG1909236
Fluoranthene	0.0341		0.00242	0.00641	1	08/12/2022 21:00	WG1909236
Fluorene	U		0.00219	0.00641	1	08/12/2022 21:00	WG1909236
Indeno(1,2,3-cd)pyrene	0.0135		0.00193	0.00641	1	08/12/2022 21:00	WG1909236
Naphthalene	U		0.00436	0.0214	1	08/12/2022 21:00	WG1909236
Phenanthrene	0.0241		0.00247	0.00641	1	08/12/2022 21:00	WG1909236

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Pyrene	0.0435		0.00214	0.00641	1	08/12/2022 21:00	WG1909236
1-Methylnaphthalene	0.00600	J	0.00480	0.0214	1	08/12/2022 21:00	WG1909236
2-Methylnaphthalene	0.00673	J	0.00456	0.0214	1	08/12/2022 21:00	WG1909236
2-Chloronaphthalene	U		0.00498	0.0214	1	08/12/2022 21:00	WG1909236
(S) Nitrobenzene-d5	*67.0*			*14.0-149*		*08/12/2022 21:00*	WG1909236
(S) 2-Fluorobiphenyl	*72.8*			*34.0-125*		*08/12/2022 21:00*	WG1909236
(S) p-Terphenyl-d14	*74.3*			*23.0-120*		*08/12/2022 21:00*	WG1909236

Method Blank (MB)

(MB) R3824969-1 08/10/22 08:11

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00200			

L1522335-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1522335-05 08/10/22 08:11 • (DUP) R3824969-3 08/10/22 08:11

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	78.5	77.2	1	1.69		10

Laboratory Control Sample (LCS)

(LCS) R3824969-2 08/10/22 08:11

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3826467-3 08/10/22 04:45

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPHGAK C6 to C10	U		0.950	2.50
(S) a,a,a-Trifluorotoluene(FID)	*93.8*			*60.0-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3826467-1 08/10/22 03:26 • (LCSD) R3826467-2 08/10/22 03:52

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPHGAK C6 to C10	125	112	114	89.6	91.2	60.0-120			1.77	20
(S) a,a,a-Trifluorotoluene(FID)				*105*	*106*	*60.0-120*				

Method Blank (MB)

(MB) R3827281-3 08/16/22 00:29

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPHGAK C6 to C10	U		0.950	2.50
(S) a,a,a-Trifluorotoluene(FID)	*102*			*60.0-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3827281-1 08/15/22 22:43 • (LCSD) R3827281-2 08/15/22 23:09

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPHGAK C6 to C10	125	115	113	92.0	90.4	60.0-120			1.75	20
(S) a,a,a-Trifluorotoluene(FID)				*110*	*100*	*60.0-120*				

Method Blank (MB)

(MB) R3825090-3 08/08/22 22:10

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0365	0.0500
Acrylonitrile	U		0.00361	0.0125
Benzene	U		0.000467	0.00100
Bromobenzene	U		0.000900	0.0125
Bromodichloromethane	U		0.000725	0.00250
Bromoform	U		0.00117	0.0250
Bromomethane	U		0.00197	0.0125
n-Butylbenzene	U		0.00525	0.0125
sec-Butylbenzene	U		0.00288	0.0125
tert-Butylbenzene	U		0.00195	0.00500
Carbon tetrachloride	U		0.000898	0.00500
Chlorobenzene	U		0.000210	0.00250
Chlorodibromomethane	U		0.000612	0.00250
Chloroethane	U		0.00170	0.00500
Chloroform	U		0.00103	0.00250
Chloromethane	U		0.00435	0.0125
2-Chlorotoluene	U		0.000865	0.00250
4-Chlorotoluene	U		0.000450	0.00500
1,2-Dibromo-3-Chloropropane	U		0.00390	0.0250
1,2-Dibromoethane	U		0.000648	0.00250
Dibromomethane	U		0.000750	0.00500
1,2-Dichlorobenzene	U		0.000425	0.00500
1,3-Dichlorobenzene	U		0.000600	0.00500
1,4-Dichlorobenzene	U		0.000700	0.00500
Dichlorodifluoromethane	U		0.00161	0.00250
1,1-Dichloroethane	U		0.000491	0.00250
1,2-Dichloroethane	U		0.000649	0.00250
1,1-Dichloroethene	U		0.000606	0.00250
cis-1,2-Dichloroethene	U		0.000734	0.00250
trans-1,2-Dichloroethene	U		0.00104	0.00500
1,2-Dichloropropane	U		0.00142	0.00500
1,1-Dichloropropene	U		0.000809	0.00250
1,3-Dichloropropane	U		0.000501	0.00500
cis-1,3-Dichloropropene	U		0.000757	0.00250
trans-1,3-Dichloropropene	U		0.00114	0.00500
2,2-Dichloropropane	U		0.00138	0.00250
Di-isopropyl ether	U		0.000410	0.00100
Ethylbenzene	U		0.000737	0.00250
Hexachloro-1,3-butadiene	U		0.00600	0.0250
Isopropylbenzene	U		0.000425	0.00250

Method Blank (MB)

(MB) R3825090-3 08/08/22 22:10

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
p-Isopropyltoluene	U		0.00255	0.00500
2-Butanone (MEK)	U		0.0635	0.100
Methylene Chloride	U		0.00664	0.0250
4-Methyl-2-pentanone (MIBK)	U		0.00228	0.0250
Methyl tert-butyl ether	U		0.000350	0.00100
Naphthalene	U		0.00488	0.0125
n-Propylbenzene	U		0.000950	0.00500
Styrene	U		0.000229	0.0125
1,1,1,2-Tetrachloroethane	U		0.000948	0.00250
1,1,2,2-Tetrachloroethane	U		0.000695	0.00250
1,1,2-Trichlorotrifluoroethane	U		0.000754	0.00250
Tetrachloroethene	U		0.000896	0.00250
Toluene	U		0.00130	0.00500
1,2,3-Trichlorobenzene	U		0.00733	0.0125
1,2,4-Trichlorobenzene	U		0.00440	0.0125
1,1,1-Trichloroethane	U		0.000923	0.00250
1,1,2-Trichloroethane	U		0.000597	0.00250
Trichloroethene	U		0.000584	0.00100
Trichlorofluoromethane	U		0.000827	0.00250
1,2,3-Trichloropropane	U		0.00162	0.0125
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,2,3-Trimethylbenzene	U		0.00158	0.00500
Vinyl chloride	U		0.00116	0.00250
1,3,5-Trimethylbenzene	U		0.00200	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	*111*			*75.0-131*
(S) 4-Bromofluorobenzene	*101*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*82.1*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3825090-1 08/08/22 20:55 • (LCSD) R3825090-2 08/08/22 21:14

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	0.625	0.519	0.504	83.0	80.6	10.0-160			2.93	31
Acrylonitrile	0.625	0.496	0.457	79.4	73.1	45.0-153			8.18	22
Benzene	0.125	0.121	0.125	96.8	100	70.0-123			3.25	20
Bromobenzene	0.125	0.136	0.138	109	110	73.0-121			1.46	20
Bromodichloromethane	0.125	0.112	0.113	89.6	90.4	73.0-121			0.889	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3825090-1 08/08/22 20:55 • (LCSD) R3825090-2 08/08/22 21:14

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromoform	0.125	0.118	0.121	94.4	96.8	64.0-132			2.51	20
Bromomethane	0.125	0.0998	0.0997	79.8	79.8	56.0-147			0.100	20
n-Butylbenzene	0.125	0.132	0.130	106	104	68.0-135			1.53	20
sec-Butylbenzene	0.125	0.147	0.145	118	116	74.0-130			1.37	20
tert-Butylbenzene	0.125	0.137	0.137	110	110	75.0-127			0.000	20
Carbon tetrachloride	0.125	0.105	0.113	84.0	90.4	66.0-128			7.34	20
Chlorobenzene	0.125	0.134	0.137	107	110	76.0-128			2.21	20
Chlorodibromomethane	0.125	0.116	0.119	92.8	95.2	74.0-127			2.55	20
Chloroethane	0.125	0.112	0.111	89.6	88.8	61.0-134			0.897	20
Chloroform	0.125	0.111	0.115	88.8	92.0	72.0-123			3.54	20
Chloromethane	0.125	0.0764	0.0824	61.1	65.9	51.0-138			7.56	20
2-Chlorotoluene	0.125	0.139	0.134	111	107	75.0-124			3.66	20
4-Chlorotoluene	0.125	0.133	0.133	106	106	75.0-124			0.000	20
1,2-Dibromo-3-Chloropropane	0.125	0.103	0.100	82.4	80.0	59.0-130			2.96	20
1,2-Dibromoethane	0.125	0.136	0.136	109	109	74.0-128			0.000	20
Dibromomethane	0.125	0.111	0.117	88.8	93.6	75.0-122			5.26	20
1,2-Dichlorobenzene	0.125	0.132	0.130	106	104	76.0-124			1.53	20
1,3-Dichlorobenzene	0.125	0.142	0.136	114	109	76.0-125			4.32	20
1,4-Dichlorobenzene	0.125	0.130	0.131	104	105	77.0-121			0.766	20
Dichlorodifluoromethane	0.125	0.0884	0.0903	70.7	72.2	43.0-156			2.13	20
1,1-Dichloroethane	0.125	0.113	0.119	90.4	95.2	70.0-127			5.17	20
1,2-Dichloroethane	0.125	0.0964	0.0963	77.1	77.0	65.0-131			0.104	20
1,1-Dichloroethene	0.125	0.120	0.122	96.0	97.6	65.0-131			1.65	20
cis-1,2-Dichloroethene	0.125	0.115	0.116	92.0	92.8	73.0-125			0.866	20
trans-1,2-Dichloroethene	0.125	0.120	0.123	96.0	98.4	71.0-125			2.47	20
1,2-Dichloropropane	0.125	0.125	0.129	100	103	74.0-125			3.15	20
1,1-Dichloropropene	0.125	0.119	0.129	95.2	103	73.0-125			8.06	20
1,3-Dichloropropane	0.125	0.139	0.138	111	110	80.0-125			0.722	20
cis-1,3-Dichloropropene	0.125	0.125	0.125	100	100	76.0-127			0.000	20
trans-1,3-Dichloropropene	0.125	0.128	0.138	102	110	73.0-127			7.52	20
2,2-Dichloropropane	0.125	0.113	0.116	90.4	92.8	59.0-135			2.62	20
Di-isopropyl ether	0.125	0.111	0.114	88.8	91.2	60.0-136			2.67	20
Ethylbenzene	0.125	0.135	0.143	108	114	74.0-126			5.76	20
Hexachloro-1,3-butadiene	0.125	0.116	0.117	92.8	93.6	57.0-150			0.858	20
Isopropylbenzene	0.125	0.130	0.132	104	106	72.0-127			1.53	20
p-Isopropyltoluene	0.125	0.137	0.134	110	107	72.0-133			2.21	20
2-Butanone (MEK)	0.625	0.574	0.565	91.8	90.4	30.0-160			1.58	24
Methylene Chloride	0.125	0.116	0.114	92.8	91.2	68.0-123			1.74	20
4-Methyl-2-pentanone (MIBK)	0.625	0.624	0.632	99.8	101	56.0-143			1.27	20
Methyl tert-butyl ether	0.125	0.104	0.106	83.2	84.8	66.0-132			1.90	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3825090-1 08/08/22 20:55 • (LCSD) R3825090-2 08/08/22 21:14

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Naphthalene	0.125	0.118	0.122	94.4	97.6	59.0-130			3.33	20
n-Propylbenzene	0.125	0.143	0.141	114	113	74.0-126			1.41	20
Styrene	0.125	0.132	0.137	106	110	72.0-127			3.72	20
1,1,1,2-Tetrachloroethane	0.125	0.117	0.129	93.6	103	74.0-129			9.76	20
1,1,2,2-Tetrachloroethane	0.125	0.134	0.130	107	104	68.0-128			3.03	20
1,1,2-Trichlorotrifluoroethane	0.125	0.115	0.109	92.0	87.2	61.0-139			5.36	20
Tetrachloroethene	0.125	0.135	0.138	108	110	70.0-136			2.20	20
Toluene	0.125	0.132	0.139	106	111	75.0-121			5.17	20
1,2,3-Trichlorobenzene	0.125	0.113	0.116	90.4	92.8	59.0-139			2.62	20
1,2,4-Trichlorobenzene	0.125	0.134	0.132	107	106	62.0-137			1.50	20
1,1,1-Trichloroethane	0.125	0.105	0.117	84.0	93.6	69.0-126			10.8	20
1,1,2-Trichloroethane	0.125	0.141	0.137	113	110	78.0-123			2.88	20
Trichloroethene	0.125	0.125	0.126	100	101	76.0-126			0.797	20
Trichlorofluoromethane	0.125	0.105	0.107	84.0	85.6	61.0-142			1.89	20
1,2,3-Trichloropropane	0.125	0.128	0.115	102	92.0	67.0-129			10.7	20
1,2,4-Trimethylbenzene	0.125	0.127	0.123	102	98.4	70.0-126			3.20	20
1,2,3-Trimethylbenzene	0.125	0.127	0.127	102	102	74.0-124			0.000	20
Vinyl chloride	0.125	0.117	0.118	93.6	94.4	63.0-134			0.851	20
1,3,5-Trimethylbenzene	0.125	0.131	0.130	105	104	73.0-127			0.766	20
Xylenes, Total	0.375	0.401	0.411	107	110	72.0-127			2.46	20
(S) Toluene-d8				*110*	*112*	*75.0-131*				
(S) 4-Bromofluorobenzene				*101*	*103*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*84.8*	*83.9*	*70.0-130*				

Method Blank (MB)

(MB) R3826068-2 08/08/22 23:23

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0365	0.0500
Acrylonitrile	U		0.00361	0.0125
Benzene	U		0.000467	0.00100
Bromobenzene	U		0.000900	0.0125
Bromodichloromethane	U		0.000725	0.00250
Bromoform	U		0.00117	0.0250
Bromomethane	U		0.00197	0.0125
n-Butylbenzene	U		0.00525	0.0125
sec-Butylbenzene	U		0.00288	0.0125
tert-Butylbenzene	U		0.00195	0.00500
Carbon tetrachloride	U		0.000898	0.00500
Chlorobenzene	U		0.000210	0.00250
Chlorodibromomethane	U		0.000612	0.00250
Chloroethane	U		0.00170	0.00500
Chloroform	U		0.00103	0.00250
Chloromethane	U		0.00435	0.0125
2-Chlorotoluene	U		0.000865	0.00250
4-Chlorotoluene	U		0.000450	0.00500
1,2-Dibromo-3-Chloropropane	U		0.00390	0.0250
1,2-Dibromoethane	U		0.000648	0.00250
Dibromomethane	U		0.000750	0.00500
1,2-Dichlorobenzene	U		0.000425	0.00500
1,3-Dichlorobenzene	U		0.000600	0.00500
1,4-Dichlorobenzene	U		0.000700	0.00500
Dichlorodifluoromethane	U		0.00161	0.00250
1,1-Dichloroethane	U		0.000491	0.00250
1,2-Dichloroethane	U		0.000649	0.00250
1,1-Dichloroethene	U		0.000606	0.00250
cis-1,2-Dichloroethene	U		0.000734	0.00250
trans-1,2-Dichloroethene	U		0.00104	0.00500
1,2-Dichloropropane	U		0.00142	0.00500
1,1-Dichloropropene	U		0.000809	0.00250
1,3-Dichloropropane	U		0.000501	0.00500
cis-1,3-Dichloropropene	U		0.000757	0.00250
trans-1,3-Dichloropropene	U		0.00114	0.00500
2,2-Dichloropropane	U		0.00138	0.00250
Di-isopropyl ether	U		0.000410	0.00100
Ethylbenzene	U		0.000737	0.00250
Hexachloro-1,3-butadiene	U		0.00600	0.0250
Isopropylbenzene	U		0.000425	0.00250

Method Blank (MB)

(MB) R3826068-2 08/08/22 23:23

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
p-Isopropyltoluene	U		0.00255	0.00500
2-Butanone (MEK)	U		0.0635	0.100
Methylene Chloride	U		0.00664	0.0250
4-Methyl-2-pentanone (MIBK)	U		0.00228	0.0250
Methyl tert-butyl ether	U		0.000350	0.00100
Naphthalene	U		0.00488	0.0125
n-Propylbenzene	U		0.000950	0.00500
Styrene	U		0.000229	0.0125
1,1,1,2-Tetrachloroethane	U		0.000948	0.00250
1,1,2,2-Tetrachloroethane	U		0.000695	0.00250
1,1,2-Trichlorotrifluoroethane	U		0.000754	0.00250
Tetrachloroethene	U		0.000896	0.00250
Toluene	U		0.00130	0.00500
1,2,3-Trichlorobenzene	U		0.00733	0.0125
1,2,4-Trichlorobenzene	U		0.00440	0.0125
1,1,1-Trichloroethane	U		0.000923	0.00250
1,1,2-Trichloroethane	U		0.000597	0.00250
Trichloroethene	U		0.000584	0.00100
Trichlorofluoromethane	U		0.000827	0.00250
1,2,3-Trichloropropane	U		0.00162	0.0125
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,2,3-Trimethylbenzene	U		0.00158	0.00500
Vinyl chloride	U		0.00116	0.00250
1,3,5-Trimethylbenzene	U		0.00200	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	*105*			*75.0-131*
(S) 4-Bromofluorobenzene	*81.1*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*106*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3826068-1 08/08/22 22:26

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	0.625	0.981	157	10.0-160	
Acrylonitrile	0.625	0.772	124	45.0-153	
Benzene	0.125	0.137	110	70.0-123	
Bromobenzene	0.125	0.148	118	73.0-121	
Bromodichloromethane	0.125	0.145	116	73.0-121	

Laboratory Control Sample (LCS)

(LCS) R3826068-1 08/08/22 22:26

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Bromoform	0.125	0.120	96.0	64.0-132	
Bromomethane	0.125	0.157	126	56.0-147	
n-Butylbenzene	0.125	0.119	95.2	68.0-135	
sec-Butylbenzene	0.125	0.145	116	74.0-130	
tert-Butylbenzene	0.125	0.135	108	75.0-127	
Carbon tetrachloride	0.125	0.147	118	66.0-128	
Chlorobenzene	0.125	0.131	105	76.0-128	
Chlorodibromomethane	0.125	0.120	96.0	74.0-127	
Chloroethane	0.125	0.156	125	61.0-134	
Chloroform	0.125	0.139	111	72.0-123	
Chloromethane	0.125	0.130	104	51.0-138	
2-Chlorotoluene	0.125	0.135	108	75.0-124	
4-Chlorotoluene	0.125	0.147	118	75.0-124	
1,2-Dibromo-3-Chloropropane	0.125	0.119	95.2	59.0-130	
1,2-Dibromoethane	0.125	0.126	101	74.0-128	
Dibromomethane	0.125	0.136	109	75.0-122	
1,2-Dichlorobenzene	0.125	0.136	109	76.0-124	
1,3-Dichlorobenzene	0.125	0.147	118	76.0-125	
1,4-Dichlorobenzene	0.125	0.135	108	77.0-121	
Dichlorodifluoromethane	0.125	0.103	82.4	43.0-156	
1,1-Dichloroethane	0.125	0.138	110	70.0-127	
1,2-Dichloroethane	0.125	0.165	132	65.0-131	J4
1,1-Dichloroethene	0.125	0.135	108	65.0-131	
cis-1,2-Dichloroethene	0.125	0.144	115	73.0-125	
trans-1,2-Dichloroethene	0.125	0.127	102	71.0-125	
1,2-Dichloropropane	0.125	0.143	114	74.0-125	
1,1-Dichloropropene	0.125	0.141	113	73.0-125	
1,3-Dichloropropane	0.125	0.142	114	80.0-125	
cis-1,3-Dichloropropene	0.125	0.136	109	76.0-127	
trans-1,3-Dichloropropene	0.125	0.134	107	73.0-127	
2,2-Dichloropropane	0.125	0.149	119	59.0-135	
Di-isopropyl ether	0.125	0.144	115	60.0-136	
Ethylbenzene	0.125	0.125	100	74.0-126	
Hexachloro-1,3-butadiene	0.125	0.150	120	57.0-150	
Isopropylbenzene	0.125	0.123	98.4	72.0-127	
p-Isopropyltoluene	0.125	0.142	114	72.0-133	
2-Butanone (MEK)	0.625	0.749	120	30.0-160	
Methylene Chloride	0.125	0.134	107	68.0-123	
4-Methyl-2-pentanone (MIBK)	0.625	0.847	136	56.0-143	
Methyl tert-butyl ether	0.125	0.147	118	66.0-132	

Laboratory Control Sample (LCS)

(LCS) R3826068-1 08/08/22 22:26

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Naphthalene	0.125	0.0986	78.9	59.0-130	
n-Propylbenzene	0.125	0.144	115	74.0-126	
Styrene	0.125	0.113	90.4	72.0-127	
1,1,1,2-Tetrachloroethane	0.125	0.127	102	74.0-129	
1,1,2,2-Tetrachloroethane	0.125	0.158	126	68.0-128	
1,1,2-Trichlorotrifluoroethane	0.125	0.137	110	61.0-139	
Tetrachloroethene	0.125	0.143	114	70.0-136	
Toluene	0.125	0.136	109	75.0-121	
1,2,3-Trichlorobenzene	0.125	0.109	87.2	59.0-139	
1,2,4-Trichlorobenzene	0.125	0.122	97.6	62.0-137	
1,1,1-Trichloroethane	0.125	0.149	119	69.0-126	
1,1,2-Trichloroethane	0.125	0.137	110	78.0-123	
Trichloroethene	0.125	0.142	114	76.0-126	
Trichlorofluoromethane	0.125	0.143	114	61.0-142	
1,2,3-Trichloropropane	0.125	0.178	142	67.0-129	J4
1,2,4-Trimethylbenzene	0.125	0.134	107	70.0-126	
1,2,3-Trimethylbenzene	0.125	0.132	106	74.0-124	
Vinyl chloride	0.125	0.137	110	63.0-134	
1,3,5-Trimethylbenzene	0.125	0.147	118	73.0-127	
Xylenes, Total	0.375	0.361	96.3	72.0-127	
(S) Toluene-d8			*98.4*	*75.0-131*	
(S) 4-Bromofluorobenzene			*79.3*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*115*	*70.0-130*	

Method Blank (MB)

(MB) R3825470-3 08/11/22 11:34

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
p-Isopropyltoluene	U		0.00255	0.00500
Naphthalene	U		0.00488	0.0125
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,2,3-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	*102*			*75.0-131*
(S) 4-Bromofluorobenzene	*97.1*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*98.8*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3825470-1 08/11/22 10:15 • (LCSD) R3825470-2 08/11/22 10:35

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
p-Isopropyltoluene	0.125	0.127	0.131	102	105	72.0-133			3.10	20
Naphthalene	0.125	0.134	0.141	107	113	59.0-130			5.09	20
1,2,4-Trimethylbenzene	0.125	0.128	0.124	102	99.2	70.0-126			3.17	20
1,2,3-Trimethylbenzene	0.125	0.113	0.118	90.4	94.4	74.0-124			4.33	20
1,3,5-Trimethylbenzene	0.125	0.131	0.131	105	105	73.0-127			0.000	20
Xylenes, Total	0.375	0.306	0.338	81.6	90.1	72.0-127			9.94	20
(S) Toluene-d8				*99.6*	*97.1*	*75.0-131*				
(S) 4-Bromofluorobenzene				*97.1*	*92.2*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*110*	*110*	*70.0-130*				

Method Blank (MB)

(MB) R3826192-3 08/14/22 18:44

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Naphthalene	U		0.00488	0.0125
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	*109*			*75.0-131*
(S) 4-Bromofluorobenzene	*101*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*82.9*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3826192-1 08/14/22 17:30 • (LCSD) R3826192-2 08/14/22 17:48

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Naphthalene	0.125	0.114	0.128	91.2	102	59.0-130			11.6	20
Xylenes, Total	0.375	0.425	0.413	113	110	72.0-127			2.86	20
(S) Toluene-d8				*110*	*108*	*75.0-131*				
(S) 4-Bromofluorobenzene				*104*	*100*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*90.2*	*90.2*	*70.0-130*				

Method Blank (MB)

(MB) R3824095-1 08/08/22 23:13

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
AK102 DRO C10-C25	7.95		6.92	200
(S) o-Terphenyl	*110*			*60.0-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3824095-2 08/08/22 23:26 • (LCSD) R3824095-3 08/08/22 23:39

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
AK102 DRO C10-C25	200	209	215	104	108	75.0-125			2.83	20
(S) o-Terphenyl				*101*	*104*	*60.0-120*				

L1521363-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1521363-01 08/09/22 00:18 • (MS) R3824095-4 08/09/22 00:30 • (MSD) R3824095-5 08/09/22 00:43

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
AK102 DRO C10-C25	704	77.2	690	740	87.0	93.6	1	75.0-125			6.97	20
(S) o-Terphenyl					*90.5*	*94.7*		*50.0-150*				

Method Blank (MB)

(MB) R3825514-1 08/12/22 02:07

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
AK102 DRO C10-C25	U		6.92	200
(S) o-Terphenyl	*90.6*			*60.0-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3825514-2 08/12/22 02:20 • (LCSD) R3825514-3 08/12/22 02:34

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
AK102 DRO C10-C25	200	183	183	91.5	91.5	75.0-125			0.000	20
(S) o-Terphenyl				*120*	*117*	*60.0-120*				

L1524107-25 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1524107-25 08/12/22 03:16 • (MS) R3825514-4 08/12/22 03:30 • (MSD) R3825514-5 08/12/22 03:44

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
AK102 DRO C10-C25	244	339	342	94.5	1.50	0.000	1	75.0-125	J6	J3 J6	113	20
(S) o-Terphenyl					*49.4*	*8.09*		*50.0-150*	J2	J2		

Method Blank (MB)

(MB) R3824928-2 08/08/22 22:09

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	0.240		0.00230	0.00600
Acenaphthene	0.00588	J	0.00209	0.00600
Acenaphthylene	U		0.00216	0.00600
Benzo(a)anthracene	0.00932		0.00173	0.00600
Benzo(a)pyrene	0.00195	J	0.00179	0.00600
Benzo(b)fluoranthene	0.00495	J	0.00153	0.00600
Benzo(g,h,i)perylene	U		0.00177	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Chrysene	0.0120		0.00232	0.00600
Dibenz(a,h)anthracene	U		0.00172	0.00600
Fluoranthene	0.0424		0.00227	0.00600
Fluorene	0.0248		0.00205	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600
Naphthalene	0.00912	J	0.00408	0.0200
Phenanthrene	0.0828		0.00231	0.00600
Pyrene	0.0269		0.00200	0.00600
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	0.0110	J	0.00427	0.0200
2-Chloronaphthalene	U		0.00466	0.0200
(S) Nitrobenzene-d5	*60.8*			*14.0-149*
(S) 2-Fluorobiphenyl	*70.0*			*34.0-125*
(S) p-Terphenyl-d14	*74.7*			*23.0-120*

Laboratory Control Sample (LCS)

(LCS) R3824928-1 08/08/22 21:49

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0717	89.6	50.0-126	
Acenaphthene	0.0800	0.0702	87.8	50.0-120	
Acenaphthylene	0.0800	0.0685	85.6	50.0-120	
Benzo(a)anthracene	0.0800	0.0705	88.1	45.0-120	
Benzo(a)pyrene	0.0800	0.0696	87.0	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0707	88.4	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0669	83.6	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0698	87.3	49.0-125	
Chrysene	0.0800	0.0731	91.4	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0669	83.6	47.0-125	
Fluoranthene	0.0800	0.0741	92.6	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R3824928-1 08/08/22 21:49

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0705	88.1	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0702	87.8	46.0-125	
Naphthalene	0.0800	0.0656	82.0	50.0-120	
Phenanthrene	0.0800	0.0703	87.9	47.0-120	
Pyrene	0.0800	0.0675	84.4	43.0-123	
1-Methylnaphthalene	0.0800	0.0656	82.0	51.0-121	
2-Methylnaphthalene	0.0800	0.0687	85.9	50.0-120	
2-Chloronaphthalene	0.0800	0.0679	84.9	50.0-120	
(S) Nitrobenzene-d5			*78.5*	*14.0-149*	
(S) 2-Fluorobiphenyl			*81.5*	*34.0-125*	
(S) p-Terphenyl-d14			*81.1*	*23.0-120*	

Method Blank (MB)

(MB) R3825747-2 08/12/22 14:46

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00230	0.00600
Acenaphthene	U		0.00209	0.00600
Acenaphthylene	U		0.00216	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(a)pyrene	U		0.00179	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(g,h,i)perylene	U		0.00177	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Chrysene	U		0.00232	0.00600
Dibenz(a,h)anthracene	U		0.00172	0.00600
Fluoranthene	U		0.00227	0.00600
Fluorene	U		0.00205	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600
Naphthalene	U		0.00408	0.0200
Phenanthrene	U		0.00231	0.00600
Pyrene	U		0.00200	0.00600
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
2-Chloronaphthalene	U		0.00466	0.0200
(S) Nitrobenzene-d5	*70.3*			*14.0-149*
(S) 2-Fluorobiphenyl	*84.2*			*34.0-125*
(S) p-Terphenyl-d14	*85.5*			*23.0-120*

Laboratory Control Sample (LCS)

(LCS) R3825747-1 08/12/22 14:28

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0591	73.9	50.0-126	
Acenaphthene	0.0800	0.0627	78.4	50.0-120	
Acenaphthylene	0.0800	0.0630	78.8	50.0-120	
Benzo(a)anthracene	0.0800	0.0625	78.1	45.0-120	
Benzo(a)pyrene	0.0800	0.0653	81.6	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0619	77.4	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0592	74.0	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0606	75.8	49.0-125	
Chrysene	0.0800	0.0626	78.3	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0585	73.1	47.0-125	
Fluoranthene	0.0800	0.0620	77.5	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R3825747-1 08/12/22 14:28

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0615	76.9	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0630	78.8	46.0-125	
Naphthalene	0.0800	0.0598	74.8	50.0-120	
Phenanthrene	0.0800	0.0569	71.1	47.0-120	
Pyrene	0.0800	0.0704	88.0	43.0-123	
1-Methylnaphthalene	0.0800	0.0602	75.3	51.0-121	
2-Methylnaphthalene	0.0800	0.0634	79.3	50.0-120	
2-Chloronaphthalene	0.0800	0.0592	74.0	50.0-120	
(S) Nitrobenzene-d5			*75.7*	*14.0-149*	
(S) 2-Fluorobiphenyl			*83.9*	*34.0-125*	
(S) p-Terphenyl-d14			*82.6*	*23.0-120*	

L1522266-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1522266-05 08/12/22 19:49 • (MS) R3825747-3 08/12/22 20:07 • (MSD) R3825747-4 08/12/22 20:25

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Anthracene	0.0858	0.0699	0.375	0.471	355	473	1	10.0-145	J5	J5	22.8	30
Acenaphthene	0.0858	0.0272	0.219	0.231	223	240	1	14.0-127	J5	J5	5.30	27
Acenaphthylene	0.0858	0.00829	0.0797	0.0825	83.3	87.3	1	21.0-124			3.34	25
Benzo(a)anthracene	0.0858	0.354	0.994	1.37	745	1190	1	10.0-139	V	J3 V	31.5	30
Benzo(a)pyrene	0.0858	0.404	0.916	1.25	596	991	1	10.0-141	V	V	30.6	31
Benzo(b)fluoranthene	0.0858	0.421	1.05	1.34	734	1090	1	10.0-140	V	V	24.4	36
Benzo(g,h,i)perylene	0.0858	0.245	0.516	0.684	316	517	1	10.0-140	J5	J5	28.0	33
Benzo(k)fluoranthene	0.0858	0.141	0.373	0.512	270	438	1	10.0-137	J5	J3 J5	31.6	31
Chrysene	0.0858	0.291	0.968	1.28	788	1160	1	10.0-145	J5	J5	27.7	30
Dibenz(a,h)anthracene	0.0858	0.0501	0.166	0.193	135	168	1	10.0-132	J5	J5	15.1	31
Fluoranthene	0.0858	0.645	2.07	2.71	1660	2430	1	10.0-153	V	V	26.8	33
Fluorene	0.0858	0.0166	0.171	0.171	180	182	1	11.0-130	J5	J5	0.000	29
Indeno(1,2,3-cd)pyrene	0.0858	0.262	0.589	0.756	381	582	1	10.0-137	J5	J5	24.8	32
Naphthalene	0.0858	0.00609	0.102	0.107	112	118	1	10.0-135			4.36	27
Phenanthrene	0.0858	0.250	1.29	1.65	1210	1640	1	10.0-144	J5	J5	24.4	31
Pyrene	0.0858	0.742	1.96	2.77	1420	2390	1	10.0-148	V	V	34.3	35
1-Methylnaphthalene	0.0858	0.00514	0.102	0.102	113	114	1	10.0-142			0.636	28
2-Methylnaphthalene	0.0858	U	0.0965	0.0973	107	109	1	10.0-137			0.783	28
2-Chloronaphthalene	0.0858	U	0.0627	0.0569	72.8	66.7	1	29.0-120			9.78	24
(S) Nitrobenzene-d5					*68.4*	*64.9*		*14.0-149*				
(S) 2-Fluorobiphenyl					*80.1*	*73.7*		*34.0-125*				
(S) p-Terphenyl-d14					*79.2*	*72.9*		*23.0-120*				

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
MDL (dry)	Method Detection Limit.
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
C3	The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Method sensitivity check is acceptable.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
V	The sample concentration is too high to evaluate accurate spike recoveries.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
Arcadis - Chevron - AK

880 H St.
Anchorage, AK 99501

Billing Information:
Attn: Acounts Payable
630 Plaza Dr Ste 600
Highlands Ranch, CO 80129

Pres Chk

Report to:
Erika Midkiff/Sydney Clark/Nick Wood

Email To:
Sydney.Clark@arcadis.com;Nick.Wood@arcadis.

Project Description:
309152

City/State Collected: Fairbanks, AK

Please Circle: PT MT CT ET (AKST)

Phone: 907-276-8095

Client Project #
30064227 07.42

Lab Project #
CHEVARCAK-309152

Collected by (print):
E. Wojcik

Site/Facility ID #
501 EAST 30TH AVE,

P.O. #
30043353.5134

Collected by (signature):
E Wojcik

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day X Standard

Quote #

Date Results Needed

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	AK101 60mlAmb/MeOH/Syr	AK102 4ozClr-NoPres	PAHs 8270SIM 4ozClr-NoPres	Total Lead 6010 4ozClr-NoPres	VOCs 8260D 40mlAmb/MeOH10ml/Syr	Remarks	Sample # (lab only)
MW-24-S-0.5-1	Grab	SS	0.5-1	8.3.22	1030	4	X	X	X	X	X		01
MW-23-S-0.5-1	Grab	SS	0.5-1	8.3.22	1150	4	X	X	X	X	X		02
MW-23-S-4.5-5	Grab	SS	4.5-5	8.3.22	1250	4	X	X	X	X	X		03
DUP-1	Grab	SS	—	8.3.22	—	4	X	X	X	X	X		04
MW-23-S-9.5-10	Grab	SS	9.5-10	8.3.22	1315	4	X	X	X	X	X		05
MW-22-S-0.5-1	Grab	SS	0.5-1	8.3.22	1430	4	X	X	X	X	X		06
MW-24-S-4.5-5	Grab	SS	4.5-5	8.3.22	1510	4	X	X	X	X	X		07
MW-24-S-9.5-10	Grab	SS	9.5-10	8.3.22	1520	4	X	X	X	X	X		08
MW-22-S-4.5-5	Grab	SS	4.5-5	8.3.22	1745	4	X	X	X	X	X		09
MW-27-S-5-5.5	Grab	SS	5-5.5	8.3.22	1750	4	X	X	X	X	X		10

remove lead analysis for all samples per request of Parry, Sean <Sean.Parry@arcadis.com>-bjf 08/09/22

Chain of Custody Page 1 of 2

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN
12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1522335
D241

Acctnum: CHEVARCAK
Template: T213301
Prelogin: P939328
PM: 110 - Brian Ford
PB: CS 7/23/22

Shipped Via: FedEx 2nd Day

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS X FedEx __ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
E Wojcik	8.4.22	0800			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) D. Ramsey	Date: 08-09-22 Time: 0845	Hold: Condition: NCF / OK

Company Name/Address:
Arcadis - Chevron - AK

880 H St.
Anchorage, AK 99501

Billing Information:
Attn: Acounts Payable
630 Plaza Dr Ste 600
Highlands Ranch, CO 80129

Pres Chk

Report to:
Erika Midkiff/Sydney Clark/Nick Wood

Email To:
Sydney.Clark@arcadis.com;Nick.Wood@arcadis.

Project Description:
309152

City/State Collected: Fairbanks, AK

Please Circle: PT MT CT ET

Phone: **907-276-8095**

Client Project #
30064227 07.42

Lab Project #
CHEVARCAK-309152

Collected by (print):
E. Wujcik

Site/Facility ID #
501 EAST 30TH AVE,

P.O. #
30043353.5134

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day X Standard

Date Results Needed

Quote #

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	AK101 60mlAmb/MeOH/Syr	AK102 4ozClr-NoPres	PAHs 8270SIM 4ozClr-NoPres	Total Lead 6010 4ozClr-NoPres	VOCs 8260D 40mlAmb/MeOH10ml/Syr
Trip Blank	—	SS	—	—	—	6					
		SS									
		SS									

Analysis / Container / Preservative

Chain of Custody Page 2 of 2

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN
12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L522335

Table #

Acctnum: **CHEVARCAK**
Template: **T213301**
Prelogin: **P939328**
PM: **110 - Brian Ford**
PB: CB 7/23/22

Shipped Via: **FedEX 2nd Day**

Remarks	Sample # (lab only)

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS X FedEx __ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
E. Wujcik	8.4.22	0800			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) D. Ramsey	Date: 08-05-22 Time: 0845	Hold: / Condition: NCF / OK

Tracking Numbers	Temperature
5882 7546 7740	.5 + .0 = .5
5882 7546 7739	1.7 + .0 = 1.7

ANALYTICAL REPORT

August 18, 2022

Arcadis - Chevron - AK

Sample Delivery Group:	L1523339
Samples Received:	08/09/2022
Project Number:	30064227.07.42
Description:	309152
Site:	501 EAST 30TH AVE, FAIRBANKS
Report To:	Erika Midkiff/Sydney Clark/Nick Wood 880 H St. Anchorage, AK 99501

Entire Report Reviewed By:

Brian Ford

Project Manager

Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

EB-1_220803 L1523339-01 GW

Collected by: EW/MM | Collected date/time: 08/03/22 15:20 | Received date/time: 08/09/22 14:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020B	WG1908982	1	08/11/22 02:29	08/13/22 17:21	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG1910867	1	08/16/22 22:14	08/16/22 22:14	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1908394	1	08/11/22 10:41	08/11/22 10:41	BRA	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1910764	1	08/14/22 22:50	08/14/22 22:50	JAH	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG1909574	1.02	08/12/22 14:10	08/16/22 22:49	KLA	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG1908113	1.11	08/10/22 03:39	08/10/22 21:38	MWS	Mt. Juliet, TN

MW-22_220806 L1523339-02 GW

Collected by: EW/MM | Collected date/time: 08/06/22 14:30 | Received date/time: 08/09/22 14:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020B	WG1908982	1	08/11/22 02:29	08/13/22 17:24	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG1910867	1	08/16/22 22:52	08/16/22 22:52	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1908394	50	08/11/22 11:05	08/11/22 11:05	BRA	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1910764	1	08/15/22 03:01	08/15/22 03:01	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1911477	10	08/17/22 03:25	08/17/22 03:25	ADM	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG1911861	1.03	08/14/22 13:19	08/16/22 20:04	AO	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG1908113	1	08/10/22 03:39	08/10/22 22:00	MWS	Mt. Juliet, TN

MW-23_220806 L1523339-03 GW

Collected by: EW/MM | Collected date/time: 08/06/22 11:17 | Received date/time: 08/09/22 14:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020B	WG1908982	1	08/11/22 02:29	08/13/22 17:27	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG1910867	1	08/16/22 23:42	08/16/22 23:42	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1908394	50	08/11/22 11:29	08/11/22 11:29	BRA	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1910764	1	08/15/22 03:21	08/15/22 03:21	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1911477	10	08/17/22 03:45	08/17/22 03:45	ADM	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG1911861	1.03	08/14/22 13:19	08/16/22 20:16	AO	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG1908113	1	08/10/22 03:39	08/10/22 22:23	MWS	Mt. Juliet, TN

DUP-1_220806 L1523339-04 GW

Collected by: EW/MM | Collected date/time: 08/06/22 18:00 | Received date/time: 08/09/22 14:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020B	WG1908982	1	08/11/22 02:29	08/13/22 17:30	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG1910867	10	08/17/22 00:08	08/17/22 00:08	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1908394	50	08/11/22 11:53	08/11/22 11:53	BRA	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1910764	10	08/15/22 07:10	08/15/22 07:10	JAH	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG1911861	1.02	08/14/22 13:19	08/16/22 21:05	KLA	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG1908113	1	08/10/22 03:39	08/10/22 22:46	MWS	Mt. Juliet, TN

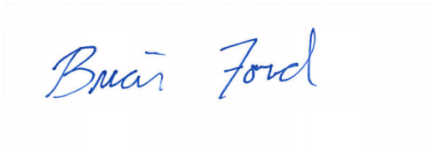
MW-24_220806 L1523339-06 GW

Collected by: EW/MM | Collected date/time: 08/06/22 18:00 | Received date/time: 08/09/22 14:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020B	WG1908982	1	08/11/22 02:29	08/13/22 17:34	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG1910867	10	08/17/22 02:11	08/17/22 02:11	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1908394	50	08/11/22 12:17	08/11/22 12:17	BRA	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1910764	10	08/15/22 07:30	08/15/22 07:30	JAH	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG1911861	1.04	08/14/22 13:19	08/16/22 21:17	KLA	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG1908113	1	08/10/22 03:39	08/10/22 23:09	MWS	Mt. Juliet, TN

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Unless qualified or notated within the narrative below, all sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Brian Ford
Project Manager

Volatile Organic Compounds (GC/MS) by Method 8260D

The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Data is likely to show a low bias concerning the result.

Batch	Lab Sample ID	Analytes
WG1910764	L1523339-01	1,2,3-Trichlorobenzene and 1,2,4-Trichlorobenzene
WG1910764	L1523339-02	1,2,3-Trichlorobenzene and 1,2,4-Trichlorobenzene
WG1910764	L1523339-03	1,2,3-Trichlorobenzene and 1,2,4-Trichlorobenzene
WG1910764	L1523339-04	1,2,3-Trichlorobenzene and 1,2,4-Trichlorobenzene
WG1910764	L1523339-06	1,2,3-Trichlorobenzene and 1,2,4-Trichlorobenzene

The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Method sensitivity check is acceptable.

Batch	Lab Sample ID	Analytes
WG1910764	L1523339-01	Hexachloro-1,3-butadiene, Naphthalene and Vinyl acetate
WG1910764	L1523339-02	Hexachloro-1,3-butadiene, Naphthalene and Vinyl acetate
WG1910764	L1523339-03	Hexachloro-1,3-butadiene, Naphthalene and Vinyl acetate
WG1910764	L1523339-04	Hexachloro-1,3-butadiene, Naphthalene and Vinyl acetate
WG1910764	L1523339-06	Hexachloro-1,3-butadiene, Naphthalene and Vinyl acetate

The associated batch QC was outside the established quality control range for precision.

Batch	Lab Sample ID	Analytes
WG1910764	(LCSD) R3826595-2, L1523339-01, 02, 03, 04, 06	Vinyl acetate

EDB / DBCP by Method 8011

The associated batch QC was above the established quality control range for accuracy.

Batch	Lab Sample ID	Analytes
WG1911861	(LCSD) R3826997-5, L1523339-02, 03	Ethylene Dibromide

Semi-Volatile Organic Compounds (GC) by Method AK102

Surrogate recovery limits have been exceeded; values are outside upper control limits.

Batch	Analyte	Lab Sample ID
WG1908113	o-Terphenyl	(LCS) R3824911-2, (LCSD) R3824911-3

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Lead,Dissolved	U		0.849	2.00	1	08/13/2022 17:21	WG1908982

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TPHGAK C6 to C10	U		28.7	100	1	08/16/2022 22:14	WG1910867
(S) a,a,a-Trifluorotoluene(FID)	*88.8*			*50.0-150*		*08/16/2022 22:14*	WG1910867

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,2,3-Trichloropropane	U		0.00200	0.00500	1	08/11/2022 10:41	WG1908394
Acetone	U		11.3	25.0	1	08/14/2022 22:50	WG1910764
Acrylonitrile	U		0.671	5.00	1	08/14/2022 22:50	WG1910764
Benzene	U		0.0941	0.500	1	08/14/2022 22:50	WG1910764
Bromobenzene	U		0.118	0.500	1	08/14/2022 22:50	WG1910764
Bromodichloromethane	U		0.136	0.500	1	08/14/2022 22:50	WG1910764
Bromochloromethane	U		0.128	0.500	1	08/14/2022 22:50	WG1910764
Bromoform	U		0.129	0.500	1	08/14/2022 22:50	WG1910764
Bromomethane	U		0.605	2.50	1	08/14/2022 22:50	WG1910764
n-Butylbenzene	U		0.157	0.500	1	08/14/2022 22:50	WG1910764
sec-Butylbenzene	U		0.125	0.500	1	08/14/2022 22:50	WG1910764
tert-Butylbenzene	U		0.127	0.500	1	08/14/2022 22:50	WG1910764
Carbon disulfide	U		0.0962	0.500	1	08/14/2022 22:50	WG1910764
Carbon tetrachloride	U		0.128	0.500	1	08/14/2022 22:50	WG1910764
Chlorobenzene	U		0.117	0.500	1	08/14/2022 22:50	WG1910764
Chlorodibromomethane	U		0.140	0.500	1	08/14/2022 22:50	WG1910764
Chloroethane	U		0.192	2.50	1	08/14/2022 22:50	WG1910764
2-Chloroethyl vinyl ether	U		0.575	50.0	1	08/14/2022 22:50	WG1910764
Chloroform	U		0.111	0.500	1	08/14/2022 22:50	WG1910764
Chloromethane	U		0.960	1.25	1	08/14/2022 22:50	WG1910764
2-Chlorotoluene	U		0.106	0.500	1	08/14/2022 22:50	WG1910764
4-Chlorotoluene	U		0.114	0.500	1	08/14/2022 22:50	WG1910764
1,2-Dibromo-3-Chloropropane	U		0.276	2.50	1	08/14/2022 22:50	WG1910764
1,2-Dibromoethane	U		0.126	0.500	1	08/14/2022 22:50	WG1910764
Dibromomethane	U		0.122	0.500	1	08/14/2022 22:50	WG1910764
1,2-Dichlorobenzene	U		0.107	0.500	1	08/14/2022 22:50	WG1910764
1,3-Dichlorobenzene	U		0.299	0.500	1	08/14/2022 22:50	WG1910764
1,4-Dichlorobenzene	U		0.120	0.500	1	08/14/2022 22:50	WG1910764
Dichlorodifluoromethane	U		0.374	2.50	1	08/14/2022 22:50	WG1910764
1,1-Dichloroethane	U		0.100	0.500	1	08/14/2022 22:50	WG1910764
1,2-Dichloroethane	U		0.0819	0.500	1	08/14/2022 22:50	WG1910764
1,1-Dichloroethene	U		0.188	0.500	1	08/14/2022 22:50	WG1910764
cis-1,2-Dichloroethene	U		0.126	0.500	1	08/14/2022 22:50	WG1910764
trans-1,2-Dichloroethene	U		0.149	0.500	1	08/14/2022 22:50	WG1910764
1,2-Dichloropropane	U		0.149	0.500	1	08/14/2022 22:50	WG1910764
1,1-Dichloropropene	U		0.142	0.500	1	08/14/2022 22:50	WG1910764
1,3-Dichloropropane	U		0.109	1.00	1	08/14/2022 22:50	WG1910764
cis-1,3-Dichloropropene	U		0.111	0.500	1	08/14/2022 22:50	WG1910764
trans-1,3-Dichloropropene	U		0.118	0.500	1	08/14/2022 22:50	WG1910764
trans-1,4-Dichloro-2-butene	U		0.467	5.00	1	08/14/2022 22:50	WG1910764
2,2-Dichloropropane	U		0.161	0.500	1	08/14/2022 22:50	WG1910764
Di-isopropyl ether	U		0.105	0.500	1	08/14/2022 22:50	WG1910764
Ethylbenzene	U		0.137	0.500	1	08/14/2022 22:50	WG1910764

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Hexachloro-1,3-butadiene	U	C3	0.337	1.00	1	08/14/2022 22:50	WG1910764
2-Hexanone	U		0.787	5.00	1	08/14/2022 22:50	WG1910764
n-Hexane	U		0.749	5.00	1	08/14/2022 22:50	WG1910764
Iodomethane	U		0.554	5.00	1	08/14/2022 22:50	WG1910764
Isopropylbenzene	U		0.105	0.500	1	08/14/2022 22:50	WG1910764
p-Isopropyltoluene	U		0.120	0.500	1	08/14/2022 22:50	WG1910764
2-Butanone (MEK)	U		1.19	5.00	1	08/14/2022 22:50	WG1910764
Methylene Chloride	U		0.430	2.50	1	08/14/2022 22:50	WG1910764
4-Methyl-2-pentanone (MIBK)	U		0.478	5.00	1	08/14/2022 22:50	WG1910764
Methyl tert-butyl ether	U		0.101	0.500	1	08/14/2022 22:50	WG1910764
Naphthalene	U	C3	0.174	2.50	1	08/14/2022 22:50	WG1910764
n-Propylbenzene	U		0.0993	0.500	1	08/14/2022 22:50	WG1910764
Styrene	U		0.118	0.500	1	08/14/2022 22:50	WG1910764
1,1,1,2-Tetrachloroethane	U		0.147	0.500	1	08/14/2022 22:50	WG1910764
1,1,2,2-Tetrachloroethane	U		0.133	0.500	1	08/14/2022 22:50	WG1910764
1,1,2-Trichlorotrifluoroethane	U		0.180	0.500	1	08/14/2022 22:50	WG1910764
Tetrachloroethene	U		0.300	0.500	1	08/14/2022 22:50	WG1910764
Toluene	U		0.278	0.500	1	08/14/2022 22:50	WG1910764
1,2,3-Trichlorobenzene	U	C4	0.164	0.500	1	08/14/2022 22:50	WG1910764
1,2,4-Trichlorobenzene	U	C4	0.481	1.00	1	08/14/2022 22:50	WG1910764
1,1,1-Trichloroethane	U		0.149	0.500	1	08/14/2022 22:50	WG1910764
1,1,2-Trichloroethane	U		0.158	0.500	1	08/14/2022 22:50	WG1910764
Trichloroethene	U		0.190	0.500	1	08/14/2022 22:50	WG1910764
Trichlorofluoromethane	U		0.160	2.50	1	08/14/2022 22:50	WG1910764
1,2,3-Trichloropropane	U		0.237	2.50	1	08/14/2022 22:50	WG1910764
1,2,4-Trimethylbenzene	U		0.322	0.500	1	08/14/2022 22:50	WG1910764
1,2,3-Trimethylbenzene	U		0.104	0.500	1	08/14/2022 22:50	WG1910764
1,3,5-Trimethylbenzene	U		0.104	0.500	1	08/14/2022 22:50	WG1910764
Vinyl acetate	U	C3 J3	0.692	5.00	1	08/14/2022 22:50	WG1910764
Vinyl chloride	U		0.234	0.500	1	08/14/2022 22:50	WG1910764
Xylenes, Total	U		0.174	1.50	1	08/14/2022 22:50	WG1910764
(S) Toluene-d8	*102*			*80.0-120*		*08/14/2022 22:50*	WG1910764
(S) 4-Bromofluorobenzene	*103*			*77.0-126*		*08/14/2022 22:50*	WG1910764
(S) 1,2-Dichloroethane-d4	*105*			*70.0-130*		*08/14/2022 22:50*	WG1910764

EDB / DBCP by Method 8011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Ethylene Dibromide	U		0.00547	0.0204	1.02	08/16/2022 22:49	WG1909574

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
AK102 DRO C10-C25	U		254	888	1.11	08/10/2022 21:38	WG1908113
(S) o-Terphenyl	*56.5*			*50.0-150*		*08/10/2022 21:38*	WG1908113

Sample Narrative:

L1523339-01 WG1908113: Dilution due to sample volume.

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Lead,Dissolved	U		0.849	2.00	1	08/13/2022 17:24	WG1908982

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TPHGAK C6 to C10	1370		28.7	100	1	08/16/2022 22:52	WG1910867
(S) a,a,a-Trifluorotoluene(FID)	*90.1*			*50.0-150*		*08/16/2022 22:52*	WG1910867

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,2,3-Trichloropropane	U		0.100	0.250	50	08/11/2022 11:05	WG1908394
Acetone	U		11.3	25.0	1	08/15/2022 03:01	WG1910764
Acrylonitrile	U		0.671	5.00	1	08/15/2022 03:01	WG1910764
Benzene	53.3		0.0941	0.500	1	08/15/2022 03:01	WG1910764
Bromobenzene	U		0.118	0.500	1	08/15/2022 03:01	WG1910764
Bromodichloromethane	U		0.136	0.500	1	08/15/2022 03:01	WG1910764
Bromochloromethane	U		0.128	0.500	1	08/15/2022 03:01	WG1910764
Bromoform	U		0.129	0.500	1	08/15/2022 03:01	WG1910764
Bromomethane	U		0.605	2.50	1	08/15/2022 03:01	WG1910764
n-Butylbenzene	0.952		0.157	0.500	1	08/15/2022 03:01	WG1910764
sec-Butylbenzene	2.65		0.125	0.500	1	08/15/2022 03:01	WG1910764
tert-Butylbenzene	0.478	J	0.127	0.500	1	08/15/2022 03:01	WG1910764
Carbon disulfide	U		0.0962	0.500	1	08/15/2022 03:01	WG1910764
Carbon tetrachloride	U		0.128	0.500	1	08/15/2022 03:01	WG1910764
Chlorobenzene	U		0.117	0.500	1	08/15/2022 03:01	WG1910764
Chlorodibromomethane	U		0.140	0.500	1	08/15/2022 03:01	WG1910764
Chloroethane	U		0.192	2.50	1	08/15/2022 03:01	WG1910764
2-Chloroethyl vinyl ether	U		0.575	50.0	1	08/15/2022 03:01	WG1910764
Chloroform	U		0.111	0.500	1	08/15/2022 03:01	WG1910764
Chloromethane	U		0.960	1.25	1	08/15/2022 03:01	WG1910764
2-Chlorotoluene	U		0.106	0.500	1	08/15/2022 03:01	WG1910764
4-Chlorotoluene	U		0.114	0.500	1	08/15/2022 03:01	WG1910764
1,2-Dibromo-3-Chloropropane	U		0.276	2.50	1	08/15/2022 03:01	WG1910764
1,2-Dibromoethane	U		0.126	0.500	1	08/15/2022 03:01	WG1910764
Dibromomethane	U		0.122	0.500	1	08/15/2022 03:01	WG1910764
1,2-Dichlorobenzene	U		0.107	0.500	1	08/15/2022 03:01	WG1910764
1,3-Dichlorobenzene	U		0.299	0.500	1	08/15/2022 03:01	WG1910764
1,4-Dichlorobenzene	U		0.120	0.500	1	08/15/2022 03:01	WG1910764
Dichlorodifluoromethane	U		0.374	2.50	1	08/15/2022 03:01	WG1910764
1,1-Dichloroethane	U		0.100	0.500	1	08/15/2022 03:01	WG1910764
1,2-Dichloroethane	U		0.0819	0.500	1	08/15/2022 03:01	WG1910764
1,1-Dichloroethene	U		0.188	0.500	1	08/15/2022 03:01	WG1910764
cis-1,2-Dichloroethene	U		0.126	0.500	1	08/15/2022 03:01	WG1910764
trans-1,2-Dichloroethene	U		0.149	0.500	1	08/15/2022 03:01	WG1910764
1,2-Dichloropropane	U		0.149	0.500	1	08/15/2022 03:01	WG1910764
1,1-Dichloropropene	U		0.142	0.500	1	08/15/2022 03:01	WG1910764
1,3-Dichloropropane	U		0.109	1.00	1	08/15/2022 03:01	WG1910764
cis-1,3-Dichloropropene	U		0.111	0.500	1	08/15/2022 03:01	WG1910764
trans-1,3-Dichloropropene	U		0.118	0.500	1	08/15/2022 03:01	WG1910764
trans-1,4-Dichloro-2-butene	U		0.467	5.00	1	08/15/2022 03:01	WG1910764
2,2-Dichloropropane	U		0.161	0.500	1	08/15/2022 03:01	WG1910764
Di-isopropyl ether	U		0.105	0.500	1	08/15/2022 03:01	WG1910764
Ethylbenzene	17.1		0.137	0.500	1	08/15/2022 03:01	WG1910764

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Hexachloro-1,3-butadiene	U	C3	0.337	1.00	1	08/15/2022 03:01	WG1910764
2-Hexanone	U		0.787	5.00	1	08/15/2022 03:01	WG1910764
n-Hexane	6.75		0.749	5.00	1	08/15/2022 03:01	WG1910764
Iodomethane	U		0.554	5.00	1	08/15/2022 03:01	WG1910764
Isopropylbenzene	6.78		0.105	0.500	1	08/15/2022 03:01	WG1910764
p-Isopropyltoluene	U		0.120	0.500	1	08/15/2022 03:01	WG1910764
2-Butanone (MEK)	U		1.19	5.00	1	08/15/2022 03:01	WG1910764
Methylene Chloride	U		0.430	2.50	1	08/15/2022 03:01	WG1910764
4-Methyl-2-pentanone (MIBK)	U		0.478	5.00	1	08/15/2022 03:01	WG1910764
Methyl tert-butyl ether	U		0.101	0.500	1	08/15/2022 03:01	WG1910764
Naphthalene	35.1	C3	0.174	2.50	1	08/15/2022 03:01	WG1910764
n-Propylbenzene	11.7		0.0993	0.500	1	08/15/2022 03:01	WG1910764
Styrene	U		0.118	0.500	1	08/15/2022 03:01	WG1910764
1,1,1,2-Tetrachloroethane	U		0.147	0.500	1	08/15/2022 03:01	WG1910764
1,1,2,2-Tetrachloroethane	U		0.133	0.500	1	08/15/2022 03:01	WG1910764
1,1,2-Trichlorotrifluoroethane	U		0.180	0.500	1	08/15/2022 03:01	WG1910764
Tetrachloroethene	U		0.300	0.500	1	08/15/2022 03:01	WG1910764
Toluene	0.422	J	0.278	0.500	1	08/15/2022 03:01	WG1910764
1,2,3-Trichlorobenzene	U	C4	0.164	0.500	1	08/15/2022 03:01	WG1910764
1,2,4-Trichlorobenzene	U	C4	0.481	1.00	1	08/15/2022 03:01	WG1910764
1,1,1-Trichloroethane	U		0.149	0.500	1	08/15/2022 03:01	WG1910764
1,1,2-Trichloroethane	U		0.158	0.500	1	08/15/2022 03:01	WG1910764
Trichloroethene	U		0.190	0.500	1	08/15/2022 03:01	WG1910764
Trichlorofluoromethane	U		0.160	2.50	1	08/15/2022 03:01	WG1910764
1,2,3-Trichloropropane	U		0.237	2.50	1	08/15/2022 03:01	WG1910764
1,2,4-Trimethylbenzene	102		0.322	0.500	1	08/15/2022 03:01	WG1910764
1,2,3-Trimethylbenzene	44.3		0.104	0.500	1	08/15/2022 03:01	WG1910764
1,3,5-Trimethylbenzene	27.9		0.104	0.500	1	08/15/2022 03:01	WG1910764
Vinyl acetate	U	C3 J3	0.692	5.00	1	08/15/2022 03:01	WG1910764
Vinyl chloride	U		0.234	0.500	1	08/15/2022 03:01	WG1910764
Xylenes, Total	595		1.74	15.0	10	08/17/2022 03:25	WG1911477
(S) Toluene-d8	*100*			*80.0-120*		*08/15/2022 03:01*	WG1910764
(S) Toluene-d8	*99.2*			*80.0-120*		*08/17/2022 03:25*	WG1911477
(S) 4-Bromofluorobenzene	*102*			*77.0-126*		*08/15/2022 03:01*	WG1910764
(S) 4-Bromofluorobenzene	*99.3*			*77.0-126*		*08/17/2022 03:25*	WG1911477
(S) 1,2-Dichloroethane-d4	*105*			*70.0-130*		*08/15/2022 03:01*	WG1910764
(S) 1,2-Dichloroethane-d4	*108*			*70.0-130*		*08/17/2022 03:25*	WG1911477

Sample Narrative:

L1523339-02 WG1908394: Non-target compounds too high to run at a lower dilution.

EDB / DBCP by Method 8011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Ethylene Dibromide	U	J4	0.00552	0.0206	1.03	08/16/2022 20:04	WG1911861

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
AK102 DRO C10-C25	3850		229	800	1	08/10/2022 22:00	WG1908113
(S) o-Terphenyl	*58.4*			*50.0-150*		*08/10/2022 22:00*	WG1908113

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Lead,Dissolved	U		0.849	2.00	1	08/13/2022 17:27	WG1908982

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TPHGAK C6 to C10	2200		28.7	100	1	08/16/2022 23:42	WG1910867
(S) a,a,a-Trifluorotoluene(FID)	*92.1*			*50.0-150*		*08/16/2022 23:42*	WG1910867

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,2,3-Trichloropropane	U		0.100	0.250	50	08/11/2022 11:29	WG1908394
Acetone	U		11.3	25.0	1	08/15/2022 03:21	WG1910764
Acrylonitrile	U		0.671	5.00	1	08/15/2022 03:21	WG1910764
Benzene	80.0		0.0941	0.500	1	08/15/2022 03:21	WG1910764
Bromobenzene	U		0.118	0.500	1	08/15/2022 03:21	WG1910764
Bromodichloromethane	U		0.136	0.500	1	08/15/2022 03:21	WG1910764
Bromochloromethane	U		0.128	0.500	1	08/15/2022 03:21	WG1910764
Bromoform	U		0.129	0.500	1	08/15/2022 03:21	WG1910764
Bromomethane	U		0.605	2.50	1	08/15/2022 03:21	WG1910764
n-Butylbenzene	U		0.157	0.500	1	08/15/2022 03:21	WG1910764
sec-Butylbenzene	1.98		0.125	0.500	1	08/15/2022 03:21	WG1910764
tert-Butylbenzene	0.654		0.127	0.500	1	08/15/2022 03:21	WG1910764
Carbon disulfide	U		0.0962	0.500	1	08/15/2022 03:21	WG1910764
Carbon tetrachloride	U		0.128	0.500	1	08/15/2022 03:21	WG1910764
Chlorobenzene	U		0.117	0.500	1	08/15/2022 03:21	WG1910764
Chlorodibromomethane	U		0.140	0.500	1	08/15/2022 03:21	WG1910764
Chloroethane	U		0.192	2.50	1	08/15/2022 03:21	WG1910764
2-Chloroethyl vinyl ether	U		0.575	50.0	1	08/15/2022 03:21	WG1910764
Chloroform	U		0.111	0.500	1	08/15/2022 03:21	WG1910764
Chloromethane	U		0.960	1.25	1	08/15/2022 03:21	WG1910764
2-Chlorotoluene	U		0.106	0.500	1	08/15/2022 03:21	WG1910764
4-Chlorotoluene	U		0.114	0.500	1	08/15/2022 03:21	WG1910764
1,2-Dibromo-3-Chloropropane	U		0.276	2.50	1	08/15/2022 03:21	WG1910764
1,2-Dibromoethane	U		0.126	0.500	1	08/15/2022 03:21	WG1910764
Dibromomethane	U		0.122	0.500	1	08/15/2022 03:21	WG1910764
1,2-Dichlorobenzene	U		0.107	0.500	1	08/15/2022 03:21	WG1910764
1,3-Dichlorobenzene	U		0.299	0.500	1	08/15/2022 03:21	WG1910764
1,4-Dichlorobenzene	U		0.120	0.500	1	08/15/2022 03:21	WG1910764
Dichlorodifluoromethane	U		0.374	2.50	1	08/15/2022 03:21	WG1910764
1,1-Dichloroethane	U		0.100	0.500	1	08/15/2022 03:21	WG1910764
1,2-Dichloroethane	0.958		0.0819	0.500	1	08/15/2022 03:21	WG1910764
1,1-Dichloroethene	U		0.188	0.500	1	08/15/2022 03:21	WG1910764
cis-1,2-Dichloroethene	U		0.126	0.500	1	08/15/2022 03:21	WG1910764
trans-1,2-Dichloroethene	U		0.149	0.500	1	08/15/2022 03:21	WG1910764
1,2-Dichloropropane	U		0.149	0.500	1	08/15/2022 03:21	WG1910764
1,1-Dichloropropene	U		0.142	0.500	1	08/15/2022 03:21	WG1910764
1,3-Dichloropropane	U		0.109	1.00	1	08/15/2022 03:21	WG1910764
cis-1,3-Dichloropropene	U		0.111	0.500	1	08/15/2022 03:21	WG1910764
trans-1,3-Dichloropropene	U		0.118	0.500	1	08/15/2022 03:21	WG1910764
trans-1,4-Dichloro-2-butene	U		0.467	5.00	1	08/15/2022 03:21	WG1910764
2,2-Dichloropropane	U		0.161	0.500	1	08/15/2022 03:21	WG1910764
Di-isopropyl ether	U		0.105	0.500	1	08/15/2022 03:21	WG1910764
Ethylbenzene	4.39		0.137	0.500	1	08/15/2022 03:21	WG1910764

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Hexachloro-1,3-butadiene	U	C3	0.337	1.00	1	08/15/2022 03:21	WG1910764
2-Hexanone	U		0.787	5.00	1	08/15/2022 03:21	WG1910764
n-Hexane	4.35	J	0.749	5.00	1	08/15/2022 03:21	WG1910764
Iodomethane	U		0.554	5.00	1	08/15/2022 03:21	WG1910764
Isopropylbenzene	6.54		0.105	0.500	1	08/15/2022 03:21	WG1910764
p-Isopropyltoluene	U		0.120	0.500	1	08/15/2022 03:21	WG1910764
2-Butanone (MEK)	U		1.19	5.00	1	08/15/2022 03:21	WG1910764
Methylene Chloride	U		0.430	2.50	1	08/15/2022 03:21	WG1910764
4-Methyl-2-pentanone (MIBK)	U		0.478	5.00	1	08/15/2022 03:21	WG1910764
Methyl tert-butyl ether	0.309	J	0.101	0.500	1	08/15/2022 03:21	WG1910764
Naphthalene	4.68	C3	0.174	2.50	1	08/15/2022 03:21	WG1910764
n-Propylbenzene	4.75		0.0993	0.500	1	08/15/2022 03:21	WG1910764
Styrene	U		0.118	0.500	1	08/15/2022 03:21	WG1910764
1,1,1,2-Tetrachloroethane	U		0.147	0.500	1	08/15/2022 03:21	WG1910764
1,1,2,2-Tetrachloroethane	U		0.133	0.500	1	08/15/2022 03:21	WG1910764
1,1,2-Trichlorotrifluoroethane	U		0.180	0.500	1	08/15/2022 03:21	WG1910764
Tetrachloroethene	U		0.300	0.500	1	08/15/2022 03:21	WG1910764
Toluene	0.764		0.278	0.500	1	08/15/2022 03:21	WG1910764
1,2,3-Trichlorobenzene	U	C4	0.164	0.500	1	08/15/2022 03:21	WG1910764
1,2,4-Trichlorobenzene	U	C4	0.481	1.00	1	08/15/2022 03:21	WG1910764
1,1,1-Trichloroethane	U		0.149	0.500	1	08/15/2022 03:21	WG1910764
1,1,2-Trichloroethane	U		0.158	0.500	1	08/15/2022 03:21	WG1910764
Trichloroethene	U		0.190	0.500	1	08/15/2022 03:21	WG1910764
Trichlorofluoromethane	U		0.160	2.50	1	08/15/2022 03:21	WG1910764
1,2,3-Trichloropropane	U		0.237	2.50	1	08/15/2022 03:21	WG1910764
1,2,4-Trimethylbenzene	103		0.322	0.500	1	08/15/2022 03:21	WG1910764
1,2,3-Trimethylbenzene	58.7		0.104	0.500	1	08/15/2022 03:21	WG1910764
1,3,5-Trimethylbenzene	28.7		0.104	0.500	1	08/15/2022 03:21	WG1910764
Vinyl acetate	U	C3 J3	0.692	5.00	1	08/15/2022 03:21	WG1910764
Vinyl chloride	U		0.234	0.500	1	08/15/2022 03:21	WG1910764
Xylenes, Total	1070		1.74	15.0	10	08/17/2022 03:45	WG1911477
(S) Toluene-d8	*99.2*			*80.0-120*		*08/15/2022 03:21*	WG1910764
(S) Toluene-d8	*98.3*			*80.0-120*		*08/17/2022 03:45*	WG1911477
(S) 4-Bromofluorobenzene	*101*			*77.0-126*		*08/15/2022 03:21*	WG1910764
(S) 4-Bromofluorobenzene	*98.3*			*77.0-126*		*08/17/2022 03:45*	WG1911477
(S) 1,2-Dichloroethane-d4	*105*			*70.0-130*		*08/15/2022 03:21*	WG1910764
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*		*08/17/2022 03:45*	WG1911477

Sample Narrative:

L1523339-03 WG1908394: Non-target compounds too high to run at a lower dilution.

EDB / DBCP by Method 8011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Ethylene Dibromide	U	J4	0.00552	0.0206	1.03	08/16/2022 20:16	WG1911861

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	2460		229	800	1	08/10/2022 22:23	WG1908113
(S) o-Terphenyl	*52.4*			*50.0-150*		*08/10/2022 22:23*	WG1908113

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Lead,Dissolved	U		0.849	2.00	1	08/13/2022 17:30	WG1908982

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TPHGAK C6 to C10	1990		287	1000	10	08/17/2022 00:08	WG1910867
(S) a,a,a-Trifluorotoluene(FID)	*85.0*			*50.0-150*		*08/17/2022 00:08*	WG1910867

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,2,3-Trichloropropane	U		0.100	0.250	50	08/11/2022 11:53	WG1908394
Acetone	U		113	250	10	08/15/2022 07:10	WG1910764
Acrylonitrile	U		6.71	50.0	10	08/15/2022 07:10	WG1910764
Benzene	75.8		0.941	5.00	10	08/15/2022 07:10	WG1910764
Bromobenzene	U		1.18	5.00	10	08/15/2022 07:10	WG1910764
Bromodichloromethane	U		1.36	5.00	10	08/15/2022 07:10	WG1910764
Bromochloromethane	U		1.28	5.00	10	08/15/2022 07:10	WG1910764
Bromoform	U		1.29	5.00	10	08/15/2022 07:10	WG1910764
Bromomethane	U		6.05	25.0	10	08/15/2022 07:10	WG1910764
n-Butylbenzene	U		1.57	5.00	10	08/15/2022 07:10	WG1910764
sec-Butylbenzene	2.25	J	1.25	5.00	10	08/15/2022 07:10	WG1910764
tert-Butylbenzene	U		1.27	5.00	10	08/15/2022 07:10	WG1910764
Carbon disulfide	U		0.962	5.00	10	08/15/2022 07:10	WG1910764
Carbon tetrachloride	U		1.28	5.00	10	08/15/2022 07:10	WG1910764
Chlorobenzene	U		1.17	5.00	10	08/15/2022 07:10	WG1910764
Chlorodibromomethane	U		1.40	5.00	10	08/15/2022 07:10	WG1910764
Chloroethane	U		1.92	25.0	10	08/15/2022 07:10	WG1910764
2-Chloroethyl vinyl ether	U		5.75	500	10	08/15/2022 07:10	WG1910764
Chloroform	U		1.11	5.00	10	08/15/2022 07:10	WG1910764
Chloromethane	U		9.60	12.5	10	08/15/2022 07:10	WG1910764
2-Chlorotoluene	U		1.06	5.00	10	08/15/2022 07:10	WG1910764
4-Chlorotoluene	U		1.14	5.00	10	08/15/2022 07:10	WG1910764
1,2-Dibromo-3-Chloropropane	U		2.76	25.0	10	08/15/2022 07:10	WG1910764
1,2-Dibromoethane	U		1.26	5.00	10	08/15/2022 07:10	WG1910764
Dibromomethane	U		1.22	5.00	10	08/15/2022 07:10	WG1910764
1,2-Dichlorobenzene	U		1.07	5.00	10	08/15/2022 07:10	WG1910764
1,3-Dichlorobenzene	U		2.99	5.00	10	08/15/2022 07:10	WG1910764
1,4-Dichlorobenzene	U		1.20	5.00	10	08/15/2022 07:10	WG1910764
Dichlorodifluoromethane	U		3.74	25.0	10	08/15/2022 07:10	WG1910764
1,1-Dichloroethane	U		1.00	5.00	10	08/15/2022 07:10	WG1910764
1,2-Dichloroethane	U		0.819	5.00	10	08/15/2022 07:10	WG1910764
1,1-Dichloroethene	U		1.88	5.00	10	08/15/2022 07:10	WG1910764
cis-1,2-Dichloroethene	U		1.26	5.00	10	08/15/2022 07:10	WG1910764
trans-1,2-Dichloroethene	U		1.49	5.00	10	08/15/2022 07:10	WG1910764
1,2-Dichloropropane	U		1.49	5.00	10	08/15/2022 07:10	WG1910764
1,1-Dichloropropene	U		1.42	5.00	10	08/15/2022 07:10	WG1910764
1,3-Dichloropropane	U		1.09	10.0	10	08/15/2022 07:10	WG1910764
cis-1,3-Dichloropropene	U		1.11	5.00	10	08/15/2022 07:10	WG1910764
trans-1,3-Dichloropropene	U		1.18	5.00	10	08/15/2022 07:10	WG1910764
trans-1,4-Dichloro-2-butene	U		4.67	50.0	10	08/15/2022 07:10	WG1910764
2,2-Dichloropropane	U		1.61	5.00	10	08/15/2022 07:10	WG1910764
Di-isopropyl ether	U		1.05	5.00	10	08/15/2022 07:10	WG1910764
Ethylbenzene	3.82	J	1.37	5.00	10	08/15/2022 07:10	WG1910764

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Hexachloro-1,3-butadiene	U	C3	3.37	10.0	10	08/15/2022 07:10	WG1910764
2-Hexanone	U		7.87	50.0	10	08/15/2022 07:10	WG1910764
n-Hexane	U		7.49	50.0	10	08/15/2022 07:10	WG1910764
Iodomethane	U		5.54	50.0	10	08/15/2022 07:10	WG1910764
Isopropylbenzene	6.40		1.05	5.00	10	08/15/2022 07:10	WG1910764
p-Isopropyltoluene	U		1.20	5.00	10	08/15/2022 07:10	WG1910764
2-Butanone (MEK)	U		11.9	50.0	10	08/15/2022 07:10	WG1910764
Methylene Chloride	U		4.30	25.0	10	08/15/2022 07:10	WG1910764
4-Methyl-2-pentanone (MIBK)	U		4.78	50.0	10	08/15/2022 07:10	WG1910764
Methyl tert-butyl ether	U		1.01	5.00	10	08/15/2022 07:10	WG1910764
Naphthalene	2.61	C3 J	1.74	25.0	10	08/15/2022 07:10	WG1910764
n-Propylbenzene	4.75	J	0.993	5.00	10	08/15/2022 07:10	WG1910764
Styrene	U		1.18	5.00	10	08/15/2022 07:10	WG1910764
1,1,1,2-Tetrachloroethane	U		1.47	5.00	10	08/15/2022 07:10	WG1910764
1,1,2,2-Tetrachloroethane	U		1.33	5.00	10	08/15/2022 07:10	WG1910764
1,1,2-Trichlorotrifluoroethane	U		1.80	5.00	10	08/15/2022 07:10	WG1910764
Tetrachloroethene	U		3.00	5.00	10	08/15/2022 07:10	WG1910764
Toluene	U		2.78	5.00	10	08/15/2022 07:10	WG1910764
1,2,3-Trichlorobenzene	U	C4	1.64	5.00	10	08/15/2022 07:10	WG1910764
1,2,4-Trichlorobenzene	U	C4	4.81	10.0	10	08/15/2022 07:10	WG1910764
1,1,1-Trichloroethane	U		1.49	5.00	10	08/15/2022 07:10	WG1910764
1,1,2-Trichloroethane	U		1.58	5.00	10	08/15/2022 07:10	WG1910764
Trichloroethene	U		1.90	5.00	10	08/15/2022 07:10	WG1910764
Trichlorofluoromethane	U		1.60	25.0	10	08/15/2022 07:10	WG1910764
1,2,3-Trichloropropane	U		2.37	25.0	10	08/15/2022 07:10	WG1910764
1,2,4-Trimethylbenzene	100		3.22	5.00	10	08/15/2022 07:10	WG1910764
1,2,3-Trimethylbenzene	56.7		1.04	5.00	10	08/15/2022 07:10	WG1910764
1,3,5-Trimethylbenzene	27.7		1.04	5.00	10	08/15/2022 07:10	WG1910764
Vinyl acetate	U	C3 J3	6.92	50.0	10	08/15/2022 07:10	WG1910764
Vinyl chloride	U		2.34	5.00	10	08/15/2022 07:10	WG1910764
Xylenes, Total	1050		1.74	15.0	10	08/15/2022 07:10	WG1910764
(S) Toluene-d8	*101*			*80.0-120*		*08/15/2022 07:10*	WG1910764
(S) 4-Bromofluorobenzene	*103*			*77.0-126*		*08/15/2022 07:10*	WG1910764
(S) 1,2-Dichloroethane-d4	*105*			*70.0-130*		*08/15/2022 07:10*	WG1910764

Sample Narrative:

L1523339-04 WG1908394: Non-target compounds too high to run at a lower dilution.

EDB / DBCP by Method 8011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Ethylene Dibromide	U		0.00547	0.0204	1.02	08/16/2022 21:05	WG1911861

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
AK102 DRO C10-C25	2380		229	800	1	08/10/2022 22:46	WG1908113
(S) o-Terphenyl	*63.1*			*50.0-150*		*08/10/2022 22:46*	WG1908113

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Lead,Dissolved	U		0.849	2.00	1	08/13/2022 17:34	WG1908982

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TPHGAK C6 to C10	1050		287	1000	10	08/17/2022 02:11	WG1910867
(S) a,a,a-Trifluorotoluene(FID)	*84.3*			*50.0-150*		*08/17/2022 02:11*	WG1910867

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,2,3-Trichloropropane	U		0.100	0.250	50	08/11/2022 12:17	WG1908394
Acetone	U		113	250	10	08/15/2022 07:30	WG1910764
Acrylonitrile	U		6.71	50.0	10	08/15/2022 07:30	WG1910764
Benzene	12.0		0.941	5.00	10	08/15/2022 07:30	WG1910764
Bromobenzene	U		1.18	5.00	10	08/15/2022 07:30	WG1910764
Bromodichloromethane	U		1.36	5.00	10	08/15/2022 07:30	WG1910764
Bromochloromethane	U		1.28	5.00	10	08/15/2022 07:30	WG1910764
Bromoform	U		1.29	5.00	10	08/15/2022 07:30	WG1910764
Bromomethane	U		6.05	25.0	10	08/15/2022 07:30	WG1910764
n-Butylbenzene	U		1.57	5.00	10	08/15/2022 07:30	WG1910764
sec-Butylbenzene	2.13	J	1.25	5.00	10	08/15/2022 07:30	WG1910764
tert-Butylbenzene	U		1.27	5.00	10	08/15/2022 07:30	WG1910764
Carbon disulfide	U		0.962	5.00	10	08/15/2022 07:30	WG1910764
Carbon tetrachloride	U		1.28	5.00	10	08/15/2022 07:30	WG1910764
Chlorobenzene	U		1.17	5.00	10	08/15/2022 07:30	WG1910764
Chlorodibromomethane	U		1.40	5.00	10	08/15/2022 07:30	WG1910764
Chloroethane	U		1.92	25.0	10	08/15/2022 07:30	WG1910764
2-Chloroethyl vinyl ether	U		5.75	500	10	08/15/2022 07:30	WG1910764
Chloroform	U		1.11	5.00	10	08/15/2022 07:30	WG1910764
Chloromethane	U		9.60	12.5	10	08/15/2022 07:30	WG1910764
2-Chlorotoluene	U		1.06	5.00	10	08/15/2022 07:30	WG1910764
4-Chlorotoluene	U		1.14	5.00	10	08/15/2022 07:30	WG1910764
1,2-Dibromo-3-Chloropropane	U		2.76	25.0	10	08/15/2022 07:30	WG1910764
1,2-Dibromoethane	U		1.26	5.00	10	08/15/2022 07:30	WG1910764
Dibromomethane	U		1.22	5.00	10	08/15/2022 07:30	WG1910764
1,2-Dichlorobenzene	U		1.07	5.00	10	08/15/2022 07:30	WG1910764
1,3-Dichlorobenzene	U		2.99	5.00	10	08/15/2022 07:30	WG1910764
1,4-Dichlorobenzene	U		1.20	5.00	10	08/15/2022 07:30	WG1910764
Dichlorodifluoromethane	U		3.74	25.0	10	08/15/2022 07:30	WG1910764
1,1-Dichloroethane	U		1.00	5.00	10	08/15/2022 07:30	WG1910764
1,2-Dichloroethane	U		0.819	5.00	10	08/15/2022 07:30	WG1910764
1,1-Dichloroethene	U		1.88	5.00	10	08/15/2022 07:30	WG1910764
cis-1,2-Dichloroethene	U		1.26	5.00	10	08/15/2022 07:30	WG1910764
trans-1,2-Dichloroethene	U		1.49	5.00	10	08/15/2022 07:30	WG1910764
1,2-Dichloropropane	U		1.49	5.00	10	08/15/2022 07:30	WG1910764
1,1-Dichloropropene	U		1.42	5.00	10	08/15/2022 07:30	WG1910764
1,3-Dichloropropane	U		1.09	10.0	10	08/15/2022 07:30	WG1910764
cis-1,3-Dichloropropene	U		1.11	5.00	10	08/15/2022 07:30	WG1910764
trans-1,3-Dichloropropene	U		1.18	5.00	10	08/15/2022 07:30	WG1910764
trans-1,4-Dichloro-2-butene	U		4.67	50.0	10	08/15/2022 07:30	WG1910764
2,2-Dichloropropane	U		1.61	5.00	10	08/15/2022 07:30	WG1910764
Di-isopropyl ether	U		1.05	5.00	10	08/15/2022 07:30	WG1910764
Ethylbenzene	5.23		1.37	5.00	10	08/15/2022 07:30	WG1910764

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Hexachloro-1,3-butadiene	U	C3	3.37	10.0	10	08/15/2022 07:30	WG1910764
2-Hexanone	U		7.87	50.0	10	08/15/2022 07:30	WG1910764
n-Hexane	U		7.49	50.0	10	08/15/2022 07:30	WG1910764
Iodomethane	U		5.54	50.0	10	08/15/2022 07:30	WG1910764
Isopropylbenzene	4.18	J	1.05	5.00	10	08/15/2022 07:30	WG1910764
p-Isopropyltoluene	2.50	J	1.20	5.00	10	08/15/2022 07:30	WG1910764
2-Butanone (MEK)	U		11.9	50.0	10	08/15/2022 07:30	WG1910764
Methylene Chloride	U		4.30	25.0	10	08/15/2022 07:30	WG1910764
4-Methyl-2-pentanone (MIBK)	U		4.78	50.0	10	08/15/2022 07:30	WG1910764
Methyl tert-butyl ether	U		1.01	5.00	10	08/15/2022 07:30	WG1910764
Naphthalene	18.8	C3 J	1.74	25.0	10	08/15/2022 07:30	WG1910764
n-Propylbenzene	5.40		0.993	5.00	10	08/15/2022 07:30	WG1910764
Styrene	U		1.18	5.00	10	08/15/2022 07:30	WG1910764
1,1,1,2-Tetrachloroethane	U		1.47	5.00	10	08/15/2022 07:30	WG1910764
1,1,2,2-Tetrachloroethane	U		1.33	5.00	10	08/15/2022 07:30	WG1910764
1,1,2-Trichlorotrifluoroethane	U		1.80	5.00	10	08/15/2022 07:30	WG1910764
Tetrachloroethene	U		3.00	5.00	10	08/15/2022 07:30	WG1910764
Toluene	U		2.78	5.00	10	08/15/2022 07:30	WG1910764
1,2,3-Trichlorobenzene	U	C4	1.64	5.00	10	08/15/2022 07:30	WG1910764
1,2,4-Trichlorobenzene	U	C4	4.81	10.0	10	08/15/2022 07:30	WG1910764
1,1,1-Trichloroethane	U		1.49	5.00	10	08/15/2022 07:30	WG1910764
1,1,2-Trichloroethane	U		1.58	5.00	10	08/15/2022 07:30	WG1910764
Trichloroethene	U		1.90	5.00	10	08/15/2022 07:30	WG1910764
Trichlorofluoromethane	U		1.60	25.0	10	08/15/2022 07:30	WG1910764
1,2,3-Trichloropropane	U		2.37	25.0	10	08/15/2022 07:30	WG1910764
1,2,4-Trimethylbenzene	63.4		3.22	5.00	10	08/15/2022 07:30	WG1910764
1,2,3-Trimethylbenzene	32.6		1.04	5.00	10	08/15/2022 07:30	WG1910764
1,3,5-Trimethylbenzene	15.8		1.04	5.00	10	08/15/2022 07:30	WG1910764
Vinyl acetate	U	C3 J3	6.92	50.0	10	08/15/2022 07:30	WG1910764
Vinyl chloride	U		2.34	5.00	10	08/15/2022 07:30	WG1910764
Xylenes, Total	268		1.74	15.0	10	08/15/2022 07:30	WG1910764
(S) Toluene-d8	*101*			*80.0-120*		*08/15/2022 07:30*	WG1910764
(S) 4-Bromofluorobenzene	*102*			*77.0-126*		*08/15/2022 07:30*	WG1910764
(S) 1,2-Dichloroethane-d4	*105*			*70.0-130*		*08/15/2022 07:30*	WG1910764

Sample Narrative:

L1523339-06 WG1908394: Non-target compounds too high to run at a lower dilution.

EDB / DBCP by Method 8011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Ethylene Dibromide	U		0.00557	0.0208	1.04	08/16/2022 21:17	WG1911861

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	2260		229	800	1	08/10/2022 23:09	WG1908113
(S) o-Terphenyl	*60.5*			*50.0-150*		*08/10/2022 23:09*	WG1908113

Method Blank (MB)

(MB) R3825974-1 08/13/22 16:28

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Lead,Dissolved	U		0.849	2.00

Laboratory Control Sample (LCS)

(LCS) R3825974-2 08/13/22 16:31

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Lead,Dissolved	50.0	46.9	93.9	80.0-120	

L1521199-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1521199-05 08/13/22 16:35 • (MS) R3825974-4 08/13/22 16:41 • (MSD) R3825974-5 08/13/22 16:45

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Lead,Dissolved	50.0	U	48.6	48.0	97.2	96.0	1	75.0-125			1.29	20

L1523063-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1523063-01 08/13/22 17:49 • (MS) R3825974-8 08/13/22 17:52 • (MSD) R3825974-9 08/13/22 17:55

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Lead,Dissolved	50.0	U	41.7	40.6	83.4	81.2	10	75.0-125			2.68	20

Method Blank (MB)

(MB) R3827303-3 08/16/22 21:48

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
TPHGAK C6 to C10	U		28.7	100
(S) a,a,a-Trifluorotoluene(FID)	*89.1*			*60.0-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3827303-1 08/16/22 19:11 • (LCSD) R3827303-2 08/16/22 19:37

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPHGAK C6 to C10	5000	4390	4560	87.8	91.2	60.0-120			3.80	20
(S) a,a,a-Trifluorotoluene(FID)				*111*	*102*	*60.0-120*				

Method Blank (MB)

(MB) R3825151-2 08/11/22 09:56

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
1,2,3-Trichloropropane	U		0.00200	0.00500

Laboratory Control Sample (LCS)

(LCS) R3825151-1 08/11/22 09:33

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
1,2,3-Trichloropropane	0.0500	0.0500	100	70.0-130	

Method Blank (MB)

(MB) R3826595-3 08/14/22 22:09

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		11.3	25.0
Acrylonitrile	U		0.671	5.00
Benzene	U		0.0941	0.500
Bromobenzene	U		0.118	0.500
Bromodichloromethane	U		0.136	0.500
Bromochloromethane	U		0.128	0.500
Bromoform	U		0.129	0.500
Bromomethane	U		0.605	2.50
n-Butylbenzene	U		0.157	0.500
sec-Butylbenzene	U		0.125	0.500
tert-Butylbenzene	U		0.127	0.500
Carbon disulfide	U		0.0962	0.500
Carbon tetrachloride	U		0.128	0.500
Chlorobenzene	U		0.117	0.500
Chlorodibromomethane	U		0.140	0.500
Chloroethane	U		0.192	2.50
2-Chloroethyl vinyl ether	U		0.575	50.0
Chloroform	U		0.111	0.500
Chloromethane	U		0.960	1.25
2-Chlorotoluene	U		0.106	0.500
4-Chlorotoluene	U		0.114	0.500
1,2-Dibromo-3-Chloropropane	U		0.276	2.50
1,2-Dibromoethane	U		0.126	0.500
Dibromomethane	U		0.122	0.500
1,2-Dichlorobenzene	U		0.107	0.500
1,3-Dichlorobenzene	U		0.299	0.500
1,4-Dichlorobenzene	U		0.120	0.500
Dichlorodifluoromethane	U		0.374	2.50
1,1-Dichloroethane	U		0.100	0.500
1,2-Dichloroethane	U		0.0819	0.500
1,1-Dichloroethene	U		0.188	0.500
cis-1,2-Dichloroethene	U		0.126	0.500
trans-1,2-Dichloroethene	U		0.149	0.500
1,2-Dichloropropane	U		0.149	0.500
1,1-Dichloropropene	U		0.142	0.500
1,3-Dichloropropane	U		0.109	1.00
cis-1,3-Dichloropropene	U		0.111	0.500
trans-1,3-Dichloropropene	U		0.118	0.500
trans-1,4-Dichloro-2-butene	U		0.467	5.00
2,2-Dichloropropane	U		0.161	0.500

Method Blank (MB)

(MB) R3826595-3 08/14/22 22:09

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Di-isopropyl ether	U		0.105	0.500
Ethylbenzene	U		0.137	0.500
Hexachloro-1,3-butadiene	U		0.337	1.00
2-Hexanone	U		0.787	5.00
n-Hexane	U		0.749	5.00
Iodomethane	U		0.554	5.00
Isopropylbenzene	U		0.105	0.500
p-Isopropyltoluene	U		0.120	0.500
2-Butanone (MEK)	U		1.19	5.00
Methylene Chloride	U		0.430	2.50
4-Methyl-2-pentanone (MIBK)	U		0.478	5.00
Methyl tert-butyl ether	U		0.101	0.500
Naphthalene	U		0.174	2.50
n-Propylbenzene	U		0.0993	0.500
Styrene	U		0.118	0.500
1,1,1,2-Tetrachloroethane	U		0.147	0.500
1,1,2,2-Tetrachloroethane	U		0.133	0.500
1,1,2-Trichlorotrifluoroethane	U		0.180	0.500
Tetrachloroethene	U		0.300	0.500
Toluene	U		0.278	0.500
1,2,3-Trichlorobenzene	U		0.164	0.500
1,2,4-Trichlorobenzene	U		0.481	1.00
1,1,1-Trichloroethane	U		0.149	0.500
1,1,2-Trichloroethane	U		0.158	0.500
Trichloroethene	U		0.190	0.500
Trichlorofluoromethane	U		0.160	2.50
1,2,3-Trichloropropane	U		0.237	2.50
1,2,4-Trimethylbenzene	U		0.322	0.500
1,2,3-Trimethylbenzene	U		0.104	0.500
1,3,5-Trimethylbenzene	U		0.104	0.500
Vinyl acetate	U		0.692	5.00
Vinyl chloride	U		0.234	0.500
Xylenes, Total	U		0.174	1.50
(S) Toluene-d8	*101*			*80.0-120*
(S) 4-Bromofluorobenzene	*103*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*105*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3826595-1 08/14/22 20:47 • (LCSD) R3826595-2 08/14/22 21:07

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	25.0	37.8	39.0	151	156	19.0-160			3.13	27
Acrylonitrile	25.0	27.0	26.8	108	107	55.0-149			0.744	20
Benzene	5.00	5.41	5.30	108	106	70.0-123			2.05	20
Bromobenzene	5.00	5.16	4.92	103	98.4	73.0-121			4.76	20
Bromodichloromethane	5.00	5.20	5.17	104	103	75.0-120			0.579	20
Bromochloromethane	5.00	5.16	4.99	103	99.8	76.0-122			3.35	20
Bromoform	5.00	4.52	4.57	90.4	91.4	68.0-132			1.10	20
Bromomethane	5.00	5.79	5.79	116	116	10.0-160			0.000	25
n-Butylbenzene	5.00	4.58	4.68	91.6	93.6	73.0-125			2.16	20
sec-Butylbenzene	5.00	4.91	4.78	98.2	95.6	75.0-125			2.68	20
tert-Butylbenzene	5.00	4.82	4.87	96.4	97.4	76.0-124			1.03	20
Carbon disulfide	5.00	5.05	5.01	101	100	61.0-128			0.795	20
Carbon tetrachloride	5.00	5.29	5.09	106	102	68.0-126			3.85	20
Chlorobenzene	5.00	5.00	4.98	100	99.6	80.0-121			0.401	20
Chlorodibromomethane	5.00	4.72	4.69	94.4	93.8	77.0-125			0.638	20
Chloroethane	5.00	5.63	5.51	113	110	47.0-150			2.15	20
2-Chloroethyl vinyl ether	25.0	29.1	28.5	116	114	51.0-160			2.08	20
Chloroform	5.00	5.32	5.24	106	105	73.0-120			1.52	20
Chloromethane	5.00	5.73	5.63	115	113	41.0-142			1.76	20
2-Chlorotoluene	5.00	4.97	4.95	99.4	99.0	76.0-123			0.403	20
4-Chlorotoluene	5.00	5.08	4.97	102	99.4	75.0-122			2.19	20
1,2-Dibromo-3-Chloropropane	5.00	4.33	4.31	86.6	86.2	58.0-134			0.463	20
1,2-Dibromoethane	5.00	5.09	5.06	102	101	80.0-122			0.591	20
Dibromomethane	5.00	5.34	5.23	107	105	80.0-120			2.08	20
1,2-Dichlorobenzene	5.00	4.92	4.84	98.4	96.8	79.0-121			1.64	20
1,3-Dichlorobenzene	5.00	4.86	4.84	97.2	96.8	79.0-120			0.412	20
1,4-Dichlorobenzene	5.00	5.01	5.03	100	101	79.0-120			0.398	20
Dichlorodifluoromethane	5.00	5.69	5.50	114	110	51.0-149			3.40	20
1,1-Dichloroethane	5.00	5.35	5.24	107	105	70.0-126			2.08	20
1,2-Dichloroethane	5.00	5.37	5.42	107	108	70.0-128			0.927	20
1,1-Dichloroethene	5.00	5.11	5.01	102	100	71.0-124			1.98	20
cis-1,2-Dichloroethene	5.00	5.13	5.17	103	103	73.0-120			0.777	20
trans-1,2-Dichloroethene	5.00	5.03	5.03	101	101	73.0-120			0.000	20
1,2-Dichloropropane	5.00	5.25	5.03	105	101	77.0-125			4.28	20
1,1-Dichloropropene	5.00	5.38	5.24	108	105	74.0-126			2.64	20
1,3-Dichloropropane	5.00	5.32	5.23	106	105	80.0-120			1.71	20
cis-1,3-Dichloropropene	5.00	5.19	5.22	104	104	80.0-123			0.576	20
trans-1,3-Dichloropropene	5.00	4.72	4.81	94.4	96.2	78.0-124			1.89	20
trans-1,4-Dichloro-2-butene	5.00	4.31	4.49	86.2	89.8	33.0-144			4.09	20
2,2-Dichloropropane	5.00	4.19	4.04	83.8	80.8	58.0-130			3.65	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3826595-1 08/14/22 20:47 • (LCSD) R3826595-2 08/14/22 21:07

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Di-isopropyl ether	5.00	5.20	5.24	104	105	58.0-138			0.766	20
Ethylbenzene	5.00	4.84	4.77	96.8	95.4	79.0-123			1.46	20
Hexachloro-1,3-butadiene	5.00	3.80	4.39	76.0	87.8	54.0-138			14.4	20
2-Hexanone	25.0	26.7	26.8	107	107	67.0-149			0.374	20
n-Hexane	5.00	4.84	4.68	96.8	93.6	57.0-133			3.36	20
Iodomethane	25.0	26.8	26.4	107	106	33.0-147			1.50	26
Isopropylbenzene	5.00	4.68	4.68	93.6	93.6	76.0-127			0.000	20
p-Isopropyltoluene	5.00	4.64	4.85	92.8	97.0	76.0-125			4.43	20
2-Butanone (MEK)	25.0	31.6	31.7	126	127	44.0-160			0.316	20
Methylene Chloride	5.00	5.12	5.16	102	103	67.0-120			0.778	20
4-Methyl-2-pentanone (MIBK)	25.0	25.9	25.9	104	104	68.0-142			0.000	20
Methyl tert-butyl ether	5.00	4.99	4.98	99.8	99.6	68.0-125			0.201	20
Naphthalene	5.00	3.96	4.32	79.2	86.4	54.0-135			8.70	20
n-Propylbenzene	5.00	4.98	4.90	99.6	98.0	77.0-124			1.62	20
Styrene	5.00	4.68	4.72	93.6	94.4	73.0-130			0.851	20
1,1,1,2-Tetrachloroethane	5.00	4.72	4.74	94.4	94.8	75.0-125			0.423	20
1,1,2,2-Tetrachloroethane	5.00	4.89	4.75	97.8	95.0	65.0-130			2.90	20
1,1,2-Trichlorotrifluoroethane	5.00	5.35	5.09	107	102	69.0-132			4.98	20
Tetrachloroethene	5.00	4.86	4.71	97.2	94.2	72.0-132			3.13	20
Toluene	5.00	4.92	4.82	98.4	96.4	79.0-120			2.05	20
1,2,3-Trichlorobenzene	5.00	4.08	4.36	81.6	87.2	50.0-138			6.64	20
1,2,4-Trichlorobenzene	5.00	4.21	4.47	84.2	89.4	57.0-137			5.99	20
1,1,1-Trichloroethane	5.00	5.57	5.49	111	110	73.0-124			1.45	20
1,1,2-Trichloroethane	5.00	5.20	5.04	104	101	80.0-120			3.12	20
Trichloroethene	5.00	5.58	5.53	112	111	78.0-124			0.900	20
Trichlorofluoromethane	5.00	6.17	5.96	123	119	59.0-147			3.46	20
1,2,3-Trichloropropane	5.00	5.31	5.20	106	104	73.0-130			2.09	20
1,2,4-Trimethylbenzene	5.00	4.95	4.88	99.0	97.6	76.0-121			1.42	20
1,2,3-Trimethylbenzene	5.00	4.86	4.94	97.2	98.8	77.0-120			1.63	20
1,3,5-Trimethylbenzene	5.00	4.89	4.85	97.8	97.0	76.0-122			0.821	20
Vinyl acetate	25.0	16.1	12.7	64.4	50.8	11.0-160		J3	23.6	20
Vinyl chloride	5.00	5.96	5.84	119	117	67.0-131			2.03	20
Xylenes, Total	15.0	14.7	14.5	98.0	96.7	79.0-123			1.37	20
(S) Toluene-d8				*101*	*99.5*	*80.0-120*				
(S) 4-Bromofluorobenzene				*99.7*	*102*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*106*	*105*	*70.0-130*				

Method Blank (MB)

(MB) R3827171-2 08/16/22 22:44

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Xylenes, Total	U		0.174	1.50
(S) Toluene-d8	*99.4*			*80.0-120*
(S) 4-Bromofluorobenzene	*100*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*110*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3827171-1 08/16/22 22:02

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Xylenes, Total	15.0	13.6	90.7	79.0-123	
(S) Toluene-d8			*99.1*	*80.0-120*	
(S) 4-Bromofluorobenzene			*99.2*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*110*	*70.0-130*	

QUALITY CONTROL SUMMARY

L1523339-01

Method Blank (MB)

(MB) R3827137-1 08/16/22 17:45

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Ethylene Dibromide	U		0.00536	0.0200

L1522723-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1522723-02 08/16/22 18:33 • (DUP) R3827137-3 08/16/22 18:21

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Ethylene Dibromide	U	U	1.01	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3827137-4 08/16/22 20:35 • (LCSD) R3827137-5 08/16/22 23:13

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethylene Dibromide	0.250	0.321	0.293	128	117	60.0-140			9.12	20

L1522723-03 Original Sample (OS) • Matrix Spike (MS)

(OS) L1522723-03 08/16/22 18:09 • (MS) R3827137-2 08/16/22 17:57

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Ethylene Dibromide	0.100	U	0.104	104	1	64.0-159	

Method Blank (MB)

(MB) R3826997-1 08/16/22 17:50

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Ethylene Dibromide	U		0.00536	0.0200

L1522729-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1522729-01 08/16/22 18:38 • (DUP) R3826997-3 08/16/22 18:26

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Ethylene Dibromide	U	U	1.02	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3826997-4 08/16/22 20:41 • (LCSD) R3826997-5 08/16/22 23:19

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethylene Dibromide	0.250	0.309	0.361	124	144	60.0-140		J4	15.5	20

L1523065-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1523065-01 08/16/22 18:14 • (MS) R3826997-2 08/16/22 18:02

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Ethylene Dibromide	0.101	U	0.118	117	1.01	64.0-159	

Method Blank (MB)

(MB) R3824911-1 08/10/22 12:28

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
AK102 DRO C10-C25	U		229	800
(S) o-Terphenyl	*104*			*60.0-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3824911-2 08/10/22 12:51 • (LCSD) R3824911-3 08/10/22 13:14

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
AK102 DRO C10-C25	6000	6480	6470	108	108	75.0-125			0.154	20
(S) o-Terphenyl				*126*	*126*	*60.0-120*	J1	J1		

L1522831-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1522831-01 08/10/22 17:08 • (MS) R3824911-6 08/10/22 17:31 • (MSD) R3824911-7 08/10/22 17:54

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
AK102 DRO C10-C25	6000	U	6600	6010	110	100	1	75.0-125			9.36	20
(S) o-Terphenyl					*115*	*74.2*		*50.0-150*				

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
C3	The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Method sensitivity check is acceptable.
C4	The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Data is likely to show a low bias concerning the result.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
Arcadis - Chevron - AK

880 H St.
Anchorage, AK 99501

Billing Information:
Attn: Acounts Payable
630 Plaza Dr Ste 600
Highlands Ranch, CO 80129

Pres Chk

Report to:
Erika Midkiff/Sydney Clark/Nick Wood

Email To:
Sydney.Clark@arcadis.com;Nick.Wood@arcadis.

Project Description:
309152

City/State Collected: Fairbanks, AK

Please Circle: RT MT CT ET (AKST)

Phone: 907-276-8095

Client Project #
30064227.07.42

Lab Project #
CHEVARCAK-309152

Collected by (print): C. Wojcik M. Moe

Site/Facility ID #
501 EAST 30TH AVE,

P.O. #
30043353.5134

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day X Standard

Quote #

Date Results Needed

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN
12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1523339
Table # C001
Acctnum: CHEVARCAK
Template: T213302
Prelogin: P939493
PM: 110 - Brian Ford
PB: 8/8/22
Shipped Via: FedEX 2nd Day

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	AK101 40mlAmb HCl	AK102 100ml Amb HCl	Diss Lead 6020 250mlHDPE-NoPres	EDB 8011 40mlClr-NaThio	EDB/123TCP 524LL 40mlAmb-HCl	VOCs 8260D LL 40mlAmb-HCl	Remarks	Sample # (lab only)
EB-1	Grab	GW	-	8.3.22	1520	15	X	X	X	X	X	X		-01
MW-22		GW		8.6.22	1430									-02
MW-23		GW			1117									-03
MW-24		GW			1800									-06
DUP-1		GW			—									-04

do not report EDB 524LL per Sean Parry's request-bjf 08/10/22

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS X FedEx __ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCl / MeoH TBR	
	8.8.22	0900			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 2.6 °C Bottles Received: 75	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 8/9/22 Time: 1445	Hold: Condition: NCF / OK

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

Laboratory Job ID: 320-90869-1
Client Project/Site: 30064227.0742, 309152 Saupe

For:
ARCADIS U.S. Inc
500 Ala Moana Blvd, Ste 7-400
Honolulu, Hawaii 96813-4900

Attn: Nick Wood

Authorized for release by:
9/7/2022 8:59:27 AM

Jill Kellmann, Client Service Manager
(916)374-4402
Jill.Kellmann@et.eurofinsus.com

Table of Contents

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1-	Surrogate recovery exceeds control limits, low biased.

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

LCMS

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
H3	Sample was received and analyzed past holding time.
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.

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)

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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

Job ID: 320-90869-1

Laboratory: Eurofins Sacramento

Narrative

Receipt
The sample was received on 8/10/2022 9:30 AM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.0º C.

Receipt Exceptions

Client requested for method AK102, 103, however no container AGB with HCL was submitted to the lab.IDW-W-082022 (320-90869-1). Following discussion with client, lab will use one 250ml unpreserved amber glass container and preserve for method AK102/103 analysis.

Limited Vials were received for method AK101, and 8260D. The lab received 3 vials.IDW-W-082022 (320-90869-1). As such, the sample was analyzed for method 8260D only.

GC/MS VOA
Methods 8260D: The continuing calibration verification (CCV) associated with batch 280-584171 recovered above the upper control limit for Vinyl Acetate (21.5 Limit 20). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8260D: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 280-584171.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method 8270D: Surrogate recovery for the following sample was outside control limits: IDW-W-082022 (320-90869-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8270D: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 320-609049 and analytical batch 320-611138 recovered outside control limits for the following analytes: Benzoic acid.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

LCMS
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
Method 9040C: This analysis is normally performed in the field and has a method-defined holding time of 15 minutes. The following samples in analytical batch 320-608896 have been qualified with the "HF" flag to indicate analysis was performed in the laboratory outside the 15 minute timeframe: IDW-W-082022 (320-90869-1), (320-90763-J-1) and (320-90763-J-1 DU).

Methods 1010B: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 280-584417 recovered outside control limits for the following analytes: flashpoint. This analyte was biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Methods 1010B: The following sample was not associated with a duplicate as none of these samples had a detectable flashpoint. IDW-W-082022 (320-90869-1)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
Method 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with

Job ID: 320-90869-1 (Continued)

Laboratory: Eurofins Sacramento (Continued)

method 8270D SIM aqueous in preparation batch 320-608789.

Method 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with method 8270D aqueous in preparation batch 320-609049.

Method 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with method AK102/103 aqueous in preparation batch 320-610616.

Method 3535: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with method 537 Mod aqueous in preparation batch 320-610673.

Method 3535: During the solid phase extraction process, the following samples contained non-settable particulates which clogged the solid phase extraction column: IDW-W-082022 (320-90869-1).
Preparation batch 320-610673

Method 3535: The following samples in preparation batch 320-610673 were observed to have a thin layer of sediment present in the bottom of the bottle prior to extraction. IDW-W-082022 (320-90869-1)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: ARCADIS U.S. Inc
Project/Site: 30064227.0742, 309152 Saupe

Job ID: 320-90869-1

Client Sample ID: IDW-W-082022

Lab Sample ID: 320-90869-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	29		1.0	0.31	ug/L	1		8260D	Total/NA
n-Butylbenzene	0.89	J	1.0	0.48	ug/L	1		8260D	Total/NA
sec-Butylbenzene	0.84	J	1.0	0.45	ug/L	1		8260D	Total/NA
Ethylbenzene	5.8		1.0	0.30	ug/L	1		8260D	Total/NA
Isopropylbenzene	2.6		1.0	0.36	ug/L	1		8260D	Total/NA
p-Isopropyltoluene	1.0		1.0	0.43	ug/L	1		8260D	Total/NA
Naphthalene	12		2.0	0.63	ug/L	1		8260D	Total/NA
N-Propylbenzene	2.9		1.0	0.53	ug/L	1		8260D	Total/NA
Toluene	1.1		1.0	0.32	ug/L	1		8260D	Total/NA
1,2,4-Trimethylbenzene	37		1.0	0.15	ug/L	1		8260D	Total/NA
1,3,5-Trimethylbenzene	11		1.0	0.37	ug/L	1		8260D	Total/NA
Xylenes, Total - DL	350		5.0	1.7	ug/L	5		8260D	Total/NA
o-Xylene - DL	47		5.0	1.7	ug/L	5		8260D	Total/NA
m-Xylene & p-Xylene - DL	300		10	1.8	ug/L	5		8260D	Total/NA
Acenaphthene	1600		50	9.7	ng/L	1		8270D SIM	Total/NA
Acenaphthylene	31	J	50	8.5	ng/L	1		8270D SIM	Total/NA
Anthracene	60		50	10	ng/L	1		8270D SIM	Total/NA
Fluoranthene	120		50	10	ng/L	1		8270D SIM	Total/NA
Fluorene	730		50	11	ng/L	1		8270D SIM	Total/NA
Naphthalene	5300		50	13	ng/L	1		8270D SIM	Total/NA
Phenanthrene	600		50	11	ng/L	1		8270D SIM	Total/NA
Pyrene	79		50	18	ng/L	1		8270D SIM	Total/NA
Acenaphthene	2.4	J	9.5	1.0	ug/L	1		8270D	Total/NA
2,4-Dimethylphenol	3.8	J	9.5	2.1	ug/L	1		8270D	Total/NA
Fluorene	0.97	J	9.5	0.89	ug/L	1		8270D	Total/NA
2-Methylnaphthalene	3.0	J	9.5	1.4	ug/L	1		8270D	Total/NA
Naphthalene	6.7	J	9.5	1.2	ug/L	1		8270D	Total/NA
Phenol	1.2	J	9.5	1.0	ug/L	1		8270D	Total/NA
DRO (nC10-<nC25)	1400		150	61	ug/L	1		AK102 & 103	Total/NA
RRO (nC25-nC36)	290	J	500	140	ug/L	1		AK102 & 103	Total/NA
Perfluorohexanoic acid (PFHxA)	14		1.7	0.48	ng/L	1		EPA 537(Mod)	Total/NA
Perfluoroheptanoic acid (PFHpA)	3.4		1.7	0.21	ng/L	1		EPA 537(Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	21		1.7	0.71	ng/L	1		EPA 537(Mod)	Total/NA
Perfluorononanoic acid (PFNA)	0.82	J	1.7	0.22	ng/L	1		EPA 537(Mod)	Total/NA
Perfluorodecanoic acid (PFDA)	0.32	J	1.7	0.26	ng/L	1		EPA 537(Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	10		1.7	0.17	ng/L	1		EPA 537(Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	64		1.7	0.47	ng/L	1		EPA 537(Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	170		1.7	0.45	ng/L	1		EPA 537(Mod)	Total/NA
Barium	0.23		0.0050	0.0025	mg/L	1		6010C	Total/NA
Chromium	0.0057	J	0.0080	0.0012	mg/L	1		6010C	Total/NA
Flashpoint	>160	*+	1.0	1.0	Degrees F	1		1010B	Total/NA
pH adj. to 25 deg C	7.0	H3 HF	0.1	0.1	SU	1		9040C	Total/NA

This Detection Summary does not include radiochemical test results.

Client: ARCADIS U.S. Inc
Project/Site: 30064227.0742, 309152 Saupe

Job ID: 320-90869-1

Client Sample ID: IDW-W-082022
Date Collected: 08/07/22 13:54
Date Received: 08/10/22 09:30

Lab Sample ID: 320-90869-1
Matrix: Water

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		15	6.6	ug/L			08/17/22 13:26	1
Benzene	**29**		1.0	0.31	ug/L			08/17/22 13:26	1
Bromobenzene	ND		1.0	0.40	ug/L			08/17/22 13:26	1
Bromochloromethane	ND		1.0	0.40	ug/L			08/17/22 13:26	1
Bromodichloromethane	ND		1.0	0.39	ug/L			08/17/22 13:26	1
Bromoform	ND		2.0	1.2	ug/L			08/17/22 13:26	1
Bromomethane	ND		5.0	2.4	ug/L			08/17/22 13:26	1
2-Butanone (MEK)	ND		15	5.9	ug/L			08/17/22 13:26	1
n-Butylbenzene	**0.89**	**J**	1.0	0.48	ug/L			08/17/22 13:26	1
sec-Butylbenzene	**0.84**	**J**	1.0	0.45	ug/L			08/17/22 13:26	1
tert-Butylbenzene	ND		1.0	0.42	ug/L			08/17/22 13:26	1
Carbon disulfide	ND		2.0	0.63	ug/L			08/17/22 13:26	1
Carbon tetrachloride	ND		1.0	0.57	ug/L			08/17/22 13:26	1
Chlorobenzene	ND		1.0	0.42	ug/L			08/17/22 13:26	1
Chloroethane	ND		4.0	1.4	ug/L			08/17/22 13:26	1
Chloroform	ND		1.0	0.36	ug/L			08/17/22 13:26	1
Chloromethane	ND		2.0	0.75	ug/L			08/17/22 13:26	1
4-Chlorotoluene	ND		1.0	0.21	ug/L			08/17/22 13:26	1
Dibromochloromethane	ND		2.0	0.62	ug/L			08/17/22 13:26	1
1,2-Dibromo-3-Chloropropane	ND		5.0	1.8	ug/L			08/17/22 13:26	1
Dichlorodifluoromethane	ND		3.0	0.96	ug/L			08/17/22 13:26	1
Dibromomethane	ND		1.0	0.34	ug/L			08/17/22 13:26	1
1,2-Dibromoethane (EDB)	ND		1.0	0.40	ug/L			08/17/22 13:26	1
1,2-Dichlorobenzene	ND		1.0	0.37	ug/L			08/17/22 13:26	1
1,3-Dichlorobenzene	ND		1.0	0.33	ug/L			08/17/22 13:26	1
1,4-Dichlorobenzene	ND		1.0	0.39	ug/L			08/17/22 13:26	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			08/17/22 13:26	1
1,2-Dichloroethane	ND		1.0	0.54	ug/L			08/17/22 13:26	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			08/17/22 13:26	1
cis-1,2-Dichloroethene	ND		1.0	0.32	ug/L			08/17/22 13:26	1
trans-1,2-Dichloroethene	ND		1.0	0.37	ug/L			08/17/22 13:26	1
1,2-Dichloropropane	ND		1.0	0.52	ug/L			08/17/22 13:26	1
1,3-Dichloropropane	ND		1.0	0.38	ug/L			08/17/22 13:26	1
2,2-Dichloropropane	ND		1.0	0.38	ug/L			08/17/22 13:26	1
1,1-Dichloropropene	ND		1.0	0.42	ug/L			08/17/22 13:26	1
cis-1,3-Dichloropropene	ND		2.0	0.63	ug/L			08/17/22 13:26	1
trans-1,3-Dichloropropene	ND		2.0	0.65	ug/L			08/17/22 13:26	1
Ethylbenzene	**5.8**		1.0	0.30	ug/L			08/17/22 13:26	1
2-Hexanone	ND		5.0	1.7	ug/L			08/17/22 13:26	1
Hexachlorobutadiene	ND		2.0	1.2	ug/L			08/17/22 13:26	1
Isopropylbenzene	**2.6**		1.0	0.36	ug/L			08/17/22 13:26	1
p-Isopropyltoluene	**1.0**		1.0	0.43	ug/L			08/17/22 13:26	1
Methylene Chloride	ND		2.0	0.94	ug/L			08/17/22 13:26	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			08/17/22 13:26	1
Methyl-tert-butyl Ether (MTBE)	ND		5.0	0.25	ug/L			08/17/22 13:26	1
Naphthalene	**12**		2.0	0.63	ug/L			08/17/22 13:26	1
N-Propylbenzene	**2.9**		1.0	0.53	ug/L			08/17/22 13:26	1
Styrene	ND		1.0	0.36	ug/L			08/17/22 13:26	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.58	ug/L			08/17/22 13:26	1

Client Sample ID: IDW-W-082022

Date Collected: 08/07/22 13:54
Date Received: 08/10/22 09:30

Lab Sample ID: 320-90869-1

Matrix: Water

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			08/17/22 13:26	1
Tetrachloroethene	ND		1.0	0.40	ug/L			08/17/22 13:26	1
Toluene	**1.1**		1.0	0.32	ug/L			08/17/22 13:26	1
1,2,3-Trichlorobenzene	ND		2.0	0.70	ug/L			08/17/22 13:26	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			08/17/22 13:26	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			08/17/22 13:26	1
Trichloroethene	ND		1.0	0.30	ug/L			08/17/22 13:26	1
Trichlorofluoromethane	ND		2.0	0.57	ug/L			08/17/22 13:26	1
1,2,4-Trichlorobenzene	ND		1.0	0.58	ug/L			08/17/22 13:26	1
1,2,3-Trichloropropane	ND		2.5	0.86	ug/L			08/17/22 13:26	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.0	0.73	ug/L			08/17/22 13:26	1
1,2,4-Trimethylbenzene	**37**		1.0	0.15	ug/L			08/17/22 13:26	1
1,3,5-Trimethylbenzene	**11**		1.0	0.37	ug/L			08/17/22 13:26	1
Vinyl acetate	ND		3.0	0.94	ug/L			08/17/22 13:26	1
Vinyl chloride	ND		2.0	0.51	ug/L			08/17/22 13:26	1
2-Chlorotoluene	ND		1.0	0.34	ug/L			08/17/22 13:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*80 - 125*		*08/17/22 13:26*	*1*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 127*		*08/17/22 13:26*	*1*
4-Bromofluorobenzene (Surr)	*98*		*78 - 120*		*08/17/22 13:26*	*1*
Dibromofluoromethane (Surr)	*92*		*77 - 120*		*08/17/22 13:26*	*1*

Method: 8260D - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Xylenes, Total	**350**		5.0	1.7	ug/L			08/18/22 01:41	5
o-Xylene	**47**		5.0	1.7	ug/L			08/18/22 01:41	5
m-Xylene & p-Xylene	**300**		10	1.8	ug/L			08/18/22 01:41	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*80 - 125*		*08/18/22 01:41*	*5*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 127*		*08/18/22 01:41*	*5*
4-Bromofluorobenzene (Surr)	*98*		*78 - 120*		*08/18/22 01:41*	*5*
Dibromofluoromethane (Surr)	*96*		*77 - 120*		*08/18/22 01:41*	*5*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**1600**		50	9.7	ng/L		08/11/22 07:24	08/16/22 18:55	1
Acenaphthylene	**31**	**J**	50	8.5	ng/L		08/11/22 07:24	08/16/22 18:55	1
Anthracene	**60**		50	10	ng/L		08/11/22 07:24	08/16/22 18:55	1
Benzo[a]anthracene	ND		50	12	ng/L		08/11/22 07:24	08/16/22 18:55	1
Benzo[a]pyrene	ND		50	11	ng/L		08/11/22 07:24	08/16/22 18:55	1
Benzo[b]fluoranthene	ND		50	11	ng/L		08/11/22 07:24	08/16/22 18:55	1
Benzo[g,h,i]perylene	ND		50	8.2	ng/L		08/11/22 07:24	08/16/22 18:55	1
Benzo[k]fluoranthene	ND		50	10	ng/L		08/11/22 07:24	08/16/22 18:55	1
Chrysene	ND		50	11	ng/L		08/11/22 07:24	08/16/22 18:55	1
Dibenz(a,h)anthracene	ND		50	12	ng/L		08/11/22 07:24	08/16/22 18:55	1
Fluoranthene	**120**		50	10	ng/L		08/11/22 07:24	08/16/22 18:55	1
Fluorene	**730**		50	11	ng/L		08/11/22 07:24	08/16/22 18:55	1
Indeno[1,2,3-cd]pyrene	ND		50	12	ng/L		08/11/22 07:24	08/16/22 18:55	1

Client Sample ID: IDW-W-082022

Date Collected: 08/07/22 13:54
Date Received: 08/10/22 09:30

Lab Sample ID: 320-90869-1

Matrix: Water

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	**5300**		50	13	ng/L		08/11/22 07:24	08/16/22 18:55	1
Phenanthrene	**600**		50	11	ng/L		08/11/22 07:24	08/16/22 18:55	1
Pyrene	**79**		50	18	ng/L		08/11/22 07:24	08/16/22 18:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*66*		*20 - 123*	*08/11/22 07:24*	*08/16/22 18:55*	*1*
Terphenyl-d14	*69*		*46 - 137*	*08/11/22 07:24*	*08/16/22 18:55*	*1*
2-Fluorobiphenyl (Surr)	*53*		*31 - 107*	*08/11/22 07:24*	*08/16/22 18:55*	*1*
2-methylnaphthalene-d10	*67*		*50 - 150*	*08/11/22 07:24*	*08/16/22 18:55*	*1*
Fluoranthene-d10 (Surr)	*67*		*50 - 150*	*08/11/22 07:24*	*08/16/22 18:55*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**2.4**	**J**	9.5	1.0	ug/L		08/12/22 08:25	08/22/22 18:23	1
Acenaphthylene	ND		9.5	1.0	ug/L		08/12/22 08:25	08/22/22 18:23	1
Anthracene	ND		9.5	0.95	ug/L		08/12/22 08:25	08/22/22 18:23	1
Benzo[a]anthracene	ND		9.5	0.95	ug/L		08/12/22 08:25	08/22/22 18:23	1
Benzo[b]fluoranthene	ND		9.5	1.1	ug/L		08/12/22 08:25	08/22/22 18:23	1
Benzo[k]fluoranthene	ND		9.5	0.91	ug/L		08/12/22 08:25	08/22/22 18:23	1
Benzo[g,h,i]perylene	ND		9.5	1.3	ug/L		08/12/22 08:25	08/22/22 18:23	1
Benzo[a]pyrene	ND		9.5	0.65	ug/L		08/12/22 08:25	08/22/22 18:23	1
Benzoic acid	ND	*1	48	19	ug/L		08/12/22 08:25	08/22/22 18:23	1
Benzyl alcohol	ND		9.5	2.5	ug/L		08/12/22 08:25	08/22/22 18:23	1
Bis(2-chloroethoxy)methane	ND		9.5	0.95	ug/L		08/12/22 08:25	08/22/22 18:23	1
Bis(2-chloroethyl)ether	ND		9.5	1.4	ug/L		08/12/22 08:25	08/22/22 18:23	1
bis (2-chloroisopropyl) ether	ND		9.5	1.2	ug/L		08/12/22 08:25	08/22/22 18:23	1
Bis(2-ethylhexyl) phthalate	ND		9.5	0.95	ug/L		08/12/22 08:25	08/22/22 18:23	1
4-Bromophenyl phenyl ether	ND		9.5	1.0	ug/L		08/12/22 08:25	08/22/22 18:23	1
Butyl benzyl phthalate	ND		9.5	1.3	ug/L		08/12/22 08:25	08/22/22 18:23	1
4-Chloroaniline	ND		9.5	1.9	ug/L		08/12/22 08:25	08/22/22 18:23	1
4-Chloro-3-methylphenol	ND		9.5	1.9	ug/L		08/12/22 08:25	08/22/22 18:23	1
2-Chloronaphthalene	ND		9.5	1.2	ug/L		08/12/22 08:25	08/22/22 18:23	1
2-Chlorophenol	ND		9.5	1.5	ug/L		08/12/22 08:25	08/22/22 18:23	1
4-Chlorophenyl phenyl ether	ND		9.5	1.0	ug/L		08/12/22 08:25	08/22/22 18:23	1
Chrysene	ND		9.5	0.58	ug/L		08/12/22 08:25	08/22/22 18:23	1
Dibenz(a,h)anthracene	ND		9.5	1.9	ug/L		08/12/22 08:25	08/22/22 18:23	1
Dibenzofuran	ND		9.5	1.0	ug/L		08/12/22 08:25	08/22/22 18:23	1
Di-n-butyl phthalate	ND		9.5	1.0	ug/L		08/12/22 08:25	08/22/22 18:23	1
1,2-Dichlorobenzene	ND		9.5	1.4	ug/L		08/12/22 08:25	08/22/22 18:23	1
1,3-Dichlorobenzene	ND		9.5	1.4	ug/L		08/12/22 08:25	08/22/22 18:23	1
1,4-Dichlorobenzene	ND		9.5	1.3	ug/L		08/12/22 08:25	08/22/22 18:23	1
3,3'-Dichlorobenzidine	ND		48	0.91	ug/L		08/12/22 08:25	08/22/22 18:23	1
2,4-Dichlorophenol	ND		9.5	2.5	ug/L		08/12/22 08:25	08/22/22 18:23	1
Diethyl phthalate	ND		9.5	0.89	ug/L		08/12/22 08:25	08/22/22 18:23	1
2,4-Dimethylphenol	**3.8**	**J**	9.5	2.1	ug/L		08/12/22 08:25	08/22/22 18:23	1
Dimethyl phthalate	ND		9.5	0.84	ug/L		08/12/22 08:25	08/22/22 18:23	1
4,6-Dinitro-2-methylphenol	ND		48	2.1	ug/L		08/12/22 08:25	08/22/22 18:23	1
2,4-Dinitrophenol	ND		48	19	ug/L		08/12/22 08:25	08/22/22 18:23	1
2,4-Dinitrotoluene	ND		9.5	1.9	ug/L		08/12/22 08:25	08/22/22 18:23	1
2,6-Dinitrotoluene	ND		9.5	1.9	ug/L		08/12/22 08:25	08/22/22 18:23	1

Client Sample ID: IDW-W-082022

Date Collected: 08/07/22 13:54
Date Received: 08/10/22 09:30

Lab Sample ID: 320-90869-1

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate	ND		9.5	1.4	ug/L		08/12/22 08:25	08/22/22 18:23	1
Fluoranthene	ND		9.5	0.62	ug/L		08/12/22 08:25	08/22/22 18:23	1
Fluorene	**0.97**	**J**	9.5	0.89	ug/L		08/12/22 08:25	08/22/22 18:23	1
Hexachlorobenzene	ND		9.5	1.3	ug/L		08/12/22 08:25	08/22/22 18:23	1
Hexachlorobutadiene	ND		9.5	1.2	ug/L		08/12/22 08:25	08/22/22 18:23	1
Hexachlorocyclopentadiene	ND		48	4.8	ug/L		08/12/22 08:25	08/22/22 18:23	1
Hexachloroethane	ND		9.5	1.3	ug/L		08/12/22 08:25	08/22/22 18:23	1
Indeno[1,2,3-cd]pyrene	ND		9.5	3.2	ug/L		08/12/22 08:25	08/22/22 18:23	1
Isophorone	ND		9.5	0.95	ug/L		08/12/22 08:25	08/22/22 18:23	1
2-Methylnaphthalene	**3.0**	**J**	9.5	1.4	ug/L		08/12/22 08:25	08/22/22 18:23	1
2-Methylphenol	ND		9.5	0.89	ug/L		08/12/22 08:25	08/22/22 18:23	1
3-Methylphenol & 4-Methylphenol	ND		19	1.1	ug/L		08/12/22 08:25	08/22/22 18:23	1
Naphthalene	**6.7**	**J**	9.5	1.2	ug/L		08/12/22 08:25	08/22/22 18:23	1
2-Nitroaniline	ND		48	1.9	ug/L		08/12/22 08:25	08/22/22 18:23	1
3-Nitroaniline	ND		48	1.3	ug/L		08/12/22 08:25	08/22/22 18:23	1
4-Nitroaniline	ND		48	1.4	ug/L		08/12/22 08:25	08/22/22 18:23	1
Nitrobenzene	ND		9.5	1.5	ug/L		08/12/22 08:25	08/22/22 18:23	1
2-Nitrophenol	ND		9.5	1.8	ug/L		08/12/22 08:25	08/22/22 18:23	1
4-Nitrophenol	ND		48	5.8	ug/L		08/12/22 08:25	08/22/22 18:23	1
N-Nitrosodiphenylamine	ND		9.5	0.51	ug/L		08/12/22 08:25	08/22/22 18:23	1
N-Nitrosodi-n-propylamine	ND		9.5	1.3	ug/L		08/12/22 08:25	08/22/22 18:23	1
Pentachlorophenol	ND		48	1.9	ug/L		08/12/22 08:25	08/22/22 18:23	1
Phenanthrene	ND		9.5	0.95	ug/L		08/12/22 08:25	08/22/22 18:23	1
Phenol	**1.2**	**J**	9.5	1.0	ug/L		08/12/22 08:25	08/22/22 18:23	1
Pyrene	ND		9.5	1.3	ug/L		08/12/22 08:25	08/22/22 18:23	1
Pyridine	ND		19	0.76	ug/L		08/12/22 08:25	08/22/22 18:23	1
1,2,4-Trichlorobenzene	ND		9.5	1.3	ug/L		08/12/22 08:25	08/22/22 18:23	1
2,4,5-Trichlorophenol	ND		9.5	1.9	ug/L		08/12/22 08:25	08/22/22 18:23	1
2,4,6-Trichlorophenol	ND		9.5	1.9	ug/L		08/12/22 08:25	08/22/22 18:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*78*		*55 - 140*	*08/12/22 08:25*	*08/22/22 18:23*	*1*
2-Fluorobiphenyl (Surr)	*66*		*57 - 98*	*08/12/22 08:25*	*08/22/22 18:23*	*1*
2-Fluorophenol (Surr)	*44*	*S1-*	*47 - 87*	*08/12/22 08:25*	*08/22/22 18:23*	*1*
Nitrobenzene-d5 (Surr)	*65*		*64 - 104*	*08/12/22 08:25*	*08/22/22 18:23*	*1*
Phenol-d5 (Surr)	*34*		*29 - 69*	*08/12/22 08:25*	*08/22/22 18:23*	*1*
Terphenyl-d14 (Surr)	*71*		*70 - 118*	*08/12/22 08:25*	*08/22/22 18:23*	*1*

Method: AK102 & 103 - Alaska - Diesel Range Organics & Residual Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	**1400**		150	61	ug/L		08/19/22 07:18	08/30/22 13:26	1
RRO (nC25-nC36)	**290**	**J**	500	140	ug/L		08/19/22 07:18	08/30/22 13:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*68*		*60 - 120*	*08/19/22 07:18*	*08/30/22 13:26*	*1*
n-Triacontane-d62	*70*		*60 - 120*	*08/19/22 07:18*	*08/30/22 13:26*	*1*

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	**14**		1.7	0.48	ng/L		08/19/22 12:21	08/23/22 13:28	1

Client Sample ID: IDW-W-082022
Date Collected: 08/07/22 13:54
Date Received: 08/10/22 09:30

Lab Sample ID: 320-90869-1
Matrix: Water

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	**3.4**		1.7	0.21	ng/L		08/19/22 12:21	08/23/22 13:28	1
Perfluorooctanoic acid (PFOA)	**21**		1.7	0.71	ng/L		08/19/22 12:21	08/23/22 13:28	1
Perfluorononanoic acid (PFNA)	**0.82**	**J**	1.7	0.22	ng/L		08/19/22 12:21	08/23/22 13:28	1
Perfluorodecanoic acid (PFDA)	**0.32**	**J**	1.7	0.26	ng/L		08/19/22 12:21	08/23/22 13:28	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.91	ng/L		08/19/22 12:21	08/23/22 13:28	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.46	ng/L		08/19/22 12:21	08/23/22 13:28	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.7	1.1	ng/L		08/19/22 12:21	08/23/22 13:28	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.61	ng/L		08/19/22 12:21	08/23/22 13:28	1
Perfluorobutanesulfonic acid (PFBS)	**10**		1.7	0.17	ng/L		08/19/22 12:21	08/23/22 13:28	1
Perfluorohexanesulfonic acid (PFHxS)	**64**		1.7	0.47	ng/L		08/19/22 12:21	08/23/22 13:28	1
Perfluorooctanesulfonic acid (PFOS)	**170**		1.7	0.45	ng/L		08/19/22 12:21	08/23/22 13:28	1
NEtFOSAA	ND		4.2	1.1	ng/L		08/19/22 12:21	08/23/22 13:28	1
NMeFOSAA	ND		4.2	1.0	ng/L		08/19/22 12:21	08/23/22 13:28	1
HFPO-DA (GenX)	ND		3.3	1.2	ng/L		08/19/22 12:21	08/23/22 13:28	1
9Cl-PF3ONS	ND		1.7	0.20	ng/L		08/19/22 12:21	08/23/22 13:28	1
11Cl-PF3OUdS	ND		1.7	0.27	ng/L		08/19/22 12:21	08/23/22 13:28	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.7	0.33	ng/L		08/19/22 12:21	08/23/22 13:28	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*117*		*50 - 150*	*08/19/22 12:21*	*08/23/22 13:28*	*1*
13C4 PFHpA	*89*		*50 - 150*	*08/19/22 12:21*	*08/23/22 13:28*	*1*
13C4 PFOA	*93*		*50 - 150*	*08/19/22 12:21*	*08/23/22 13:28*	*1*
13C5 PFNA	*93*		*50 - 150*	*08/19/22 12:21*	*08/23/22 13:28*	*1*
13C2 PFDA	*97*		*50 - 150*	*08/19/22 12:21*	*08/23/22 13:28*	*1*
13C2 PFUnA	*91*		*50 - 150*	*08/19/22 12:21*	*08/23/22 13:28*	*1*
13C2 PFDoA	*83*		*50 - 150*	*08/19/22 12:21*	*08/23/22 13:28*	*1*
13C2 PFTeDA	*77*		*50 - 150*	*08/19/22 12:21*	*08/23/22 13:28*	*1*
13C3 PFBS	*78*		*50 - 150*	*08/19/22 12:21*	*08/23/22 13:28*	*1*
18O2 PFHxS	*89*		*50 - 150*	*08/19/22 12:21*	*08/23/22 13:28*	*1*
13C4 PFOS	*90*		*50 - 150*	*08/19/22 12:21*	*08/23/22 13:28*	*1*
d3-NMeFOSAA	*76*		*50 - 150*	*08/19/22 12:21*	*08/23/22 13:28*	*1*
d5-NEtFOSAA	*91*		*50 - 150*	*08/19/22 12:21*	*08/23/22 13:28*	*1*
13C3 HFPO-DA	*84*		*50 - 150*	*08/19/22 12:21*	*08/23/22 13:28*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.020	0.012	mg/L		08/11/22 16:00	08/16/22 12:49	1
Barium	**0.23**		0.0050	0.0025	mg/L		08/11/22 16:00	08/16/22 12:49	1
Cadmium	ND		0.0020	0.00050	mg/L		08/11/22 16:00	08/16/22 12:49	1
Chromium	**0.0057**	**J**	0.0080	0.0012	mg/L		08/11/22 16:00	08/16/22 12:49	1
Lead	ND		0.0050	0.0025	mg/L		08/11/22 16:00	08/16/22 12:49	1
Selenium	ND		0.020	0.013	mg/L		08/11/22 16:00	08/16/22 12:49	1
Silver	ND		0.0050	0.00084	mg/L		08/11/22 16:00	08/16/22 12:49	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00010	mg/L		08/31/22 16:06	09/01/22 12:02	1

Client: ARCADIS U.S. Inc
Project/Site: 30064227.0742, 309152 Saupe

Job ID: 320-90869-1

Client Sample ID: IDW-W-082022
Date Collected: 08/07/22 13:54
Date Received: 08/10/22 09:30

Lab Sample ID: 320-90869-1
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Flashpoint	>160	*+	1.0	1.0	Degrees F			08/18/22 15:06	1
pH adj. to 25 deg C	7.0	H3 HF	0.1	0.1	SU			08/11/22 14:18	1

Surrogate Summary

Client: ARCADIS U.S. Inc
Project/Site: 30064227.0742, 309152 Saupe

Job ID: 320-90869-1

Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		TOL	DCA	BFB	DBFM
Lab Sample ID	Client Sample ID	(80-125)	(70-127)	(78-120)	(77-120)
320-90869-1	IDW-W-082022	100	94	98	92
320-90869-1 - DL	IDW-W-082022	100	98	98	96
LCS 280-584171/1002	Lab Control Sample	100	96	98	96
LCS 280-584292/1002	Lab Control Sample	100	97	96	94
LCSD 280-584171/5	Lab Control Sample Dup	101	94	98	95
LCSD 280-584292/5	Lab Control Sample Dup	102	98	95	97
MB 280-584171/9	Method Blank	101	96	97	95
MB 280-584292/9	Method Blank	101	100	99	99

Surrogate Legend

TOL = Toluene-d8 (Surr)
DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		TBP	FBP	2FP	NBZ	PHL	TPHL
Lab Sample ID	Client Sample ID	(55-140)	(57-98)	(47-87)	(64-104)	(29-69)	(70-118)
320-90869-1	IDW-W-082022	78	66	44 S1-	65	34	71
LCS 320-609049/2-A	Lab Control Sample	99	91	71	89	50	97
LCSD 320-609049/3-A	Lab Control Sample Dup	89	83	70	79	50	89
MB 320-609049/1-A	Method Blank	76	73	55	66	39	84

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPHL = Terphenyl-d14 (Surr)

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Matrix: Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)				
		NBZ	TPHL	FBP	2MN	FLN10
Lab Sample ID	Client Sample ID	(20-123)	(46-137)	(31-107)	(50-150)	(50-150)
320-90869-1	IDW-W-082022	66	69	53	67	67
LCS 320-608789/2-A	Lab Control Sample	82	73	63	64	72
LCSD 320-608789/3-A	Lab Control Sample Dup	85	77	63	65	74
MB 320-608789/1-A	Method Blank	83	78	66	68	79

Surrogate Legend

NBZ = Nitrobenzene-d5
TPHL = Terphenyl-d14
FBP = 2-Fluorobiphenyl (Surr)
2MN = 2-methylnaphthalene-d10
FLN10 = Fluoranthene-d10 (Surr)

Surrogate Summary

Client: ARCADIS U.S. Inc
Job ID: 320-90869-1
Project/Site: 30064227.0742, 309152 Saupe

Method: AK102 & 103 - Alaska - Diesel Range Organics & Residual Range Organics (GC)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)									
Lab Sample ID	Client Sample ID	OTPH (60-120)	NTC (60-120)								
320-90869-1	IDW-W-082022	68	70								
LCS 320-610616/2-A	Lab Control Sample	72	68								
LCSD 320-610616/3-A	Lab Control Sample Dup	69	68								
MB 320-610616/1-A	Method Blank	65	64								

Surrogate Legend

OTPH = o-Terphenyl (Surr)
NTC = n-Triacontane-d62

Isotope Dilution Summary

Client: ARCADIS U.S. Inc
Project/Site: 30064227.0742, 309152 Saupe

Job ID: 320-90869-1

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Matrix: Water

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFHxA (50-150)	C4PFHA (50-150)	PFOA (50-150)	PFNA (50-150)	PFDA (50-150)	PFUnA (50-150)	PFDoA (50-150)	PFTDA (50-150)
320-90869-1	IDW-W-082022	117	89	93	93	97	91	83	77
LCS 320-610673/2-A	Lab Control Sample	108	105	105	106	103	103	102	99
LCSD 320-610673/3-A	Lab Control Sample Dup	105	100	101	102	106	103	102	100
MB 320-610673/1-A	Method Blank	106	104	105	104	104	100	98	95

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	C3PFBS (50-150)	PFHxS (50-150)	PFOS (50-150)	d3NMFOS (50-150)	d5NEFOS (50-150)	HFPODA (50-150)		
320-90869-1	IDW-W-082022	78	89	90	76	91	84		
LCS 320-610673/2-A	Lab Control Sample	104	109	108	102	104	98		
LCSD 320-610673/3-A	Lab Control Sample Dup	102	108	104	102	104	99		
MB 320-610673/1-A	Method Blank	103	108	103	100	102	99		

Surrogate Legend

PFHxA = 13C2 PFHxA
C4PFHA = 13C4 PFHpA
PFOA = 13C4 PFOA
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA
PFUnA = 13C2 PFUnA
PFDoA = 13C2 PFDoA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS
d3NMFOS = d3-NMeFOSAA
d5NEFOS = d5-NEtFOSAA
HFPODA = 13C3 HFPO-DA

Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 280-584171/9
Matrix: Water
Analysis Batch: 584171

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		15	6.6	ug/L			08/17/22 09:36	1
Benzene	ND		1.0	0.31	ug/L			08/17/22 09:36	1
Bromobenzene	ND		1.0	0.40	ug/L			08/17/22 09:36	1
Bromochloromethane	ND		1.0	0.40	ug/L			08/17/22 09:36	1
Bromodichloromethane	ND		1.0	0.39	ug/L			08/17/22 09:36	1
Bromoform	ND		2.0	1.2	ug/L			08/17/22 09:36	1
Bromomethane	ND		5.0	2.4	ug/L			08/17/22 09:36	1
2-Butanone (MEK)	ND		15	5.9	ug/L			08/17/22 09:36	1
n-Butylbenzene	ND		1.0	0.48	ug/L			08/17/22 09:36	1
sec-Butylbenzene	ND		1.0	0.45	ug/L			08/17/22 09:36	1
tert-Butylbenzene	ND		1.0	0.42	ug/L			08/17/22 09:36	1
Carbon disulfide	ND		2.0	0.63	ug/L			08/17/22 09:36	1
Carbon tetrachloride	ND		1.0	0.57	ug/L			08/17/22 09:36	1
Chlorobenzene	ND		1.0	0.42	ug/L			08/17/22 09:36	1
Chloroethane	ND		4.0	1.4	ug/L			08/17/22 09:36	1
Chloroform	ND		1.0	0.36	ug/L			08/17/22 09:36	1
Chloromethane	ND		2.0	0.75	ug/L			08/17/22 09:36	1
4-Chlorotoluene	ND		1.0	0.21	ug/L			08/17/22 09:36	1
Dibromochloromethane	ND		2.0	0.62	ug/L			08/17/22 09:36	1
1,2-Dibromo-3-Chloropropane	ND		5.0	1.8	ug/L			08/17/22 09:36	1
Dichlorodifluoromethane	ND		3.0	0.96	ug/L			08/17/22 09:36	1
Dibromomethane	ND		1.0	0.34	ug/L			08/17/22 09:36	1
1,2-Dibromoethane (EDB)	ND		1.0	0.40	ug/L			08/17/22 09:36	1
1,2-Dichlorobenzene	ND		1.0	0.37	ug/L			08/17/22 09:36	1
1,3-Dichlorobenzene	ND		1.0	0.33	ug/L			08/17/22 09:36	1
1,4-Dichlorobenzene	ND		1.0	0.39	ug/L			08/17/22 09:36	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			08/17/22 09:36	1
1,2-Dichloroethane	ND		1.0	0.54	ug/L			08/17/22 09:36	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			08/17/22 09:36	1
cis-1,2-Dichloroethene	ND		1.0	0.32	ug/L			08/17/22 09:36	1
trans-1,2-Dichloroethene	ND		1.0	0.37	ug/L			08/17/22 09:36	1
1,2-Dichloropropane	ND		1.0	0.52	ug/L			08/17/22 09:36	1
1,3-Dichloropropane	ND		1.0	0.38	ug/L			08/17/22 09:36	1
2,2-Dichloropropane	ND		1.0	0.38	ug/L			08/17/22 09:36	1
1,1-Dichloropropene	ND		1.0	0.42	ug/L			08/17/22 09:36	1
cis-1,3-Dichloropropene	ND		2.0	0.63	ug/L			08/17/22 09:36	1
trans-1,3-Dichloropropene	ND		2.0	0.65	ug/L			08/17/22 09:36	1
Ethylbenzene	ND		1.0	0.30	ug/L			08/17/22 09:36	1
2-Hexanone	ND		5.0	1.7	ug/L			08/17/22 09:36	1
Hexachlorobutadiene	ND		2.0	1.2	ug/L			08/17/22 09:36	1
Isopropylbenzene	ND		1.0	0.36	ug/L			08/17/22 09:36	1
p-Isopropyltoluene	ND		1.0	0.43	ug/L			08/17/22 09:36	1
Methylene Chloride	ND		2.0	0.94	ug/L			08/17/22 09:36	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			08/17/22 09:36	1
Methyl-tert-butyl Ether (MTBE)	ND		5.0	0.25	ug/L			08/17/22 09:36	1
Naphthalene	ND		2.0	0.63	ug/L			08/17/22 09:36	1
N-Propylbenzene	ND		1.0	0.53	ug/L			08/17/22 09:36	1
Styrene	ND		1.0	0.36	ug/L			08/17/22 09:36	1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 280-584171/9
Matrix: Water
Analysis Batch: 584171

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.58	ug/L			08/17/22 09:36	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			08/17/22 09:36	1
Tetrachloroethene	ND		1.0	0.40	ug/L			08/17/22 09:36	1
Toluene	ND		1.0	0.32	ug/L			08/17/22 09:36	1
1,2,3-Trichlorobenzene	ND		2.0	0.70	ug/L			08/17/22 09:36	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			08/17/22 09:36	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			08/17/22 09:36	1
Trichloroethene	ND		1.0	0.30	ug/L			08/17/22 09:36	1
Trichlorofluoromethane	ND		2.0	0.57	ug/L			08/17/22 09:36	1
1,2,4-Trichlorobenzene	ND		1.0	0.58	ug/L			08/17/22 09:36	1
1,2,3-Trichloropropane	ND		2.5	0.86	ug/L			08/17/22 09:36	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.0	0.73	ug/L			08/17/22 09:36	1
1,2,4-Trimethylbenzene	ND		1.0	0.15	ug/L			08/17/22 09:36	1
1,3,5-Trimethylbenzene	ND		1.0	0.37	ug/L			08/17/22 09:36	1
Vinyl acetate	ND		3.0	0.94	ug/L			08/17/22 09:36	1
Vinyl chloride	ND		2.0	0.51	ug/L			08/17/22 09:36	1
Xylenes, Total	ND		1.0	0.33	ug/L			08/17/22 09:36	1
o-Xylene	ND		1.0	0.33	ug/L			08/17/22 09:36	1
m-Xylene & p-Xylene	ND		2.0	0.36	ug/L			08/17/22 09:36	1
2-Chlorotoluene	ND		1.0	0.34	ug/L			08/17/22 09:36	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*80 - 125*		*08/17/22 09:36*	*1*
1,2-Dichloroethane-d4 (Surr)	*96*		*70 - 127*		*08/17/22 09:36*	*1*
4-Bromofluorobenzene (Surr)	*97*		*78 - 120*		*08/17/22 09:36*	*1*
Dibromofluoromethane (Surr)	*95*		*77 - 120*		*08/17/22 09:36*	*1*

Lab Sample ID: LCS 280-584171/1002
Matrix: Water
Analysis Batch: 584171

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	200	181		ug/L		91	50 - 137
Benzene	50.0	47.9		ug/L		96	69 - 126
Bromobenzene	50.0	51.9		ug/L		104	75 - 122
Bromochloromethane	50.0	51.6		ug/L		103	71 - 130
Bromodichloromethane	50.0	48.1		ug/L		96	67 - 126
Bromoform	50.0	46.4		ug/L		93	57 - 125
Bromomethane	50.0	48.1		ug/L		96	25 - 163
2-Butanone (MEK)	200	187		ug/L		94	53 - 135
n-Butylbenzene	50.0	50.1		ug/L		100	69 - 130
sec-Butylbenzene	50.0	50.4		ug/L		101	72 - 127
tert-Butylbenzene	50.0	48.7		ug/L		97	72 - 126
Carbon disulfide	50.0	48.6		ug/L		97	56 - 128
Carbon tetrachloride	50.0	47.4		ug/L		95	60 - 133
Chlorobenzene	50.0	48.4		ug/L		97	78 - 118
Chloroethane	50.0	52.6		ug/L		105	52 - 144
Chloroform	50.0	48.0		ug/L		96	68 - 128

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 280-584171/1002
Matrix: Water
Analysis Batch: 584171

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloromethane	50.0	46.4		ug/L		93	43 - 142
4-Chlorotoluene	50.0	51.2		ug/L		102	74 - 124
Dibromochloromethane	50.0	48.0		ug/L		96	71 - 122
1,2-Dibromo-3-Chloropropane	50.0	43.1		ug/L		86	58 - 122
Dichlorodifluoromethane	50.0	40.9		ug/L		82	26 - 152
Dibromomethane	50.0	50.5		ug/L		101	68 - 129
1,2-Dibromoethane (EDB)	50.0	49.0		ug/L		98	81 - 118
1,2-Dichlorobenzene	50.0	50.7		ug/L		101	77 - 121
1,3-Dichlorobenzene	50.0	49.2		ug/L		98	76 - 121
1,4-Dichlorobenzene	50.0	48.9		ug/L		98	76 - 119
1,1-Dichloroethane	50.0	48.0		ug/L		96	66 - 130
1,2-Dichloroethane	50.0	47.7		ug/L		95	61 - 130
1,1-Dichloroethene	50.0	46.2		ug/L		92	62 - 130
cis-1,2-Dichloroethene	50.0	47.5		ug/L		95	69 - 126
trans-1,2-Dichloroethene	50.0	48.0		ug/L		96	66 - 129
1,2-Dichloropropane	50.0	49.8		ug/L		100	68 - 127
1,3-Dichloropropane	50.0	49.3		ug/L		99	80 - 118
2,2-Dichloropropane	50.0	51.1		ug/L		102	57 - 140
1,1-Dichloropropene	50.0	47.8		ug/L		96	64 - 133
cis-1,3-Dichloropropene	50.0	50.8		ug/L		102	75 - 120
trans-1,3-Dichloropropene	50.0	50.0		ug/L		100	66 - 127
Ethylbenzene	50.0	48.0		ug/L		96	76 - 121
2-Hexanone	200	195		ug/L		97	58 - 134
Hexachlorobutadiene	50.0	51.4		ug/L		103	69 - 133
Isopropylbenzene	50.0	49.4		ug/L		99	70 - 127
p-Isopropyltoluene	50.0	50.6		ug/L		101	74 - 127
Methylene Chloride	50.0	50.7		ug/L		101	64 - 128
4-Methyl-2-pentanone (MIBK)	200	200		ug/L		100	56 - 135
Methyl-tert-butyl Ether (MTBE)	50.0	51.7		ug/L		103	70 - 127
Naphthalene	50.0	49.1		ug/L		98	63 - 129
N-Propylbenzene	50.0	49.5		ug/L		99	73 - 127
Styrene	50.0	50.5		ug/L		101	79 - 120
1,1,1,2-Tetrachloroethane	50.0	47.5		ug/L		95	74 - 121
1,1,2,2-Tetrachloroethane	50.0	50.2		ug/L		100	72 - 122
Tetrachloroethene	50.0	48.0		ug/L		96	72 - 127
Toluene	50.0	45.7		ug/L		91	68 - 127
1,2,3-Trichlorobenzene	50.0	49.5		ug/L		99	70 - 127
1,1,1-Trichloroethane	50.0	45.4		ug/L		91	62 - 132
1,1,2-Trichloroethane	50.0	49.3		ug/L		99	72 - 128
Trichloroethene	50.0	45.4		ug/L		91	70 - 125
Trichlorofluoromethane	50.0	54.3		ug/L		109	57 - 144
1,2,4-Trichlorobenzene	50.0	49.6		ug/L		99	73 - 124
1,2,3-Trichloropropane	50.0	49.3		ug/L		99	74 - 123
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	47.7		ug/L		95	60 - 137
1,2,4-Trimethylbenzene	50.0	49.6		ug/L		99	74 - 124
1,3,5-Trimethylbenzene	50.0	49.7		ug/L		99	73 - 127
Vinyl acetate	100	122		ug/L		122	61 - 139
Vinyl chloride	50.0	47.6		ug/L		95	53 - 141

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 280-584171/1002
Matrix: Water
Analysis Batch: 584171

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Xylenes, Total			100	93.5		ug/L		94	77 - 120		
o-Xylene			50.0	48.6		ug/L		97	77 - 120		
m-Xylene & p-Xylene			50.0	44.9		ug/L		90	76 - 122		
2-Chlorotoluene			50.0	49.6		ug/L		99	75 - 123		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*100*		*80 - 125*
1,2-Dichloroethane-d4 (Surr)	*96*		*70 - 127*
4-Bromofluorobenzene (Surr)	*98*		*78 - 120*
Dibromofluoromethane (Surr)	*96*		*77 - 120*

Lab Sample ID: LCSD 280-584171/5
Matrix: Water
Analysis Batch: 584171

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
Acetone			200	179		ug/L		89	50 - 137	1	21
Benzene			50.0	47.7		ug/L		95	69 - 126	0	20
Bromobenzene			50.0	50.8		ug/L		102	75 - 122	2	20
Bromochloromethane			50.0	49.4		ug/L		99	71 - 130	4	20
Bromodichloromethane			50.0	47.3		ug/L		95	67 - 126	2	20
Bromoform			50.0	44.6		ug/L		89	57 - 125	4	20
Bromomethane			50.0	49.7		ug/L		99	25 - 163	3	40
2-Butanone (MEK)			200	188		ug/L		94	53 - 135	0	20
n-Butylbenzene			50.0	49.1		ug/L		98	69 - 130	2	20
sec-Butylbenzene			50.0	50.1		ug/L		100	72 - 127	0	20
tert-Butylbenzene			50.0	49.1		ug/L		98	72 - 126	1	20
Carbon disulfide			50.0	47.8		ug/L		96	56 - 128	2	20
Carbon tetrachloride			50.0	47.5		ug/L		95	60 - 133	0	20
Chlorobenzene			50.0	47.7		ug/L		95	78 - 118	1	20
Chloroethane			50.0	50.0		ug/L		100	52 - 144	5	30
Chloroform			50.0	48.3		ug/L		97	68 - 128	1	20
Chloromethane			50.0	45.2		ug/L		90	43 - 142	3	20
4-Chlorotoluene			50.0	49.1		ug/L		98	74 - 124	4	20
Dibromochloromethane			50.0	47.4		ug/L		95	71 - 122	1	20
1,2-Dibromo-3-Chloropropane			50.0	42.6		ug/L		85	58 - 122	1	21
Dichlorodifluoromethane			50.0	39.6		ug/L		79	26 - 152	3	21
Dibromomethane			50.0	49.9		ug/L		100	68 - 129	1	20
1,2-Dibromoethane (EDB)			50.0	48.3		ug/L		97	81 - 118	1	20
1,2-Dichlorobenzene			50.0	50.2		ug/L		100	77 - 121	1	20
1,3-Dichlorobenzene			50.0	48.7		ug/L		97	76 - 121	1	20
1,4-Dichlorobenzene			50.0	47.5		ug/L		95	76 - 119	3	20
1,1-Dichloroethane			50.0	47.7		ug/L		95	66 - 130	1	20
1,2-Dichloroethane			50.0	47.4		ug/L		95	61 - 130	1	20
1,1-Dichloroethene			50.0	46.7		ug/L		93	62 - 130	1	21
cis-1,2-Dichloroethene			50.0	46.7		ug/L		93	69 - 126	2	20
trans-1,2-Dichloroethene			50.0	48.2		ug/L		96	66 - 129	0	20
1,2-Dichloropropane			50.0	49.6		ug/L		99	68 - 127	1	20

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 280-584171/5
Matrix: Water
Analysis Batch: 584171

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
1,3-Dichloropropane			50.0	48.2		ug/L		96	80 - 118	2	20
2,2-Dichloropropane			50.0	51.2		ug/L		102	57 - 140	0	22
1,1-Dichloropropene			50.0	48.9		ug/L		98	64 - 133	2	20
cis-1,3-Dichloropropene			50.0	49.5		ug/L		99	75 - 120	3	20
trans-1,3-Dichloropropene			50.0	49.0		ug/L		98	66 - 127	2	20
Ethylbenzene			50.0	46.7		ug/L		93	76 - 121	3	20
2-Hexanone			200	189		ug/L		95	58 - 134	3	21
Hexachlorobutadiene			50.0	51.2		ug/L		102	69 - 133	0	20
Isopropylbenzene			50.0	48.4		ug/L		97	70 - 127	2	20
p-Isopropyltoluene			50.0	49.8		ug/L		100	74 - 127	2	20
Methylene Chloride			50.0	48.4		ug/L		97	64 - 128	5	20
4-Methyl-2-pentanone (MIBK)			200	195		ug/L		98	56 - 135	2	20
Methyl-tert-butyl Ether (MTBE)			50.0	50.4		ug/L		101	70 - 127	3	20
Naphthalene			50.0	48.4		ug/L		97	63 - 129	1	21
N-Propylbenzene			50.0	48.4		ug/L		97	73 - 127	2	20
Styrene			50.0	48.6		ug/L		97	79 - 120	4	20
1,1,1,2-Tetrachloroethane			50.0	46.8		ug/L		94	74 - 121	1	20
1,1,2,2-Tetrachloroethane			50.0	48.8		ug/L		98	72 - 122	3	20
Tetrachloroethene			50.0	50.2		ug/L		100	72 - 127	4	20
Toluene			50.0	44.7		ug/L		89	68 - 127	2	20
1,2,3-Trichlorobenzene			50.0	48.7		ug/L		97	70 - 127	2	20
1,1,1-Trichloroethane			50.0	46.1		ug/L		92	62 - 132	1	20
1,1,2-Trichloroethane			50.0	47.4		ug/L		95	72 - 128	4	20
Trichloroethene			50.0	46.9		ug/L		94	70 - 125	3	20
Trichlorofluoromethane			50.0	52.7		ug/L		105	57 - 144	3	28
1,2,4-Trichlorobenzene			50.0	49.0		ug/L		98	73 - 124	1	20
1,2,3-Trichloropropane			50.0	47.3		ug/L		95	74 - 123	4	20
1,1,2-Trichloro-1,2,2-trifluoroethane			50.0	48.8		ug/L		98	60 - 137	2	23
1,2,4-Trimethylbenzene			50.0	48.9		ug/L		98	74 - 124	1	20
1,3,5-Trimethylbenzene			50.0	49.2		ug/L		98	73 - 127	1	20
Vinyl acetate			100	121		ug/L		121	61 - 139	1	23
Vinyl chloride			50.0	46.6		ug/L		93	53 - 141	2	25
Xylenes, Total			100	91.4		ug/L		91	77 - 120	2	20
o-Xylene			50.0	47.5		ug/L		95	77 - 120	2	20
m-Xylene & p-Xylene			50.0	43.9		ug/L		88	76 - 122	2	20
2-Chlorotoluene			50.0	49.2		ug/L		98	75 - 123	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*101*		*80 - 125*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 127*
4-Bromofluorobenzene (Surr)	*98*		*78 - 120*
Dibromofluoromethane (Surr)	*95*		*77 - 120*

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 280-584292/9
Matrix: Water
Analysis Batch: 584292

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Xylenes, Total	ND		1.0	0.33	ug/L			08/17/22 19:47	1
o-Xylene	ND		1.0	0.33	ug/L			08/17/22 19:47	1
m-Xylene & p-Xylene	ND		2.0	0.36	ug/L			08/17/22 19:47	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*80 - 125*		*08/17/22 19:47*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 127*		*08/17/22 19:47*	*1*
4-Bromofluorobenzene (Surr)	*99*		*78 - 120*		*08/17/22 19:47*	*1*
Dibromofluoromethane (Surr)	*99*		*77 - 120*		*08/17/22 19:47*	*1*

Lab Sample ID: LCS 280-584292/1002
Matrix: Water
Analysis Batch: 584292

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Xylenes, Total			100	88.6		ug/L		89	77 - 120		
o-Xylene			50.0	46.2		ug/L		92	77 - 120		
m-Xylene & p-Xylene			50.0	42.4		ug/L		85	76 - 122		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*100*		*80 - 125*
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 127*
4-Bromofluorobenzene (Surr)	*96*		*78 - 120*
Dibromofluoromethane (Surr)	*94*		*77 - 120*

Lab Sample ID: LCSD 280-584292/5
Matrix: Water
Analysis Batch: 584292

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
Xylenes, Total			100	97.7		ug/L		98	77 - 120	10	20
o-Xylene			50.0	50.3		ug/L		101	77 - 120	9	20
m-Xylene & p-Xylene			50.0	47.4		ug/L		95	76 - 122	11	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*102*		*80 - 125*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 127*
4-Bromofluorobenzene (Surr)	*95*		*78 - 120*
Dibromofluoromethane (Surr)	*97*		*77 - 120*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 320-609049/1-A
Matrix: Water
Analysis Batch: 611138

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 609049

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		10	1.1	ug/L		08/12/22 08:25	08/22/22 17:08	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 320-609049/1-A
Matrix: Water
Analysis Batch: 611138

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 609049

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	ND		10	1.1	ug/L		08/12/22 08:25	08/22/22 17:08	1
Anthracene	ND		10	1.0	ug/L		08/12/22 08:25	08/22/22 17:08	1
Benzo[a]anthracene	ND		10	1.0	ug/L		08/12/22 08:25	08/22/22 17:08	1
Benzo[b]fluoranthene	ND		10	1.2	ug/L		08/12/22 08:25	08/22/22 17:08	1
Benzo[k]fluoranthene	ND		10	0.96	ug/L		08/12/22 08:25	08/22/22 17:08	1
Benzo[g,h,i]perylene	ND		10	1.4	ug/L		08/12/22 08:25	08/22/22 17:08	1
Benzo[a]pyrene	ND		10	0.68	ug/L		08/12/22 08:25	08/22/22 17:08	1
Benzoic acid	ND		50	20	ug/L		08/12/22 08:25	08/22/22 17:08	1
Benzyl alcohol	ND		10	2.6	ug/L		08/12/22 08:25	08/22/22 17:08	1
Bis(2-chloroethoxy)methane	ND		10	1.0	ug/L		08/12/22 08:25	08/22/22 17:08	1
Bis(2-chloroethyl)ether	ND		10	1.5	ug/L		08/12/22 08:25	08/22/22 17:08	1
bis (2-chloroisopropyl) ether	ND		10	1.3	ug/L		08/12/22 08:25	08/22/22 17:08	1
Bis(2-ethylhexyl) phthalate	ND		10	1.0	ug/L		08/12/22 08:25	08/22/22 17:08	1
4-Bromophenyl phenyl ether	ND		10	1.1	ug/L		08/12/22 08:25	08/22/22 17:08	1
Butyl benzyl phthalate	ND		10	1.4	ug/L		08/12/22 08:25	08/22/22 17:08	1
4-Chloroaniline	ND		10	2.0	ug/L		08/12/22 08:25	08/22/22 17:08	1
4-Chloro-3-methylphenol	ND		10	2.0	ug/L		08/12/22 08:25	08/22/22 17:08	1
2-Chloronaphthalene	ND		10	1.3	ug/L		08/12/22 08:25	08/22/22 17:08	1
2-Chlorophenol	ND		10	1.6	ug/L		08/12/22 08:25	08/22/22 17:08	1
4-Chlorophenyl phenyl ether	ND		10	1.1	ug/L		08/12/22 08:25	08/22/22 17:08	1
Chrysene	ND		10	0.61	ug/L		08/12/22 08:25	08/22/22 17:08	1
Dibenz(a,h)anthracene	ND		10	2.0	ug/L		08/12/22 08:25	08/22/22 17:08	1
Dibenzofuran	ND		10	1.1	ug/L		08/12/22 08:25	08/22/22 17:08	1
Di-n-butyl phthalate	ND		10	1.1	ug/L		08/12/22 08:25	08/22/22 17:08	1
1,2-Dichlorobenzene	ND		10	1.5	ug/L		08/12/22 08:25	08/22/22 17:08	1
1,3-Dichlorobenzene	ND		10	1.5	ug/L		08/12/22 08:25	08/22/22 17:08	1
1,4-Dichlorobenzene	ND		10	1.4	ug/L		08/12/22 08:25	08/22/22 17:08	1
3,3'-Dichlorobenzidine	ND		50	0.96	ug/L		08/12/22 08:25	08/22/22 17:08	1
2,4-Dichlorophenol	ND		10	2.6	ug/L		08/12/22 08:25	08/22/22 17:08	1
Diethyl phthalate	ND		10	0.93	ug/L		08/12/22 08:25	08/22/22 17:08	1
2,4-Dimethylphenol	ND		10	2.2	ug/L		08/12/22 08:25	08/22/22 17:08	1
Dimethyl phthalate	ND		10	0.88	ug/L		08/12/22 08:25	08/22/22 17:08	1
4,6-Dinitro-2-methylphenol	ND		50	2.2	ug/L		08/12/22 08:25	08/22/22 17:08	1
2,4-Dinitrophenol	ND		50	20	ug/L		08/12/22 08:25	08/22/22 17:08	1
2,4-Dinitrotoluene	ND		10	2.0	ug/L		08/12/22 08:25	08/22/22 17:08	1
2,6-Dinitrotoluene	ND		10	2.0	ug/L		08/12/22 08:25	08/22/22 17:08	1
Di-n-octyl phthalate	ND		10	1.5	ug/L		08/12/22 08:25	08/22/22 17:08	1
Fluoranthene	ND		10	0.65	ug/L		08/12/22 08:25	08/22/22 17:08	1
Fluorene	ND		10	0.93	ug/L		08/12/22 08:25	08/22/22 17:08	1
Hexachlorobenzene	ND		10	1.4	ug/L		08/12/22 08:25	08/22/22 17:08	1
Hexachlorobutadiene	ND		10	1.3	ug/L		08/12/22 08:25	08/22/22 17:08	1
Hexachlorocyclopentadiene	ND		50	5.0	ug/L		08/12/22 08:25	08/22/22 17:08	1
Hexachloroethane	ND		10	1.4	ug/L		08/12/22 08:25	08/22/22 17:08	1
Indeno[1,2,3-cd]pyrene	ND		10	3.4	ug/L		08/12/22 08:25	08/22/22 17:08	1
Isophorone	ND		10	1.0	ug/L		08/12/22 08:25	08/22/22 17:08	1
2-Methylnaphthalene	ND		10	1.5	ug/L		08/12/22 08:25	08/22/22 17:08	1
2-Methylphenol	ND		10	0.93	ug/L		08/12/22 08:25	08/22/22 17:08	1
3-Methylphenol & 4-Methylphenol	ND		20	1.2	ug/L		08/12/22 08:25	08/22/22 17:08	1
Naphthalene	ND		10	1.3	ug/L		08/12/22 08:25	08/22/22 17:08	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 320-609049/1-A
Matrix: Water
Analysis Batch: 611138

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 609049

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	ND		50	2.0	ug/L		08/12/22 08:25	08/22/22 17:08	1
3-Nitroaniline	ND		50	1.4	ug/L		08/12/22 08:25	08/22/22 17:08	1
4-Nitroaniline	ND		50	1.5	ug/L		08/12/22 08:25	08/22/22 17:08	1
Nitrobenzene	ND		10	1.6	ug/L		08/12/22 08:25	08/22/22 17:08	1
2-Nitrophenol	ND		10	1.9	ug/L		08/12/22 08:25	08/22/22 17:08	1
4-Nitrophenol	ND		50	6.1	ug/L		08/12/22 08:25	08/22/22 17:08	1
N-Nitrosodiphenylamine	ND		10	0.54	ug/L		08/12/22 08:25	08/22/22 17:08	1
N-Nitrosodi-n-propylamine	ND		10	1.4	ug/L		08/12/22 08:25	08/22/22 17:08	1
Pentachlorophenol	ND		50	2.0	ug/L		08/12/22 08:25	08/22/22 17:08	1
Phenanthrene	ND		10	1.0	ug/L		08/12/22 08:25	08/22/22 17:08	1
Phenol	ND		10	1.1	ug/L		08/12/22 08:25	08/22/22 17:08	1
Pyrene	ND		10	1.4	ug/L		08/12/22 08:25	08/22/22 17:08	1
Pyridine	ND		20	0.80	ug/L		08/12/22 08:25	08/22/22 17:08	1
1,2,4-Trichlorobenzene	ND		10	1.4	ug/L		08/12/22 08:25	08/22/22 17:08	1
2,4,5-Trichlorophenol	ND		10	2.0	ug/L		08/12/22 08:25	08/22/22 17:08	1
2,4,6-Trichlorophenol	ND		10	2.0	ug/L		08/12/22 08:25	08/22/22 17:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*76*		*55 - 140*	*08/12/22 08:25*	*08/22/22 17:08*	*1*
2-Fluorobiphenyl (Surr)	*73*		*57 - 98*	*08/12/22 08:25*	*08/22/22 17:08*	*1*
2-Fluorophenol (Surr)	*55*		*47 - 87*	*08/12/22 08:25*	*08/22/22 17:08*	*1*
Nitrobenzene-d5 (Surr)	*66*		*64 - 104*	*08/12/22 08:25*	*08/22/22 17:08*	*1*
Phenol-d5 (Surr)	*39*		*29 - 69*	*08/12/22 08:25*	*08/22/22 17:08*	*1*
Terphenyl-d14 (Surr)	*84*		*70 - 118*	*08/12/22 08:25*	*08/22/22 17:08*	*1*

Lab Sample ID: LCS 320-609049/2-A
Matrix: Water
Analysis Batch: 611138

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 609049

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acenaphthene	100	89.3		ug/L		89	63 - 103
Acenaphthylene	100	89.4		ug/L		89	60 - 100
Anthracene	100	91.6		ug/L		92	63 - 103
Benzo[a]anthracene	100	91.7		ug/L		92	66 - 109
Benzo[b]fluoranthene	100	94.4		ug/L		94	69 - 109
Benzo[k]fluoranthene	100	93.8		ug/L		94	67 - 107
Benzo[g,h,i]perylene	100	94.6		ug/L		95	63 - 113
Benzo[a]pyrene	100	93.7		ug/L		94	69 - 109
Benzoic acid	200	88.2		ug/L		44	10 - 63
Benzyl alcohol	100	83.4		ug/L		83	63 - 105
Bis(2-chloroethoxy)methane	100	86.0		ug/L		86	62 - 102
Bis(2-chloroethyl)ether	100	85.2		ug/L		85	62 - 102
bis (2-chloroisopropyl) ether	100	77.8		ug/L		78	53 - 100
Bis(2-ethylhexyl) phthalate	100	99.0		ug/L		99	70 - 117
4-Bromophenyl phenyl ether	100	97.5		ug/L		98	64 - 111
Butyl benzyl phthalate	100	96.7		ug/L		97	69 - 116
4-Chloroaniline	100	51.0		ug/L		51	45 - 97
4-Chloro-3-methylphenol	100	91.2		ug/L		91	70 - 111

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 320-609049/2-A
Matrix: Water
Analysis Batch: 611138

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 609049

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2-Chloronaphthalene	100	88.8		ug/L		89	60 - 100
2-Chlorophenol	100	89.4		ug/L		89	63 - 103
4-Chlorophenyl phenyl ether	100	92.2		ug/L		92	61 - 112
Chrysene	100	91.6		ug/L		92	64 - 111
Dibenz(a,h)anthracene	100	96.5		ug/L		97	65 - 112
Dibenzofuran	100	89.7		ug/L		90	62 - 103
Di-n-butyl phthalate	100	96.0		ug/L		96	67 - 107
1,2-Dichlorobenzene	100	83.5		ug/L		83	52 - 92
1,3-Dichlorobenzene	100	81.6		ug/L		82	50 - 90
1,4-Dichlorobenzene	100	82.5		ug/L		83	50 - 90
3,3'-Dichlorobenzidine	100	58.4		ug/L		58	52 - 114
2,4-Dichlorophenol	100	91.0		ug/L		91	66 - 106
Diethyl phthalate	100	93.9		ug/L		94	64 - 117
2,4-Dimethylphenol	100	90.7		ug/L		91	65 - 107
Dimethyl phthalate	100	93.1		ug/L		93	65 - 112
4,6-Dinitro-2-methylphenol	200	203		ug/L		102	63 - 118
2,4-Dinitrophenol	200	199		ug/L		100	49 - 128
2,4-Dinitrotoluene	100	95.4		ug/L		95	68 - 120
2,6-Dinitrotoluene	100	95.8		ug/L		96	68 - 116
Di-n-octyl phthalate	100	96.6		ug/L		97	68 - 117
Fluoranthene	100	89.1		ug/L		89	67 - 107
Fluorene	100	90.1		ug/L		90	62 - 109
Hexachlorobenzene	100	95.6		ug/L		96	56 - 124
Hexachlorobutadiene	100	86.2		ug/L		86	45 - 96
Hexachlorocyclopentadiene	100	72.7		ug/L		73	23 - 85
Hexachloroethane	100	81.3		ug/L		81	48 - 88
Indeno[1,2,3-cd]pyrene	100	98.3		ug/L		98	65 - 118
Isophorone	100	87.3		ug/L		87	62 - 102
2-Methylnaphthalene	100	80.6		ug/L		81	58 - 98
2-Methylphenol	100	87.6		ug/L		88	63 - 103
3-Methylphenol & 4-Methylphenol	100	82.6		ug/L		83	60 - 100
Naphthalene	100	84.9		ug/L		85	56 - 96
2-Nitroaniline	100	93.2		ug/L		93	61 - 127
3-Nitroaniline	100	60.3		ug/L		60	46 - 103
4-Nitroaniline	100	88.0		ug/L		88	67 - 112
Nitrobenzene	100	88.2		ug/L		88	64 - 104
2-Nitrophenol	100	93.9		ug/L		94	67 - 108
4-Nitrophenol	200	119		ug/L		59	32 - 89
N-Nitrosodiphenylamine	100	92.7		ug/L		93	64 - 104
N-Nitrosodi-n-propylamine	100	87.7		ug/L		88	63 - 108
Pentachlorophenol	200	199		ug/L		100	57 - 115
Phenanthrene	100	91.6		ug/L		92	62 - 103
Phenol	100	51.8		ug/L		52	32 - 72
Pyrene	100	96.2		ug/L		96	63 - 109
Pyridine	200	104		ug/L		52	41 - 81
1,2,4-Trichlorobenzene	100	85.8		ug/L		86	53 - 93
2,4,5-Trichlorophenol	100	96.8		ug/L		97	66 - 119
2,4,6-Trichlorophenol	100	96.8		ug/L		97	68 - 119

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 320-609049/2-A
Matrix: Water
Analysis Batch: 611138

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 609049

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*99*		*55 - 140*
2-Fluorobiphenyl (Surr)	*91*		*57 - 98*
2-Fluorophenol (Surr)	*71*		*47 - 87*
Nitrobenzene-d5 (Surr)	*89*		*64 - 104*
Phenol-d5 (Surr)	*50*		*29 - 69*
Terphenyl-d14 (Surr)	*97*		*70 - 118*

Lab Sample ID: LCSD 320-609049/3-A
Matrix: Water
Analysis Batch: 611495

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 609049

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acenaphthene			100	82.2		ug/L		82	63 - 103	8	30
Acenaphthylene			100	82.0		ug/L		82	60 - 100	9	30
Anthracene			100	85.8		ug/L		86	63 - 103	7	30
Benzo[a]anthracene			100	85.2		ug/L		85	66 - 109	7	30
Benzo[b]fluoranthene			100	89.1		ug/L		89	69 - 109	6	30
Benzo[k]fluoranthene			100	87.3		ug/L		87	67 - 107	7	30
Benzo[g,h,i]perylene			100	87.2		ug/L		87	63 - 113	8	30
Benzo[a]pyrene			100	87.9		ug/L		88	69 - 109	6	30
Benzoic acid			200	49.7	J *1	ug/L		25	10 - 63	56	30
Benzyl alcohol			100	78.8		ug/L		79	63 - 105	6	30
Bis(2-chloroethoxy)methane			100	79.2		ug/L		79	62 - 102	8	30
Bis(2-chloroethyl)ether			100	80.9		ug/L		81	62 - 102	5	30
bis (2-chloroisopropyl) ether			100	74.9		ug/L		75	53 - 100	4	30
Bis(2-ethylhexyl) phthalate			100	95.9		ug/L		96	70 - 117	3	30
4-Bromophenyl phenyl ether			100	88.0		ug/L		88	64 - 111	10	30
Butyl benzyl phthalate			100	92.3		ug/L		92	69 - 116	5	30
4-Chloroaniline			100	52.1		ug/L		52	45 - 97	2	30
4-Chloro-3-methylphenol			100	82.8		ug/L		83	70 - 111	10	30
2-Chloronaphthalene			100	81.5		ug/L		81	60 - 100	9	30
2-Chlorophenol			100	84.2		ug/L		84	63 - 103	6	30
4-Chlorophenyl phenyl ether			100	85.6		ug/L		86	61 - 112	7	30
Chrysene			100	84.8		ug/L		85	64 - 111	8	30
Dibenz(a,h)anthracene			100	89.4		ug/L		89	65 - 112	8	30
Dibenzofuran			100	83.4		ug/L		83	62 - 103	7	30
Di-n-butyl phthalate			100	93.9		ug/L		94	67 - 107	2	30
1,2-Dichlorobenzene			100	77.8		ug/L		78	52 - 92	7	30
1,3-Dichlorobenzene			100	77.2		ug/L		77	50 - 90	6	30
1,4-Dichlorobenzene			100	77.3		ug/L		77	50 - 90	7	30
3,3'-Dichlorobenzidine			100	53.4		ug/L		53	52 - 114	9	30
2,4-Dichlorophenol			100	84.6		ug/L		85	66 - 106	7	30
Diethyl phthalate			100	89.7		ug/L		90	64 - 117	5	30
2,4-Dimethylphenol			100	83.0		ug/L		83	65 - 107	9	30
Dimethyl phthalate			100	86.4		ug/L		86	65 - 112	8	30
4,6-Dinitro-2-methylphenol			200	190		ug/L		95	63 - 118	7	30
2,4-Dinitrophenol			200	190		ug/L		95	49 - 128	5	30
2,4-Dinitrotoluene			100	90.9		ug/L		91	68 - 120	5	30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 320-609049/3-A
Matrix: Water
Analysis Batch: 611495

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 609049

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2,6-Dinitrotoluene			100	89.3		ug/L		89	68 - 116	7	30
Di-n-octyl phthalate			100	95.4		ug/L		95	68 - 117	1	30
Fluoranthene			100	86.7		ug/L		87	67 - 107	3	30
Fluorene			100	83.9		ug/L		84	62 - 109	7	30
Hexachlorobenzene			100	88.5		ug/L		88	56 - 124	8	30
Hexachlorobutadiene			100	81.1		ug/L		81	45 - 96	6	30
Hexachlorocyclopentadiene			100	68.5		ug/L		68	23 - 85	6	30
Hexachloroethane			100	77.5		ug/L		78	48 - 88	5	30
Indeno[1,2,3-cd]pyrene			100	90.5		ug/L		91	65 - 118	8	30
Isophorone			100	80.3		ug/L		80	62 - 102	8	30
2-Methylnaphthalene			100	74.3		ug/L		74	58 - 98	8	30
2-Methylphenol			100	81.3		ug/L		81	63 - 103	8	30
3-Methylphenol & 4-Methylphenol			100	77.5		ug/L		78	60 - 100	6	30
Naphthalene			100	77.9		ug/L		78	56 - 96	9	30
2-Nitroaniline			100	87.6		ug/L		88	61 - 127	6	30
3-Nitroaniline			100	60.1		ug/L		60	46 - 103	0	30
4-Nitroaniline			100	84.4		ug/L		84	67 - 112	4	30
Nitrobenzene			100	82.1		ug/L		82	64 - 104	7	30
2-Nitrophenol			100	85.2		ug/L		85	67 - 108	10	30
4-Nitrophenol			200	119		ug/L		60	32 - 89	0	30
N-Nitrosodiphenylamine			100	84.3		ug/L		84	64 - 104	10	30
N-Nitrosodi-n-propylamine			100	81.1		ug/L		81	63 - 108	8	30
Pentachlorophenol			200	186		ug/L		93	57 - 115	7	30
Phenanthrene			100	84.8		ug/L		85	62 - 103	8	30
Phenol			100	50.5		ug/L		50	32 - 72	3	30
Pyrene			100	86.5		ug/L		86	63 - 109	11	30
Pyridine			200	115		ug/L		57	41 - 81	10	30
1,2,4-Trichlorobenzene			100	79.5		ug/L		80	53 - 93	8	30
2,4,5-Trichlorophenol			100	91.2		ug/L		91	66 - 119	6	30
2,4,6-Trichlorophenol			100	90.2		ug/L		90	68 - 119	7	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*89*		*55 - 140*
2-Fluorobiphenyl (Surr)	*83*		*57 - 98*
2-Fluorophenol (Surr)	*70*		*47 - 87*
Nitrobenzene-d5 (Surr)	*79*		*64 - 104*
Phenol-d5 (Surr)	*50*		*29 - 69*
Terphenyl-d14 (Surr)	*89*		*70 - 118*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 320-608789/1-A
Matrix: Water
Analysis Batch: 609822

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 608789

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		50	9.6	ng/L		08/11/22 07:24	08/16/22 13:38	1
Acenaphthylene	ND		50	8.4	ng/L		08/11/22 07:24	08/16/22 13:38	1
Anthracene	ND		50	10	ng/L		08/11/22 07:24	08/16/22 13:38	1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: MB 320-608789/1-A
Matrix: Water
Analysis Batch: 609822

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 608789

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		50	12	ng/L		08/11/22 07:24	08/16/22 13:38	1
Benzo[a]pyrene	ND		50	11	ng/L		08/11/22 07:24	08/16/22 13:38	1
Benzo[b]fluoranthene	ND		50	11	ng/L		08/11/22 07:24	08/16/22 13:38	1
Benzo[g,h,i]perylene	ND		50	8.1	ng/L		08/11/22 07:24	08/16/22 13:38	1
Benzo[k]fluoranthene	ND		50	10	ng/L		08/11/22 07:24	08/16/22 13:38	1
Chrysene	ND		50	11	ng/L		08/11/22 07:24	08/16/22 13:38	1
Dibenz(a,h)anthracene	ND		50	12	ng/L		08/11/22 07:24	08/16/22 13:38	1
Fluoranthene	ND		50	10	ng/L		08/11/22 07:24	08/16/22 13:38	1
Fluorene	ND		50	11	ng/L		08/11/22 07:24	08/16/22 13:38	1
Indeno[1,2,3-cd]pyrene	ND		50	12	ng/L		08/11/22 07:24	08/16/22 13:38	1
Naphthalene	ND		50	13	ng/L		08/11/22 07:24	08/16/22 13:38	1
Phenanthrene	ND		50	11	ng/L		08/11/22 07:24	08/16/22 13:38	1
Pyrene	ND		50	18	ng/L		08/11/22 07:24	08/16/22 13:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*83*		*20 - 123*	*08/11/22 07:24*	*08/16/22 13:38*	*1*
Terphenyl-d14	*78*		*46 - 137*	*08/11/22 07:24*	*08/16/22 13:38*	*1*
2-Fluorobiphenyl (Surr)	*66*		*31 - 107*	*08/11/22 07:24*	*08/16/22 13:38*	*1*
2-methylnaphthalene-d10	*68*		*50 - 150*	*08/11/22 07:24*	*08/16/22 13:38*	*1*
Fluoranthene-d10 (Surr)	*79*		*50 - 150*	*08/11/22 07:24*	*08/16/22 13:38*	*1*

Lab Sample ID: LCS 320-608789/2-A
Matrix: Water
Analysis Batch: 609822

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 608789

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acenaphthene	500	286		ng/L		57	45 - 105
Acenaphthylene	500	296		ng/L		59	43 - 103
Anthracene	500	302		ng/L		60	40 - 100
Benzo[a]anthracene	500	339		ng/L		68	54 - 117
Benzo[a]pyrene	500	302		ng/L		60	52 - 117
Benzo[b]fluoranthene	500	306		ng/L		61	50 - 124
Benzo[g,h,i]perylene	500	307		ng/L		61	39 - 118
Benzo[k]fluoranthene	500	315		ng/L		63	61 - 129
Chrysene	500	311		ng/L		62	57 - 117
Dibenz(a,h)anthracene	500	314		ng/L		63	38 - 123
Fluoranthene	500	313		ng/L		63	51 - 111
Fluorene	500	292		ng/L		58	44 - 106
Indeno[1,2,3-cd]pyrene	500	314		ng/L		63	36 - 123
Naphthalene	500	301		ng/L		60	42 - 105
Phenanthrene	500	309		ng/L		62	49 - 111
Pyrene	500	315		ng/L		63	54 - 114

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Nitrobenzene-d5	*82*		*20 - 123*
Terphenyl-d14	*73*		*46 - 137*
2-Fluorobiphenyl (Surr)	*63*		*31 - 107*
2-methylnaphthalene-d10	*64*		*50 - 150*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: LCS 320-608789/2-A
Matrix: Water
Analysis Batch: 609822

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 608789

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Fluoranthene-d10 (Surr)	*72*		*50 - 150*

Lab Sample ID: LCSD 320-608789/3-A
Matrix: Water
Analysis Batch: 609822

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 608789

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acenaphthene			500	293		ng/L		59	45 - 105	3	30
Acenaphthylene			500	309		ng/L		62	43 - 103	4	30
Anthracene			500	314		ng/L		63	40 - 100	4	30
Benzo[a]anthracene			500	342		ng/L		68	54 - 117	1	30
Benzo[a]pyrene			500	332		ng/L		66	52 - 117	10	30
Benzo[b]fluoranthene			500	324		ng/L		65	50 - 124	5	30
Benzo[g,h,i]perylene			500	318		ng/L		64	39 - 118	3	30
Benzo[k]fluoranthene			500	320		ng/L		64	61 - 129	1	30
Chrysene			500	309		ng/L		62	57 - 117	1	30
Dibenz(a,h)anthracene			500	314		ng/L		63	38 - 123	0	30
Fluoranthene			500	319		ng/L		64	51 - 111	2	30
Fluorene			500	293		ng/L		59	44 - 106	1	30
Indeno[1,2,3-cd]pyrene			500	335		ng/L		67	36 - 123	6	30
Naphthalene			500	303		ng/L		61	42 - 105	1	30
Phenanthrene			500	311		ng/L		62	49 - 111	0	30
Pyrene			500	319		ng/L		64	54 - 114	1	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Nitrobenzene-d5	*85*		*20 - 123*
Terphenyl-d14	*77*		*46 - 137*
2-Fluorobiphenyl (Surr)	*63*		*31 - 107*
2-methylnaphthalene-d10	*65*		*50 - 150*
Fluoranthene-d10 (Surr)	*74*		*50 - 150*

Method: AK102 & 103 - Alaska - Diesel Range Organics & Residual Range Organics (GC)

Lab Sample ID: MB 320-610616/1-A
Matrix: Water
Analysis Batch: 613158

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 610616

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	ND		150	60	ug/L		08/19/22 07:18	08/30/22 12:02	1
RRO (nC25-nC36)	ND		500	140	ug/L		08/19/22 07:18	08/30/22 12:02	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*65*		*60 - 120*	*08/19/22 07:18*	*08/30/22 12:02*	*1*
n-Triacontane-d62	*64*		*60 - 120*	*08/19/22 07:18*	*08/30/22 12:02*	*1*

Method: AK102 & 103 - Alaska - Diesel Range Organics & Residual Range Organics (GC) (Continued)

Lab Sample ID: LCS 320-610616/2-A
Matrix: Water
Analysis Batch: 613158

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 610616

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
DRO (nC10-<nC25)			1200	1150		ug/L		96	75 - 125		
RRO (nC25-nC36)			3600	3480		ug/L		97	60 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl (Surr)	*72*		*60 - 120*
n-Triacontane-d62	*68*		*60 - 120*

Lab Sample ID: LCSD 320-610616/3-A
Matrix: Water
Analysis Batch: 613158

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 610616

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
DRO (nC10-<nC25)			1200	1140		ug/L		95	75 - 125	2	20
RRO (nC25-nC36)			3600	3450		ug/L		96	60 - 120	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl (Surr)	*69*		*60 - 120*
n-Triacontane-d62	*68*		*60 - 120*

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Lab Sample ID: MB 320-610673/1-A
Matrix: Water
Analysis Batch: 611455

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 610673

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		2.0	0.58	ng/L		08/19/22 12:21	08/23/22 11:57	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.25	ng/L		08/19/22 12:21	08/23/22 11:57	1
Perfluorooctanoic acid (PFOA)	ND		2.0	0.85	ng/L		08/19/22 12:21	08/23/22 11:57	1
Perfluorononanoic acid (PFNA)	ND		2.0	0.27	ng/L		08/19/22 12:21	08/23/22 11:57	1
Perfluorodecanoic acid (PFDA)	ND		2.0	0.31	ng/L		08/19/22 12:21	08/23/22 11:57	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	1.1	ng/L		08/19/22 12:21	08/23/22 11:57	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.55	ng/L		08/19/22 12:21	08/23/22 11:57	1
Perfluorotridecanoic acid (PFTrDA)	ND		2.0	1.3	ng/L		08/19/22 12:21	08/23/22 11:57	1
Perfluorotetradecanoic acid (PFTeA)	ND		2.0	0.73	ng/L		08/19/22 12:21	08/23/22 11:57	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.20	ng/L		08/19/22 12:21	08/23/22 11:57	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0	0.57	ng/L		08/19/22 12:21	08/23/22 11:57	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	0.54	ng/L		08/19/22 12:21	08/23/22 11:57	1
NEtFOSAA	ND		5.0	1.3	ng/L		08/19/22 12:21	08/23/22 11:57	1
NMeFOSAA	ND		5.0	1.2	ng/L		08/19/22 12:21	08/23/22 11:57	1
HFPO-DA (GenX)	ND		4.0	1.5	ng/L		08/19/22 12:21	08/23/22 11:57	1
9Cl-PF3ONS	ND		2.0	0.24	ng/L		08/19/22 12:21	08/23/22 11:57	1
11Cl-PF3OUdS	ND		2.0	0.32	ng/L		08/19/22 12:21	08/23/22 11:57	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.0	0.40	ng/L		08/19/22 12:21	08/23/22 11:57	1

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15 (Continued)

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	106		50 - 150	08/19/22 12:21	08/23/22 11:57	1
13C4 PFHpA	104		50 - 150	08/19/22 12:21	08/23/22 11:57	1
13C4 PFOA	105		50 - 150	08/19/22 12:21	08/23/22 11:57	1
13C5 PFNA	104		50 - 150	08/19/22 12:21	08/23/22 11:57	1
13C2 PFDA	104		50 - 150	08/19/22 12:21	08/23/22 11:57	1
13C2 PFUnA	100		50 - 150	08/19/22 12:21	08/23/22 11:57	1
13C2 PFDoA	98		50 - 150	08/19/22 12:21	08/23/22 11:57	1
13C2 PFTeDA	95		50 - 150	08/19/22 12:21	08/23/22 11:57	1
13C3 PFBS	103		50 - 150	08/19/22 12:21	08/23/22 11:57	1
18O2 PFHxS	108		50 - 150	08/19/22 12:21	08/23/22 11:57	1
13C4 PFOS	103		50 - 150	08/19/22 12:21	08/23/22 11:57	1
d3-NMeFOSAA	100		50 - 150	08/19/22 12:21	08/23/22 11:57	1
d5-NEtFOSAA	102		50 - 150	08/19/22 12:21	08/23/22 11:57	1
13C3 HFPO-DA	99		50 - 150	08/19/22 12:21	08/23/22 11:57	1

Lab Sample ID: LCS 320-610673/2-A
Matrix: Water
Analysis Batch: 611455

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 610673

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorohexanoic acid (PFHxA)	40.0	39.8		ng/L		99	72 - 129
Perfluoroheptanoic acid (PFHpA)	40.0	42.5		ng/L		106	72 - 130
Perfluorooctanoic acid (PFOA)	40.0	42.3		ng/L		106	71 - 133
Perfluorononanoic acid (PFNA)	40.0	40.2		ng/L		101	69 - 130
Perfluorodecanoic acid (PFDA)	40.0	39.3		ng/L		98	71 - 129
Perfluoroundecanoic acid (PFUnA)	40.0	41.9		ng/L		105	69 - 133
Perfluorododecanoic acid (PFDoA)	40.0	43.8		ng/L		109	72 - 134
Perfluorotridecanoic acid (PFTrDA)	40.0	41.3		ng/L		103	65 - 144
Perfluorotetradecanoic acid (PFTeA)	40.0	42.2		ng/L		105	71 - 132
Perfluorobutanesulfonic acid (PFBS)	35.5	36.7		ng/L		103	72 - 130
Perfluorohexanesulfonic acid (PFHxS)	36.5	34.1		ng/L		93	68 - 131
Perfluorooctanesulfonic acid (PFOS)	37.2	35.1		ng/L		94	65 - 140
NEtFOSAA	40.0	43.0		ng/L		107	61 - 135
NMeFOSAA	40.0	39.5		ng/L		99	65 - 136
HFPO-DA (GenX)	40.0	37.9		ng/L		95	72 - 132
9Cl-PF3ONS	37.4	35.5		ng/L		95	77 - 137
11Cl-PF3OUdS	37.8	38.5		ng/L		102	76 - 136
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	37.6		ng/L		100	81 - 141

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C2 PFHxA	108		50 - 150
13C4 PFHpA	105		50 - 150
13C4 PFOA	105		50 - 150
13C5 PFNA	106		50 - 150
13C2 PFDA	103		50 - 150
13C2 PFUnA	103		50 - 150

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15 (Continued)

Lab Sample ID: LCS 320-610673/2-A
Matrix: Water
Analysis Batch: 611455

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 610673

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C2 PFDoA	102		50 - 150
13C2 PFTeDA	99		50 - 150
13C3 PFBS	104		50 - 150
18O2 PFHxS	109		50 - 150
13C4 PFOS	108		50 - 150
d3-NMeFOSAA	102		50 - 150
d5-NEtFOSAA	104		50 - 150
13C3 HFPO-DA	98		50 - 150

Lab Sample ID: LCSD 320-610673/3-A
Matrix: Water
Analysis Batch: 611455

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 610673

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorohexanoic acid (PFHxA)			40.0	39.5		ng/L		99	72 - 129	1	30
Perfluoroheptanoic acid (PFHpA)			40.0	42.6		ng/L		107	72 - 130	0	30
Perfluorooctanoic acid (PFOA)			40.0	43.5		ng/L		109	71 - 133	3	30
Perfluorononanoic acid (PFNA)			40.0	41.9		ng/L		105	69 - 130	4	30
Perfluorodecanoic acid (PFDA)			40.0	39.7		ng/L		99	71 - 129	1	30
Perfluoroundecanoic acid (PFUnA)			40.0	42.4		ng/L		106	69 - 133	1	30
Perfluorododecanoic acid (PFDoA)			40.0	43.9		ng/L		110	72 - 134	0	30
Perfluorotridecanoic acid (PFTrDA)			40.0	41.7		ng/L		104	65 - 144	1	30
Perfluorotetradecanoic acid (PFTeA)			40.0	41.5		ng/L		104	71 - 132	2	30
Perfluorobutanesulfonic acid (PFBS)			35.5	37.0		ng/L		104	72 - 130	1	30
Perfluorohexanesulfonic acid (PFHxS)			36.5	33.3		ng/L		91	68 - 131	2	30
Perfluorooctanesulfonic acid (PFOS)			37.2	36.8		ng/L		99	65 - 140	5	30
NEtFOSAA			40.0	42.2		ng/L		105	61 - 135	2	30
NMeFOSAA			40.0	40.1		ng/L		100	65 - 136	1	30
HFPO-DA (GenX)			40.0	35.4		ng/L		88	72 - 132	7	30
9Cl-PF3ONS			37.4	37.4		ng/L		100	77 - 137	5	30
11Cl-PF3OUdS			37.8	38.4		ng/L		102	76 - 136	0	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			37.8	38.9		ng/L		103	81 - 141	3	30

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C2 PFHxA	105		50 - 150
13C4 PFHpA	100		50 - 150
13C4 PFOA	101		50 - 150
13C5 PFNA	102		50 - 150
13C2 PFDA	106		50 - 150
13C2 PFUnA	103		50 - 150
13C2 PFDoA	102		50 - 150
13C2 PFTeDA	100		50 - 150
13C3 PFBS	102		50 - 150

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15 (Continued)

Lab Sample ID: LCSD 320-610673/3-A
Matrix: Water
Analysis Batch: 611455

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 610673

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
18O2 PFHxS	*108*		*50 - 150*
13C4 PFOS	*104*		*50 - 150*
d3-NMeFOSAA	*102*		*50 - 150*
d5-NEtFOSAA	*104*		*50 - 150*
13C3 HFPO-DA	*99*		*50 - 150*

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 320-608966/1-A
Matrix: Water
Analysis Batch: 609877

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 608966

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.020	0.012	mg/L		08/11/22 16:00	08/16/22 12:42	1
Barium	ND		0.0050	0.0025	mg/L		08/11/22 16:00	08/16/22 12:42	1
Cadmium	ND		0.0020	0.00050	mg/L		08/11/22 16:00	08/16/22 12:42	1
Chromium	ND		0.0080	0.0012	mg/L		08/11/22 16:00	08/16/22 12:42	1
Lead	ND		0.0050	0.0025	mg/L		08/11/22 16:00	08/16/22 12:42	1
Selenium	ND		0.020	0.013	mg/L		08/11/22 16:00	08/16/22 12:42	1
Silver	ND		0.0050	0.00084	mg/L		08/11/22 16:00	08/16/22 12:42	1

Lab Sample ID: LCS 320-608966/2-A
Matrix: Water
Analysis Batch: 609877

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 608966

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	0.500	0.480		mg/L		96	80 - 120
Barium	0.500	0.496		mg/L		99	80 - 120
Cadmium	0.250	0.256		mg/L		103	80 - 120
Chromium	0.250	0.256		mg/L		102	80 - 120
Lead	0.250	0.254		mg/L		102	80 - 120
Selenium	0.500	0.466		mg/L		93	80 - 120
Silver	0.0505	0.0497		mg/L		99	80 - 120

Lab Sample ID: 320-90869-1 MS
Matrix: Water
Analysis Batch: 609877

Client Sample ID: IDW-W-082022
Prep Type: Total/NA
Prep Batch: 608966

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	ND		0.500	0.497		mg/L		99	75 - 125
Barium	0.23		0.500	0.722		mg/L		98	75 - 125
Cadmium	ND		0.250	0.253		mg/L		101	75 - 125
Chromium	0.0057	J	0.250	0.257		mg/L		101	75 - 125
Lead	ND		0.250	0.251		mg/L		101	75 - 125
Selenium	ND		0.500	0.483		mg/L		97	75 - 125
Silver	ND		0.0505	0.0501		mg/L		99	75 - 125

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 320-90869-1 MSD — **Client Sample ID: IDW-W-082022**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 609877 — **Prep Batch: 608966**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	ND		0.500	0.495		mg/L		99	75 - 125	0	20
Barium	0.23		0.500	0.729		mg/L		100	75 - 125	1	20
Cadmium	ND		0.250	0.251		mg/L		100	75 - 125	1	20
Chromium	0.0057	J	0.250	0.257		mg/L		100	75 - 125	0	20
Lead	ND		0.250	0.249		mg/L		100	75 - 125	1	20
Selenium	ND		0.500	0.474		mg/L		95	75 - 125	2	20
Silver	ND		0.0505	0.0498		mg/L		99	75 - 125	1	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 320-613592/11-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 613910 — **Prep Batch: 613592**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00010	mg/L		08/31/22 16:06	09/01/22 11:47	1

Lab Sample ID: LCS 320-613592/12-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 613910 — **Prep Batch: 613592**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00100	0.000990		mg/L		99	82 - 113

Lab Sample ID: LCSD 320-613592/13-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 613910 — **Prep Batch: 613592**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	0.00100	0.000980		mg/L		98	82 - 113	1	17

Lab Sample ID: 320-90869-1 MS — **Client Sample ID: IDW-W-082022**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 613910 — **Prep Batch: 613592**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	ND		0.00100	0.000990		mg/L		99	82 - 113

Lab Sample ID: 320-90869-1 MSD — **Client Sample ID: IDW-W-082022**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 613910 — **Prep Batch: 613592**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	ND		0.00100	0.000990		mg/L		99	82 - 113	0	17

Method: 1010B - Ignitability, Pensky-Martens Closed-Cup Method

Lab Sample ID: MB 280-584417/2
Matrix: Water
Analysis Batch: 584417

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Flashpoint	>160		1.0	1.0	Degrees F			08/18/22 15:06	1

Lab Sample ID: MB 280-584417/7
Matrix: Water
Analysis Batch: 584417

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Flashpoint	>160		1.0	1.0	Degrees F			08/18/22 15:06	1

Lab Sample ID: LCS 280-584417/1
Matrix: Water
Analysis Batch: 584417

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Flashpoint			90.0	97.0	*+	Degrees F		108	95 - 105		

Lab Sample ID: LCSD 280-584417/6
Matrix: Water
Analysis Batch: 584417

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
Flashpoint			90.0	97.0	*+	Degrees F		108	95 - 105	0	10

Method: 9040C - pH

Lab Sample ID: LCS 320-608896/2
Matrix: Water
Analysis Batch: 608896

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
pH adj. to 25 deg C			8.00	8.0		SU		100	98 - 102		

GC/MS VOA

Analysis Batch: 584171

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-90869-1	IDW-W-082022	Total/NA	Water	8260D	
MB 280-584171/9	Method Blank	Total/NA	Water	8260D	
LCS 280-584171/1002	Lab Control Sample	Total/NA	Water	8260D	
LCSD 280-584171/5	Lab Control Sample Dup	Total/NA	Water	8260D	

Analysis Batch: 584292

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-90869-1 - DL	IDW-W-082022	Total/NA	Water	8260D	
MB 280-584292/9	Method Blank	Total/NA	Water	8260D	
LCS 280-584292/1002	Lab Control Sample	Total/NA	Water	8260D	
LCSD 280-584292/5	Lab Control Sample Dup	Total/NA	Water	8260D	

GC/MS Semi VOA

Prep Batch: 608789

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-90869-1	IDW-W-082022	Total/NA	Water	3510C	
MB 320-608789/1-A	Method Blank	Total/NA	Water	3510C	
LCS 320-608789/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 320-608789/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Prep Batch: 609049

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-90869-1	IDW-W-082022	Total/NA	Water	3510C	
MB 320-609049/1-A	Method Blank	Total/NA	Water	3510C	
LCS 320-609049/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 320-609049/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 609822

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-90869-1	IDW-W-082022	Total/NA	Water	8270D SIM	608789
MB 320-608789/1-A	Method Blank	Total/NA	Water	8270D SIM	608789
LCS 320-608789/2-A	Lab Control Sample	Total/NA	Water	8270D SIM	608789
LCSD 320-608789/3-A	Lab Control Sample Dup	Total/NA	Water	8270D SIM	608789

Analysis Batch: 611138

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-90869-1	IDW-W-082022	Total/NA	Water	8270D	609049
MB 320-609049/1-A	Method Blank	Total/NA	Water	8270D	609049
LCS 320-609049/2-A	Lab Control Sample	Total/NA	Water	8270D	609049

Analysis Batch: 611495

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 320-609049/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	609049

GC Semi VOA

Prep Batch: 610616

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-90869-1	IDW-W-082022	Total/NA	Water	3510C	
MB 320-610616/1-A	Method Blank	Total/NA	Water	3510C	
LCS 320-610616/2-A	Lab Control Sample	Total/NA	Water	3510C	

GC Semi VOA (Continued)

Prep Batch: 610616 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 320-610616/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 613158

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-90869-1	IDW-W-082022	Total/NA	Water	AK102 & 103	610616
MB 320-610616/1-A	Method Blank	Total/NA	Water	AK102 & 103	610616
LCS 320-610616/2-A	Lab Control Sample	Total/NA	Water	AK102 & 103	610616
LCSD 320-610616/3-A	Lab Control Sample Dup	Total/NA	Water	AK102 & 103	610616

LCMS

Prep Batch: 610673

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-90869-1	IDW-W-082022	Total/NA	Water	3535	
MB 320-610673/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-610673/2-A	Lab Control Sample	Total/NA	Water	3535	
LCSD 320-610673/3-A	Lab Control Sample Dup	Total/NA	Water	3535	

Analysis Batch: 611455

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-90869-1	IDW-W-082022	Total/NA	Water	EPA 537(Mod)	610673
MB 320-610673/1-A	Method Blank	Total/NA	Water	EPA 537(Mod)	610673
LCS 320-610673/2-A	Lab Control Sample	Total/NA	Water	EPA 537(Mod)	610673
LCSD 320-610673/3-A	Lab Control Sample Dup	Total/NA	Water	EPA 537(Mod)	610673

Metals

Prep Batch: 608966

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-90869-1	IDW-W-082022	Total/NA	Water	3010A	
MB 320-608966/1-A	Method Blank	Total/NA	Water	3010A	
LCS 320-608966/2-A	Lab Control Sample	Total/NA	Water	3010A	
320-90869-1 MS	IDW-W-082022	Total/NA	Water	3010A	
320-90869-1 MSD	IDW-W-082022	Total/NA	Water	3010A	

Analysis Batch: 609877

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-90869-1	IDW-W-082022	Total/NA	Water	6010C	608966
MB 320-608966/1-A	Method Blank	Total/NA	Water	6010C	608966
LCS 320-608966/2-A	Lab Control Sample	Total/NA	Water	6010C	608966
320-90869-1 MS	IDW-W-082022	Total/NA	Water	6010C	608966
320-90869-1 MSD	IDW-W-082022	Total/NA	Water	6010C	608966

Prep Batch: 613592

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-90869-1	IDW-W-082022	Total/NA	Water	7470A	
MB 320-613592/11-A	Method Blank	Total/NA	Water	7470A	
LCS 320-613592/12-A	Lab Control Sample	Total/NA	Water	7470A	
LCSD 320-613592/13-A	Lab Control Sample Dup	Total/NA	Water	7470A	
320-90869-1 MS	IDW-W-082022	Total/NA	Water	7470A	
320-90869-1 MSD	IDW-W-082022	Total/NA	Water	7470A	

QC Association Summary

Client: ARCADIS U.S. Inc
Project/Site: 30064227.0742, 309152 Saupe

Job ID: 320-90869-1

Metals

Analysis Batch: 613910

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-90869-1	IDW-W-082022	Total/NA	Water	7470A	613592
MB 320-613592/11-A	Method Blank	Total/NA	Water	7470A	613592
LCS 320-613592/12-A	Lab Control Sample	Total/NA	Water	7470A	613592
LCSD 320-613592/13-A	Lab Control Sample Dup	Total/NA	Water	7470A	613592
320-90869-1 MS	IDW-W-082022	Total/NA	Water	7470A	613592
320-90869-1 MSD	IDW-W-082022	Total/NA	Water	7470A	613592

General Chemistry

Analysis Batch: 584417

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-90869-1	IDW-W-082022	Total/NA	Water	1010B	
MB 280-584417/2	Method Blank	Total/NA	Water	1010B	
MB 280-584417/7	Method Blank	Total/NA	Water	1010B	
LCS 280-584417/1	Lab Control Sample	Total/NA	Water	1010B	
LCSD 280-584417/6	Lab Control Sample Dup	Total/NA	Water	1010B	

Analysis Batch: 608896

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-90869-1	IDW-W-082022	Total/NA	Water	9040C	
LCS 320-608896/2	Lab Control Sample	Total/NA	Water	9040C	

Lab Chronicle

Client: ARCADIS U.S. Inc
Project/Site: 30064227.0742, 309152 Saupe

Job ID: 320-90869-1

Client Sample ID: IDW-W-082022

Date Collected: 08/07/22 13:54
Date Received: 08/10/22 09:30

Lab Sample ID: 320-90869-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	584171	08/17/22 13:26	CKL	EET DEN
Total/NA	Analysis	8260D	DL	5	5 mL	5 mL	584292	08/18/22 01:41	AJP	EET DEN
Total/NA	Prep	3510C			1049.4 mL	1 mL	609049	08/12/22 08:25	JFA	EET SAC
Total/NA	Analysis	8270D		1	1 mL	1.0 mL	611138	08/22/22 18:23	Y1S	EET SAC
Total/NA	Prep	3510C			247.8 mL	1 mL	608789	08/11/22 07:24	JFA	EET SAC
Total/NA	Analysis	8270D SIM		1			609822	08/16/22 18:55	Y1S	EET SAC
Total/NA	Prep	3510C			247.9 mL	2 mL	610616	08/19/22 07:18	JFA	EET SAC
Total/NA	Analysis	AK102 & 103		1	1 mL	1 mL	613158	08/30/22 13:26	K1D	EET SAC
Total/NA	Prep	3535			300.9 mL	10.0 mL	610673	08/19/22 12:21	RAC	EET SAC
Total/NA	Analysis	EPA 537(Mod)		1			611455	08/23/22 13:28	S1M	EET SAC
Total/NA	Prep	3010A			50 mL	50 mL	608966	08/11/22 16:00	JP	EET SAC
Total/NA	Analysis	6010C		1			609877	08/16/22 12:49	SP	EET SAC
Total/NA	Prep	7470A			30 mL	30 mL	613592	08/31/22 16:06	JAP	EET SAC
Total/NA	Analysis	7470A		1			613910	09/01/22 12:02	JAP	EET SAC
Total/NA	Analysis	1010B		1			584417	08/18/22 15:06	MEC	EET DEN
Total/NA	Analysis	9040C		1			608896	08/11/22 14:18	KMW	EET SAC

Laboratory References:

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: ARCADIS U.S. Inc
Job ID: 320-90869-1
Project/Site: 30064227.0742, 309152 Saupe

Laboratory: Eurofins Sacramento

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-020	02-20-24

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
7470A	7470A	Water	Mercury
8270D	3510C	Water	1,2,4-Trichlorobenzene
8270D	3510C	Water	2-Nitroaniline
8270D	3510C	Water	2-Nitrophenol
8270D	3510C	Water	3-Nitroaniline
8270D	3510C	Water	4,6-Dinitro-2-methylphenol
8270D	3510C	Water	4-Bromophenyl phenyl ether
8270D	3510C	Water	4-Chloro-3-methylphenol
8270D	3510C	Water	4-Chlorophenyl phenyl ether
8270D	3510C	Water	4-Nitroaniline
8270D	3510C	Water	4-Nitrophenol
8270D	3510C	Water	bis (2-chloroisopropyl) ether
8270D	3510C	Water	Bis(2-chloroethoxy)methane
8270D	3510C	Water	Di-n-butyl phthalate
8270D	3510C	Water	Pyridine
9040C		Water	pH adj. to 25 deg C

Laboratory: Eurofins Denver

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	18-001	02-08-23

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
1010B		Water	Flashpoint
8260D		Water	1,1-Dichloropropene
8260D		Water	1,2-Dibromo-3-Chloropropane
8260D		Water	1,3-Dichloropropane
8260D		Water	2,2-Dichloropropane
8260D		Water	2-Chlorotoluene
8260D		Water	4-Chlorotoluene
8260D		Water	Bromochloromethane
8260D		Water	p-Isopropyltoluene

Method Summary

Client: ARCADIS U.S. Inc
Project/Site: 30064227.0742, 309152 Saupe

Job ID: 320-90869-1

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET DEN
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	EET SAC
8270D SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	EET SAC
AK102 & 103	Alaska - Diesel Range Organics & Residual Range Organics (GC)	ADEC	EET SAC
EPA 537(Mod)	PFAS for QSM 5.3, Table B-15	EPA	EET SAC
6010C	Metals (ICP)	SW846	EET SAC
7470A	Mercury (CVAA)	SW846	EET SAC
1010B	Ignitability, Pensky-Martens Closed-Cup Method	SW846	EET DEN
9040C	pH	SW846	EET SAC
3010A	Preparation, Total Metals	SW846	EET SAC
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET SAC
3535	Solid-Phase Extraction (SPE)	SW846	EET SAC
5030C	Purge and Trap	SW846	EET DEN
7470A	Preparation, Mercury	SW846	EET SAC

Protocol References:

ADEC = Alaska Department of Environmental Conservation

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: ARCADIS U.S. Inc
Project/Site: 30064227.0742, 309152 Saupe

Job ID: 320-90869-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-90869-1	IDW-W-082022	Water	08/07/22 13:54	08/10/22 09:30

Chain of Custody Record 592243

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Address: _____

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other: TAL-8210

Client Contact	Project Manager: Nick Wood	Site Contact: Sean Parry	Date: 08072022	COC No:
Company Name: Arcadis Chevron AK	Tel/Email: nick.wood@arcadis.com	Lab Contact:	Carrier:	1 of 1 COCs
Address: 550 W 7th St	Analysis Turnaround Time			Sampler: Minda Moe
City/State/Zip: Anchorage AK 99501	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 907 276 8095	TAT if different from Below			Walk-in Client:
Fax:	X 2 weeks			Lab Sampling:
Project Name: 309152-Sample	☐ 1 week			
Site: 4223 Old Airport Rd	☐ 2 days			Job / SDG No:
PO# 3006 4227	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	8260C - VOCs	8270D - SVOCs	6010C - RCRA metals, Mercury	7470A - Mercury	9040C - pH	PPC - IDA - Bis - PAH's	8270D - SIM - PAHs	AK101	AK102	AK103	10108 ignitc	Sample Specific Notes:
IDW-W-082022	8/7/22	1354	G	W	12	N	N	X	X	X	X	X	X	X	X	X	X	X	112

320-90869 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____ | 2 | 1 | 4 | 4 | 1 | 1 | 1 |

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client X Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd 2.0 Corr'd 2.0 | Therm ID No.: 104

Relinquished by	Company	Date/Time	Received by	Company	Date/Time
[signature]	ANA	8.8.22/0900	[signature]	FEDEX	8/10/22 930
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Eurofins Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Phone: 916-373-5600 Fax: 916-372-1059

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kellmann, Jill	Carrier Tracking No(s):	COC No: 320-280301.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Jill.Kellmann@et.eurofinsus.com	State of Origin: Alaska	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State - Alaska (UST)		Job #: 320-90869-1
Address: 4955 Yarrow Street, ,	Due Date Requested: 8/30/2022			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: 30064227.0742, 309152 Saupe	Project #: 32020508			
Site:	SSOW#:			

Analysis 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
Y - Trizma
Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	AK101/5030B Standard AK GRO	8260D/5030C VOC Standard List	1010B	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
IDW-W-082022 (320-90869-1)	8/7/22	13:54 Alaskan		Water			X	X	X	4	Only 3 VOA vials for AK101 and 8260

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Northern California, LLC places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Northern California, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Northern California, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins Environment Testing Northern California, LLC.

Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)***
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	8-10-22/16:30	ETSAC	[signature]	08/11/2022 0955	SA DSH
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 1.6 CF 0.1 IR#12

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: ARCADIS U.S. Inc

Job Number: 320-90869-1

Login Number: 90869
List Number: 1
Creator: Her, David A

List Source: Eurofins Sacramento

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
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.	False	Refer to Job Narrative for details.
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	

Login Sample Receipt Checklist

Client: ARCADIS U.S. Inc

Job Number: 320-90869-1

Login Number: 90869
List Number: 2
Creator: Kazenga, Oliver M

List Source: Eurofins Denver
List Creation: 08/11/22 03:49 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
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?	N/A	
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.	N/A	
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	

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ANALYTICAL REPORT

Eurofins Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

Laboratory Job ID: 320-90872-1
Client Project/Site: 30064227.0742, 309152 IDW Saupe

For:
ARCADIS U.S. Inc
500 Ala Moana Blvd, Ste 7-400
Honolulu, Hawaii 96813-4900

Attn: Nick Wood

Authorized for release by:
9/23/2022 4:56:45 PM

Jill Kellmann, Client Service Manager
(916)374-4402
Jill.Kellmann@et.eurofinsus.com

Table of Contents

Definitions/Glossary

Client: ARCADIS U.S. Inc
Job ID: 320-90872-1
Project/Site: 30064227.0742, 309152 IDW Saupe

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
F1	MS and/or MSD recovery exceeds control limits.
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1+	Surrogate recovery exceeds control limits, high biased.

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1-	Surrogate recovery exceeds control limits, low biased.

LCMS

Qualifier	Qualifier Description
I	Value is EMPC (estimated maximum possible concentration).
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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)

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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

Job ID: 320-90872-1

Laboratory: Eurofins Sacramento

Narrative

Receipt
The sample was received on 8/10/2022 9:30 AM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.0º C.

Receipt Exceptions

The COC did not indicate to run method 8260, however client was contacted and has confirmed to run method for 8260.IDW-S-082022 (320-90872-1)

The client had submitted soil sample for AK101 without properly preserving the soil with MeOH. The PM will provide instruction for the lab to properly preserve the sample.IDW-S-082022 (320-90872-1)

GC/MS VOA
Methods 8260D: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 280-584275 and analytical batch 280-584539.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method 8270D: Surrogate recovery for the following laboratory control sample and laboratory control sample duplicate were outside the upper control limit: (LCS 320-612033/2-A) and (LCSD 320-612033/3-A). The samples associated to these LCS and LCSD did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed

Method 8270D SIM: The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) and matrix spike duplicate (MSD) for preparation batch 320-610232 and analytical batch 320-613668 recovered outside control limits for multiple analytes. The associated samples were re-prepared outside holding time. Both sets of data have been reported.

Method 8270D SIM: The matrix spike (MS) recoveries for preparation batch 320-618253 and analytical batch 320-618843 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
Method AK102 & 103: Surrogate recovery was outside acceptance limits for the following matrix spike(MS) sample: (320-90872-D-1-E MS). The parent sample's surrogate recovery was within limits. The MS/MSD sample has been qualified and reported.

Method AK102 & 103: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 320-609716 and 320-609716 and analytical batch 320-609995 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

Method AK102 & 103: The following sample contained a hydrocarbon pattern in the diesel range; however, the elution pattern was later than the typical diesel fuel pattern used by the laboratory for quantitative purposes: IDW-S-082022 (320-90872-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals
Method 7470A: The following sample was analyzed outside of analytical holding time due to instrumentation issues. The sample could not be analyzed within the holding time. IDW-S-082022 (320-90872-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Job ID: 320-90872-1 (Continued)

Laboratory: Eurofins Sacramento (Continued)

LCMS

Method EPA 537(Mod): The Isotope Dilution Analyte (IDA) recovery associated with the following sample is below the method recommended limit: (LCS 320-610866/2-A). Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the sample(s).

Method EPA 537(Mod): The "I" qualifier means the transition mass ratio for the indicated analyte was below the established ratio limits. The qualitative identification of the analyte has some degree of uncertainty. However, analyst judgment was used to positively identify the analyte. IDW-S-082022 (320-90872-1)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Geotechnical

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

Method 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with method 8270C/8270D aqueous in preparation batch 320-610196 and 320-612033.

Method 3550B: The following samples were re-prepared outside of preparation holding time due to low recovery of the laboratory control sample: IDW-S-082022 (320-90872-1), (320-90872-D-1 MS) and (320-90872-D-1 MSD).
Samples are associated with method 3550B 8270DSIM solids in preparation batch 320-618253.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: ARCADIS U.S. Inc
Job ID: 320-90872-1
Project/Site: 30064227.0742, 309152 IDW Saupe

Client Sample ID: IDW-S-082022
Lab Sample ID: 320-90872-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[b]fluoranthene	1.3	J	5.4	0.93	ug/Kg	1	☼	8270D SIM	Total/NA
Benzo[g,h,i]perylene	1.9	J	5.4	0.74	ug/Kg	1	☼	8270D SIM	Total/NA
Chrysene	1.1	J *- F1	5.4	0.66	ug/Kg	1	☼	8270D SIM	Total/NA
Fluoranthene	0.90	J *- F1	5.4	0.61	ug/Kg	1	☼	8270D SIM	Total/NA
Benzo[a]anthracene - RE	0.83	J H F1	5.0	0.67	ug/Kg	1	☼	8270D SIM	Total/NA
Benzo[a]pyrene - RE	0.86	J H F1	5.0	0.78	ug/Kg	1	☼	8270D SIM	Total/NA
Benzo[b]fluoranthene - RE	1.8	J H	5.0	0.87	ug/Kg	1	☼	8270D SIM	Total/NA
Benzo[g,h,i]perylene - RE	1.5	J H	5.0	0.69	ug/Kg	1	☼	8270D SIM	Total/NA
Chrysene - RE	1.4	J H F1	5.0	0.62	ug/Kg	1	☼	8270D SIM	Total/NA
Fluoranthene - RE	1.9	J H F1	5.0	0.57	ug/Kg	1	☼	8270D SIM	Total/NA
Indeno[1,2,3-cd]pyrene - RE	0.97	J H	5.0	0.77	ug/Kg	1	☼	8270D SIM	Total/NA
Phenanthrene - RE	1.4	J H	5.0	0.51	ug/Kg	1	☼	8270D SIM	Total/NA
Pyrene - RE	1.5	J H F1	5.0	0.55	ug/Kg	1	☼	8270D SIM	Total/NA
DRO (nC10-<nC25)	8.5	F1	2.2	0.54	mg/Kg	1	☼	AK102 & 103	Total/NA
RRO (nC25-nC36)	64	F1 F2	22	4.1	mg/Kg	1	☼	AK102 & 103	Total/NA
Perfluorohexanoic acid (PFHxA)	0.043	J	0.20	0.032	ug/Kg	1	☼	EPA 537(Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	0.13	J	0.20	0.054	ug/Kg	1	☼	EPA 537(Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.22		0.20	0.030	ug/Kg	1	☼	EPA 537(Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	0.85	I	0.20	0.044	ug/Kg	1	☼	EPA 537(Mod)	Total/NA
Barium	1.3	J B	5.0	0.012	mg/L	1		6010C	TCLP
Cadmium	0.0026	J	0.050	0.0025	mg/L	1		6010C	TCLP
Mercury	0.00035	J H B	0.0020	0.00030	mg/L	1		7470A	TCLP

This Detection Summary does not include radiochemical test results.

Client: ARCADIS U.S. Inc
Project/Site: 30064227.0742, 309152 IDW Saupe

Job ID: 320-90872-1

Client Sample ID: IDW-S-082022

Date Collected: 08/07/22 13:23
Date Received: 08/10/22 09:30

Lab Sample ID: 320-90872-1

Matrix: Solid
Percent Solids: 90.9

Method: 8260D - Volatile Organic Compounds by GC/MS - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.010	0.0031	mg/L			08/19/22 14:33	1
2-Butanone (MEK)	ND		0.15	0.060	mg/L			08/19/22 14:33	1
Carbon tetrachloride	ND		0.010	0.0057	mg/L			08/19/22 14:33	1
Chlorobenzene	ND		0.010	0.0042	mg/L			08/19/22 14:33	1
Chloroform	ND		0.010	0.0036	mg/L			08/19/22 14:33	1
1,2-Dichloroethane	ND		0.010	0.0054	mg/L			08/19/22 14:33	1
1,1-Dichloroethene	ND		0.010	0.0023	mg/L			08/19/22 14:33	1
Tetrachloroethene	ND		0.010	0.0040	mg/L			08/19/22 14:33	1
Trichloroethene	ND		0.010	0.0030	mg/L			08/19/22 14:33	1
Vinyl chloride	ND		0.020	0.0051	mg/L			08/19/22 14:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*70 - 127*		*08/19/22 14:33*	*1*
Toluene-d8 (Surr)	*100*		*80 - 125*		*08/19/22 14:33*	*1*
4-Bromofluorobenzene (Surr)	*98*		*78 - 120*		*08/19/22 14:33*	*1*
Dibromofluoromethane (Surr)	*97*		*77 - 120*		*08/19/22 14:33*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		5.4	0.54	ug/Kg	☼	08/18/22 11:18	09/01/22 00:05	1
Acenaphthylene	ND		5.4	0.54	ug/Kg	☼	08/18/22 11:18	09/01/22 00:05	1
Anthracene	ND		5.4	0.62	ug/Kg	☼	08/18/22 11:18	09/01/22 00:05	1
Benzo[a]anthracene	ND	*-	5.4	0.72	ug/Kg	☼	08/18/22 11:18	09/01/22 00:05	1
Benzo[a]pyrene	ND		5.4	0.84	ug/Kg	☼	08/18/22 11:18	09/01/22 00:05	1
Benzo[b]fluoranthene	**1.3**	**J**	5.4	0.93	ug/Kg	☼	08/18/22 11:18	09/01/22 00:05	1
Benzo[g,h,i]perylene	**1.9**	**J**	5.4	0.74	ug/Kg	☼	08/18/22 11:18	09/01/22 00:05	1
Benzo[k]fluoranthene	ND	*- F1	5.4	0.87	ug/Kg	☼	08/18/22 11:18	09/01/22 00:05	1
Chrysene	**1.1**	**J *- F1**	5.4	0.66	ug/Kg	☼	08/18/22 11:18	09/01/22 00:05	1
Dibenz(a,h)anthracene	ND		5.4	0.79	ug/Kg	☼	08/18/22 11:18	09/01/22 00:05	1
Fluoranthene	**0.90**	**J *- F1**	5.4	0.61	ug/Kg	☼	08/18/22 11:18	09/01/22 00:05	1
Fluorene	ND		5.4	0.54	ug/Kg	☼	08/18/22 11:18	09/01/22 00:05	1
Indeno[1,2,3-cd]pyrene	ND		5.4	0.82	ug/Kg	☼	08/18/22 11:18	09/01/22 00:05	1
Naphthalene	ND		5.4	0.88	ug/Kg	☼	08/18/22 11:18	09/01/22 00:05	1
Phenanthrene	ND		5.4	0.55	ug/Kg	☼	08/18/22 11:18	09/01/22 00:05	1
Pyrene	ND	*- F1	5.4	0.60	ug/Kg	☼	08/18/22 11:18	09/01/22 00:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*73*		*53 - 113*	*08/18/22 11:18*	*09/01/22 00:05*	*1*
Terphenyl-d14	*86*		*70 - 144*	*08/18/22 11:18*	*09/01/22 00:05*	*1*
2-Fluorobiphenyl (Surr)	*68*		*53 - 113*	*08/18/22 11:18*	*09/01/22 00:05*	*1*
2-methylnaphthalene-d10	*75*		*50 - 150*	*08/18/22 11:18*	*09/01/22 00:05*	*1*
Fluoranthene-d10 (Surr)	*84*		*50 - 150*	*08/18/22 11:18*	*09/01/22 00:05*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND	H	5.0	0.50	ug/Kg	☼	09/20/22 08:27	09/22/22 03:53	1
Acenaphthylene	ND	H	5.0	0.50	ug/Kg	☼	09/20/22 08:27	09/22/22 03:53	1
Anthracene	ND	H	5.0	0.58	ug/Kg	☼	09/20/22 08:27	09/22/22 03:53	1
Benzo[a]anthracene	**0.83**	**J H F1**	5.0	0.67	ug/Kg	☼	09/20/22 08:27	09/22/22 03:53	1
Benzo[a]pyrene	**0.86**	**J H F1**	5.0	0.78	ug/Kg	☼	09/20/22 08:27	09/22/22 03:53	1

Client Sample ID: IDW-S-082022

Date Collected: 08/07/22 13:23
Date Received: 08/10/22 09:30

Lab Sample ID: 320-90872-1

Matrix: Solid
Percent Solids: 90.9

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	**1.8**	**J H**	5.0	0.87	ug/Kg	☼	09/20/22 08:27	09/22/22 03:53	1
Benzo[g,h,i]perylene	**1.5**	**J H**	5.0	0.69	ug/Kg	☼	09/20/22 08:27	09/22/22 03:53	1
Benzo[k]fluoranthene	ND	H F1	5.0	0.81	ug/Kg	☼	09/20/22 08:27	09/22/22 03:53	1
Chrysene	**1.4**	**J H F1**	5.0	0.62	ug/Kg	☼	09/20/22 08:27	09/22/22 03:53	1
Dibenz(a,h)anthracene	ND	H	5.0	0.74	ug/Kg	☼	09/20/22 08:27	09/22/22 03:53	1
Fluoranthene	**1.9**	**J H F1**	5.0	0.57	ug/Kg	☼	09/20/22 08:27	09/22/22 03:53	1
Fluorene	ND	H	5.0	0.50	ug/Kg	☼	09/20/22 08:27	09/22/22 03:53	1
Indeno[1,2,3-cd]pyrene	**0.97**	**J H**	5.0	0.77	ug/Kg	☼	09/20/22 08:27	09/22/22 03:53	1
Naphthalene	ND	H	5.0	0.82	ug/Kg	☼	09/20/22 08:27	09/22/22 03:53	1
Phenanthrene	**1.4**	**J H**	5.0	0.51	ug/Kg	☼	09/20/22 08:27	09/22/22 03:53	1
Pyrene	**1.5**	**J H F1**	5.0	0.55	ug/Kg	☼	09/20/22 08:27	09/22/22 03:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*66*		*53 - 113*	*09/20/22 08:27*	*09/22/22 03:53*	*1*
Terphenyl-d14	*74*		*70 - 144*	*09/20/22 08:27*	*09/22/22 03:53*	*1*
2-Fluorobiphenyl (Surr)	*65*		*53 - 113*	*09/20/22 08:27*	*09/22/22 03:53*	*1*
2-methylnaphthalene-d10	*65*		*50 - 150*	*09/20/22 08:27*	*09/22/22 03:53*	*1*
Fluoranthene-d10 (Surr)	*74*		*50 - 150*	*09/20/22 08:27*	*09/22/22 03:53*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		50	7.0	ug/L		08/25/22 11:10	08/27/22 18:43	1
2-Methylphenol	ND		50	4.7	ug/L		08/25/22 11:10	08/27/22 18:43	1
3-Methylphenol & 4-Methylphenol	ND		150	50	ug/L		08/25/22 11:10	08/27/22 18:43	1
Total Cresols	ND		150	50	ug/L		08/25/22 11:10	08/27/22 18:43	1
2,4-Dinitrotoluene	ND		50	10	ug/L		08/25/22 11:10	08/27/22 18:43	1
Hexachlorobenzene	ND		50	7.0	ug/L		08/25/22 11:10	08/27/22 18:43	1
Hexachlorobutadiene	ND		50	6.5	ug/L		08/25/22 11:10	08/27/22 18:43	1
Hexachloroethane	ND		50	7.0	ug/L		08/25/22 11:10	08/27/22 18:43	1
Nitrobenzene	ND		50	8.0	ug/L		08/25/22 11:10	08/27/22 18:43	1
Pentachlorophenol	ND		250	10	ug/L		08/25/22 11:10	08/27/22 18:43	1
Pyridine	ND		100	4.0	ug/L		08/25/22 11:10	08/27/22 18:43	1
2,4,5-Trichlorophenol	ND		50	10	ug/L		08/25/22 11:10	08/27/22 18:43	1
2,4,6-Trichlorophenol	ND		50	10	ug/L		08/25/22 11:10	08/27/22 18:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*69*		*49 - 98*	*08/25/22 11:10*	*08/27/22 18:43*	*1*
2-Fluorophenol (Surr)	*53*		*24 - 68*	*08/25/22 11:10*	*08/27/22 18:43*	*1*
Nitrobenzene-d5 (Surr)	*64*		*53 - 102*	*08/25/22 11:10*	*08/27/22 18:43*	*1*
Phenol-d5 (Surr)	*40*		*10 - 50*	*08/25/22 11:10*	*08/27/22 18:43*	*1*
Terphenyl-d14 (Surr)	*76*		*76 - 121*	*08/25/22 11:10*	*08/27/22 18:43*	*1*
2,4,6-Tribromophenol (Surr)	*77*		*28 - 132*	*08/25/22 11:10*	*08/27/22 18:43*	*1*

Method: AK102 & 103 - Alaska - Diesel Range Organics & Residual Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	**8.5**	**F1**	2.2	0.54	mg/Kg	☼	08/16/22 07:23	08/17/22 19:37	1
RRO (nC25-nC36)	**64**	**F1 F2**	22	4.1	mg/Kg	☼	08/16/22 07:23	08/17/22 19:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*67*		*60 - 120*	*08/16/22 07:23*	*08/17/22 19:37*	*1*
n-Triacontane-d62	*63*		*60 - 120*	*08/16/22 07:23*	*08/17/22 19:37*	*1*

Client Sample ID: IDW-S-082022
Lab Sample ID: 320-90872-1
Date Collected: 08/07/22 13:23
Matrix: Solid
Date Received: 08/10/22 09:30
Percent Solids: 90.9

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	**0.043**	**J**	0.20	0.032	ug/Kg	☼	08/19/22 18:46	08/22/22 16:18	1
Perfluoroheptanoic acid (PFHpA)	ND		0.20	0.039	ug/Kg	☼	08/19/22 18:46	08/22/22 16:18	1
Perfluorooctanoic acid (PFOA)	**0.13**	**J**	0.20	0.054	ug/Kg	☼	08/19/22 18:46	08/22/22 16:18	1
Perfluorononanoic acid (PFNA)	ND		0.20	0.022	ug/Kg	☼	08/19/22 18:46	08/22/22 16:18	1
Perfluorodecanoic acid (PFDA)	ND		0.20	0.049	ug/Kg	☼	08/19/22 18:46	08/22/22 16:18	1
Perfluoroundecanoic acid (PFUnA)	ND		0.20	0.043	ug/Kg	☼	08/19/22 18:46	08/22/22 16:18	1
Perfluorododecanoic acid (PFDoA)	ND		0.20	0.031	ug/Kg	☼	08/19/22 18:46	08/22/22 16:18	1
Perfluorotridecanoic acid (PFTrDA)	ND		0.20	0.021	ug/Kg	☼	08/19/22 18:46	08/22/22 16:18	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.20	0.038	ug/Kg	☼	08/19/22 18:46	08/22/22 16:18	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.20	0.039	ug/Kg	☼	08/19/22 18:46	08/22/22 16:18	1
Perfluorohexanesulfonic acid (PFHxS)	**0.22**		0.20	0.030	ug/Kg	☼	08/19/22 18:46	08/22/22 16:18	1
Perfluorooctanesulfonic acid (PFOS)	**0.85**	**I**	0.20	0.044	ug/Kg	☼	08/19/22 18:46	08/22/22 16:18	1
NEtFOSAA	ND		0.20	0.049	ug/Kg	☼	08/19/22 18:46	08/22/22 16:18	1
NMeFOSAA	ND		0.20	0.024	ug/Kg	☼	08/19/22 18:46	08/22/22 16:18	1
HFPO-DA (GenX)	ND		0.20	0.042	ug/Kg	☼	08/19/22 18:46	08/22/22 16:18	1
9Cl-PF3ONS	ND		0.20	0.036	ug/Kg	☼	08/19/22 18:46	08/22/22 16:18	1
11Cl-PF3OUdS	ND		0.20	0.032	ug/Kg	☼	08/19/22 18:46	08/22/22 16:18	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.20	0.040	ug/Kg	☼	08/19/22 18:46	08/22/22 16:18	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*93*		*50 - 150*	*08/19/22 18:46*	*08/22/22 16:18*	*1*
13C4 PFHpA	*91*		*50 - 150*	*08/19/22 18:46*	*08/22/22 16:18*	*1*
13C4 PFOA	*95*		*50 - 150*	*08/19/22 18:46*	*08/22/22 16:18*	*1*
13C5 PFNA	*96*		*50 - 150*	*08/19/22 18:46*	*08/22/22 16:18*	*1*
13C2 PFDA	*99*		*50 - 150*	*08/19/22 18:46*	*08/22/22 16:18*	*1*
13C2 PFUnA	*98*		*50 - 150*	*08/19/22 18:46*	*08/22/22 16:18*	*1*
13C2 PFDoA	*95*		*50 - 150*	*08/19/22 18:46*	*08/22/22 16:18*	*1*
13C2 PFTeDA	*91*		*50 - 150*	*08/19/22 18:46*	*08/22/22 16:18*	*1*
13C3 PFBS	*81*		*50 - 150*	*08/19/22 18:46*	*08/22/22 16:18*	*1*
18O2 PFHxS	*92*		*50 - 150*	*08/19/22 18:46*	*08/22/22 16:18*	*1*
13C4 PFOS	*88*		*50 - 150*	*08/19/22 18:46*	*08/22/22 16:18*	*1*
d3-NMeFOSAA	*96*		*50 - 150*	*08/19/22 18:46*	*08/22/22 16:18*	*1*
d5-NEtFOSAA	*111*		*50 - 150*	*08/19/22 18:46*	*08/22/22 16:18*	*1*
13C3 HFPO-DA	*82*		*50 - 150*	*08/19/22 18:46*	*08/22/22 16:18*	*1*

Method: 6010C - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		1.0	0.060	mg/L		08/22/22 16:59	08/23/22 12:29	1
Barium	**1.3**	**J B**	5.0	0.012	mg/L		08/22/22 16:59	08/23/22 12:29	1
Cadmium	**0.0026**	**J**	0.050	0.0025	mg/L		08/22/22 16:59	08/23/22 12:29	1
Chromium	ND		0.10	0.0060	mg/L		08/22/22 16:59	08/23/22 12:29	1
Lead	ND		0.50	0.012	mg/L		08/22/22 16:59	08/23/22 12:29	1
Selenium	ND		0.20	0.065	mg/L		08/22/22 16:59	08/23/22 12:29	1
Silver	ND		0.10	0.0042	mg/L		08/22/22 16:59	08/23/22 12:29	1

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.00035**	**J H B**	0.0020	0.00030	mg/L		09/19/22 15:36	09/21/22 16:55	1

Client Sample Results

Client: ARCADIS U.S. Inc
Job ID: 320-90872-1
Project/Site: 30064227.0742, 309152 IDW Saupe

Client Sample ID: IDW-S-082022
Lab Sample ID: 320-90872-1
Date Collected: 08/07/22 13:23
Matrix: Solid
Date Received: 08/10/22 09:30
Percent Solids: 90.9

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	9.1		0.1	0.1	%			08/12/22 12:11	1
Percent Solids	90.9		0.1	0.1	%			08/12/22 12:11	1

Surrogate Summary

Client: ARCADIS U.S. Inc
Job ID: 320-90872-1
Project/Site: 30064227.0742, 309152 IDW Saupe

Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Solid **Prep Type: TCLP**

		Percent Surrogate Recovery (Acceptance Limits)							
		DCA	TOL	BFB	DBFM				
Lab Sample ID	Client Sample ID	(70-127)	(80-125)	(78-120)	(77-120)				
320-90872-1	IDW-S-082022	96	100	98	97				
LB 280-584275/1-A	Method Blank	100	99	98	96				
LCS 280-584275/2-A	Lab Control Sample	96	99	97	95				
LCSD 280-584275/3-A	Lab Control Sample Dup	94	100	94	94				

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)							
		FBP	2FP	NBZ	PHL	TPHL	TBP		
Lab Sample ID	Client Sample ID	(49-98)	(24-68)	(53-102)	(10-50)	(76-121)	(28-132)		
LCS 320-612033/2-A	Lab Control Sample	88	73 S1+	86	53 S1+	90	93		
LCSD 320-612033/3-A	Lab Control Sample Dup	86	71 S1+	83	50	90	94		
MB 320-612033/1-A	Method Blank	78	63	77	46	88	80		

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPHL = Terphenyl-d14 (Surr)
TBP = 2,4,6-Tribromophenol (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid **Prep Type: TCLP**

		Percent Surrogate Recovery (Acceptance Limits)							
		FBP	2FP	NBZ	PHL	TPHL	TBP		
Lab Sample ID	Client Sample ID	(49-98)	(24-68)	(53-102)	(10-50)	(76-121)	(28-132)		
320-90872-1	IDW-S-082022	69	53	64	40	76	77		
LB 320-610196/1-C	Method Blank	80	55	67	43	90	88		

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPHL = Terphenyl-d14 (Surr)
TBP = 2,4,6-Tribromophenol (Surr)

Surrogate Summary

Client: ARCADIS U.S. Inc
Job ID: 320-90872-1
Project/Site: 30064227.0742, 309152 IDW Saupe

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)				
		NBZ	TPHL	FBP	2MN	FLN10
Lab Sample ID	Client Sample ID	(53-113)	(70-144)	(53-113)	(50-150)	(50-150)
320-90872-1	IDW-S-082022	73	86	68	75	84
320-90872-1 - RE	IDW-S-082022	66	74	65	65	74
320-90872-1 MS	IDW-S-082022	68	77	65	70	80
320-90872-1 MS - RE	IDW-S-082022	66	71	65	62	70
320-90872-1 MSD	IDW-S-082022	67	73	66	71	73
320-90872-1 MSD - RE	IDW-S-082022	69	77	70	67	76
LCS 320-610232/2-A	Lab Control Sample	71	73	71	73	73
LCS 320-618253/2-A	Lab Control Sample	76	78	73	71	78
LCSD 320-610232/3-A	Lab Control Sample Dup	70	74	65	72	71
MB 320-610232/1-A	Method Blank	74	76	72	76	74
MB 320-618253/1-A	Method Blank	72	78	71	67	75

Surrogate Legend

NBZ = Nitrobenzene-d5
TPHL = Terphenyl-d14
FBP = 2-Fluorobiphenyl (Surr)
2MN = 2-methylnaphthalene-d10
FLN10 = Fluoranthene-d10 (Surr)

Method: AK102 & 103 - Alaska - Diesel Range Organics & Residual Range Organics (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		OTPH	NTC
Lab Sample ID	Client Sample ID	(60-120)	(60-120)
320-90872-1	IDW-S-082022	67	63
320-90872-1 MS	IDW-S-082022	65	57 S1-
320-90872-1 MSD	IDW-S-082022	70	60
LCS 320-609716/2-A	Lab Control Sample	72	61
LCSD 320-609716/3-A	Lab Control Sample Dup	75	64
MB 320-609716/1-A	Method Blank	65	60

Surrogate Legend

OTPH = o-Terphenyl (Surr)
NTC = n-Triacontane-d62

Isotope Dilution Summary

Client: ARCADIS U.S. Inc
Project/Site: 30064227.0742, 309152 IDW Saupe

Job ID: 320-90872-1

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Matrix: Solid

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFHxA	C4PFHA	PFOA	PFNA	PFDA	PFUnA	PFDoA	PFTDA
Lab Sample ID	Client Sample ID	(50-150)	(50-150)	(50-150)	(50-150)	(50-150)	(50-150)	(50-150)	(50-150)
320-90872-1	IDW-S-082022	93	91	95	96	99	98	95	91
LCS 320-610866/2-A	Lab Control Sample	102	102	105	106	105	105	107	106
MB 320-610866/1-A	Method Blank	101	105	100	104	103	105	105	105

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		C3PFBS	PFHxS	PFOS	d3NMFOS	d5NEFOS	HFPODA		
Lab Sample ID	Client Sample ID	(50-150)	(50-150)	(50-150)	(50-150)	(50-150)	(50-150)		
320-90872-1	IDW-S-082022	81	92	88	96	111	82		
LCS 320-610866/2-A	Lab Control Sample	103	109	108	106	111	100		
MB 320-610866/1-A	Method Blank	102	113	111	107	117	94		

Surrogate Legend

PFHxA = 13C2 PFHxA
C4PFHA = 13C4 PFHpA
PFOA = 13C4 PFOA
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA
PFUnA = 13C2 PFUnA
PFDoA = 13C2 PFDoA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS
d3NMFOS = d3-NMeFOSAA
d5NEFOS = d5-NEtFOSAA
HFPODA = 13C3 HFPO-DA

Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: LB 280-584275/1-A
Matrix: Solid
Analysis Batch: 584539

Client Sample ID: Method Blank
Prep Type: TCLP

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.010	0.0031	mg/L			08/19/22 12:01	1
2-Butanone (MEK)	ND		0.15	0.060	mg/L			08/19/22 12:01	1
Carbon tetrachloride	ND		0.010	0.0057	mg/L			08/19/22 12:01	1
Chlorobenzene	ND		0.010	0.0042	mg/L			08/19/22 12:01	1
Chloroform	ND		0.010	0.0036	mg/L			08/19/22 12:01	1
1,2-Dichloroethane	ND		0.010	0.0054	mg/L			08/19/22 12:01	1
1,1-Dichloroethene	ND		0.010	0.0023	mg/L			08/19/22 12:01	1
Tetrachloroethene	ND		0.010	0.0040	mg/L			08/19/22 12:01	1
Trichloroethene	ND		0.010	0.0030	mg/L			08/19/22 12:01	1
Vinyl chloride	ND		0.020	0.0051	mg/L			08/19/22 12:01	1

Surrogate	*LB %Recovery*	*LB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 127*		*08/19/22 12:01*	*1*
Toluene-d8 (Surr)	*99*		*80 - 125*		*08/19/22 12:01*	*1*
4-Bromofluorobenzene (Surr)	*98*		*78 - 120*		*08/19/22 12:01*	*1*
Dibromofluoromethane (Surr)	*96*		*77 - 120*		*08/19/22 12:01*	*1*

Lab Sample ID: LCS 280-584275/2-A
Matrix: Solid
Analysis Batch: 584539

Client Sample ID: Lab Control Sample
Prep Type: TCLP

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.250	0.248		mg/L		99	69 - 126		
2-Butanone (MEK)			1.00	1.03		mg/L		103	53 - 135		
Carbon tetrachloride			0.250	0.239		mg/L		95	60 - 133		
Chlorobenzene			0.250	0.237		mg/L		95	78 - 118		
Chloroform			0.250	0.239		mg/L		96	68 - 128		
1,2-Dichloroethane			0.250	0.237		mg/L		95	61 - 130		
1,1-Dichloroethene			0.250	0.241		mg/L		96	62 - 130		
Tetrachloroethene			0.250	0.247		mg/L		99	72 - 127		
Trichloroethene			0.250	0.238		mg/L		95	70 - 125		
Vinyl chloride			0.250	0.262		mg/L		105	53 - 141		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*96*		*70 - 127*
Toluene-d8 (Surr)	*99*		*80 - 125*
4-Bromofluorobenzene (Surr)	*97*		*78 - 120*
Dibromofluoromethane (Surr)	*95*		*77 - 120*

Lab Sample ID: LCSD 280-584275/3-A
Matrix: Solid
Analysis Batch: 584539

Client Sample ID: Lab Control Sample Dup
Prep Type: TCLP

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.250	0.271		mg/L		108	69 - 126	9	20
2-Butanone (MEK)			1.00	1.12		mg/L		112	53 - 135	7	20
Carbon tetrachloride			0.250	0.264		mg/L		106	60 - 133	10	20
Chlorobenzene			0.250	0.266		mg/L		106	78 - 118	11	20

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 280-584275/3-A
Matrix: Solid
Analysis Batch: 584539

Client Sample ID: Lab Control Sample Dup
Prep Type: TCLP

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloroform			0.250	0.268		mg/L		107	68 - 128	11	20
1,2-Dichloroethane			0.250	0.261		mg/L		104	61 - 130	10	20
1,1-Dichloroethene			0.250	0.271		mg/L		108	62 - 130	12	21
Tetrachloroethene			0.250	0.278		mg/L		111	72 - 127	12	20
Trichloroethene			0.250	0.263		mg/L		105	70 - 125	10	20
Vinyl chloride			0.250	0.270		mg/L		108	53 - 141	3	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 127*
Toluene-d8 (Surr)	*100*		*80 - 125*
4-Bromofluorobenzene (Surr)	*94*		*78 - 120*
Dibromofluoromethane (Surr)	*94*		*77 - 120*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 320-612033/1-A
Matrix: Solid
Analysis Batch: 612616

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 612033

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		10	1.4	ug/L		08/25/22 11:10	08/27/22 12:31	1
2-Methylphenol	ND		10	0.94	ug/L		08/25/22 11:10	08/27/22 12:31	1
3-Methylphenol & 4-Methylphenol	ND		30	10	ug/L		08/25/22 11:10	08/27/22 12:31	1
Total Cresols	ND		30	10	ug/L		08/25/22 11:10	08/27/22 12:31	1
2,4-Dinitrotoluene	ND		10	2.0	ug/L		08/25/22 11:10	08/27/22 12:31	1
Hexachlorobenzene	ND		10	1.4	ug/L		08/25/22 11:10	08/27/22 12:31	1
Hexachlorobutadiene	ND		10	1.3	ug/L		08/25/22 11:10	08/27/22 12:31	1
Hexachloroethane	ND		10	1.4	ug/L		08/25/22 11:10	08/27/22 12:31	1
Nitrobenzene	ND		10	1.6	ug/L		08/25/22 11:10	08/27/22 12:31	1
Pentachlorophenol	ND		50	2.0	ug/L		08/25/22 11:10	08/27/22 12:31	1
Pyridine	ND		20	0.80	ug/L		08/25/22 11:10	08/27/22 12:31	1
2,4,5-Trichlorophenol	ND		10	2.0	ug/L		08/25/22 11:10	08/27/22 12:31	1
2,4,6-Trichlorophenol	ND		10	2.0	ug/L		08/25/22 11:10	08/27/22 12:31	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*78*		*49 - 98*	*08/25/22 11:10*	*08/27/22 12:31*	*1*
2-Fluorophenol (Surr)	*63*		*24 - 68*	*08/25/22 11:10*	*08/27/22 12:31*	*1*
Nitrobenzene-d5 (Surr)	*77*		*53 - 102*	*08/25/22 11:10*	*08/27/22 12:31*	*1*
Phenol-d5 (Surr)	*46*		*10 - 50*	*08/25/22 11:10*	*08/27/22 12:31*	*1*
Terphenyl-d14 (Surr)	*88*		*76 - 121*	*08/25/22 11:10*	*08/27/22 12:31*	*1*
2,4,6-Tribromophenol (Surr)	*80*		*28 - 132*	*08/25/22 11:10*	*08/27/22 12:31*	*1*

Lab Sample ID: LCS 320-612033/2-A
Matrix: Solid
Analysis Batch: 612616

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 612033

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
1,4-Dichlorobenzene			100	76.4		ug/L		76	31 - 98		

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 320-612033/2-A
Client Sample ID: Lab Control Sample
Matrix: Solid
Prep Type: Total/NA
Analysis Batch: 612616
Prep Batch: 612033

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
2-Methylphenol			100	83.8		ug/L		84	52 - 105		
3-Methylphenol & 4-Methylphenol			100	79.4		ug/L		79	48 - 99		
2,4-Dinitrotoluene			100	90.4		ug/L		90	63 - 132		
Hexachlorobenzene			100	90.8		ug/L		91	60 - 118		
Hexachlorobutadiene			100	73.6		ug/L		74	39 - 91		
Hexachloroethane			100	70.2		ug/L		70	42 - 85		
Nitrobenzene			100	85.0		ug/L		85	53 - 110		
Pentachlorophenol			200	185		ug/L		93	53 - 136		
Pyridine			200	120		ug/L		60	32 - 73		
2,4,5-Trichlorophenol			100	92.2		ug/L		92	58 - 120		
2,4,6-Trichlorophenol			100	91.1		ug/L		91	64 - 123		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*88*		*49 - 98*
2-Fluorophenol (Surr)	*73*	*S1+*	*24 - 68*
Nitrobenzene-d5 (Surr)	*86*		*53 - 102*
Phenol-d5 (Surr)	*53*	*S1+*	*10 - 50*
Terphenyl-d14 (Surr)	*90*		*76 - 121*
2,4,6-Tribromophenol (Surr)	*93*		*28 - 132*

Lab Sample ID: LCSD 320-612033/3-A
Client Sample ID: Lab Control Sample Dup
Matrix: Solid
Prep Type: Total/NA
Analysis Batch: 612616
Prep Batch: 612033

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,4-Dichlorobenzene			100	74.3		ug/L		74	31 - 98	3	30
2-Methylphenol			100	82.1		ug/L		82	52 - 105	2	30
3-Methylphenol & 4-Methylphenol			100	78.3		ug/L		78	48 - 99	1	30
2,4-Dinitrotoluene			100	92.7		ug/L		93	63 - 132	2	30
Hexachlorobenzene			100	89.5		ug/L		89	60 - 118	2	30
Hexachlorobutadiene			100	73.4		ug/L		73	39 - 91	0	30
Hexachloroethane			100	68.7		ug/L		69	42 - 85	2	30
Nitrobenzene			100	84.0		ug/L		84	53 - 110	1	30
Pentachlorophenol			200	190		ug/L		95	53 - 136	2	30
Pyridine			200	115		ug/L		58	32 - 73	4	30
2,4,5-Trichlorophenol			100	93.8		ug/L		94	58 - 120	2	30
2,4,6-Trichlorophenol			100	92.2		ug/L		92	64 - 123	1	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*86*		*49 - 98*
2-Fluorophenol (Surr)	*71*	*S1+*	*24 - 68*
Nitrobenzene-d5 (Surr)	*83*		*53 - 102*
Phenol-d5 (Surr)	*50*		*10 - 50*
Terphenyl-d14 (Surr)	*90*		*76 - 121*
2,4,6-Tribromophenol (Surr)	*94*		*28 - 132*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LB 320-610196/1-C
Matrix: Solid
Analysis Batch: 612616

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 612033

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		50	7.0	ug/L		08/25/22 11:10	08/27/22 18:18	1
2-Methylphenol	ND		50	4.7	ug/L		08/25/22 11:10	08/27/22 18:18	1
3-Methylphenol & 4-Methylphenol	ND		150	50	ug/L		08/25/22 11:10	08/27/22 18:18	1
Total Cresols	ND		150	50	ug/L		08/25/22 11:10	08/27/22 18:18	1
2,4-Dinitrotoluene	ND		50	10	ug/L		08/25/22 11:10	08/27/22 18:18	1
Hexachlorobenzene	ND		50	7.0	ug/L		08/25/22 11:10	08/27/22 18:18	1
Hexachlorobutadiene	ND		50	6.5	ug/L		08/25/22 11:10	08/27/22 18:18	1
Hexachloroethane	ND		50	7.0	ug/L		08/25/22 11:10	08/27/22 18:18	1
Nitrobenzene	ND		50	8.0	ug/L		08/25/22 11:10	08/27/22 18:18	1
Pentachlorophenol	ND		250	10	ug/L		08/25/22 11:10	08/27/22 18:18	1
Pyridine	ND		100	4.0	ug/L		08/25/22 11:10	08/27/22 18:18	1
2,4,5-Trichlorophenol	ND		50	10	ug/L		08/25/22 11:10	08/27/22 18:18	1
2,4,6-Trichlorophenol	ND		50	10	ug/L		08/25/22 11:10	08/27/22 18:18	1

Surrogate	*LB %Recovery*	*LB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*80*		*49 - 98*	*08/25/22 11:10*	*08/27/22 18:18*	*1*
2-Fluorophenol (Surr)	*55*		*24 - 68*	*08/25/22 11:10*	*08/27/22 18:18*	*1*
Nitrobenzene-d5 (Surr)	*67*		*53 - 102*	*08/25/22 11:10*	*08/27/22 18:18*	*1*
Phenol-d5 (Surr)	*43*		*10 - 50*	*08/25/22 11:10*	*08/27/22 18:18*	*1*
Terphenyl-d14 (Surr)	*90*		*76 - 121*	*08/25/22 11:10*	*08/27/22 18:18*	*1*
2,4,6-Tribromophenol (Surr)	*88*		*28 - 132*	*08/25/22 11:10*	*08/27/22 18:18*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 320-610232/1-A
Matrix: Solid
Analysis Batch: 613668

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 610232

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		5.0	0.50	ug/Kg		08/18/22 11:18	08/31/22 22:10	1
Acenaphthylene	ND		5.0	0.50	ug/Kg		08/18/22 11:18	08/31/22 22:10	1
Anthracene	ND		5.0	0.57	ug/Kg		08/18/22 11:18	08/31/22 22:10	1
Benzo[a]anthracene	ND		5.0	0.66	ug/Kg		08/18/22 11:18	08/31/22 22:10	1
Benzo[a]pyrene	ND		5.0	0.77	ug/Kg		08/18/22 11:18	08/31/22 22:10	1
Benzo[b]fluoranthene	ND		5.0	0.86	ug/Kg		08/18/22 11:18	08/31/22 22:10	1
Benzo[g,h,i]perylene	ND		5.0	0.68	ug/Kg		08/18/22 11:18	08/31/22 22:10	1
Benzo[k]fluoranthene	ND		5.0	0.80	ug/Kg		08/18/22 11:18	08/31/22 22:10	1
Chrysene	ND		5.0	0.61	ug/Kg		08/18/22 11:18	08/31/22 22:10	1
Dibenz(a,h)anthracene	ND		5.0	0.73	ug/Kg		08/18/22 11:18	08/31/22 22:10	1
Fluoranthene	ND		5.0	0.56	ug/Kg		08/18/22 11:18	08/31/22 22:10	1
Fluorene	ND		5.0	0.50	ug/Kg		08/18/22 11:18	08/31/22 22:10	1
Indeno[1,2,3-cd]pyrene	ND		5.0	0.76	ug/Kg		08/18/22 11:18	08/31/22 22:10	1
Naphthalene	ND		5.0	0.81	ug/Kg		08/18/22 11:18	08/31/22 22:10	1
Phenanthrene	ND		5.0	0.51	ug/Kg		08/18/22 11:18	08/31/22 22:10	1
Pyrene	ND		5.0	0.55	ug/Kg		08/18/22 11:18	08/31/22 22:10	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*74*		*53 - 113*	*08/18/22 11:18*	*08/31/22 22:10*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: MB 320-610232/1-A
Matrix: Solid
Analysis Batch: 613668

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 610232

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	*76*		*70 - 144*	*08/18/22 11:18*	*08/31/22 22:10*	*1*
2-Fluorobiphenyl (Surr)	*72*		*53 - 113*	*08/18/22 11:18*	*08/31/22 22:10*	*1*
2-methylnaphthalene-d10	*76*		*50 - 150*	*08/18/22 11:18*	*08/31/22 22:10*	*1*
Fluoranthene-d10 (Surr)	*74*		*50 - 150*	*08/18/22 11:18*	*08/31/22 22:10*	*1*

Lab Sample ID: LCS 320-610232/2-A
Matrix: Solid
Analysis Batch: 613668

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 610232

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acenaphthene	25.0	15.6		ug/Kg		62	51 - 111
Acenaphthylene	25.0	15.3		ug/Kg		61	51 - 111
Anthracene	25.0	15.5		ug/Kg		62	54 - 114
Benzo[a]anthracene	25.0	16.1	*-	ug/Kg		64	66 - 126
Benzo[a]pyrene	25.0	15.9		ug/Kg		64	64 - 124
Benzo[b]fluoranthene	25.0	16.8		ug/Kg		67	65 - 125
Benzo[g,h,i]perylene	25.0	16.3		ug/Kg		65	54 - 134
Benzo[k]fluoranthene	25.0	17.0	*-	ug/Kg		68	69 - 129
Chrysene	25.0	16.6	*-	ug/Kg		66	67 - 127
Dibenz(a,h)anthracene	25.0	16.2		ug/Kg		65	58 - 128
Fluoranthene	25.0	16.0	*-	ug/Kg		64	67 - 127
Fluorene	25.0	15.9		ug/Kg		64	54 - 114
Indeno[1,2,3-cd]pyrene	25.0	16.1		ug/Kg		64	59 - 133
Naphthalene	25.0	16.4		ug/Kg		65	52 - 112
Phenanthrene	25.0	16.0		ug/Kg		64	59 - 119
Pyrene	25.0	15.7	*-	ug/Kg		63	71 - 131

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Nitrobenzene-d5	*71*		*53 - 113*
Terphenyl-d14	*73*		*70 - 144*
2-Fluorobiphenyl (Surr)	*71*		*53 - 113*
2-methylnaphthalene-d10	*73*		*50 - 150*
Fluoranthene-d10 (Surr)	*73*		*50 - 150*

Lab Sample ID: LCSD 320-610232/3-A
Matrix: Solid
Analysis Batch: 613668

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 610232

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acenaphthene	25.0	14.8		ug/Kg		59	51 - 111	5	30
Acenaphthylene	25.0	14.9		ug/Kg		60	51 - 111	3	30
Anthracene	25.0	15.2		ug/Kg		61	54 - 114	2	30
Benzo[a]anthracene	25.0	16.8		ug/Kg		67	66 - 126	4	30
Benzo[a]pyrene	25.0	16.2		ug/Kg		65	64 - 124	2	30
Benzo[b]fluoranthene	25.0	17.4		ug/Kg		70	65 - 125	3	30
Benzo[g,h,i]perylene	25.0	16.8		ug/Kg		67	54 - 134	3	30
Benzo[k]fluoranthene	25.0	17.7		ug/Kg		71	69 - 129	4	30
Chrysene	25.0	17.5		ug/Kg		70	67 - 127	5	30

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: LCSD 320-610232/3-A
Client Sample ID: Lab Control Sample Dup
Matrix: Solid
Prep Type: Total/NA
Analysis Batch: 613668
Prep Batch: 610232

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dibenz(a,h)anthracene			25.0	17.1		ug/Kg		68	58 - 128	5	30
Fluoranthene			25.0	16.0	*-	ug/Kg		64	67 - 127	0	30
Fluorene			25.0	15.4		ug/Kg		61	54 - 114	4	30
Indeno[1,2,3-cd]pyrene			25.0	16.7		ug/Kg		67	59 - 133	4	30
Naphthalene			25.0	16.3		ug/Kg		65	52 - 112	1	30
Phenanthrene			25.0	16.0		ug/Kg		64	59 - 119	0	30
Pyrene			25.0	15.5	*-	ug/Kg		62	71 - 131	1	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Nitrobenzene-d5	*70*		*53 - 113*
Terphenyl-d14	*74*		*70 - 144*
2-Fluorobiphenyl (Surr)	*65*		*53 - 113*
2-methylnaphthalene-d10	*72*		*50 - 150*
Fluoranthene-d10 (Surr)	*71*		*50 - 150*

Lab Sample ID: 320-90872-1 MS
Client Sample ID: IDW-S-082022
Matrix: Solid
Prep Type: Total/NA
Analysis Batch: 613668
Prep Batch: 610232

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Acenaphthene	ND		27.1	16.6		ug/Kg	☼	61	51 - 111
Acenaphthylene	ND		27.1	16.0		ug/Kg	☼	59	51 - 111
Anthracene	ND		27.1	18.4		ug/Kg	☼	68	54 - 114
Benzo[a]anthracene	ND	*-	27.1	19.1		ug/Kg	☼	71	66 - 126
Benzo[a]pyrene	ND		27.1	18.7		ug/Kg	☼	69	64 - 124
Benzo[b]fluoranthene	1.3	J	27.1	20.3		ug/Kg	☼	70	65 - 125
Benzo[g,h,i]perylene	1.9	J	27.1	18.9		ug/Kg	☼	63	54 - 134
Benzo[k]fluoranthene	ND	*- F1	27.1	19.4		ug/Kg	☼	72	69 - 129
Chrysene	1.1	J *- F1	27.1	19.7		ug/Kg	☼	69	67 - 127
Dibenz(a,h)anthracene	ND		27.1	18.6		ug/Kg	☼	69	58 - 128
Fluoranthene	0.90	J *- F1	27.1	20.2		ug/Kg	☼	71	67 - 127
Fluorene	ND		27.1	16.6		ug/Kg	☼	61	54 - 114
Indeno[1,2,3-cd]pyrene	ND		27.1	18.9		ug/Kg	☼	70	59 - 133
Naphthalene	ND		27.1	17.2		ug/Kg	☼	64	52 - 112
Phenanthrene	ND		27.1	19.0		ug/Kg	☼	70	59 - 119
Pyrene	ND	*- F1	27.1	20.0		ug/Kg	☼	74	71 - 131

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Nitrobenzene-d5	*68*		*53 - 113*
Terphenyl-d14	*77*		*70 - 144*
2-Fluorobiphenyl (Surr)	*65*		*53 - 113*
2-methylnaphthalene-d10	*70*		*50 - 150*
Fluoranthene-d10 (Surr)	*80*		*50 - 150*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: 320-90872-1 MSD
Matrix: Solid
Analysis Batch: 613668

Client Sample ID: IDW-S-082022
Prep Type: Total/NA
Prep Batch: 610232

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acenaphthene	ND		26.5	16.1		ug/Kg	☼	61	51 - 111	3	30
Acenaphthylene	ND		26.5	16.9		ug/Kg	☼	64	51 - 111	5	30
Anthracene	ND		26.5	17.3		ug/Kg	☼	65	54 - 114	6	30
Benzo[a]anthracene	ND	*-	26.5	17.9		ug/Kg	☼	68	66 - 126	6	30
Benzo[a]pyrene	ND		26.5	17.7		ug/Kg	☼	67	64 - 124	6	30
Benzo[b]fluoranthene	1.3	J	26.5	18.9		ug/Kg	☼	66	65 - 125	7	30
Benzo[g,h,i]perylene	1.9	J	26.5	18.0		ug/Kg	☼	61	54 - 134	5	30
Benzo[k]fluoranthene	ND	*- F1	26.5	17.9	F1	ug/Kg	☼	67	69 - 129	8	30
Chrysene	1.1	J *- F1	26.5	17.9	F1	ug/Kg	☼	63	67 - 127	10	30
Dibenz(a,h)anthracene	ND		26.5	17.3		ug/Kg	☼	65	58 - 128	7	30
Fluoranthene	0.90	J *- F1	26.5	18.3	F1	ug/Kg	☼	66	67 - 127	10	30
Fluorene	ND		26.5	16.8		ug/Kg	☼	63	54 - 114	1	30
Indeno[1,2,3-cd]pyrene	ND		26.5	17.8		ug/Kg	☼	67	59 - 133	6	30
Naphthalene	ND		26.5	16.8		ug/Kg	☼	63	52 - 112	3	30
Phenanthrene	ND		26.5	17.6		ug/Kg	☼	66	59 - 119	8	30
Pyrene	ND	*- F1	26.5	18.2	F1	ug/Kg	☼	68	71 - 131	10	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Nitrobenzene-d5	*67*		*53 - 113*
Terphenyl-d14	*73*		*70 - 144*
2-Fluorobiphenyl (Surr)	*66*		*53 - 113*
2-methylnaphthalene-d10	*71*		*50 - 150*
Fluoranthene-d10 (Surr)	*73*		*50 - 150*

Lab Sample ID: MB 320-618253/1-A
Matrix: Solid
Analysis Batch: 618843

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 618253

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		5.0	0.50	ug/Kg		09/20/22 08:27	09/22/22 02:55	1
Acenaphthylene	ND		5.0	0.50	ug/Kg		09/20/22 08:27	09/22/22 02:55	1
Anthracene	ND		5.0	0.57	ug/Kg		09/20/22 08:27	09/22/22 02:55	1
Benzo[a]anthracene	ND		5.0	0.66	ug/Kg		09/20/22 08:27	09/22/22 02:55	1
Benzo[a]pyrene	ND		5.0	0.77	ug/Kg		09/20/22 08:27	09/22/22 02:55	1
Benzo[b]fluoranthene	ND		5.0	0.86	ug/Kg		09/20/22 08:27	09/22/22 02:55	1
Benzo[g,h,i]perylene	ND		5.0	0.68	ug/Kg		09/20/22 08:27	09/22/22 02:55	1
Benzo[k]fluoranthene	ND		5.0	0.80	ug/Kg		09/20/22 08:27	09/22/22 02:55	1
Chrysene	ND		5.0	0.61	ug/Kg		09/20/22 08:27	09/22/22 02:55	1
Dibenz(a,h)anthracene	ND		5.0	0.73	ug/Kg		09/20/22 08:27	09/22/22 02:55	1
Fluoranthene	ND		5.0	0.56	ug/Kg		09/20/22 08:27	09/22/22 02:55	1
Fluorene	ND		5.0	0.50	ug/Kg		09/20/22 08:27	09/22/22 02:55	1
Indeno[1,2,3-cd]pyrene	ND		5.0	0.76	ug/Kg		09/20/22 08:27	09/22/22 02:55	1
Naphthalene	ND		5.0	0.81	ug/Kg		09/20/22 08:27	09/22/22 02:55	1
Phenanthrene	ND		5.0	0.51	ug/Kg		09/20/22 08:27	09/22/22 02:55	1
Pyrene	ND		5.0	0.55	ug/Kg		09/20/22 08:27	09/22/22 02:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*72*		*53 - 113*	*09/20/22 08:27*	*09/22/22 02:55*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: MB 320-618253/1-A
Matrix: Solid
Analysis Batch: 618843

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 618253

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	*78*		*70 - 144*	*09/20/22 08:27*	*09/22/22 02:55*	*1*
2-Fluorobiphenyl (Surr)	*71*		*53 - 113*	*09/20/22 08:27*	*09/22/22 02:55*	*1*
2-methylnaphthalene-d10	*67*		*50 - 150*	*09/20/22 08:27*	*09/22/22 02:55*	*1*
Fluoranthene-d10 (Surr)	*75*		*50 - 150*	*09/20/22 08:27*	*09/22/22 02:55*	*1*

Lab Sample ID: LCS 320-618253/2-A
Matrix: Solid
Analysis Batch: 618843

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 618253

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acenaphthene	25.0	17.9		ug/Kg		72	51 - 111
Acenaphthylene	25.0	18.6		ug/Kg		74	51 - 111
Anthracene	25.0	18.9		ug/Kg		76	54 - 114
Benzo[a]anthracene	25.0	19.1		ug/Kg		76	66 - 126
Benzo[a]pyrene	25.0	18.3		ug/Kg		73	64 - 124
Benzo[b]fluoranthene	25.0	19.0		ug/Kg		76	65 - 125
Benzo[g,h,i]perylene	25.0	18.3		ug/Kg		73	54 - 134
Benzo[k]fluoranthene	25.0	19.4		ug/Kg		78	69 - 129
Chrysene	25.0	18.3		ug/Kg		73	67 - 127
Dibenz(a,h)anthracene	25.0	18.3		ug/Kg		73	58 - 128
Fluoranthene	25.0	18.3		ug/Kg		73	67 - 127
Fluorene	25.0	18.1		ug/Kg		73	54 - 114
Indeno[1,2,3-cd]pyrene	25.0	18.5		ug/Kg		74	59 - 133
Naphthalene	25.0	17.4		ug/Kg		69	52 - 112
Phenanthrene	25.0	18.5		ug/Kg		74	59 - 119
Pyrene	25.0	18.8		ug/Kg		75	71 - 131

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Nitrobenzene-d5	*76*		*53 - 113*
Terphenyl-d14	*78*		*70 - 144*
2-Fluorobiphenyl (Surr)	*73*		*53 - 113*
2-methylnaphthalene-d10	*71*		*50 - 150*
Fluoranthene-d10 (Surr)	*78*		*50 - 150*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) - RE

Lab Sample ID: 320-90872-1 MS
Matrix: Solid
Analysis Batch: 618843

Client Sample ID: IDW-S-082022
Prep Type: Total/NA
Prep Batch: 618253

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Acenaphthene - RE	ND	H	26.8	16.9		ug/Kg	☼	63	51 - 111
Acenaphthylene - RE	ND	H	26.8	17.6		ug/Kg	☼	66	51 - 111
Anthracene - RE	ND	H	26.8	18.0		ug/Kg	☼	67	54 - 114
Benzo[a]anthracene - RE	0.83	J H F1	26.8	18.2	F1	ug/Kg	☼	65	66 - 126
Benzo[a]pyrene - RE	0.86	J H F1	26.8	17.1	F1	ug/Kg	☼	61	64 - 124
Benzo[b]fluoranthene - RE	1.8	J H	26.8	19.6		ug/Kg	☼	66	65 - 125
Benzo[g,h,i]perylene - RE	1.5	J H	26.8	19.1		ug/Kg	☼	66	54 - 134

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) - RE (Continued)

Lab Sample ID: 320-90872-1 MS
Matrix: Solid
Analysis Batch: 618843

Client Sample ID: IDW-S-082022
Prep Type: Total/NA
Prep Batch: 618253

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzo[k]fluoranthene - RE	ND	H F1	26.8	17.8	F1	ug/Kg	☼	66	69 - 129
Chrysene - RE	1.4	J H F1	26.8	18.6	F1	ug/Kg	☼	64	67 - 127
Dibenz(a,h)anthracene - RE	ND	H	26.8	18.2		ug/Kg	☼	68	58 - 128
Fluoranthene - RE	1.9	J H F1	26.8	18.9	F1	ug/Kg	☼	63	67 - 127
Fluorene - RE	ND	H	26.8	18.1		ug/Kg	☼	68	54 - 114
Indeno[1,2,3-cd]pyrene - RE	0.97	J H	26.8	18.6		ug/Kg	☼	66	59 - 133
Naphthalene - RE	ND	H	26.8	16.3		ug/Kg	☼	61	52 - 112
Phenanthrene - RE	1.4	J H	26.8	18.7		ug/Kg	☼	65	59 - 119
Pyrene - RE	1.5	J H F1	26.8	19.0	F1	ug/Kg	☼	65	71 - 131

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Nitrobenzene-d5 - RE	*66*		*53 - 113*
Terphenyl-d14 - RE	*71*		*70 - 144*
2-Fluorobiphenyl (Surr) - RE	*65*		*53 - 113*
2-methylnaphthalene-d10 - RE	*62*		*50 - 150*
Fluoranthene-d10 (Surr) - RE	*70*		*50 - 150*

Lab Sample ID: 320-90872-1 MSD
Matrix: Solid
Analysis Batch: 618843

Client Sample ID: IDW-S-082022
Prep Type: Total/NA
Prep Batch: 618253

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acenaphthene - RE	ND	H	27.3	18.6		ug/Kg	☼	68	51 - 111	9	30
Acenaphthylene - RE	ND	H	27.3	19.2		ug/Kg	☼	70	51 - 111	9	30
Anthracene - RE	ND	H	27.3	19.9		ug/Kg	☼	73	54 - 114	10	30
Benzo[a]anthracene - RE	0.83	J H F1	27.3	21.0		ug/Kg	☼	74	66 - 126	15	30
Benzo[a]pyrene - RE	0.86	J H F1	27.3	19.1		ug/Kg	☼	67	64 - 124	11	30
Benzo[b]fluoranthene - RE	1.8	J H	27.3	21.4		ug/Kg	☼	72	65 - 125	9	30
Benzo[g,h,i]perylene - RE	1.5	J H	27.3	20.8		ug/Kg	☼	71	54 - 134	9	30
Benzo[k]fluoranthene - RE	ND	H F1	27.3	19.9		ug/Kg	☼	73	69 - 129	11	30
Chrysene - RE	1.4	J H F1	27.3	20.6		ug/Kg	☼	70	67 - 127	11	30
Dibenz(a,h)anthracene - RE	ND	H	27.3	20.1		ug/Kg	☼	73	58 - 128	9	30
Fluoranthene - RE	1.9	J H F1	27.3	21.3		ug/Kg	☼	71	67 - 127	12	30
Fluorene - RE	ND	H	27.3	19.6		ug/Kg	☼	72	54 - 114	8	30
Indeno[1,2,3-cd]pyrene - RE	0.97	J H	27.3	20.8		ug/Kg	☼	73	59 - 133	11	30
Naphthalene - RE	ND	H	27.3	17.9		ug/Kg	☼	66	52 - 112	9	30
Phenanthrene - RE	1.4	J H	27.3	20.0		ug/Kg	☼	68	59 - 119	7	30
Pyrene - RE	1.5	J H F1	27.3	21.8		ug/Kg	☼	74	71 - 131	14	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Nitrobenzene-d5 - RE	*69*		*53 - 113*
Terphenyl-d14 - RE	*77*		*70 - 144*
2-Fluorobiphenyl (Surr) - RE	*70*		*53 - 113*
2-methylnaphthalene-d10 - RE	*67*		*50 - 150*
Fluoranthene-d10 (Surr) - RE	*76*		*50 - 150*

Method: AK102 & 103 - Alaska - Diesel Range Organics & Residual Range Organics (GC)

Lab Sample ID: MB 320-609716/1-A
Matrix: Solid
Analysis Batch: 609995

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 609716

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	ND		2.0	0.50	mg/Kg		08/16/22 07:23	08/17/22 18:11	1
RRO (nC25-nC36)	ND		20	3.8	mg/Kg		08/16/22 07:23	08/17/22 18:11	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*65*		*60 - 120*	*08/16/22 07:23*	*08/17/22 18:11*	*1*
n-Triacontane-d62	*60*		*60 - 120*	*08/16/22 07:23*	*08/17/22 18:11*	*1*

Lab Sample ID: LCS 320-609716/2-A
Matrix: Solid
Analysis Batch: 609995

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 609716

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
DRO (nC10-<nC25)			10.0	8.59		mg/Kg		86	75 - 125		
RRO (nC25-nC36)			30.0	25.6		mg/Kg		85	60 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl (Surr)	*72*		*60 - 120*
n-Triacontane-d62	*61*		*60 - 120*

Lab Sample ID: LCSD 320-609716/3-A
Matrix: Solid
Analysis Batch: 609995

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 609716

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
DRO (nC10-<nC25)			10.0	9.16		mg/Kg		92	75 - 125	6	20
RRO (nC25-nC36)			30.0	28.0		mg/Kg		93	60 - 120	9	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl (Surr)	*75*		*60 - 120*
n-Triacontane-d62	*64*		*60 - 120*

Lab Sample ID: 320-90872-1 MS
Matrix: Solid
Analysis Batch: 609995

Client Sample ID: IDW-S-082022
Prep Type: Total/NA
Prep Batch: 609716

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
DRO (nC10-<nC25)	8.5	F1	11.0	12.2	F1	mg/Kg	☼	34	60 - 140		
RRO (nC25-nC36)	64	F1 F2	32.9	61.3	F1	mg/Kg	☼	-10	60 - 120		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
o-Terphenyl (Surr)	*65*		*60 - 120*
n-Triacontane-d62	*57*	*S1-*	*60 - 120*

Method: AK102 & 103 - Alaska - Diesel Range Organics & Residual Range Organics (GC) (Continued)

Lab Sample ID: 320-90872-1 MSD
Matrix: Solid
Analysis Batch: 609995

Client Sample ID: IDW-S-082022
Prep Type: Total/NA
Prep Batch: 609716

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
DRO (nC10-<nC25)	8.5	F1	10.8	15.7		mg/Kg	☼	66	60 - 140	25	50
RRO (nC25-nC36)	64	F1 F2	32.5	106	F1 F2	mg/Kg	☼	127	60 - 120	53	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
o-Terphenyl (Surr)	*70*		*60 - 120*
n-Triacontane-d62	*60*		*60 - 120*

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Lab Sample ID: MB 320-610866/1-A
Matrix: Solid
Analysis Batch: 611153

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 610866

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		0.20	0.031	ug/Kg		08/19/22 18:46	08/22/22 15:58	1
Perfluoroheptanoic acid (PFHpA)	ND		0.20	0.038	ug/Kg		08/19/22 18:46	08/22/22 15:58	1
Perfluorooctanoic acid (PFOA)	ND		0.20	0.053	ug/Kg		08/19/22 18:46	08/22/22 15:58	1
Perfluorononanoic acid (PFNA)	ND		0.20	0.022	ug/Kg		08/19/22 18:46	08/22/22 15:58	1
Perfluorodecanoic acid (PFDA)	ND		0.20	0.048	ug/Kg		08/19/22 18:46	08/22/22 15:58	1
Perfluoroundecanoic acid (PFUnA)	ND		0.20	0.042	ug/Kg		08/19/22 18:46	08/22/22 15:58	1
Perfluorododecanoic acid (PFDoA)	ND		0.20	0.030	ug/Kg		08/19/22 18:46	08/22/22 15:58	1
Perfluorotridecanoic acid (PFTrDA)	ND		0.20	0.021	ug/Kg		08/19/22 18:46	08/22/22 15:58	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.20	0.037	ug/Kg		08/19/22 18:46	08/22/22 15:58	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.20	0.038	ug/Kg		08/19/22 18:46	08/22/22 15:58	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.20	0.029	ug/Kg		08/19/22 18:46	08/22/22 15:58	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.20	0.043	ug/Kg		08/19/22 18:46	08/22/22 15:58	1
NEtFOSAA	ND		0.20	0.048	ug/Kg		08/19/22 18:46	08/22/22 15:58	1
NMeFOSAA	ND		0.20	0.023	ug/Kg		08/19/22 18:46	08/22/22 15:58	1
HFPO-DA (GenX)	ND		0.20	0.041	ug/Kg		08/19/22 18:46	08/22/22 15:58	1
9Cl-PF3ONS	ND		0.20	0.035	ug/Kg		08/19/22 18:46	08/22/22 15:58	1
11Cl-PF3OUdS	ND		0.20	0.031	ug/Kg		08/19/22 18:46	08/22/22 15:58	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.20	0.039	ug/Kg		08/19/22 18:46	08/22/22 15:58	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*101*		*50 - 150*	*08/19/22 18:46*	*08/22/22 15:58*	*1*
13C4 PFHpA	*105*		*50 - 150*	*08/19/22 18:46*	*08/22/22 15:58*	*1*
13C4 PFOA	*100*		*50 - 150*	*08/19/22 18:46*	*08/22/22 15:58*	*1*
13C5 PFNA	*104*		*50 - 150*	*08/19/22 18:46*	*08/22/22 15:58*	*1*
13C2 PFDA	*103*		*50 - 150*	*08/19/22 18:46*	*08/22/22 15:58*	*1*
13C2 PFUnA	*105*		*50 - 150*	*08/19/22 18:46*	*08/22/22 15:58*	*1*
13C2 PFDoA	*105*		*50 - 150*	*08/19/22 18:46*	*08/22/22 15:58*	*1*
13C2 PFTeDA	*105*		*50 - 150*	*08/19/22 18:46*	*08/22/22 15:58*	*1*
13C3 PFBS	*102*		*50 - 150*	*08/19/22 18:46*	*08/22/22 15:58*	*1*
18O2 PFHxS	*113*		*50 - 150*	*08/19/22 18:46*	*08/22/22 15:58*	*1*
13C4 PFOS	*111*		*50 - 150*	*08/19/22 18:46*	*08/22/22 15:58*	*1*
d3-NMeFOSAA	*107*		*50 - 150*	*08/19/22 18:46*	*08/22/22 15:58*	*1*

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15 (Continued)

Lab Sample ID: MB 320-610866/1-A
Matrix: Solid
Analysis Batch: 611153

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 610866

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	117		50 - 150	08/19/22 18:46	08/22/22 15:58	1
13C3 HFPO-DA	94		50 - 150	08/19/22 18:46	08/22/22 15:58	1

Lab Sample ID: LCS 320-610866/2-A
Matrix: Solid
Analysis Batch: 611153

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 610866

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorohexanoic acid (PFHxA)	2.00	2.02		ug/Kg		101	70 - 132
Perfluoroheptanoic acid (PFHpA)	2.00	2.05		ug/Kg		103	71 - 131
Perfluorooctanoic acid (PFOA)	2.00	2.07		ug/Kg		104	69 - 133
Perfluorononanoic acid (PFNA)	2.00	2.04		ug/Kg		102	72 - 129
Perfluorodecanoic acid (PFDA)	2.00	1.96		ug/Kg		98	69 - 133
Perfluoroundecanoic acid (PFUnA)	2.00	2.08		ug/Kg		104	64 - 136
Perfluorododecanoic acid (PFDoA)	2.00	2.15		ug/Kg		108	69 - 135
Perfluorotridecanoic acid (PFTrDA)	2.00	2.08		ug/Kg		104	66 - 139
Perfluorotetradecanoic acid (PFTeA)	2.00	2.06		ug/Kg		103	69 - 133
Perfluorobutanesulfonic acid (PFBS)	1.78	1.78		ug/Kg		100	72 - 128
Perfluorohexanesulfonic acid (PFHxS)	1.82	1.65		ug/Kg		90	67 - 130
Perfluorooctanesulfonic acid (PFOS)	1.86	1.69		ug/Kg		91	68 - 136
NEtFOSAA	2.00	2.08		ug/Kg		104	61 - 139
NMeFOSAA	2.00	1.91		ug/Kg		95	63 - 144
HFPO-DA (GenX)	2.00	1.77		ug/Kg		88	77 - 137
9Cl-PF3ONS	1.87	1.69		ug/Kg		90	75 - 135
11Cl-PF3OUdS	1.89	1.88		ug/Kg		100	76 - 136
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.89	1.81		ug/Kg		96	79 - 139

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C2 PFHxA	102		50 - 150
13C4 PFHpA	102		50 - 150
13C4 PFOA	105		50 - 150
13C5 PFNA	106		50 - 150
13C2 PFDA	105		50 - 150
13C2 PFUnA	105		50 - 150
13C2 PFDoA	107		50 - 150
13C2 PFTeDA	106		50 - 150
13C3 PFBS	103		50 - 150
18O2 PFHxS	109		50 - 150
13C4 PFOS	108		50 - 150
d3-NMeFOSAA	106		50 - 150
d5-NEtFOSAA	111		50 - 150
13C3 HFPO-DA	100		50 - 150

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 320-611366/1-A
Matrix: Solid
Analysis Batch: 611594

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 611366

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.20	0.012	mg/L		08/22/22 16:59	08/23/22 12:10	1
Barium	ND		1.0	0.0024	mg/L		08/22/22 16:59	08/23/22 12:10	1
Cadmium	ND		0.010	0.00050	mg/L		08/22/22 16:59	08/23/22 12:10	1
Chromium	ND		0.020	0.0012	mg/L		08/22/22 16:59	08/23/22 12:10	1
Lead	ND		0.10	0.0024	mg/L		08/22/22 16:59	08/23/22 12:10	1
Selenium	ND		0.040	0.013	mg/L		08/22/22 16:59	08/23/22 12:10	1
Silver	ND		0.020	0.00084	mg/L		08/22/22 16:59	08/23/22 12:10	1

Lab Sample ID: LCS 320-611366/2-A
Matrix: Solid
Analysis Batch: 611594

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 611366

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	0.500	0.477		mg/L		95	90 - 114
Barium	0.500	0.495	J	mg/L		99	90 - 112
Cadmium	0.250	0.251		mg/L		100	88 - 110
Chromium	0.250	0.248		mg/L		99	84 - 114
Lead	0.250	0.254		mg/L		102	86 - 111
Selenium	0.500	0.475		mg/L		95	89 - 110
Silver	0.0505	0.0485		mg/L		96	82 - 121

Lab Sample ID: LB 320-610196/1-B
Matrix: Solid
Analysis Batch: 611594

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 611366

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		1.0	0.060	mg/L		08/22/22 16:59	08/23/22 12:17	1
Barium	0.0553	J	5.0	0.012	mg/L		08/22/22 16:59	08/23/22 12:17	1
Cadmium	ND		0.050	0.0025	mg/L		08/22/22 16:59	08/23/22 12:17	1
Chromium	ND		0.10	0.0060	mg/L		08/22/22 16:59	08/23/22 12:17	1
Lead	ND		0.50	0.012	mg/L		08/22/22 16:59	08/23/22 12:17	1
Selenium	ND		0.20	0.065	mg/L		08/22/22 16:59	08/23/22 12:17	1
Silver	ND		0.10	0.0042	mg/L		08/22/22 16:59	08/23/22 12:17	1

Lab Sample ID: 320-90872-1 MS
Matrix: Solid
Analysis Batch: 611594

Client Sample ID: IDW-S-082022
Prep Type: TCLP
Prep Batch: 611366

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	ND		2.50	2.43		mg/L		97	90 - 114
Barium	1.3	J B	2.50	3.70	J	mg/L		97	90 - 112
Cadmium	0.0026	J	1.25	1.24		mg/L		99	88 - 110
Chromium	ND		1.25	1.24		mg/L		99	84 - 114
Lead	ND		1.25	1.22		mg/L		98	86 - 111
Selenium	ND		2.50	2.41		mg/L		96	89 - 110
Silver	ND		0.252	0.248		mg/L		98	82 - 121

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 320-90872-1 MSD
Matrix: Solid
Analysis Batch: 611594

Client Sample ID: IDW-S-082022
Prep Type: TCLP
Prep Batch: 611366

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	ND		2.50	2.44		mg/L		98	90 - 114	0	20
Barium	1.3	J B	2.50	3.69	J	mg/L		96	90 - 112	0	20
Cadmium	0.0026	J	1.25	1.24		mg/L		99	88 - 110	1	20
Chromium	ND		1.25	1.23		mg/L		98	84 - 114	1	20
Lead	ND		1.25	1.20		mg/L		96	86 - 111	2	20
Selenium	ND		2.50	2.43		mg/L		97	89 - 110	1	20
Silver	ND		0.252	0.241		mg/L		96	82 - 121	3	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: LB 320-618409/14-A
Matrix: Solid
Analysis Batch: 618830

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 618409

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000450	J	0.0020	0.00030	mg/L		09/19/22 15:36	09/21/22 16:24	1

Lab Sample ID: MB 320-618409/11-A
Matrix: Solid
Analysis Batch: 618830

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 618409

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000120	J	0.00040	0.000060	mg/L		09/19/22 15:36	09/21/22 16:19	1

Lab Sample ID: LCS 320-618409/12-A
Matrix: Solid
Analysis Batch: 618830

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 618409

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Mercury			0.00100	0.00113		mg/L		113	76 - 117		

Lab Sample ID: LCSD 320-618409/13-A
Matrix: Solid
Analysis Batch: 618830

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 618409

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury			0.00100	0.00109		mg/L		109	76 - 117	4	19

Lab Sample ID: 320-90872-1 MS
Matrix: Solid
Analysis Batch: 618830

Client Sample ID: IDW-S-082022
Prep Type: TCLP
Prep Batch: 618409

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Mercury	0.00035	J H B	0.00500	0.00560		mg/L		105	76 - 117		

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 320-90872-1 MSD
Client Sample ID: IDW-S-082022
Matrix: Solid
Prep Type: TCLP
Analysis Batch: 618830
Prep Batch: 618409

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	0.00035	J H B	0.00500	0.00555		mg/L		104	76 - 117	1	19

Method: D 2216 - Percent Moisture

Lab Sample ID: 320-90872-1 DU
Client Sample ID: IDW-S-082022
Matrix: Solid
Prep Type: Total/NA
Analysis Batch: 609121

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Moisture	9.1			8.7		%				5	20
Percent Solids	90.9			91.3		%				0.5	20

GC/MS VOA

Leach Batch: 584275

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-90872-1	IDW-S-082022	TCLP	Solid	1311	
LB 280-584275/1-A	Method Blank	TCLP	Solid	1311	
LCS 280-584275/2-A	Lab Control Sample	TCLP	Solid	1311	
LCSD 280-584275/3-A	Lab Control Sample Dup	TCLP	Solid	1311	

Analysis Batch: 584539

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-90872-1	IDW-S-082022	TCLP	Solid	8260D	584275
LB 280-584275/1-A	Method Blank	TCLP	Solid	8260D	584275
LCS 280-584275/2-A	Lab Control Sample	TCLP	Solid	8260D	584275
LCSD 280-584275/3-A	Lab Control Sample Dup	TCLP	Solid	8260D	584275

GC/MS Semi VOA

Leach Batch: 610196

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-90872-1	IDW-S-082022	TCLP	Solid	1311	
LB 320-610196/1-C	Method Blank	TCLP	Solid	1311	

Prep Batch: 610232

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-90872-1	IDW-S-082022	Total/NA	Solid	3550B	
MB 320-610232/1-A	Method Blank	Total/NA	Solid	3550B	
LCS 320-610232/2-A	Lab Control Sample	Total/NA	Solid	3550B	
LCSD 320-610232/3-A	Lab Control Sample Dup	Total/NA	Solid	3550B	
320-90872-1 MS	IDW-S-082022	Total/NA	Solid	3550B	
320-90872-1 MSD	IDW-S-082022	Total/NA	Solid	3550B	

Prep Batch: 612033

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-90872-1	IDW-S-082022	TCLP	Solid	3510C	610196
LB 320-610196/1-C	Method Blank	TCLP	Solid	3510C	610196
MB 320-612033/1-A	Method Blank	Total/NA	Solid	3510C	
LCS 320-612033/2-A	Lab Control Sample	Total/NA	Solid	3510C	
LCSD 320-612033/3-A	Lab Control Sample Dup	Total/NA	Solid	3510C	

Analysis Batch: 612616

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-90872-1	IDW-S-082022	TCLP	Solid	8270D	612033
LB 320-610196/1-C	Method Blank	TCLP	Solid	8270D	612033
MB 320-612033/1-A	Method Blank	Total/NA	Solid	8270D	612033
LCS 320-612033/2-A	Lab Control Sample	Total/NA	Solid	8270D	612033
LCSD 320-612033/3-A	Lab Control Sample Dup	Total/NA	Solid	8270D	612033

Analysis Batch: 613668

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-90872-1	IDW-S-082022	Total/NA	Solid	8270D SIM	610232
MB 320-610232/1-A	Method Blank	Total/NA	Solid	8270D SIM	610232
LCS 320-610232/2-A	Lab Control Sample	Total/NA	Solid	8270D SIM	610232
LCSD 320-610232/3-A	Lab Control Sample Dup	Total/NA	Solid	8270D SIM	610232
320-90872-1 MS	IDW-S-082022	Total/NA	Solid	8270D SIM	610232

GC/MS Semi VOA (Continued)

Analysis Batch: 613668 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-90872-1 MSD	IDW-S-082022	Total/NA	Solid	8270D SIM	610232

Prep Batch: 618253

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-90872-1 - RE	IDW-S-082022	Total/NA	Solid	3550B	
MB 320-618253/1-A	Method Blank	Total/NA	Solid	3550B	
LCS 320-618253/2-A	Lab Control Sample	Total/NA	Solid	3550B	
320-90872-1 MS - RE	IDW-S-082022	Total/NA	Solid	3550B	
320-90872-1 MSD - RE	IDW-S-082022	Total/NA	Solid	3550B	

Analysis Batch: 618843

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-90872-1 - RE	IDW-S-082022	Total/NA	Solid	8270D SIM	618253
MB 320-618253/1-A	Method Blank	Total/NA	Solid	8270D SIM	618253
LCS 320-618253/2-A	Lab Control Sample	Total/NA	Solid	8270D SIM	618253
320-90872-1 MS - RE	IDW-S-082022	Total/NA	Solid	8270D SIM	618253
320-90872-1 MSD - RE	IDW-S-082022	Total/NA	Solid	8270D SIM	618253

GC Semi VOA

Prep Batch: 609716

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-90872-1	IDW-S-082022	Total/NA	Solid	AK102	
MB 320-609716/1-A	Method Blank	Total/NA	Solid	AK102	
LCS 320-609716/2-A	Lab Control Sample	Total/NA	Solid	AK102	
LCSD 320-609716/3-A	Lab Control Sample Dup	Total/NA	Solid	AK102	
320-90872-1 MS	IDW-S-082022	Total/NA	Solid	AK102	
320-90872-1 MSD	IDW-S-082022	Total/NA	Solid	AK102	

Analysis Batch: 609995

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-90872-1	IDW-S-082022	Total/NA	Solid	AK102 & 103	609716
MB 320-609716/1-A	Method Blank	Total/NA	Solid	AK102 & 103	609716
LCS 320-609716/2-A	Lab Control Sample	Total/NA	Solid	AK102 & 103	609716
LCSD 320-609716/3-A	Lab Control Sample Dup	Total/NA	Solid	AK102 & 103	609716
320-90872-1 MS	IDW-S-082022	Total/NA	Solid	AK102 & 103	609716
320-90872-1 MSD	IDW-S-082022	Total/NA	Solid	AK102 & 103	609716

LCMS

Prep Batch: 610866

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-90872-1	IDW-S-082022	Total/NA	Solid	SHAKE	
MB 320-610866/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 320-610866/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	

Analysis Batch: 611153

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-90872-1	IDW-S-082022	Total/NA	Solid	EPA 537(Mod)	610866
MB 320-610866/1-A	Method Blank	Total/NA	Solid	EPA 537(Mod)	610866
LCS 320-610866/2-A	Lab Control Sample	Total/NA	Solid	EPA 537(Mod)	610866

Metals

Leach Batch: 610196

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-90872-1	IDW-S-082022	TCLP	Solid	1311	
LB 320-610196/1-B	Method Blank	TCLP	Solid	1311	
320-90872-1 MS	IDW-S-082022	TCLP	Solid	1311	
320-90872-1 MSD	IDW-S-082022	TCLP	Solid	1311	

Prep Batch: 611366

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-90872-1	IDW-S-082022	TCLP	Solid	3005A	610196
LB 320-610196/1-B	Method Blank	TCLP	Solid	3005A	610196
MB 320-611366/1-A	Method Blank	Total Recoverable	Solid	3005A	
LCS 320-611366/2-A	Lab Control Sample	Total Recoverable	Solid	3005A	
320-90872-1 MS	IDW-S-082022	TCLP	Solid	3005A	610196
320-90872-1 MSD	IDW-S-082022	TCLP	Solid	3005A	610196

Analysis Batch: 611594

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-90872-1	IDW-S-082022	TCLP	Solid	6010C	611366
LB 320-610196/1-B	Method Blank	TCLP	Solid	6010C	611366
MB 320-611366/1-A	Method Blank	Total Recoverable	Solid	6010C	611366
LCS 320-611366/2-A	Lab Control Sample	Total Recoverable	Solid	6010C	611366
320-90872-1 MS	IDW-S-082022	TCLP	Solid	6010C	611366
320-90872-1 MSD	IDW-S-082022	TCLP	Solid	6010C	611366

Prep Batch: 618409

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-90872-1	IDW-S-082022	TCLP	Solid	7470A	610196
LB 320-618409/14-A	Method Blank	Total/NA	Solid	7470A	
MB 320-618409/11-A	Method Blank	Total/NA	Solid	7470A	
LCS 320-618409/12-A	Lab Control Sample	Total/NA	Solid	7470A	
LCSD 320-618409/13-A	Lab Control Sample Dup	Total/NA	Solid	7470A	
320-90872-1 MS	IDW-S-082022	TCLP	Solid	7470A	610196
320-90872-1 MSD	IDW-S-082022	TCLP	Solid	7470A	610196

Analysis Batch: 618830

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-90872-1	IDW-S-082022	TCLP	Solid	7470A	618409
LB 320-618409/14-A	Method Blank	Total/NA	Solid	7470A	618409
MB 320-618409/11-A	Method Blank	Total/NA	Solid	7470A	618409
LCS 320-618409/12-A	Lab Control Sample	Total/NA	Solid	7470A	618409
LCSD 320-618409/13-A	Lab Control Sample Dup	Total/NA	Solid	7470A	618409
320-90872-1 MS	IDW-S-082022	TCLP	Solid	7470A	618409
320-90872-1 MSD	IDW-S-082022	TCLP	Solid	7470A	618409

General Chemistry

Analysis Batch: 609121

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-90872-1	IDW-S-082022	Total/NA	Solid	D 2216	
320-90872-1 DU	IDW-S-082022	Total/NA	Solid	D 2216	

Lab Chronicle

Client: ARCADIS U.S. Inc
Project/Site: 30064227.0742, 309152 IDW Saupe

Job ID: 320-90872-1

Client Sample ID: IDW-S-082022

Date Collected: 08/07/22 13:23
Date Received: 08/10/22 09:30

Lab Sample ID: 320-90872-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			1.0 g	1.0 mL	584275	08/17/22 17:05	DFB1	EET DEN
TCLP	Analysis	8260D		1	0.5 mL	5 mL	584539	08/19/22 14:33	CKL	EET DEN
TCLP	Leach	1311			100.03 g	2000 mL	610196	08/18/22 14:30	GSH	EET SAC
TCLP	Prep	3510C			200 mL	1 mL	612033	08/25/22 11:10	JFA	EET SAC
TCLP	Analysis	8270D		1	1 mL	1 mL	612616	08/27/22 18:43	Y1S	EET SAC
TCLP	Leach	1311			100.03 g	2000 mL	610196	08/18/22 14:30	GSH	EET SAC
TCLP	Prep	3005A			10 mL	50 mL	611366	08/22/22 16:59	JP	EET SAC
TCLP	Analysis	6010C		1			611594	08/23/22 12:29	SP	EET SAC
TCLP	Leach	1311			100.03 g	2000 mL	610196	08/18/22 14:30	GSH	EET SAC
TCLP	Prep	7470A			6 mL	30 mL	618409	09/19/22 15:36	JAP	EET SAC
TCLP	Analysis	7470A		1			618830	09/21/22 16:55	JAP	EET SAC
Total/NA	Analysis	D 2216		1			609121	08/12/22 12:11	DAN	EET SAC

Client Sample ID: IDW-S-082022

Date Collected: 08/07/22 13:23
Date Received: 08/10/22 09:30

Lab Sample ID: 320-90872-1

Matrix: Solid
Percent Solids: 90.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550B			10.14 g	1 mL	610232	08/18/22 11:18	PT	EET SAC
Total/NA	Analysis	8270D SIM		1	1 mL	1 mL	613668	09/01/22 00:05	RAR	EET SAC
Total/NA	Prep	3550B	RE		10.90 g	1 mL	618253	09/20/22 08:27	NGK	EET SAC
Total/NA	Analysis	8270D SIM	RE	1	1 mL	1 mL	618843	09/22/22 03:53	KT	EET SAC
Total/NA	Prep	AK102			30.62 g	3 mL	609716	08/16/22 07:23	PT	EET SAC
Total/NA	Analysis	AK102 & 103		1			609995	08/17/22 19:37	K1D	EET SAC
Total/NA	Prep	SHAKE			5.38 g	10.0 mL	610866	08/19/22 18:46	AM	EET SAC
Total/NA	Analysis	EPA 537(Mod)		1			611153	08/22/22 16:18	D1R	EET SAC

Laboratory References:

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: ARCADIS U.S. Inc
Job ID: 320-90872-1
Project/Site: 30064227.0742, 309152 IDW Saupe

Laboratory: Eurofins Sacramento

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-020	02-20-24

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
7470A	7470A	Solid	Mercury
8270D	3510C	Solid	Pyridine
8270D	3510C	Solid	Total Cresols
D 2216		Solid	Percent Moisture
D 2216		Solid	Percent Solids

Laboratory: Eurofins Denver

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	18-001	02-08-23

Method Summary

Client: ARCADIS U.S. Inc
Job ID: 320-90872-1
Project/Site: 30064227.0742, 309152 IDW Saupe

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET DEN
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	EET SAC
8270D SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	EET SAC
AK102 & 103	Alaska - Diesel Range Organics & Residual Range Organics (GC)	ADEC	EET SAC
EPA 537(Mod)	PFAS for QSM 5.3, Table B-15	EPA	EET SAC
6010C	Metals (ICP)	SW846	EET SAC
7470A	Mercury (CVAA)	SW846	EET SAC
D 2216	Percent Moisture	ASTM	EET SAC
1311	TCLP Extraction	SW846	EET DEN
1311	TCLP Extraction	SW846	EET SAC
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET SAC
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET SAC
3550B	Ultrasonic Extraction	SW846	EET SAC
5030C	Purge and Trap	SW846	EET DEN
7470A	Preparation, Mercury	SW846	EET SAC
AK102	Alaska Extraction (Diesel Range Organic Compounds)	ADEC	EET SAC
SHAKE	Shake Extraction with Ultrasonic Bath Extraction	SW846	EET SAC

Protocol References:

ADEC = Alaska Department of Environmental Conservation
ASTM = ASTM International
EPA = US Environmental Protection Agency
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: ARCADIS U.S. Inc
Project/Site: 30064227.0742, 309152 IDW Saupe

Job ID: 320-90872-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-90872-1	IDW-S-082022	Solid	08/07/22 13:23	08/10/22 09:30

Chain of Custody Record

592244

eurofins | Environment Testing TestAmerica

Address: _____

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

TAL-8210

Client Contact	Project Manager: Nick Wood	Site Contact: Sean Henry	Date: 08072022	COC No:
Company Name: Arcadis Universal AK	Tel/Email: nick.wood@arcadis.com	Lab Contact:	Carrier:	1 of 1 COCs
Address: 880 H St	Analysis Turnaround Time			Sampler: Mindy Moe
City/State/Zip: Anchorage AK 99501	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 907 276 8095	TAT if different from Below _____			Walk-in Client:
Fax:	☑ 2 weeks			Lab Sampling:
Project Name: 309152 - Sappe	☐ 1 week			
Site: 4223 Old Airport Rd	☐ 2 days			Job / SDG No:
PO# 30064227	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	AK102-103 (MOD) Diesel	6010C - RCRA+Mercury	7470A - Mercury TELP	8270D - TCLP List	8270D - SIM PAHs	PFC-IDA-B15 - PFAS	GRO	AK101	Sample Specific Notes:
IDW-S-082022	8/7/22	1323	C	S	6	N	N	X	X	X	X	X	X	X	X	
~~IDW-W-082022~~	8/7/22	1354	G	W	12	N	N	X	X	X	X	X	X	X	X	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

	1	1	1	1	1	1

320-90872 Chain of Custody

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp (°C): Obs'd 2.0 Corr'd 2.0 | Therm ID No.: Lab

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Mindy Moe	ANA	8.8.22/0900	Bill	Fisher	8/10/22 930
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Eurofins Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Phone: 916-373-5600 Fax: 916-372-1059

Chain of Custody Record

eurofins

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kellmann, Jill	Carrier Tracking No(s):	COC No: 320-280301.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Jill.Kellmann@et.eurofinsus.com	State of Origin: Alaska	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State - Alaska (UST)		Job #: 320-90872-1
Address: 4955 Yarrow Street, ,	Due Date Requested: 8/30/2022			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: 30064227.0742, 309152 Saupe	Project #: 32020508			
Site:	SSOW#:			

Analysis 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
Y - Trizma
Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	AK101/5035A_FM Standard AK GRO	8260D/5035A_FM VOC Standard List	8260D/1311_Z TCLP 8260 sublist	8260D/5030C_Leach TCLP 8260 sublist	Total Number of containers	Special Instructions/Note:
			Preservation Code:									
IDW-S-082022 (320-90872-1)	8/7/22	13:23 Alaskan		Solid			X	X	X	X	3	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Northern California, LLC places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Northern California, LLC laboratory or other instructions will be provided Any changes to accreditation status should be brought to Eurofins Environment Testing Northern California, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins Environment Testing Northern California, LLC.

Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)***
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	8-10-22 16:30	EETSAC		08/11/2022 0955	UA DEN
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 1.6 CF+0.1 IR#12

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: ARCADIS U.S. Inc

Job Number: 320-90872-1

Login Number: 90872
List Number: 1
Creator: Her, David A

List Source: Eurofins Sacramento

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
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.	N/A	
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	

Login Sample Receipt Checklist

Client: ARCADIS U.S. Inc

Job Number: 320-90872-1

Login Number: 90872
List Number: 2
Creator: Kazenga, Oliver M

List Source: Eurofins Denver
List Creation: 08/11/22 03:46 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
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?	N/A	
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.	N/A	
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	

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

Laboratory Job ID: 320-91899-1
Client Project/Site: 30064227.0742, 309152 Saupe

For:
ARCADIS U.S. Inc
500 Ala Moana Blvd, Ste 7-400
Honolulu, Hawaii 96813-4900

Attn: Nick Wood

Authorized for release by:
10/5/2022 9:50:57 AM

Jill Kellmann, Client Service Manager
(916)374-4402
Jill.Kellmann@et.eurofinsus.com

Table of Contents

Definitions/Glossary

Client: ARCADIS U.S. Inc
Job ID: 320-91899-1
Project/Site: 30064227.0742, 309152 Saupe

Qualifiers

GC VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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

Job ID: 320-91899-1

Laboratory: Eurofins Sacramento

Narrative

Receipt
The samples were received on 9/10/2022 9:15 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 7.5º C.

Receipt Exceptions

The following samples were received at the laboratory outside the required temperature criteria: IDW-S-092022 (320-91899-1) and IDW-W-092022 (320-91899-2). Samples were received out of temp at 7.5C. There was two ziploc bags of ice but samples were heavily bubbled wrapped and no temp blank was provided.

GC/MS VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: ARCADIS U.S. Inc
Project/Site: 30064227.0742, 309152 Saupe

Job ID: 320-91899-1

Client Sample ID: IDW-S-092022 — Lab Sample ID: 320-91899-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
GRO - C6 to C10	0.56	J	1.1	0.41	mg/Kg	1		AK101	Total/NA

Client Sample ID: IDW-W-092022 — Lab Sample ID: 320-91899-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
GRO - C6 to C10	0.060		0.025	0.0049	mg/L	1		AK101	Total/NA

This Detection Summary does not include radiochemical test results.

Client: ARCADIS U.S. Inc
Project/Site: 30064227.0742, 309152 Saupe

Job ID: 320-91899-1

Client Sample ID: IDW-S-092022
Date Collected: 09/08/22 15:00
Date Received: 09/10/22 09:15

Lab Sample ID: 320-91899-1
Matrix: Solid

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		13	1.1	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
1,1,1-Trichloroethane	ND		13	3.4	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
1,1,2,2-Tetrachloroethane	ND		13	1.5	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		51	3.4	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
1,1,2-Trichloroethane	ND		13	1.4	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
1,1-Dichloroethane	ND		13	2.6	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
1,1-Dichloroethene	ND		13	2.6	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
1,1-Dichloropropene	ND		13	2.5	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
1,2,3-Trichlorobenzene	ND		13	4.1	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
1,2,3-Trichloropropane	ND		13	2.4	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
1,2,4-Trichlorobenzene	ND		13	2.4	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
1,2,4-Trimethylbenzene	ND		13	1.6	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
1,2-Dibromo-3-Chloropropane	ND		26	4.4	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
1,2-Dibromoethane (EDB)	ND		13	2.9	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
1,2-Dichlorobenzene	ND		13	4.8	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
1,2-Dichloroethane	ND		13	1.3	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
1,2-Dichloropropane	ND		13	2.4	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
1,3,5-Trimethylbenzene	ND		13	2.0	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
1,3-Dichlorobenzene	ND		13	2.1	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
1,3-Dichloropropane	ND		13	1.4	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
1,4-Dichlorobenzene	ND		13	1.3	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
2,2-Dichloropropane	ND		13	3.1	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
2-Butanone (MEK)	ND		100	39	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
2-Chlorotoluene	ND		13	1.3	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
2-Hexanone	ND		51	11	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
4-Chlorotoluene	ND		13	1.2	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
4-Methyl-2-pentanone (MIBK)	ND		67	31	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
Acetone	ND		51	21	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
Benzene	ND		13	2.3	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
Bromobenzene	ND		13	0.97	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
Bromochloromethane	ND		13	2.4	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
Bromodichloromethane	ND		13	4.9	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
Bromoform	ND		13	8.2	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
Bromomethane	ND		26	2.4	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
Carbon disulfide	ND		13	3.3	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
Carbon tetrachloride	ND		13	0.87	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
Chlorobenzene	ND		13	0.67	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
Chloroethane	ND		26	8.6	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
Chloroform	ND		13	2.4	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
Chloromethane	ND		26	2.6	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
cis-1,2-Dichloroethene	ND		6.4	1.1	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
cis-1,3-Dichloropropene	ND		15	6.1	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
Dibromochloromethane	ND		13	1.7	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
Dibromomethane	ND		13	1.5	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
Dichlorodifluoromethane	ND		26	3.4	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
Ethylbenzene	ND		13	1.7	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
Hexachlorobutadiene	ND		13	2.5	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
Isopropylbenzene	ND		13	1.5	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
Methyl-tert-butyl Ether (MTBE)	ND		13	2.6	ug/Kg		09/08/22 15:00	09/22/22 18:41	50

Client Sample ID: IDW-S-092022

Date Collected: 09/08/22 15:00
Date Received: 09/10/22 09:15

Lab Sample ID: 320-91899-1

Matrix: Solid

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		13	3.5	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
m-Xylene & p-Xylene	ND		13	4.0	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
Naphthalene	ND		26	8.6	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
n-Butylbenzene	ND		13	4.1	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
N-Propylbenzene	ND		13	5.7	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
o-Xylene	ND		6.4	1.8	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
p-Isopropyltoluene	ND		13	1.6	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
sec-Butylbenzene	ND		13	1.9	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
Styrene	ND		15	6.9	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
tert-Butylbenzene	ND		13	1.4	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
Tetrachloroethene	ND		13	1.4	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
Toluene	ND		13	2.0	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
trans-1,2-Dichloroethene	ND		6.4	2.3	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
trans-1,3-Dichloropropene	ND		21	9.2	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
Trichloroethene	ND		13	1.2	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
Trichlorofluoromethane	ND		26	2.6	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
Vinyl acetate	ND		26	11	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
Vinyl chloride	ND		26	1.4	ug/Kg		09/08/22 15:00	09/22/22 18:41	50
Xylenes, Total	ND		13	1.8	ug/Kg		09/08/22 15:00	09/22/22 18:41	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*52 - 135*	*09/08/22 15:00*	*09/22/22 18:41*	*50*
4-Bromofluorobenzene (Surr)	*101*		*65 - 135*	*09/08/22 15:00*	*09/22/22 18:41*	*50*
Dibromofluoromethane (Surr)	*98*		*65 - 135*	*09/08/22 15:00*	*09/22/22 18:41*	*50*
Toluene-d8 (Surr)	*99*		*65 - 135*	*09/08/22 15:00*	*09/22/22 18:41*	*50*

Method: ADEC AK101 - Alaska - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO - C6 to C10	**0.56**	**J**	1.1	0.41	mg/Kg		10/03/22 09:59	10/03/22 15:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*60 - 120*	*10/03/22 09:59*	*10/03/22 15:17*	*1*

Client Sample ID: IDW-W-092022

Date Collected: 09/08/22 15:05
Date Received: 09/10/22 09:15

Lab Sample ID: 320-91899-2

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		1500	660	ug/L			09/21/22 22:30	100
Benzene	ND		100	31	ug/L			09/21/22 22:30	100
Bromobenzene	ND		100	40	ug/L			09/21/22 22:30	100
Bromochloromethane	ND		100	40	ug/L			09/21/22 22:30	100
Bromodichloromethane	ND		100	39	ug/L			09/21/22 22:30	100
Bromoform	ND		200	120	ug/L			09/21/22 22:30	100
Bromomethane	ND		500	240	ug/L			09/21/22 22:30	100
2-Butanone (MEK)	ND		1500	590	ug/L			09/21/22 22:30	100
n-Butylbenzene	ND		100	48	ug/L			09/21/22 22:30	100
sec-Butylbenzene	ND		100	45	ug/L			09/21/22 22:30	100
tert-Butylbenzene	ND		100	42	ug/L			09/21/22 22:30	100
Carbon disulfide	ND		200	63	ug/L			09/21/22 22:30	100

Client: ARCADIS U.S. Inc
Project/Site: 30064227.0742, 309152 Saupe

Job ID: 320-91899-1

Client Sample ID: IDW-W-092022
Date Collected: 09/08/22 15:05
Date Received: 09/10/22 09:15

Lab Sample ID: 320-91899-2
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		100	57	ug/L			09/21/22 22:30	100
Chlorobenzene	ND		100	42	ug/L			09/21/22 22:30	100
Chloroethane	ND		400	140	ug/L			09/21/22 22:30	100
Chloroform	ND		100	36	ug/L			09/21/22 22:30	100
Chloromethane	ND		200	75	ug/L			09/21/22 22:30	100
4-Chlorotoluene	ND		100	21	ug/L			09/21/22 22:30	100
Dibromochloromethane	ND		200	62	ug/L			09/21/22 22:30	100
1,2-Dibromo-3-Chloropropane	ND		500	180	ug/L			09/21/22 22:30	100
Dichlorodifluoromethane	ND		300	96	ug/L			09/21/22 22:30	100
Dibromomethane	ND		100	34	ug/L			09/21/22 22:30	100
1,2-Dibromoethane (EDB)	ND		100	40	ug/L			09/21/22 22:30	100
1,2-Dichlorobenzene	ND		100	37	ug/L			09/21/22 22:30	100
1,3-Dichlorobenzene	ND		100	33	ug/L			09/21/22 22:30	100
1,4-Dichlorobenzene	ND		100	39	ug/L			09/21/22 22:30	100
1,1-Dichloroethane	ND		100	22	ug/L			09/21/22 22:30	100
1,2-Dichloroethane	ND		100	54	ug/L			09/21/22 22:30	100
1,1-Dichloroethene	ND		100	23	ug/L			09/21/22 22:30	100
cis-1,2-Dichloroethene	ND		100	32	ug/L			09/21/22 22:30	100
trans-1,2-Dichloroethene	ND		100	37	ug/L			09/21/22 22:30	100
1,2-Dichloropropane	ND		100	52	ug/L			09/21/22 22:30	100
1,3-Dichloropropane	ND		100	38	ug/L			09/21/22 22:30	100
2,2-Dichloropropane	ND		100	38	ug/L			09/21/22 22:30	100
1,1-Dichloropropene	ND		100	42	ug/L			09/21/22 22:30	100
cis-1,3-Dichloropropene	ND		200	63	ug/L			09/21/22 22:30	100
trans-1,3-Dichloropropene	ND		200	65	ug/L			09/21/22 22:30	100
Ethylbenzene	ND		100	30	ug/L			09/21/22 22:30	100
2-Hexanone	ND		500	170	ug/L			09/21/22 22:30	100
Hexachlorobutadiene	ND		200	120	ug/L			09/21/22 22:30	100
Isopropylbenzene	ND		100	36	ug/L			09/21/22 22:30	100
p-Isopropyltoluene	ND		100	43	ug/L			09/21/22 22:30	100
Methylene Chloride	ND		200	94	ug/L			09/21/22 22:30	100
4-Methyl-2-pentanone (MIBK)	ND		500	98	ug/L			09/21/22 22:30	100
Methyl-tert-butyl Ether (MTBE)	ND		500	25	ug/L			09/21/22 22:30	100
Naphthalene	ND		200	63	ug/L			09/21/22 22:30	100
N-Propylbenzene	ND		100	53	ug/L			09/21/22 22:30	100
Styrene	ND		100	36	ug/L			09/21/22 22:30	100
1,1,1,2-Tetrachloroethane	ND		100	58	ug/L			09/21/22 22:30	100
1,1,2,2-Tetrachloroethane	ND		100	21	ug/L			09/21/22 22:30	100
Tetrachloroethene	ND		100	40	ug/L			09/21/22 22:30	100
Toluene	ND		100	32	ug/L			09/21/22 22:30	100
1,2,3-Trichlorobenzene	ND		200	70	ug/L			09/21/22 22:30	100
1,1,1-Trichloroethane	ND		100	39	ug/L			09/21/22 22:30	100
1,1,2-Trichloroethane	ND		100	27	ug/L			09/21/22 22:30	100
Trichloroethene	ND		100	30	ug/L			09/21/22 22:30	100
Trichlorofluoromethane	ND		200	57	ug/L			09/21/22 22:30	100
1,2,4-Trichlorobenzene	ND		100	58	ug/L			09/21/22 22:30	100
1,2,3-Trichloropropane	ND		250	86	ug/L			09/21/22 22:30	100
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		300	73	ug/L			09/21/22 22:30	100
1,2,4-Trimethylbenzene	ND		100	15	ug/L			09/21/22 22:30	100

Client Sample ID: IDW-W-092022
Date Collected: 09/08/22 15:05
Date Received: 09/10/22 09:15

Lab Sample ID: 320-91899-2
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		100	37	ug/L			09/21/22 22:30	100
Vinyl acetate	ND		300	94	ug/L			09/21/22 22:30	100
Vinyl chloride	ND		200	51	ug/L			09/21/22 22:30	100
Xylenes, Total	ND		100	33	ug/L			09/21/22 22:30	100
o-Xylene	ND		100	33	ug/L			09/21/22 22:30	100
m-Xylene & p-Xylene	ND		200	36	ug/L			09/21/22 22:30	100
2-Chlorotoluene	ND		100	34	ug/L			09/21/22 22:30	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*80 - 125*		*09/21/22 22:30*	*100*
1,2-Dichloroethane-d4 (Surr)	*90*		*70 - 127*		*09/21/22 22:30*	*100*
4-Bromofluorobenzene (Surr)	*94*		*78 - 120*		*09/21/22 22:30*	*100*
Dibromofluoromethane (Surr)	*97*		*77 - 120*		*09/21/22 22:30*	*100*

Method: ADEC AK101 - Alaska - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO - C6 to C10	**0.060**		0.025	0.0049	mg/L			09/21/22 13:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*60 - 120*		*09/21/22 13:05*	*1*
a,a,a-Trifluorotoluene	*92*		*60 - 120*		*09/21/22 13:05*	*1*

Surrogate Summary

Client: ARCADIS U.S. Inc
Project/Site: 30064227.0742, 309152 Saupe

Job ID: 320-91899-1

Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Solid — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(52-135)	(65-135)	(65-135)	(65-135)
320-91899-1	IDW-S-092022	100	101	98	99
LCS 280-587706/2-A	Lab Control Sample	103	98	101	97
LCSD 280-587706/3-A	Lab Control Sample Dup	102	98	101	96
MB 280-587706/1-A	Method Blank	98	98	100	98

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		TOL	DCA	BFB	DBFM
Lab Sample ID	Client Sample ID	(80-125)	(70-127)	(78-120)	(77-120)
320-91899-2	IDW-W-092022	101	90	94	97
LCS 280-587595/1002	Lab Control Sample	100	87	92	97
LCSD 280-587595/5	Lab Control Sample Dup	99	89	92	99
MB 280-587595/9	Method Blank	101	90	95	98

Surrogate Legend

TOL = Toluene-d8 (Surr)
DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: AK101 - Alaska - Gasoline Range Organics (GC)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		BFB1
Lab Sample ID	Client Sample ID	(60-120)
320-91899-1	IDW-S-092022	100
LCS 280-588613/1-A	Lab Control Sample	98
LCSD 280-588613/2-A	Lab Control Sample Dup	100
MB 280-588613/3-A	Method Blank	100

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: AK101 - Alaska - Gasoline Range Organics (GC)

Matrix: Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	TFT1
Lab Sample ID	Client Sample ID	(60-120)	(60-120)
320-91899-2	IDW-W-092022	94	92
LCS 280-587497/3	Lab Control Sample	94	93
LCSD 280-587497/4	Lab Control Sample Dup	94	94
MB 280-587497/5	Method Blank	95	92

Surrogate Summary

Client: ARCADIS U.S. Inc
Project/Site: 30064227.0742, 309152 Saupe

Job ID: 320-91899-1

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
TFT = a,a,a-Trifluorotoluene

Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 280-587595/9
Matrix: Water
Analysis Batch: 587595

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		5.0	1.8	ug/L			09/21/22 22:08	1
1,2-Dibromoethane (EDB)	ND		1.0	0.40	ug/L			09/21/22 22:08	1
2-Butanone (MEK)	ND		15	5.9	ug/L			09/21/22 22:08	1
1,2-Dichlorobenzene	ND		1.0	0.37	ug/L			09/21/22 22:08	1
1,3-Dichlorobenzene	ND		1.0	0.33	ug/L			09/21/22 22:08	1
1,4-Dichlorobenzene	ND		1.0	0.39	ug/L			09/21/22 22:08	1
4-Chlorotoluene	ND		1.0	0.21	ug/L			09/21/22 22:08	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			09/21/22 22:08	1
1,2-Dichloroethane	ND		1.0	0.54	ug/L			09/21/22 22:08	1
Acetone	ND		15	6.6	ug/L			09/21/22 22:08	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			09/21/22 22:08	1
Benzene	ND		1.0	0.31	ug/L			09/21/22 22:08	1
Bromobenzene	ND		1.0	0.40	ug/L			09/21/22 22:08	1
Bromochloromethane	ND		1.0	0.40	ug/L			09/21/22 22:08	1
1,2-Dichloropropane	ND		1.0	0.52	ug/L			09/21/22 22:08	1
Bromodichloromethane	ND		1.0	0.39	ug/L			09/21/22 22:08	1
1,3-Dichloropropane	ND		1.0	0.38	ug/L			09/21/22 22:08	1
Bromoform	ND		2.0	1.2	ug/L			09/21/22 22:08	1
2,2-Dichloropropane	ND		1.0	0.38	ug/L			09/21/22 22:08	1
Bromomethane	ND		5.0	2.4	ug/L			09/21/22 22:08	1
1,1-Dichloropropene	ND		1.0	0.42	ug/L			09/21/22 22:08	1
Carbon disulfide	ND		2.0	0.63	ug/L			09/21/22 22:08	1
Carbon tetrachloride	ND		1.0	0.57	ug/L			09/21/22 22:08	1
Chlorobenzene	ND		1.0	0.42	ug/L			09/21/22 22:08	1
Chloroethane	ND		4.0	1.4	ug/L			09/21/22 22:08	1
2-Hexanone	ND		5.0	1.7	ug/L			09/21/22 22:08	1
Chloroform	ND		1.0	0.36	ug/L			09/21/22 22:08	1
Chloromethane	ND		2.0	0.75	ug/L			09/21/22 22:08	1
cis-1,2-Dichloroethene	ND		1.0	0.32	ug/L			09/21/22 22:08	1
cis-1,3-Dichloropropene	ND		2.0	0.63	ug/L			09/21/22 22:08	1
Dibromochloromethane	ND		2.0	0.62	ug/L			09/21/22 22:08	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			09/21/22 22:08	1
Dibromomethane	ND		1.0	0.34	ug/L			09/21/22 22:08	1
Dichlorodifluoromethane	ND		3.0	0.96	ug/L			09/21/22 22:08	1
Ethylbenzene	ND		1.0	0.30	ug/L			09/21/22 22:08	1
Hexachlorobutadiene	ND		2.0	1.2	ug/L			09/21/22 22:08	1
Isopropylbenzene	ND		1.0	0.36	ug/L			09/21/22 22:08	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.58	ug/L			09/21/22 22:08	1
Methyl-tert-butyl Ether (MTBE)	ND		5.0	0.25	ug/L			09/21/22 22:08	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			09/21/22 22:08	1
Methylene Chloride	ND		2.0	0.94	ug/L			09/21/22 22:08	1
Naphthalene	ND		2.0	0.63	ug/L			09/21/22 22:08	1
1,2,3-Trichlorobenzene	ND		2.0	0.70	ug/L			09/21/22 22:08	1
n-Butylbenzene	ND		1.0	0.48	ug/L			09/21/22 22:08	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			09/21/22 22:08	1
N-Propylbenzene	ND		1.0	0.53	ug/L			09/21/22 22:08	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			09/21/22 22:08	1
p-Isopropyltoluene	ND		1.0	0.43	ug/L			09/21/22 22:08	1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 280-587595/9
Matrix: Water
Analysis Batch: 587595

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.0	0.45	ug/L			09/21/22 22:08	1
1,2,4-Trichlorobenzene	ND		1.0	0.58	ug/L			09/21/22 22:08	1
Styrene	ND		1.0	0.36	ug/L			09/21/22 22:08	1
1,2,3-Trichloropropane	ND		2.5	0.86	ug/L			09/21/22 22:08	1
tert-Butylbenzene	ND		1.0	0.42	ug/L			09/21/22 22:08	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.0	0.73	ug/L			09/21/22 22:08	1
Tetrachloroethene	ND		1.0	0.40	ug/L			09/21/22 22:08	1
1,2,4-Trimethylbenzene	ND		1.0	0.15	ug/L			09/21/22 22:08	1
Toluene	ND		1.0	0.32	ug/L			09/21/22 22:08	1
1,3,5-Trimethylbenzene	ND		1.0	0.37	ug/L			09/21/22 22:08	1
trans-1,2-Dichloroethene	ND		1.0	0.37	ug/L			09/21/22 22:08	1
trans-1,3-Dichloropropene	ND		2.0	0.65	ug/L			09/21/22 22:08	1
Trichloroethene	ND		1.0	0.30	ug/L			09/21/22 22:08	1
Trichlorofluoromethane	ND		2.0	0.57	ug/L			09/21/22 22:08	1
o-Xylene	ND		1.0	0.33	ug/L			09/21/22 22:08	1
Vinyl acetate	ND		3.0	0.94	ug/L			09/21/22 22:08	1
m-Xylene & p-Xylene	ND		2.0	0.36	ug/L			09/21/22 22:08	1
Vinyl chloride	ND		2.0	0.51	ug/L			09/21/22 22:08	1
Xylenes, Total	ND		1.0	0.33	ug/L			09/21/22 22:08	1
2-Chlorotoluene	ND		1.0	0.34	ug/L			09/21/22 22:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*90*		*70 - 127*		*09/21/22 22:08*	*1*
4-Bromofluorobenzene (Surr)	*95*		*78 - 120*		*09/21/22 22:08*	*1*
Dibromofluoromethane (Surr)	*98*		*77 - 120*		*09/21/22 22:08*	*1*
Toluene-d8 (Surr)	*101*		*80 - 125*		*09/21/22 22:08*	*1*

Lab Sample ID: LCS 280-587595/1002
Matrix: Water
Analysis Batch: 587595

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2-Dibromo-3-Chloropropane	50.0	50.9		ug/L		102	58 - 122
1,2-Dibromoethane (EDB)	50.0	48.4		ug/L		97	81 - 118
2-Butanone (MEK)	200	180		ug/L		90	53 - 135
1,2-Dichlorobenzene	50.0	48.0		ug/L		96	77 - 121
1,3-Dichlorobenzene	50.0	48.7		ug/L		97	76 - 121
1,4-Dichlorobenzene	50.0	48.9		ug/L		98	76 - 119
4-Chlorotoluene	50.0	49.9		ug/L		100	74 - 124
1,1-Dichloroethane	50.0	48.8		ug/L		98	66 - 130
1,2-Dichloroethane	50.0	41.2		ug/L		82	61 - 130
Acetone	200	186		ug/L		93	50 - 137
1,1-Dichloroethene	50.0	49.5		ug/L		99	62 - 130
Benzene	50.0	48.5		ug/L		97	69 - 126
Bromobenzene	50.0	49.1		ug/L		98	75 - 122
Bromochloromethane	50.0	49.7		ug/L		99	71 - 130
1,2-Dichloropropane	50.0	49.5		ug/L		99	68 - 127
Bromodichloromethane	50.0	46.7		ug/L		93	67 - 126

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 280-587595/1002
Matrix: Water
Analysis Batch: 587595

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,3-Dichloropropane	50.0	48.7		ug/L		97	80 - 118
Bromoform	50.0	50.0		ug/L		100	57 - 125
2,2-Dichloropropane	50.0	44.9		ug/L		90	57 - 140
Bromomethane	50.0	41.0		ug/L		82	25 - 163
1,1-Dichloropropene	50.0	49.5		ug/L		99	64 - 133
Carbon disulfide	50.0	44.6		ug/L		89	56 - 128
Carbon tetrachloride	50.0	47.4		ug/L		95	60 - 133
Chlorobenzene	50.0	49.6		ug/L		99	78 - 118
Chloroethane	50.0	43.5		ug/L		87	52 - 144
2-Hexanone	200	183		ug/L		92	58 - 134
Chloroform	50.0	48.0		ug/L		96	68 - 128
Chloromethane	50.0	45.7		ug/L		91	43 - 142
cis-1,2-Dichloroethene	50.0	49.6		ug/L		99	69 - 126
cis-1,3-Dichloropropene	50.0	48.4		ug/L		97	75 - 120
Dibromochloromethane	50.0	49.4		ug/L		99	71 - 122
4-Methyl-2-pentanone (MIBK)	200	191		ug/L		95	56 - 135
Dibromomethane	50.0	45.5		ug/L		91	68 - 129
Dichlorodifluoromethane	50.0	49.6		ug/L		99	26 - 152
Ethylbenzene	50.0	51.9		ug/L		104	76 - 121
Hexachlorobutadiene	50.0	52.7		ug/L		105	69 - 133
Isopropylbenzene	50.0	48.5		ug/L		97	70 - 127
1,1,1,2-Tetrachloroethane	50.0	50.2		ug/L		100	74 - 121
Methyl-tert-butyl Ether (MTBE)	50.0	47.7		ug/L		95	70 - 127
1,1,2,2-Tetrachloroethane	50.0	47.5		ug/L		95	72 - 122
Methylene Chloride	50.0	50.7		ug/L		101	64 - 128
Naphthalene	50.0	48.2		ug/L		96	63 - 129
1,2,3-Trichlorobenzene	50.0	52.2		ug/L		104	70 - 127
n-Butylbenzene	50.0	48.5		ug/L		97	69 - 130
1,1,1-Trichloroethane	50.0	46.9		ug/L		94	62 - 132
N-Propylbenzene	50.0	50.0		ug/L		100	73 - 127
1,1,2-Trichloroethane	50.0	48.3		ug/L		97	72 - 128
p-Isopropyltoluene	50.0	50.0		ug/L		100	74 - 127
sec-Butylbenzene	50.0	52.5		ug/L		105	72 - 127
1,2,4-Trichlorobenzene	50.0	50.8		ug/L		102	73 - 124
Styrene	50.0	50.9		ug/L		102	79 - 120
1,2,3-Trichloropropane	50.0	46.9		ug/L		94	74 - 123
tert-Butylbenzene	50.0	50.1		ug/L		100	72 - 126
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	50.4		ug/L		101	60 - 137
Tetrachloroethene	50.0	51.0		ug/L		102	72 - 127
1,2,4-Trimethylbenzene	50.0	47.5		ug/L		95	74 - 124
Toluene	50.0	49.2		ug/L		98	68 - 127
1,3,5-Trimethylbenzene	50.0	47.8		ug/L		96	73 - 127
trans-1,2-Dichloroethene	50.0	48.4		ug/L		97	66 - 129
trans-1,3-Dichloropropene	50.0	46.3		ug/L		93	66 - 127
Trichloroethene	50.0	47.6		ug/L		95	70 - 125
Trichlorofluoromethane	50.0	41.4		ug/L		83	57 - 144
o-Xylene	50.0	52.1		ug/L		104	77 - 120
Vinyl acetate	100	95.5		ug/L		95	61 - 139

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 280-587595/1002
Matrix: Water
Analysis Batch: 587595

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
m-Xylene & p-Xylene			50.0	50.9		ug/L		102	76 - 122		
Vinyl chloride			50.0	40.1		ug/L		80	53 - 141		
Xylenes, Total			100	103		ug/L		103	77 - 120		
2-Chlorotoluene			50.0	48.9		ug/L		98	75 - 123		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*87*		*70 - 127*
4-Bromofluorobenzene (Surr)	*92*		*78 - 120*
Dibromofluoromethane (Surr)	*97*		*77 - 120*
Toluene-d8 (Surr)	*100*		*80 - 125*

Lab Sample ID: LCSD 280-587595/5
Matrix: Water
Analysis Batch: 587595

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
1,2-Dibromo-3-Chloropropane			50.0	41.2		ug/L		82	58 - 122	21	21
1,2-Dibromoethane (EDB)			50.0	47.2		ug/L		94	81 - 118	3	20
2-Butanone (MEK)			200	159		ug/L		79	53 - 135	13	20
1,2-Dichlorobenzene			50.0	48.5		ug/L		97	77 - 121	1	20
1,3-Dichlorobenzene			50.0	49.1		ug/L		98	76 - 121	1	20
1,4-Dichlorobenzene			50.0	50.3		ug/L		101	76 - 119	3	20
4-Chlorotoluene			50.0	50.4		ug/L		101	74 - 124	1	20
1,1-Dichloroethane			50.0	50.4		ug/L		101	66 - 130	3	20
1,2-Dichloroethane			50.0	41.5		ug/L		83	61 - 130	1	20
Acetone			200	173		ug/L		86	50 - 137	8	21
1,1-Dichloroethene			50.0	53.1		ug/L		106	62 - 130	7	21
Benzene			50.0	50.4		ug/L		101	69 - 126	4	20
Bromobenzene			50.0	49.9		ug/L		100	75 - 122	2	20
Bromochloromethane			50.0	51.8		ug/L		104	71 - 130	4	20
1,2-Dichloropropane			50.0	50.7		ug/L		101	68 - 127	2	20
Bromodichloromethane			50.0	46.3		ug/L		93	67 - 126	1	20
1,3-Dichloropropane			50.0	47.4		ug/L		95	80 - 118	3	20
Bromoform			50.0	46.6		ug/L		93	57 - 125	7	20
2,2-Dichloropropane			50.0	48.8		ug/L		98	57 - 140	8	22
Bromomethane			50.0	49.7		ug/L		99	25 - 163	19	40
1,1-Dichloropropene			50.0	50.9		ug/L		102	64 - 133	3	20
Carbon disulfide			50.0	51.1		ug/L		102	56 - 128	14	20
Carbon tetrachloride			50.0	48.8		ug/L		98	60 - 133	3	20
Chlorobenzene			50.0	50.0		ug/L		100	78 - 118	1	20
Chloroethane			50.0	49.2		ug/L		98	52 - 144	12	30
2-Hexanone			200	157		ug/L		79	58 - 134	15	21
Chloroform			50.0	49.0		ug/L		98	68 - 128	2	20
Chloromethane			50.0	50.4		ug/L		101	43 - 142	10	20
cis-1,2-Dichloroethene			50.0	51.2		ug/L		102	69 - 126	3	20
cis-1,3-Dichloropropene			50.0	47.5		ug/L		95	75 - 120	2	20
Dibromochloromethane			50.0	47.4		ug/L		95	71 - 122	4	20
4-Methyl-2-pentanone (MIBK)			200	167		ug/L		84	56 - 135	13	20

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 280-587595/5
Matrix: Water
Analysis Batch: 587595

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
Dibromomethane			50.0	46.1		ug/L		92	68 - 129	1	20
Dichlorodifluoromethane			50.0	48.1		ug/L		96	26 - 152	3	21
Ethylbenzene			50.0	51.3		ug/L		103	76 - 121	1	20
Hexachlorobutadiene			50.0	53.3		ug/L		107	69 - 133	1	20
Isopropylbenzene			50.0	50.0		ug/L		100	70 - 127	3	20
1,1,1,2-Tetrachloroethane			50.0	50.0		ug/L		100	74 - 121	0	20
Methyl-tert-butyl Ether (MTBE)			50.0	47.0		ug/L		94	70 - 127	1	20
1,1,2,2-Tetrachloroethane			50.0	43.7		ug/L		87	72 - 122	8	20
Methylene Chloride			50.0	51.3		ug/L		103	64 - 128	1	20
Naphthalene			50.0	41.5		ug/L		83	63 - 129	15	21
1,2,3-Trichlorobenzene			50.0	48.2		ug/L		96	70 - 127	8	20
n-Butylbenzene			50.0	49.2		ug/L		98	69 - 130	1	20
1,1,1-Trichloroethane			50.0	48.3		ug/L		97	62 - 132	3	20
N-Propylbenzene			50.0	50.7		ug/L		101	73 - 127	1	20
1,1,2-Trichloroethane			50.0	48.6		ug/L		97	72 - 128	1	20
p-Isopropyltoluene			50.0	51.1		ug/L		102	74 - 127	2	20
sec-Butylbenzene			50.0	53.2		ug/L		106	72 - 127	1	20
1,2,4-Trichlorobenzene			50.0	50.3		ug/L		101	73 - 124	1	20
Styrene			50.0	50.1		ug/L		100	79 - 120	2	20
1,2,3-Trichloropropane			50.0	43.1		ug/L		86	74 - 123	8	20
tert-Butylbenzene			50.0	50.4		ug/L		101	72 - 126	1	20
1,1,2-Trichloro-1,2,2-trifluoroethane			50.0	54.1		ug/L		108	60 - 137	7	23
Tetrachloroethene			50.0	53.2		ug/L		106	72 - 127	4	20
1,2,4-Trimethylbenzene			50.0	48.3		ug/L		97	74 - 124	2	20
Toluene			50.0	50.1		ug/L		100	68 - 127	2	20
1,3,5-Trimethylbenzene			50.0	49.1		ug/L		98	73 - 127	3	20
trans-1,2-Dichloroethene			50.0	50.8		ug/L		102	66 - 129	5	20
trans-1,3-Dichloropropene			50.0	47.0		ug/L		94	66 - 127	1	20
Trichloroethene			50.0	48.1		ug/L		96	70 - 125	1	20
Trichlorofluoromethane			50.0	44.8		ug/L		90	57 - 144	8	28
o-Xylene			50.0	51.6		ug/L		103	77 - 120	1	20
Vinyl acetate			100	92.4		ug/L		92	61 - 139	3	23
m-Xylene & p-Xylene			50.0	51.9		ug/L		104	76 - 122	2	20
Vinyl chloride			50.0	48.5		ug/L		97	53 - 141	19	25
Xylenes, Total			100	104		ug/L		104	77 - 120	0	20
2-Chlorotoluene			50.0	49.6		ug/L		99	75 - 123	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*89*		*70 - 127*
4-Bromofluorobenzene (Surr)	*92*		*78 - 120*
Dibromofluoromethane (Surr)	*99*		*77 - 120*
Toluene-d8 (Surr)	*99*		*80 - 125*

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 280-587706/1-A
Matrix: Solid
Analysis Batch: 587713

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 587706

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		250	43	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
1,2-Dibromoethane (EDB)	ND		130	28	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
2-Butanone (MEK)	ND		1000	380	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
1,2-Dichlorobenzene	ND		130	47	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
1,3-Dichlorobenzene	ND		130	20	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
1,4-Dichlorobenzene	ND		130	13	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
4-Chlorotoluene	ND		130	12	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
1,1-Dichloroethane	ND		130	25	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
1,2-Dichloroethane	ND		130	13	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
Acetone	ND		500	200	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
1,1-Dichloroethene	ND		130	25	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
Benzene	ND		130	23	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
Bromobenzene	ND		130	9.5	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
Bromochloromethane	ND		130	24	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
1,2-Dichloropropane	ND		130	23	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
Bromodichloromethane	ND		130	48	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
1,3-Dichloropropane	ND		130	14	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
Bromoform	ND		130	80	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
2,2-Dichloropropane	ND		130	31	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
Bromomethane	ND		250	24	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
1,1-Dichloropropene	ND		130	24	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
Carbon disulfide	ND		130	32	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
Carbon tetrachloride	ND		130	8.5	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
Chlorobenzene	ND		130	6.6	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
Chloroethane	ND		250	84	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
2-Hexanone	ND		500	110	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
Chloroform	ND		130	23	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
Chloromethane	ND		250	25	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
cis-1,2-Dichloroethene	ND		63	11	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
cis-1,3-Dichloropropene	ND		150	60	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
Dibromochloromethane	ND		130	17	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
4-Methyl-2-pentanone (MIBK)	ND		650	300	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
Dibromomethane	ND		130	15	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
Dichlorodifluoromethane	ND		250	33	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
Ethylbenzene	ND		130	17	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
Hexachlorobutadiene	ND		130	25	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
Isopropylbenzene	ND		130	15	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
1,1,1,2-Tetrachloroethane	ND		130	11	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
Methyl-tert-butyl Ether (MTBE)	ND		130	25	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
1,1,2,2-Tetrachloroethane	ND		130	15	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
Methylene Chloride	ND		130	35	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
Naphthalene	ND		250	84	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
1,2,3-Trichlorobenzene	ND		130	40	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
n-Butylbenzene	ND		130	40	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
1,1,1-Trichloroethane	ND		130	33	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
N-Propylbenzene	ND		130	56	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
1,1,2-Trichloroethane	ND		130	14	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
p-Isopropyltoluene	ND		130	16	ug/Kg		09/22/22 07:00	09/22/22 12:51	50

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 280-587706/1-A
Matrix: Solid
Analysis Batch: 587713

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 587706

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		130	19	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
1,2,4-Trichlorobenzene	ND		130	23	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
Styrene	ND		150	68	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
1,2,3-Trichloropropane	ND		130	24	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
tert-Butylbenzene	ND		130	14	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		500	33	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
Tetrachloroethene	ND		130	14	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
1,2,4-Trimethylbenzene	ND		130	16	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
Toluene	ND		130	20	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
1,3,5-Trimethylbenzene	ND		130	20	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
trans-1,2-Dichloroethene	ND		63	22	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
trans-1,3-Dichloropropene	ND		200	90	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
Trichloroethene	ND		130	12	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
Trichlorofluoromethane	ND		250	25	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
o-Xylene	ND		63	18	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
Vinyl acetate	ND		250	110	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
m-Xylene & p-Xylene	ND		130	39	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
Vinyl chloride	ND		250	14	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
Xylenes, Total	ND		130	18	ug/Kg		09/22/22 07:00	09/22/22 12:51	50
2-Chlorotoluene	ND		130	13	ug/Kg		09/22/22 07:00	09/22/22 12:51	50

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*52 - 135*	*09/22/22 07:00*	*09/22/22 12:51*	*50*
4-Bromofluorobenzene (Surr)	*98*		*65 - 135*	*09/22/22 07:00*	*09/22/22 12:51*	*50*
Dibromofluoromethane (Surr)	*100*		*65 - 135*	*09/22/22 07:00*	*09/22/22 12:51*	*50*
Toluene-d8 (Surr)	*98*		*65 - 135*	*09/22/22 07:00*	*09/22/22 12:51*	*50*

Lab Sample ID: LCS 280-587706/2-A
Matrix: Solid
Analysis Batch: 587713

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 587706

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2-Dibromo-3-Chloropropane	2500	2320		ug/Kg		93	65 - 135
1,2-Dibromoethane (EDB)	2500	2700		ug/Kg		108	65 - 135
2-Butanone (MEK)	10000	9120		ug/Kg		91	24 - 175
1,2-Dichlorobenzene	2500	2660		ug/Kg		107	65 - 135
1,3-Dichlorobenzene	2500	2690		ug/Kg		107	65 - 135
1,4-Dichlorobenzene	2500	2740		ug/Kg		109	65 - 135
4-Chlorotoluene	2500	2750		ug/Kg		110	65 - 135
1,1-Dichloroethane	2500	2720		ug/Kg		109	65 - 135
1,2-Dichloroethane	2500	2670		ug/Kg		107	52 - 138
Acetone	10000	9870		ug/Kg		99	56 - 135
1,1-Dichloroethene	2500	2670		ug/Kg		107	59 - 135
Benzene	2500	2880		ug/Kg		115	65 - 135
Bromobenzene	2500	2720		ug/Kg		109	65 - 135
Bromochloromethane	2500	2620		ug/Kg		105	65 - 135
1,2-Dichloropropane	2500	2570		ug/Kg		103	65 - 135
Bromodichloromethane	2500	2730		ug/Kg		109	65 - 135

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 280-587706/2-A
Matrix: Solid
Analysis Batch: 587713

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 587706

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,3-Dichloropropane	2500	2600		ug/Kg		104	65 - 135
Bromoform	2500	2580		ug/Kg		103	61 - 135
2,2-Dichloropropane	2500	2850		ug/Kg		114	52 - 147
Bromomethane	2500	1750		ug/Kg		70	30 - 153
1,1-Dichloropropene	2500	2740		ug/Kg		109	65 - 135
Carbon disulfide	2500	2550		ug/Kg		102	53 - 135
Carbon tetrachloride	2500	2770		ug/Kg		111	62 - 145
Chlorobenzene	2500	2840		ug/Kg		114	65 - 135
Chloroethane	2500	2210		ug/Kg		88	22 - 166
2-Hexanone	10000	9600		ug/Kg		96	57 - 135
Chloroform	2500	2720		ug/Kg		109	65 - 135
Chloromethane	2500	2700		ug/Kg		108	19 - 154
cis-1,2-Dichloroethene	2500	2690		ug/Kg		108	65 - 135
cis-1,3-Dichloropropene	2500	2740		ug/Kg		110	62 - 135
Dibromochloromethane	2500	2630		ug/Kg		105	65 - 135
4-Methyl-2-pentanone (MIBK)	10000	11000		ug/Kg		110	54 - 142
Dibromomethane	2500	2570		ug/Kg		103	65 - 135
Dichlorodifluoromethane	2500	3010		ug/Kg		120	34 - 135
Ethylbenzene	2500	2730		ug/Kg		109	65 - 135
Hexachlorobutadiene	2500	2720		ug/Kg		109	65 - 135
Isopropylbenzene	2500	2660		ug/Kg		106	65 - 135
1,1,1,2-Tetrachloroethane	2500	2660		ug/Kg		106	65 - 135
Methyl-tert-butyl Ether (MTBE)	2500	2610		ug/Kg		104	63 - 135
1,1,2,2-Tetrachloroethane	2500	2530		ug/Kg		101	65 - 135
Methylene Chloride	2500	2940		ug/Kg		118	65 - 135
Naphthalene	2500	2500		ug/Kg		100	61 - 135
1,2,3-Trichlorobenzene	2500	2660		ug/Kg		106	65 - 135
n-Butylbenzene	2500	2690		ug/Kg		107	65 - 139
1,1,1-Trichloroethane	2500	2820		ug/Kg		113	65 - 135
N-Propylbenzene	2500	2810		ug/Kg		112	65 - 135
1,1,2-Trichloroethane	2500	2700		ug/Kg		108	65 - 135
p-Isopropyltoluene	2500	2690		ug/Kg		108	65 - 135
sec-Butylbenzene	2500	2670		ug/Kg		107	65 - 135
1,2,4-Trichlorobenzene	2500	2710		ug/Kg		108	65 - 135
Styrene	2500	2770		ug/Kg		111	65 - 135
1,2,3-Trichloropropane	2500	2460		ug/Kg		99	65 - 135
tert-Butylbenzene	2500	2670		ug/Kg		107	65 - 135
1,1,2-Trichloro-1,2,2-trifluoroethane	2500	2710		ug/Kg		108	61 - 135
Tetrachloroethene	2500	2760		ug/Kg		111	65 - 135
1,2,4-Trimethylbenzene	2500	2620		ug/Kg		105	65 - 135
Toluene	2500	2760		ug/Kg		111	65 - 135
1,3,5-Trimethylbenzene	2500	2650		ug/Kg		106	65 - 135
trans-1,2-Dichloroethene	2500	2820		ug/Kg		113	65 - 135
trans-1,3-Dichloropropene	2500	2890		ug/Kg		116	58 - 135
Trichloroethene	2500	2810		ug/Kg		112	65 - 135
Trichlorofluoromethane	2500	2540		ug/Kg		102	57 - 146
o-Xylene	2500	2650		ug/Kg		106	65 - 135
Vinyl acetate	5000	5190		ug/Kg		104	10 - 160

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 280-587706/2-A
Matrix: Solid
Analysis Batch: 587713

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 587706

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
m-Xylene & p-Xylene			2500	2690		ug/Kg		108	65 - 135		
Vinyl chloride			2500	2590		ug/Kg		103	28 - 161		
Xylenes, Total			5000	5340		ug/Kg		107	65 - 135		
2-Chlorotoluene			2500	2730		ug/Kg		109	65 - 135		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*103*		*52 - 135*
4-Bromofluorobenzene (Surr)	*98*		*65 - 135*
Dibromofluoromethane (Surr)	*101*		*65 - 135*
Toluene-d8 (Surr)	*97*		*65 - 135*

Lab Sample ID: LCSD 280-587706/3-A
Matrix: Solid
Analysis Batch: 587713

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 587706

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2-Dibromo-3-Chloropropane			2500	2290		ug/Kg		91	65 - 135	1	31
1,2-Dibromoethane (EDB)			2500	2600		ug/Kg		104	65 - 135	4	36
2-Butanone (MEK)			10000	9040		ug/Kg		90	24 - 175	1	55
1,2-Dichlorobenzene			2500	2670		ug/Kg		107	65 - 135	0	20
1,3-Dichlorobenzene			2500	2720		ug/Kg		109	65 - 135	1	20
1,4-Dichlorobenzene			2500	2730		ug/Kg		109	65 - 135	0	20
4-Chlorotoluene			2500	2780		ug/Kg		111	65 - 135	1	20
1,1-Dichloroethane			2500	2720		ug/Kg		109	65 - 135	0	25
1,2-Dichloroethane			2500	2670		ug/Kg		107	52 - 138	0	25
Acetone			10000	9210		ug/Kg		92	56 - 135	7	59
1,1-Dichloroethene			2500	2700		ug/Kg		108	59 - 135	1	29
Benzene			2500	2930		ug/Kg		117	65 - 135	2	20
Bromobenzene			2500	2730		ug/Kg		109	65 - 135	0	20
Bromochloromethane			2500	2650		ug/Kg		106	65 - 135	1	26
1,2-Dichloropropane			2500	2580		ug/Kg		103	65 - 135	0	22
Bromodichloromethane			2500	2760		ug/Kg		111	65 - 135	1	23
1,3-Dichloropropane			2500	2620		ug/Kg		105	65 - 135	1	35
Bromoform			2500	2560		ug/Kg		102	61 - 135	1	35
2,2-Dichloropropane			2500	2920		ug/Kg		117	52 - 147	2	27
Bromomethane			2500	1790		ug/Kg		72	30 - 153	2	37
1,1-Dichloropropene			2500	2760		ug/Kg		110	65 - 135	1	20
Carbon disulfide			2500	2590		ug/Kg		104	53 - 135	2	23
Carbon tetrachloride			2500	2820		ug/Kg		113	62 - 145	2	21
Chlorobenzene			2500	2830		ug/Kg		113	65 - 135	0	20
Chloroethane			2500	2270		ug/Kg		91	22 - 166	3	35
2-Hexanone			10000	9170		ug/Kg		92	57 - 135	5	51
Chloroform			2500	2730		ug/Kg		109	65 - 135	1	20
Chloromethane			2500	2770		ug/Kg		111	19 - 154	3	32
cis-1,2-Dichloroethene			2500	2700		ug/Kg		108	65 - 135	0	25
cis-1,3-Dichloropropene			2500	2710		ug/Kg		108	62 - 135	1	21
Dibromochloromethane			2500	2630		ug/Kg		105	65 - 135	0	27
4-Methyl-2-pentanone (MIBK)			10000	10600		ug/Kg		106	54 - 142	3	43

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 280-587706/3-A
Matrix: Solid
Analysis Batch: 587713

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 587706

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dibromomethane			2500	2560		ug/Kg		102	65 - 135	0	31
Dichlorodifluoromethane			2500	3050		ug/Kg		122	34 - 135	1	33
Ethylbenzene			2500	2760		ug/Kg		110	65 - 135	1	20
Hexachlorobutadiene			2500	2810		ug/Kg		112	65 - 135	3	20
Isopropylbenzene			2500	2700		ug/Kg		108	65 - 135	2	22
1,1,1,2-Tetrachloroethane			2500	2690		ug/Kg		107	65 - 135	1	20
Methyl-tert-butyl Ether (MTBE)			2500	2630		ug/Kg		105	63 - 135	1	33
1,1,2,2-Tetrachloroethane			2500	2440		ug/Kg		98	65 - 135	3	34
Methylene Chloride			2500	2930		ug/Kg		117	65 - 135	0	22
Naphthalene			2500	2530		ug/Kg		101	61 - 135	1	36
1,2,3-Trichlorobenzene			2500	2720		ug/Kg		109	65 - 135	2	22
n-Butylbenzene			2500	2730		ug/Kg		109	65 - 139	2	23
1,1,1-Trichloroethane			2500	2860		ug/Kg		114	65 - 135	2	20
N-Propylbenzene			2500	2850		ug/Kg		114	65 - 135	1	20
1,1,2-Trichloroethane			2500	2670		ug/Kg		107	65 - 135	1	26
p-Isopropyltoluene			2500	2730		ug/Kg		109	65 - 135	2	32
sec-Butylbenzene			2500	2730		ug/Kg		109	65 - 135	2	26
1,2,4-Trichlorobenzene			2500	2790		ug/Kg		112	65 - 135	3	20
Styrene			2500	2750		ug/Kg		110	65 - 135	1	20
1,2,3-Trichloropropane			2500	2430		ug/Kg		97	65 - 135	1	20
tert-Butylbenzene			2500	2710		ug/Kg		108	65 - 135	2	32
1,1,2-Trichloro-1,2,2-trifluoroethane			2500	2770		ug/Kg		111	61 - 135	2	25
Tetrachloroethene			2500	2820		ug/Kg		113	65 - 135	2	20
1,2,4-Trimethylbenzene			2500	2690		ug/Kg		108	65 - 135	3	20
Toluene			2500	2800		ug/Kg		112	65 - 135	1	20
1,3,5-Trimethylbenzene			2500	2720		ug/Kg		109	65 - 135	3	20
trans-1,2-Dichloroethene			2500	2800		ug/Kg		112	65 - 135	1	25
trans-1,3-Dichloropropene			2500	2980		ug/Kg		119	58 - 135	3	24
Trichloroethene			2500	2800		ug/Kg		112	65 - 135	0	20
Trichlorofluoromethane			2500	2530		ug/Kg		101	57 - 146	0	28
o-Xylene			2500	2640		ug/Kg		106	65 - 135	0	20
Vinyl acetate			5000	5160		ug/Kg		103	10 - 160	1	48
m-Xylene & p-Xylene			2500	2750		ug/Kg		110	65 - 135	2	23
Vinyl chloride			2500	2620		ug/Kg		105	28 - 161	1	30
Xylenes, Total			5000	5390		ug/Kg		108	65 - 135	1	20
2-Chlorotoluene			2500	2800		ug/Kg		112	65 - 135	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*102*		*52 - 135*
4-Bromofluorobenzene (Surr)	*98*		*65 - 135*
Dibromofluoromethane (Surr)	*101*		*65 - 135*
Toluene-d8 (Surr)	*96*		*65 - 135*

Method: AK101 - Alaska - Gasoline Range Organics (GC)

Lab Sample ID: MB 280-587497/5
Matrix: Water
Analysis Batch: 587497

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO - C6 to C10	ND		0.025	0.0049	mg/L			09/21/22 12:42	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*60 - 120*		*09/21/22 12:42*	*1*
a,a,a-Trifluorotoluene	*92*		*60 - 120*		*09/21/22 12:42*	*1*

Lab Sample ID: LCS 280-587497/3
Matrix: Water
Analysis Batch: 587497

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
GRO - C6 to C10			0.501	0.492		mg/L		98	60 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*60 - 120*
a,a,a-Trifluorotoluene	*93*		*60 - 120*

Lab Sample ID: LCSD 280-587497/4
Matrix: Water
Analysis Batch: 587497

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
GRO - C6 to C10			0.501	0.493		mg/L		98	60 - 120	15	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*60 - 120*
a,a,a-Trifluorotoluene	*94*		*60 - 120*

Lab Sample ID: MB 280-588613/3-A
Matrix: Solid
Analysis Batch: 588643

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 588613

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO - C6 to C10	ND		2.0	0.76	mg/Kg		10/03/22 09:59	10/03/22 13:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*60 - 120*	*10/03/22 09:59*	*10/03/22 13:09*	*1*

Lab Sample ID: LCS 280-588613/1-A
Matrix: Solid
Analysis Batch: 588643

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 588613

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
GRO - C6 to C10			10.0	8.72		mg/Kg		87	60 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*60 - 120*

Method: AK101 - Alaska - Gasoline Range Organics (GC)

Lab Sample ID: LCSD 280-588613/2-A
Matrix: Solid
Analysis Batch: 588643

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 588613

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
GRO - C6 to C10			10.0	8.63		mg/Kg		86	60 - 120	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*60 - 120*

QC Association Summary

Client: ARCADIS U.S. Inc
Project/Site: 30064227.0742, 309152 Saupe

Job ID: 320-91899-1

GC/MS VOA

Analysis Batch: 587595

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-91899-2	IDW-W-092022	Total/NA	Water	8260D	
MB 280-587595/9	Method Blank	Total/NA	Water	8260D	
LCS 280-587595/1002	Lab Control Sample	Total/NA	Water	8260D	
LCSD 280-587595/5	Lab Control Sample Dup	Total/NA	Water	8260D	

Prep Batch: 587706

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-91899-1	IDW-S-092022	Total/NA	Solid	5035	
MB 280-587706/1-A	Method Blank	Total/NA	Solid	5035	
LCS 280-587706/2-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 280-587706/3-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 587713

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-91899-1	IDW-S-092022	Total/NA	Solid	8260D	587706
MB 280-587706/1-A	Method Blank	Total/NA	Solid	8260D	587706
LCS 280-587706/2-A	Lab Control Sample	Total/NA	Solid	8260D	587706
LCSD 280-587706/3-A	Lab Control Sample Dup	Total/NA	Solid	8260D	587706

GC VOA

Analysis Batch: 587497

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-91899-2	IDW-W-092022	Total/NA	Water	AK101	
MB 280-587497/5	Method Blank	Total/NA	Water	AK101	
LCS 280-587497/3	Lab Control Sample	Total/NA	Water	AK101	
LCSD 280-587497/4	Lab Control Sample Dup	Total/NA	Water	AK101	

Prep Batch: 588613

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-91899-1	IDW-S-092022	Total/NA	Solid	5035	
MB 280-588613/3-A	Method Blank	Total/NA	Solid	5035	
LCS 280-588613/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 280-588613/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 588643

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-91899-1	IDW-S-092022	Total/NA	Solid	AK101	588613
MB 280-588613/3-A	Method Blank	Total/NA	Solid	AK101	588613
LCS 280-588613/1-A	Lab Control Sample	Total/NA	Solid	AK101	588613
LCSD 280-588613/2-A	Lab Control Sample Dup	Total/NA	Solid	AK101	588613

Lab Chronicle

Client: ARCADIS U.S. Inc
Project/Site: 30064227.0742, 309152 Saupe

Job ID: 320-91899-1

Client Sample ID: IDW-S-092022

Lab Sample ID: 320-91899-1

Date Collected: 09/08/22 15:00

Matrix: Solid

Date Received: 09/10/22 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			48.763 g	5 mL	587706	09/08/22 15:00	JLS	EET DEN
Total/NA	Analysis	8260D		50	5 g	5 mL	587713	09/22/22 18:41	JLS	EET DEN
Total/NA	Prep	5035			46.542 g	25 mL	588613	10/03/22 09:59	CAS	EET DEN
Total/NA	Analysis	AK101		1	0.1 mL	5 mL	588643	10/03/22 15:17	CAS	EET DEN

Client Sample ID: IDW-W-092022

Lab Sample ID: 320-91899-2

Date Collected: 09/08/22 15:05

Matrix: Water

Date Received: 09/10/22 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		100	5 mL	5 mL	587595	09/21/22 22:30	GO	EET DEN
Total/NA	Analysis	AK101		1	5 mL	5 mL	587497	09/21/22 13:05	CAS	EET DEN

Laboratory References:

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Accreditation/Certification Summary

Client: ARCADIS U.S. Inc
Job ID: 320-91899-1
Project/Site: 30064227.0742, 309152 Saupe

Laboratory: Eurofins Denver

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	18-001	02-08-23

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
8260D		Water	1,1-Dichloropropene
8260D		Water	1,2-Dibromo-3-Chloropropane
8260D		Water	1,3-Dichloropropane
8260D		Water	2,2-Dichloropropane
8260D		Water	2-Chlorotoluene
8260D		Water	4-Chlorotoluene
8260D		Water	Bromochloromethane
8260D		Water	p-Isopropyltoluene
8260D	5035	Solid	1,1-Dichloropropene
8260D	5035	Solid	1,2-Dibromo-3-Chloropropane
8260D	5035	Solid	1,3-Dichloropropane
8260D	5035	Solid	2,2-Dichloropropane
8260D	5035	Solid	2-Chlorotoluene
8260D	5035	Solid	4-Chlorotoluene
8260D	5035	Solid	Bromochloromethane
8260D	5035	Solid	p-Isopropyltoluene

Method Summary

Client: ARCADIS U.S. Inc
Project/Site: 30064227.0742, 309152 Saupe

Job ID: 320-91899-1

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET DEN
AK101	Alaska - Gasoline Range Organics (GC)	ADEC	EET DEN
5030B	Purge and Trap	SW846	EET DEN
5030C	Purge and Trap	SW846	EET DEN
5035	Closed System Purge and Trap	SW846	EET DEN

Protocol References:

ADEC = Alaska Department of Environmental Conservation

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: ARCADIS U.S. Inc
Project/Site: 30064227.0742, 309152 Saupe

Job ID: 320-91899-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-91899-1	IDW-S-092022	Solid	09/08/22 15:00	09/10/22 09:15
320-91899-2	IDW-W-092022	Water	09/08/22 15:05	09/10/22 09:15

Eurofins Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Phone: 916-373-5600 Fax: 916-372-1059

Chain of Custody Record

eurofins

Client Information	Sampler: Grant Jeffers	Lab PM: Kellmann, Jill	Carrier Tracking No(s):	COC No: 320-51202-12736.1
Client Contact: Sean Parry	Phone: 803-243-3337	E-Mail: Jill.Kellmann@et.eurofinsus.com	State of Origin: AK	Page: Page 1 of 1
Company: ARCADIS U.S. Inc	PWSID:			Job #:
Address: 10205 Westheimer Rd Suite 800	Due Date Requested: –			
City: Houston	TAT Requested (days): STA			
State, Zip: TX, 77042	Compliance Project: Δ Yes Δ No			
Phone: 808-522-0342(Tel) 602-377-7188(Fax)	PO #: Purchase Order Requested			
Email: sean.parry@arcadis.com	WO #:			
Project Name: 30064227.0742, 309152 Saupe	Project #: 32020508			
Site: 309152 Saupe	SSOW#:			

Analysis 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, Y - Tnzma, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260D - VOC Standard List	AK101	Total Number of containers	Special Instructions/Note:
			Preservation Code:				F			
IDW-S-092022	9/8/22	1500	C	Solid	N	N		X	1	
IDW-W-092022	9/8/22	1505	C	Water	N	N	X	X	3	

320-91899 Chain of Custody

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological	☐ 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	Date/Time	Company	Received by	Date/Time	Company
1	Grant Jeffers	9/9/22 1100	ANA		9.10.22 915	BEPX
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: 1848639 | Cooler Temperature(s) °C and Other Remarks: 7.5c

Ver: 06/08/2021

Eurofins Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Phone: 916-373-5600 Fax: 916-372-1059

Chain of Custody Record

eurofins

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kellmann, Jill	Carrier Tracking No(s):	COC No: 320-284185.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Jill.Kellmann@et.eurofinsus.com	State of Origin: Alaska	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State - Alaska (UST)		Job #: 320-91899-1
Address: 4955 Yarrow Street, ,	Due Date Requested: 10/3/2022			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: 30064227.0742, 309152 Saupe	Project #: 32020508			
Site:	SSOW#:			

Analysis 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
Y - Trizma
Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	AK101/5035A_FM Standard AK GRO	8260D/5035A_FM VOC Standard List	AK101/5030B Standard AK GRO	8260D/5030C VOC Standard List	Total Number of containers	Special Instructions/Note:
			Preservation Code:									
IDW-S-092022 (320-91899-1)	9/8/22	15:00 Alaskan		Solid			X	X			1	
IDW-W-092022 (320-91899-2)	9/8/22	15:05 Alaskan		Water					X	X	3	Only 3 vials for both 8260 and AK101-this is a resample

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Northern California, LLC places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Northern California, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Northern California, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins Environment Testing Northern California, LLC.

Possible Hazard Identification *Unconfirmed*	***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) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	9-15-22 1635	ET Sac		09/16/2022 1015	ET DEN
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 0.3, 0.6 CF +0.0 IR#2

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: ARCADIS U.S. Inc

Job Number: 320-91899-1

Login Number: 91899
List Number: 1
Creator: Oropeza, Salvador

List Source: Eurofins Sacramento

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	1848639
Sample custody seals, if present, are intact.	N/A	
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.	False	Refer to Job Narrative for details.
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.	N/A	
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	

Login Sample Receipt Checklist

Client: ARCADIS U.S. Inc

Job Number: 320-91899-1

Login Number: 91899
List Number: 2
Creator: Kazenga, Oliver M

List Source: Eurofins Denver
List Creation: 09/16/22 03:52 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
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?	N/A	
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.	N/A	
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	

Kellmann, Jill

From: Parry, Sean <Sean.Parry@arcadis.com>
Sent: Wednesday, September 14, 2022 7:46 AM
To: Kellmann, Jill
Cc: Wood, Nick; Jeffers, Gantt
Subject: RE: Eurofins Environment Testing Northern California, LLC sample confirmation files from 320-91899-1 30064227.0742, 309152 Saupe

EXTERNAL EMAIL*

Jill,

Good news! Both the regulator and the landfill said they were fine with the temp issue. Let's run them.

Thanks,

Sean

From: Kellmann, Jill <Jill.Kellmann@et.eurofinsus.com>
Sent: Tuesday, September 13, 2022 3:36 PM
To: Parry, Sean <Sean.Parry@arcadis.com>
Cc: Wood, Nick <Nick.Wood@arcadis.com>
Subject: RE: Eurofins Environment Testing Northern California, LLC sample confirmation files from 320-91899-1 30064227.0742, 309152 Saupe

Hi Sean,

The samples have a 14 day holding time and they were collected 9/8. I still need to ship them to Denver for the analysis. I'd like to give them a week to be able to analyze.

Thank you

Jill Kellmann
Customer Service Manager

Please let us know what you think of the services…its only one click, one rating

Eurofins Environment Testing America - Sacramento
880 Riverside Parkway
West Sacramento, CA 95605

Direct: +1 916-374-4402
Mobile: +1 916-358-0158

COMMUNICATION ALERT: Change of e-mail addresses for all Eurofins Environment Testing businesses in the US effective April 4, 2022

Please update my e-mail address in your e-mail directory: Jill.Kellmann@ET.EurofinsUS.com

jill.kellmann@ET.EurofinsUS.com

Follow us! Facebook | LinkedIn

From: Parry, Sean <Sean.Parry@arcadis.com>
Sent: Tuesday, September 13, 2022 1:12 PM
To: Kellmann, Jill <Jill.Kellmann@et.eurofinsus.com>
Cc: Wood, Nick <Nick.Wood@arcadis.com>
Subject: RE: Eurofins Environment Testing Northern California, LLC sample confirmation files from 320-91899-1 30064227.0742, 309152 Saupe

EXTERNAL EMAIL*

Jill,

I talked with US Ecology and they said they don't care about being out of temp which is great. However, we still need ADEC to approve.

How much longer can we keep these on hold before we need to make a decision?

Best,

Sean

From: Kellmann, Jill <Jill.Kellmann@et.eurofinsus.com>
Sent: Monday, September 12, 2022 6:00 PM
To: Parry, Sean <Sean.Parry@arcadis.com>
Subject: RE: Eurofins Environment Testing Northern California, LLC sample confirmation files from 320-91899-1 30064227.0742, 309152 Saupe

HI Sean,

I am sorry. We've had record breaking temperatures all last week. I will hold until I hear from you.

Thank you

Jill Kellmann
Customer Service Manager

Please let us know what you think of the services…its only one click, one rating

Eurofins Environment Testing America - Sacramento
880 Riverside Parkway
West Sacramento, CA 95605

Direct: +1 916-374-4402
Mobile: +1 916-358-0158

COMMUNICATION ALERT: Change of e-mail addresses for all Eurofins Environment Testing businesses in the US effective April 4, 2022
Please update my e-mail address in your e-mail directory: Jill.Kellmann@ET.EurofinsUS.com

jill.kellmann@ET.EurofinsUS.com

Follow us! Facebook | LinkedIn

From: Parry, Sean <Sean.Parry@arcadis.com>
Sent: Monday, September 12, 2022 3:36 PM
To: Kellmann, Jill <Jill.Kellmann@et.eurofinsus.com>
Subject: RE: Eurofins Environment Testing Northern California, LLC sample confirmation files from 320-91899-1 30064227.0742, 309152 Saupe

EXTERNAL EMAIL*

Jill,

This is unfortunate news. Looks like it got to the lab in under 24 hours too. Was a temperature blank not sent with the kit? You mentioned heavy bubble wrap; did the kits get sent out with unusual bubble wrap or something?

Let's put the samples on hold. I will contact ADEC and waste facility so see if we can get around this issue. I will get back to you as soon as I hear from those two.

Best,

Sean

From: Jill Kellmann <Jill.Kellmann@et.eurofinsus.com>
Sent: Monday, September 12, 2022 4:41 PM
To: Parry, Sean <Sean.Parry@arcadis.com>
Subject: Eurofins Environment Testing Northern California, LLC sample confirmation files from 320-91899-1 30064227.0742, 309152 Saupe

Hello,

Attached please find the sample confirmation files for job 320-91899-1; 30064227.0742, 309152 Saupe.

Receipt
The samples were received on 9/10/2022 9:15 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 7.5º C.

Receipt Exceptions

The following samples were received at the laboratory outside the required temperature criteria: IDW-S-092022 (320-91899-1) and IDW-W-092022 (320-91899-2). Samples were received out of temp at 7.5C. There was two ziploc bags of ice but samples were heavily bubbled wrapped and no temp blank was provided.

The laboratory will proceed unless otherwise notified.

Please feel free to contact me if you have any questions.

Thank you.

Jill Kellmann
Client Services Manager

Eurofins Sacramento
Phone: 916-374-4402

E-mail: Jill.Kellmann@et.eurofinsus.com
www.eurofinsus.com/env

Reference: [320-472441]
Attachments: 2

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Appendix G

Waste Manifest and ADEC Contaminated Media Transport and Treatment or Disposal Approval Form

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SPILL PREVENTION AND RESPONSE
Contaminated Sites and Prevention Preparedness and Response Programs

Contaminated Media Transport and Treatment or Disposal Approval Form

HAZARD ID # or SPILL ID #	NAME OF CONTAMINATED SITE OR SPILL
4314	FIA - Block 3 Lot 12 - Saupe Enterprises

CONTAMINATED SITE OR SPILL LOCATION – ADDRESS OR OTHER APPROPRIATE DESCRIPTION
6223 Old Airport Road, Fairbanks, AK, 99709

CURRENT PHYSICAL LOCATION OF MEDIA	SOURCE OF THE CONTAMINATION (DAY TANK, FIRE TRAINING PIT, LUST, ETC.)
6223 Old Airport Road, Fairbanks, AK, 99709	Above Ground Storage Tank Spills

CONTAMINANTS OF CONCERN	ESTIMATED VOLUME	DATE(S) GENERATED
VOCs, GRO, DRO, RRO, PFAS	12,000 Pounds	November 2021, September 2022

POST TREATMENT ANALYSIS REQUIRED *(such as GRO, DRO, RRO, VOCs, metals, PFAS, and/or Chlorinated Solvents)*
VOCs, GRO, DRO, RRO, PFAS

COMMENTS OR OTHER IMPORTANT INFORMATION
Soil cuttings generated during field activities contained in DOT-approved new 1x 55-gallon steel drum and 5x super sacks (approx. 180 gallons). The investigation derived waste (IDW) was appropriately labeled and stored on site pending characterizations. The site deviated from the site's work plan and gathered composite samples for characterization. Following receipt of laboratory analytical data and ADEC approval, the IDW will be transported off site.

TREATMENT FACILITY, LANDFILL, AND/OR FINAL DESTINATION OF MEDIA	PHYSICAL ADDRESS/PHONE NUMBER
US Ecology Moose Creek Facility	4822 Give-A-Way Street, North Pole, AK 99705
RESPONSIBLE PARTY	**ADDRESS/PHONE NUMBER**
Chevron EMC	6101 Bollinger Canyon Road, San Ramon, CA 94583; 714-730-9052
WASTE MANAGEMENT CO. / ORGANIZER	**ADDRESS/PHONE NUMBER**
Arcadis U.S., Inc.	28550 Cabot Dr. #500, Novi, MI 48377; 248-994-2240

***Note, disposal of polluted soil in a landfill requires prior approval from the landfill operator and ADEC Solid Waste Program.**

James Unsworth	Environmental Engineer for Arcadis	
Name of the Person Requesting Approval (printed)	Title/Association	
	10/7/2022	810-701-5586
Signature	Date	Phone Number

----------DEC USE ONLY----------

Based on the information provided, ADEC approves transport of the above mentioned material. The Responsible Party or their consultant must submit to the DEC Project Manager a copy of weight receipts of the loads transported and a post treatment analytical report, if disposed of at an approved treatment facility. The contaminated soil shall be transported as a covered load in compliance with 18 AAC 60.015.

Rebekah Reams	Environmental Program Specialist	
DEC Project Manager Name (printed)	Project Manager Title	
	10/07/2022	907-451-2144
Signature	Date	Phone Number

Instructions to Complete
Contaminated Media Transport and Treatment or Disposal Approval Form

The Alaska Department of Environmental Conservation (DEC) must approve the movement or disposal of contaminated soil and water from a site in accordance with 18 Alaska Administrative Code (AAC) 75.325(i), 18 AAC 75.370(b), and 18 AAC 78.274(b). The *Contaminated Media Transport and Treatment or Disposal Approval Form* should be used to document this approval. Soil treatment facilities regulated under 18 AAC 75.365 are required by their Operations Plans to only accept contaminated soil for which an approval form has been signed by a DEC project manager.

Site information can be found on the Contaminated Site Database (www.alaska.gov/Applications/SPAR/PublicMVC/CSP/Search/) or the Spills Database (http://dec.alaska.gov/Applications/SPAR/PublicMVC/PERP/SpillSearch).

Instructions to Complete:

1. **Hazard ID or Spill ID #:** For a contaminated site, the Hazard ID can be found on the Contaminated Sites Database. For a spill, the Spill ID can be found in the subject line of letters from DEC or the Spills Database. If the waste originates from multiple sites, all Hazard IDs or Spill IDs must be listed.

2. **Name of Contaminated Site or Spill:** For a contaminated site, the official site name can be found on the Contaminated Sites Database. For a spill, the official name of the spill is found in the subject line of letters from DEC or the Spills Database.

3. **Contaminated Site or Spill Location – Address or Other Appropriate Description:** This address or description captures the origin of the contaminated media or the location of the spill. For a contaminated site, the address or other appropriate description can be found on the Contaminated Sites Database. For a spill, this can be found on the Spill Report or the Spills Database.

4. **Current Physical Location of the Media:** Provide the physical location where the contaminated media (soil, water, etc.) is currently stored. This location may be the same as location provided in the "Contaminated Site or Spill Location", or it could be a hazardous waste facility or other location/staging area agreed upon in the DEC-approved work plan.

5. **Source of Contamination (Day Tank, Fire Training Pit, LUST, etc.):** List all sources which contributed to the contamination in the media being transported. Sources can include previous releases that have comingled. If the source is unknown, state "Unknown".

6. **Contaminants of Concern (CoCs):** List all contaminants detected above the most stringent Method 2 Tables B1 and B2 soil cleanup levels in 18 AAC 75.341(c) and (d), the Table C groundwater cleanup levels in 18 AAC 75.345, and other applicable action levels (e.g., TCLP results). Attach the laboratory data package for the contaminated media that is being disposed of and, if applicable, a data summary table or narrative to this form. Data gathered during site characterization activities may be sufficient to determine the CoCs. There are situations in which generator knowledge of the contaminant source may be accepted by a treatment or disposal facility in lieu of analytical sample results, such as, diesel-impacted media from a heating oil tank. If you are using generator knowledge in lieu of analytical sample results, include a statement which documents this knowledge in the Comments section.

7. **Estimated Volume:** Include the total volume of contaminated media to be transported; for instance, "Nine 55-gallon drums" or ""25 cubic yards of soil."

8. **Date(s) Generated:** Provide the date the media was generated (e.g., excavated, pumped out of the ground, etc.). If the media was generated over multiple days, list the range of dates.

9. **Post Treatment Analysis Required (such as GRO, DRO, RRO, VOCs, PAHs, metals, PFAS, chlorinated solvents, etc.):** Provide the list of all contaminants that exceed the most stringent Method 2 cleanup levels. For DEC-approved soil treatment facilities in Alaska, specific post treatment analyses will be determined by the facility based upon the contaminants and requirements of their Operations Plan. If the media are being transported to a landfill or permitted liquid waste facility without off-site treatment, include "Not Applicable".

10. **Comments or Other Important Information:** Provide any other information which needs to be conveyed.
    a. If generator knowledge of the CoCs is being used in lieu of sample analytical results, an explanation needs to be provided in this field.
    b. If the material is going to be placed in a landfill in Alaska, include a statement that the landfill has agreed to accept the material and provide the contact information for the landfill point of contact. If the material is going to be placed in a Class 2 or 3 landfill, attach the DEC Solid Waste Program's approval letter to this form.
    c. If the media is going to an intermediate location or facility prior to its final destination, describe the complete transportation route with intermediate locations in this field.

11. **Treatment Facility, Landfill, and/or Final Destination of Media:** Include the name of the facility, landfill, or the final destination of the media. A list of DEC-approved Alaskan soil treatment facilities is available at www.dec.alaska.gov/spar/csp/offsite-remediation/. If multiple treatment facilities will be used, use separate forms to document what media will go to which facility. For material that will go to a waste transfer facility prior to disposal at another facility, the final destination should be listed.
    a. **Physical Address/Phone Number:** Provide the physical location and telephone number of the facility, landfill, or the final destination of the media.

12. **Responsible Party:** Provide the name of the party responsible for the contaminated site or spill.
    a. **Address/Phone Number:** Provide the mailing address and telephone number of the responsible party.

13. **Waste Management Co./Organizer:** Provide the name of company or person shipping and/or organizing the shipment of the media.
    a. **Address/Phone Number:** Provide the mailing address and telephone number of the waste management company or organizer.

Submit this completed form along with all necessary attachments to the assigned DEC project manager for approval, or contact the Contaminated Sites Program at (907) 269-7558 or the Prevention, Preparedness and Response Program at (907) 269-7557.

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SPILL PREVENTION AND RESPONSE
Contaminated Sites and Prevention Preparedness and Response Programs

Contaminated Media Transport and Treatment or Disposal Approval Form

HAZARD ID # or SPILL ID #	NAME OF CONTAMINATED SITE OR SPILL
4314	FIA - Block 3 Lot 12 - Saupe Enterprises

CONTAMINATED SITE OR SPILL LOCATION – ADDRESS OR OTHER APPROPRIATE DESCRIPTION
6223 Old Airport Road, Fairbanks, AK, 99709

CURRENT PHYSICAL LOCATION OF MEDIA	SOURCE OF THE CONTAMINATION (DAY TANK, FIRE TRAINING PIT, LUST, ETC.)
6223 Old Airport Road, Fairbanks, AK, 99709	Above Ground Storage Tank Spills

CONTAMINANTS OF CONCERN	ESTIMATED VOLUME	DATE(S) GENERATED
VOCs, GRO, DRO, RRO, PFAS	1,000 lbs	November 2021, September 2022

POST TREATMENT ANALYSIS REQUIRED *(such as GRO, DRO, RRO, VOCs, metals, PFAS, and/or Chlorinated Solvents)*
VOCs, GRO, DRO, RRO, PFAS

COMMENTS OR OTHER IMPORTANT INFORMATION
Purge and decontaminating water generated during the field activities were contained in 2x DOT-approved new steel 55 gallon drums. The investigation derived wastes (IDW) will be appropriately labeled and stored on site pending characterization. The site deviated from the work plan and took composite samples. Following receipt of laboratory analytical data and ADEC approval, the IDW will be transported off site.

TREATMENT FACILITY, LANDFILL, AND/OR FINAL DESTINATION OF MEDIA	PHYSICAL ADDRESS/PHONE NUMBER
NRC Alaska - Viking Drive Facility	2020 Viking Drive, Anchorage, AK 99501; 907-258-1558
RESPONSIBLE PARTY	**ADDRESS/PHONE NUMBER**
Chevron EMC	6101 Bollinger Canyon Road, San Ramon, CA 94583; 714-730-9052
WASTE MANAGEMENT CO. / ORGANIZER	**ADDRESS/PHONE NUMBER**
Arcadis U.S. Inc.	28550 Cabot Dr. #500, Novi, MI 48377; 248-994-2240

***Note, disposal of polluted soil in a landfill requires prior approval from the landfill operator and ADEC Solid Waste Program.**

James Unsworth
Name of the Person Requesting Approval (printed)

Environmental Engineer for Arcadis
Title/Association

Signature

10/7/2022
Date

810-701-5586
Phone Number

----------DEC USE ONLY----------

Based on the information provided, ADEC approves transport of the above mentioned material. The Responsible Party or their consultant must submit to the DEC Project Manager a copy of weight receipts of the loads transported and a post treatment analytical report, if disposed of at an approved treatment facility. The contaminated soil shall be transported as a covered load in compliance with 18 AAC 60.015.

Rebekah Reams
DEC Project Manager Name (printed)

Environmental Program Specialist III
Project Manager Title

Signature

10/7/2022
Date

907-451-2144
Phone Number

Instructions to Complete
Contaminated Media Transport and Treatment or Disposal Approval Form

The Alaska Department of Environmental Conservation (DEC) must approve the movement or disposal of contaminated soil and water from a site in accordance with 18 Alaska Administrative Code (AAC) 75.325(i), 18 AAC 75.370(b), and 18 AAC 78.274(b). The *Contaminated Media Transport and Treatment or Disposal Approval Form* should be used to document this approval. Soil treatment facilities regulated under 18 AAC 75.365 are required by their Operations Plans to only accept contaminated soil for which an approval form has been signed by a DEC project manager.

Site information can be found on the Contaminated Site Database (www.alaska.gov/Applications/SPAR/PublicMVC/CSP/Search/) or the Spills Database (http://dec.alaska.gov/Applications/SPAR/PublicMVC/PERP/SpillSearch).

Instructions to Complete:

1. **Hazard ID or Spill ID #:** For a contaminated site, the Hazard ID can be found on the Contaminated Sites Database. For a spill, the Spill ID can be found in the subject line of letters from DEC or the Spills Database. If the waste originates from multiple sites, all Hazard IDs or Spill IDs must be listed.

2. **Name of Contaminated Site or Spill:** For a contaminated site, the official site name can be found on the Contaminated Sites Database. For a spill, the official name of the spill is found in the subject line of letters from DEC or the Spills Database.

3. **Contaminated Site or Spill Location – Address or Other Appropriate Description:** This address or description captures the origin of the contaminated media or the location of the spill. For a contaminated site, the address or other appropriate description can be found on the Contaminated Sites Database. For a spill, this can be found on the Spill Report or the Spills Database.

4. **Current Physical Location of the Media:** Provide the physical location where the contaminated media (soil, water, etc.) is currently stored. This location may be the same as location provided in the "Contaminated Site or Spill Location", or it could be a hazardous waste facility or other location/staging area agreed upon in the DEC-approved work plan.

5. **Source of Contamination (Day Tank, Fire Training Pit, LUST, etc.):** List all sources which contributed to the contamination in the media being transported. Sources can include previous releases that have comingled. If the source is unknown, state "Unknown".

6. **Contaminants of Concern (CoCs):** List all contaminants detected above the most stringent Method 2 Tables B1 and B2 soil cleanup levels in 18 AAC 75.341(c) and (d), the Table C groundwater cleanup levels in 18 AAC 75.345, and other applicable action levels (e.g., TCLP results). Attach the laboratory data package for the contaminated media that is being disposed of and, if applicable, a data summary table or narrative to this form. Data gathered during site characterization activities may be sufficient to determine the CoCs. There are situations in which generator knowledge of the contaminant source may be accepted by a treatment or disposal facility in lieu of analytical sample results, such as, diesel-impacted media from a heating oil tank. If you are using generator knowledge in lieu of analytical sample results, include a statement which documents this knowledge in the Comments section.

7. **Estimated Volume:** Include the total volume of contaminated media to be transported; for instance, "Nine 55-gallon drums" or ""25 cubic yards of soil."

8. **Date(s) Generated:** Provide the date the media was generated (e.g., excavated, pumped out of the ground, etc.). If the media was generated over multiple days, list the range of dates.

9. **Post Treatment Analysis Required (such as GRO, DRO, RRO, VOCs, PAHs, metals, PFAS, chlorinated solvents, etc.):** Provide the list of all contaminants that exceed the most stringent Method 2 cleanup levels. For DEC-approved soil treatment facilities in Alaska, specific post treatment analyses will be determined by the facility based upon the contaminants and requirements of their Operations Plan. If the media are being transported to a landfill or permitted liquid waste facility without off-site treatment, include "Not Applicable".

10. **Comments or Other Important Information:** Provide any other information which needs to be conveyed.
    a. If generator knowledge of the CoCs is being used in lieu of sample analytical results, an explanation needs to be provided in this field.
    b. If the material is going to be placed in a landfill in Alaska, include a statement that the landfill has agreed to accept the material and provide the contact information for the landfill point of contact. If the material is going to be placed in a Class 2 or 3 landfill, attach the DEC Solid Waste Program's approval letter to this form.
    c. If the media is going to an intermediate location or facility prior to its final destination, describe the complete transportation route with intermediate locations in this field.

11. **Treatment Facility, Landfill, and/or Final Destination of Media:** Include the name of the facility, landfill, or the final destination of the media. A list of DEC-approved Alaskan soil treatment facilities is available at www.dec.alaska.gov/spar/csp/offsite-remediation/. If multiple treatment facilities will be used, use separate forms to document what media will go to which facility. For material that will go to a waste transfer facility prior to disposal at another facility, the final destination should be listed.
    a. **Physical Address/Phone Number:** Provide the physical location and telephone number of the facility, landfill, or the final destination of the media.

12. **Responsible Party:** Provide the name of the party responsible for the contaminated site or spill.
    a. **Address/Phone Number:** Provide the mailing address and telephone number of the responsible party.

13. **Waste Management Co./Organizer:** Provide the name of company or person shipping and/or organizing the shipment of the media.
    a. **Address/Phone Number:** Provide the mailing address and telephone number of the waste management company or organizer.

Submit this completed form along with all necessary attachments to the assigned DEC project manager for approval, or contact the Contaminated Sites Program at (907) 269-7558 or the Prevention, Preparedness and Response Program at (907) 269-7557.

NON-HAZARDOUS WASTE MANIFEST 180758-KC

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. VSQG

Manifest Document No. 180758B

2. Page 1 of 1

3. Generator's Name and Mailing Address
CHEVRON ENVIRONMENTAL MANAGEME
6101 BOLLING CAYON ROAD
SAN RAMON, CA 92802

CHEVRON EMC
6223 OLD AIRPORT ROAD
FAIRBANKS, AK 99709

4. Generator's Phone ( )

IN CASE OF EMERGENCY CALL
800-899-4672

5. Transporter 1 Company Name: US ECOLOGY

6. US EPA ID Number: MIK593743838

A. State Transporter's ID

B. Transporter 1 Phone: 734-521-8104

7. Transporter 2 Company Name

8. US EPA ID Number

C. State Transporter's ID

D. Transporter 2 Phone

9. Designated Facility Name and Site Address
US ECOLOGY ALASKA LLC
2020 VIKING DRIVE
ANCHORAGE, AK 99501

10. US EPA ID Number: AKR000004184

E. State Facility's ID

F. Facility's Phone: 907-258-1558

11. WASTE DESCRIPTION	HM	Containers No.	Containers Type	13. Total Quantity	14. Unit Wt./Vol.
a. Material Not Regulated by DOT		2	DM	1	P
b.					
c.					
d.					

G. Additional Descriptions for Materials Listed Above
I) EA0325 PFOS/PFOA CONTAMINATED WASTEWATER

H. Handling Codes for Wastes Listed Above
D45362

15. Special Handling Instructions and Additional Information
Shipper's Certification: This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation

GENERATOR

16. **GENERATOR'S CERTIFICATION:** I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.

Printed/Typed Name	Signature	Date Month	Day	Year
Evan Wyatt		10	12	22

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date Month	Day	Year
Collin Gilson		10	12	22

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.

Printed/Typed Name	Signature	Date Month	Day	Year

NON-HAZARDOUS WASTE MANIFEST 180758-KC

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: VSQG

Manifest Document No.: 180758A

2. Page 1 of 1

3. Generator's Name and Mailing Address
CHEVRON ENVIRONMENTAL MANAGEME
6101 BOLLING CAYON ROAD
SAN RAMON, CA 92602

CHEVRON EMC
6223 OLD AIRPORT ROAD
FAIRBANKS, AK 99709

4. Generator's Phone ( )

IN CASE OF EMERGENCY CALL
800-899-4672

5. Transporter 1 Company Name: US ECOLOGY

6. US EPA ID Number: MIK593743838

A. State Transporter's ID

B. Transporter 1 Phone: 734-521-6104

7. Transporter 2 Company Name

8. US EPA ID Number

C. State Transporter's ID

D. Transporter 2 Phone

9. Designated Facility Name and Site Address
US ECOLOGY ALASKA (Moose Creek)
4822 Give A Way Street
NORTH POLE, AK 99705

10. US EPA ID Number: AKR000207936

E. State Facility's ID

F. Facility's Phone

11. WASTE DESCRIPTION	HM	Containers No.	Containers Type	13. Total Quantity	14. Unit Wt./Vol.
a. Material Not Regulated by DOT		5	BA	12500	P
b. Material Not Regulated by DOT		1	DM	800	P
c.					
d.					

G. Additional Descriptions for Materials Listed Above
1) MCF0006 PFOS CONTAMINATED SOIL FOR THERMAL TREATMENT
2) MCF0006 PFOS CONTAMINATED SOIL FOR THERMAL TREATMENT

H. Handling Codes for Wastes Listed Above
D45361

15. Special Handling Instructions and Additional Information
Shipper's Certification: This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation

GENERATOR

16. **GENERATOR'S CERTIFICATION:** I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.

Printed/Typed Name	Signature	Date: Month	Day	Year
Evan Wujcik		10	12	22

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date: Month	Day	Year
Colton Fuller		10	12	22

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date: Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.

Printed/Typed Name	Signature	Date: Month	Day	Year

NON-HAZARDOUS WASTE

Appendix H

ADEC Data Review Checklist

Company Name/Address:
Arcadis - Chevron - AK

880 H St.
Anchorage, AK 99501

Billing Information:
Attn: Acounts Payable
630 Plaza Dr Ste 600
Highlands Ranch, CO 80129

Pres Chk

Report to:
Erika Midkiff/Sydney Clark/Nick Wood

Email To:
Sydney.Clark@arcadis.com;Nick.Wood@arcadis.

Project Description:
309152

City/State Collected: Fairbanks, AK

Please Circle: PT MT CT ET (AKST)

Phone: 907-276-8095

Client Project #
30064227 07.42

Lab Project #
CHEVARCAK-309152

Collected by (print):
E. Wojcik

Site/Facility ID #
501 EAST 30TH AVE,

P.O. #
30043353.5134

Collected by (signature):
E Wojcik

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day X Standard

Quote #

Date Results Needed

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	AK101 60mlAmb/MeOH/Syr	AK102 4ozClr-NoPres	PAHs 8270SIM 4ozClr-NoPres	Total Lead 6010 4ozClr-NoPres	VOCs 8260D 40mlAmb/MeOH10ml/Syr	Remarks	Sample # (lab only)
MW-24-S-0.5-1	Grab	SS	0.5-1	8.3.22	1030	4	X	X	X	X	X		01
MW-23-S-0.5-1	Grab	SS	0.5-1	8.3.22	1150	4	X	X	X	X	X		02
MW-23-S-4.5-5	Grab	SS	4.5-5	8.3.22	1250	4	X	X	X	X	X		03
DUP-1	Grab	SS	—	8.3.22	—	4	X	X	X	X	X		04
MW-23-S-9.5-10	Grab	SS	9.5-10	8.3.22	1315	4	X	X	X	X	X		05
MW-22-S-0.5-1	Grab	SS	0.5-1	8.3.22	1430	4	X	X	X	X	X		06
MW-24-S-4.5-5	Grab	SS	4.5-5	8.3.22	1510	4	X	X	X	X	X		07
MW-24-S-9.5-10	Grab	SS	9.5-10	8.3.22	1520	4	X	X	X	X	X		08
MW-22-S-4.5-5	Grab	SS	4.5-5	8.3.22	1745	4	X	X	X	X	X		09
MW-27-S-5-5.5	Grab	SS	5-5.5	8.3.22	1750	4	X	X	X	X	X		10

remove lead analysis for all samples per request of Parry, Sean <Sean.Parry@arcadis.com>-bjf 08/09/22

Chain of Custody Page 1 of 2

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN
12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1522335
D241

Acctnum: CHEVARCAK
Template: T213301
Prelogin: P939328
PM: 110 - Brian Ford
PB: CS 7/23/22

Shipped Via: FedEx 2nd Day

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS X FedEx __ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
E Wojcik	8.4.22	0800			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) D. Ramsey	Date: 08-09-22 Time: 0845	Hold: Condition: NCF / OK

Company Name/Address:
Arcadis - Chevron - AK

880 H St.
Anchorage, AK 99501

Billing Information:
Attn: Acounts Payable
630 Plaza Dr Ste 600
Highlands Ranch, CO 80129

Pres Chk

Report to:
Erika Midkiff/Sydney Clark/Nick Wood

Email To:
Sydney.Clark@arcadis.com;Nick.Wood@arcadis.

Project Description:
309152

City/State Collected: Fairbanks, AK

Please Circle: PT MT CT ET

Phone: **907-276-8095**

Client Project #
30064227 07.42

Lab Project #
CHEVARCAK-309152

Collected by (print):
E. Wujcik

Site/Facility ID #
501 EAST 30TH AVE,

P.O. #
30043353.5134

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day X Standard

Date Results Needed

Quote #

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	AK101 60mlAmb/MeOH/Syr	AK102 4ozClr-NoPres	PAHs 8270SIM 4ozClr-NoPres	Total Lead 6010 4ozClr-NoPres	VOCs 8260D 40mlAmb/MeOH10ml/Syr
Trip Blank	—	SS	—	—	—	6					
		SS									
		SS									

Analysis / Container / Preservative

Chain of Custody Page 2 of 2

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN
12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L522335

Table #

Acctnum: **CHEVARCAK**
Template: **T213301**
Prelogin: **P939328**
PM: **110 - Brian Ford**
PB: CB 7/23/22

Shipped Via: **FedEX 2nd Day**

Remarks	Sample # (lab only)

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS X FedEx __ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
E. Wujcik	8.4.22	0800			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) D. Ramsey	Date: 08-05-22 Time: 0845	Hold: / Condition: NCF / OK

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	84.8		1	08/10/2022 08:11	WG1907557

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHGAK C6 to C10	U		3.11	8.19	2.78	08/10/2022 05:12	WG1908093
(S) a,a,a-Trifluorotoluene(FID)	*87.0*			*50.0-150*		*08/10/2022 05:12*	WG1908093

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier		MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg			mg/kg	mg/kg		date / time	
Acetone	U			0.0587	0.0803	1.21	08/09/2022 00:28	WG1907699
Acrylonitrile	U	UJ	~~C3~~	0.00580	0.0200	1.21	08/09/2022 00:28	WG1907699
Benzene	U			0.000750	0.00161	1.21	08/09/2022 00:28	WG1907699
Bromobenzene	U			0.00145	0.0200	1.21	08/09/2022 00:28	WG1907699
Bromodichloromethane	U			0.00116	0.00402	1.21	08/09/2022 00:28	WG1907699
Bromoform	U			0.00188	0.0402	1.21	08/09/2022 00:28	WG1907699
Bromomethane	U			0.00316	0.0200	1.21	08/09/2022 00:28	WG1907699
n-Butylbenzene	U			0.00843	0.0200	1.21	08/09/2022 00:28	WG1907699
sec-Butylbenzene	U			0.00462	0.0200	1.21	08/09/2022 00:28	WG1907699
tert-Butylbenzene	U			0.00313	0.00803	1.21	08/09/2022 00:28	WG1907699
Carbon tetrachloride	U			0.00145	0.00803	1.21	08/09/2022 00:28	WG1907699
Chlorobenzene	U			0.000337	0.00402	1.21	08/09/2022 00:28	WG1907699
Chlorodibromomethane	U			0.000983	0.00402	1.21	08/09/2022 00:28	WG1907699
Chloroethane	U			0.00273	0.00803	1.21	08/09/2022 00:28	WG1907699
Chloroform	U			0.00166	0.00402	1.21	08/09/2022 00:28	WG1907699
Chloromethane	U	UJ	~~C3~~	0.00698	0.0200	1.21	08/09/2022 00:28	WG1907699
2-Chlorotoluene	U			0.00139	0.00402	1.21	08/09/2022 00:28	WG1907699
4-Chlorotoluene	U			0.000722	0.00803	1.21	08/09/2022 00:28	WG1907699
1,2-Dibromo-3-Chloropropane	U			0.00626	0.0402	1.21	08/09/2022 00:28	WG1907699
1,2-Dibromoethane	U			0.00104	0.00402	1.21	08/09/2022 00:28	WG1907699
Dibromomethane	U			0.00121	0.00803	1.21	08/09/2022 00:28	WG1907699
1,2-Dichlorobenzene	U			0.000682	0.00803	1.21	08/09/2022 00:28	WG1907699
1,3-Dichlorobenzene	U			0.000964	0.00803	1.21	08/09/2022 00:28	WG1907699
1,4-Dichlorobenzene	U			0.00112	0.00803	1.21	08/09/2022 00:28	WG1907699
Dichlorodifluoromethane	U	UJ	~~C3~~	0.00259	0.00402	1.21	08/09/2022 00:28	WG1907699
1,1-Dichloroethane	U			0.000788	0.00402	1.21	08/09/2022 00:28	WG1907699
1,2-Dichloroethane	U	UJ	~~C3~~	0.00104	0.00402	1.21	08/09/2022 00:28	WG1907699
1,1-Dichloroethene	U			0.000973	0.00402	1.21	08/09/2022 00:28	WG1907699
cis-1,2-Dichloroethene	U			0.00118	0.00402	1.21	08/09/2022 00:28	WG1907699
trans-1,2-Dichloroethene	U			0.00167	0.00803	1.21	08/09/2022 00:28	WG1907699
1,2-Dichloropropane	U			0.00228	0.00803	1.21	08/09/2022 00:28	WG1907699
1,1-Dichloropropene	U			0.00130	0.00402	1.21	08/09/2022 00:28	WG1907699
1,3-Dichloropropane	U			0.000804	0.00803	1.21	08/09/2022 00:28	WG1907699
cis-1,3-Dichloropropene	U			0.00122	0.00402	1.21	08/09/2022 00:28	WG1907699
trans-1,3-Dichloropropene	U			0.00183	0.00803	1.21	08/09/2022 00:28	WG1907699
2,2-Dichloropropane	U			0.00222	0.00402	1.21	08/09/2022 00:28	WG1907699
Di-isopropyl ether	U			0.000658	0.00161	1.21	08/09/2022 00:28	WG1907699
Ethylbenzene	U			0.00118	0.00402	1.21	08/09/2022 00:28	WG1907699
Hexachloro-1,3-butadiene	U			0.00964	0.0402	1.21	08/09/2022 00:28	WG1907699
Isopropylbenzene	U			0.000682	0.00402	1.21	08/09/2022 00:28	WG1907699
p-Isopropyltoluene	U			0.00410	0.00803	1.21	08/09/2022 00:28	WG1907699
2-Butanone (MEK)	U			0.102	0.161	1.21	08/09/2022 00:28	WG1907699
Methylene Chloride	U			0.0107	0.0402	1.21	08/09/2022 00:28	WG1907699
4-Methyl-2-pentanone (MIBK)	U			0.00366	0.0402	1.21	08/09/2022 00:28	WG1907699

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Methyl tert-butyl ether	U		0.000561	0.00161	1.21	08/09/2022 00:28	WG1907699
Naphthalene	U		0.00783	0.0200	1.21	08/09/2022 00:28	WG1907699
n-Propylbenzene	U		0.00153	0.00803	1.21	08/09/2022 00:28	WG1907699
Styrene	U		0.000368	0.0200	1.21	08/09/2022 00:28	WG1907699
1,1,1,2-Tetrachloroethane	U		0.00153	0.00402	1.21	08/09/2022 00:28	WG1907699
1,1,2,2-Tetrachloroethane	U		0.00112	0.00402	1.21	08/09/2022 00:28	WG1907699
1,1,2-Trichlorotrifluoroethane	U		0.00121	0.00402	1.21	08/09/2022 00:28	WG1907699
Tetrachloroethene	U		0.00143	0.00402	1.21	08/09/2022 00:28	WG1907699
Toluene	U		0.00208	0.00803	1.21	08/09/2022 00:28	WG1907699
1,2,3-Trichlorobenzene	U		0.0118	0.0200	1.21	08/09/2022 00:28	WG1907699
1,2,4-Trichlorobenzene	U		0.00706	0.0200	1.21	08/09/2022 00:28	WG1907699
1,1,1-Trichloroethane	U		0.00149	0.00402	1.21	08/09/2022 00:28	WG1907699
1,1,2-Trichloroethane	U		0.000958	0.00402	1.21	08/09/2022 00:28	WG1907699
Trichloroethene	U		0.000938	0.00161	1.21	08/09/2022 00:28	WG1907699
Trichlorofluoromethane	U		0.00133	0.00402	1.21	08/09/2022 00:28	WG1907699
1,2,3-Trichloropropane	U		0.00260	0.0200	1.21	08/09/2022 00:28	WG1907699
1,2,4-Trimethylbenzene	U		0.00253	0.00803	1.21	08/09/2022 00:28	WG1907699
1,2,3-Trimethylbenzene	U		0.00253	0.00803	1.21	08/09/2022 00:28	WG1907699
Vinyl chloride	U		0.00186	0.00402	1.21	08/09/2022 00:28	WG1907699
1,3,5-Trimethylbenzene	U		0.00321	0.00803	1.21	08/09/2022 00:28	WG1907699
Xylenes, Total	0.00534	J	0.00141	0.0104	1.21	08/09/2022 00:28	WG1907699
(S) Toluene-d8	*108*			*75.0-131*		*08/09/2022 00:28*	WG1907699
(S) 4-Bromofluorobenzene	*98.8*			*67.0-138*		*08/09/2022 00:28*	WG1907699
(S) 1,2-Dichloroethane-d4	*82.9*			*70.0-130*		*08/09/2022 00:28*	WG1907699

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	~~21.2~~	J	8.16	236 UB	1	08/09/2022 03:37	WG1907345
(S) o-Terphenyl	*78.7*			*50.0-150*		*08/09/2022 03:37*	WG1907345

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00271	0.00707	1	08/12/2022 18:02	WG1909236
Acenaphthene	U		0.00246	0.00707	1	08/12/2022 18:02	WG1909236
Acenaphthylene	U		0.00255	0.00707	1	08/12/2022 18:02	WG1909236
Benzo(a)anthracene	U		0.00204	0.00707	1	08/12/2022 18:02	WG1909236
Benzo(a)pyrene	U		0.00211	0.00707	1	08/12/2022 18:02	WG1909236
Benzo(b)fluoranthene	U		0.00180	0.00707	1	08/12/2022 18:02	WG1909236
Benzo(g,h,i)perylene	U		0.00209	0.00707	1	08/12/2022 18:02	WG1909236
Benzo(k)fluoranthene	U		0.00253	0.00707	1	08/12/2022 18:02	WG1909236
Chrysene	U		0.00274	0.00707	1	08/12/2022 18:02	WG1909236
Dibenz(a,h)anthracene	U		0.00203	0.00707	1	08/12/2022 18:02	WG1909236
Fluoranthene	U		0.00268	0.00707	1	08/12/2022 18:02	WG1909236
Fluorene	U		0.00242	0.00707	1	08/12/2022 18:02	WG1909236
Indeno(1,2,3-cd)pyrene	U		0.00213	0.00707	1	08/12/2022 18:02	WG1909236
Naphthalene	U		0.00481	0.0236	1	08/12/2022 18:02	WG1909236
Phenanthrene	U		0.00272	0.00707	1	08/12/2022 18:02	WG1909236
Pyrene	U		0.00236	0.00707	1	08/12/2022 18:02	WG1909236
1-Methylnaphthalene	U		0.00529	0.0236	1	08/12/2022 18:02	WG1909236
2-Methylnaphthalene	U		0.00503	0.0236	1	08/12/2022 18:02	WG1909236
2-Chloronaphthalene	U		0.00549	0.0236	1	08/12/2022 18:02	WG1909236
(S) Nitrobenzene-d5	*58.8*			*14.0-149*		*08/12/2022 18:02*	WG1909236
(S) 2-Fluorobiphenyl	*70.7*			*34.0-125*		*08/12/2022 18:02*	WG1909236

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) p-Terphenyl-d14	*72.9*			*23.0-120*		*08/12/2022 18:02*	WG1909236

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.5		1	08/10/2022 08:11	WG1907557

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHGAK C6 to C10	U		2.42	6.37	2.38	08/10/2022 05:38	WG1908093
(S) a,a,a-Trifluorotoluene(FID)	*87.8*			*50.0-150*		*08/10/2022 05:38*	WG1908093

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier		MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg			mg/kg	mg/kg		date / time	
Acetone	U			0.0452	0.0618	1.09	08/09/2022 00:46	WG1907699
Acrylonitrile	U	UJ	C3	0.00446	0.0154	1.09	08/09/2022 00:46	WG1907699
Benzene	U			0.000578	0.00124	1.09	08/09/2022 00:46	WG1907699
Bromobenzene	U			0.00111	0.0154	1.09	08/09/2022 00:46	WG1907699
Bromodichloromethane	U			0.000896	0.00310	1.09	08/09/2022 00:46	WG1907699
Bromoform	U			0.00145	0.0310	1.09	08/09/2022 00:46	WG1907699
Bromomethane	U			0.00244	0.0154	1.09	08/09/2022 00:46	WG1907699
n-Butylbenzene	U			0.00649	0.0154	1.09	08/09/2022 00:46	WG1907699
sec-Butylbenzene	U			0.00356	0.0154	1.09	08/09/2022 00:46	WG1907699
tert-Butylbenzene	U			0.00242	0.00618	1.09	08/09/2022 00:46	WG1907699
Carbon tetrachloride	U			0.00111	0.00618	1.09	08/09/2022 00:46	WG1907699
Chlorobenzene	U			0.000260	0.00310	1.09	08/09/2022 00:46	WG1907699
Chlorodibromomethane	U			0.000757	0.00310	1.09	08/09/2022 00:46	WG1907699
Chloroethane	U			0.00210	0.00618	1.09	08/09/2022 00:46	WG1907699
Chloroform	U			0.00127	0.00310	1.09	08/09/2022 00:46	WG1907699
Chloromethane	U	UJ	C3	0.00538	0.0154	1.09	08/09/2022 00:46	WG1907699
2-Chlorotoluene	U			0.00107	0.00310	1.09	08/09/2022 00:46	WG1907699
4-Chlorotoluene	U			0.000557	0.00618	1.09	08/09/2022 00:46	WG1907699
1,2-Dibromo-3-Chloropropane	U			0.00482	0.0310	1.09	08/09/2022 00:46	WG1907699
1,2-Dibromoethane	U			0.000801	0.00310	1.09	08/09/2022 00:46	WG1907699
Dibromomethane	U			0.000928	0.00618	1.09	08/09/2022 00:46	WG1907699
1,2-Dichlorobenzene	U			0.000525	0.00618	1.09	08/09/2022 00:46	WG1907699
1,3-Dichlorobenzene	U			0.000742	0.00618	1.09	08/09/2022 00:46	WG1907699
1,4-Dichlorobenzene	U			0.000866	0.00618	1.09	08/09/2022 00:46	WG1907699
Dichlorodifluoromethane	U	UJ	C3	0.00199	0.00310	1.09	08/09/2022 00:46	WG1907699
1,1-Dichloroethane	U			0.000607	0.00310	1.09	08/09/2022 00:46	WG1907699
1,2-Dichloroethane	U	UJ	C3	0.000802	0.00310	1.09	08/09/2022 00:46	WG1907699
1,1-Dichloroethene	U			0.000750	0.00310	1.09	08/09/2022 00:46	WG1907699
cis-1,2-Dichloroethene	U			0.000908	0.00310	1.09	08/09/2022 00:46	WG1907699
trans-1,2-Dichloroethene	U			0.00128	0.00618	1.09	08/09/2022 00:46	WG1907699
1,2-Dichloropropane	U			0.00176	0.00618	1.09	08/09/2022 00:46	WG1907699
1,1-Dichloropropene	U			0.00100	0.00310	1.09	08/09/2022 00:46	WG1907699
1,3-Dichloropropane	U			0.000619	0.00618	1.09	08/09/2022 00:46	WG1907699
cis-1,3-Dichloropropene	U			0.000936	0.00310	1.09	08/09/2022 00:46	WG1907699
trans-1,3-Dichloropropene	U			0.00141	0.00618	1.09	08/09/2022 00:46	WG1907699
2,2-Dichloropropane	U			0.00170	0.00310	1.09	08/09/2022 00:46	WG1907699
Di-isopropyl ether	U			0.000507	0.00124	1.09	08/09/2022 00:46	WG1907699
Ethylbenzene	0.000989		J	0.000911	0.00310	1.09	08/09/2022 00:46	WG1907699
Hexachloro-1,3-butadiene	U			0.00742	0.0310	1.09	08/09/2022 00:46	WG1907699
Isopropylbenzene	U			0.000525	0.00310	1.09	08/09/2022 00:46	WG1907699
p-Isopropyltoluene	U			0.00315	0.00618	1.09	08/09/2022 00:46	WG1907699
2-Butanone (MEK)	U			0.0785	0.124	1.09	08/09/2022 00:46	WG1907699
Methylene Chloride	U			0.00821	0.0310	1.09	08/09/2022 00:46	WG1907699
4-Methyl-2-pentanone (MIBK)	U			0.00283	0.0310	1.09	08/09/2022 00:46	WG1907699

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Methyl tert-butyl ether	U		0.000432	0.00124	1.09	08/09/2022 00:46	WG1907699
Naphthalene	U		0.00604	0.0154	1.09	08/09/2022 00:46	WG1907699
n-Propylbenzene	U		0.00118	0.00618	1.09	08/09/2022 00:46	WG1907699
Styrene	U		0.000284	0.0154	1.09	08/09/2022 00:46	WG1907699
1,1,1,2-Tetrachloroethane	U		0.00117	0.00310	1.09	08/09/2022 00:46	WG1907699
1,1,2,2-Tetrachloroethane	U		0.000860	0.00310	1.09	08/09/2022 00:46	WG1907699
1,1,2-Trichlorotrifluoroethane	U		0.000933	0.00310	1.09	08/09/2022 00:46	WG1907699
Tetrachloroethene	U		0.00111	0.00310	1.09	08/09/2022 00:46	WG1907699
Toluene	U		0.00161	0.00618	1.09	08/09/2022 00:46	WG1907699
1,2,3-Trichlorobenzene	U		0.00907	0.0154	1.09	08/09/2022 00:46	WG1907699
1,2,4-Trichlorobenzene	U		0.00545	0.0154	1.09	08/09/2022 00:46	WG1907699
1,1,1-Trichloroethane	U		0.00115	0.00310	1.09	08/09/2022 00:46	WG1907699
1,1,2-Trichloroethane	U		0.000739	0.00310	1.09	08/09/2022 00:46	WG1907699
Trichloroethene	U		0.000723	0.00124	1.09	08/09/2022 00:46	WG1907699
Trichlorofluoromethane	U		0.00102	0.00310	1.09	08/09/2022 00:46	WG1907699
1,2,3-Trichloropropane	U		0.00201	0.0154	1.09	08/09/2022 00:46	WG1907699
1,2,4-Trimethylbenzene	U		0.00195	0.00618	1.09	08/09/2022 00:46	WG1907699
1,2,3-Trimethylbenzene	U		0.00195	0.00618	1.09	08/09/2022 00:46	WG1907699
Vinyl chloride	U		0.00143	0.00310	1.09	08/09/2022 00:46	WG1907699
1,3,5-Trimethylbenzene	U		0.00247	0.00618	1.09	08/09/2022 00:46	WG1907699
Xylenes, Total	0.00719	J	0.00109	0.00803	1.09	08/09/2022 00:46	WG1907699
(S) Toluene-d8	*111*			*75.0-131*		*08/09/2022 00:46*	WG1907699
(S) 4-Bromofluorobenzene	*101*			*67.0-138*		*08/09/2022 00:46*	WG1907699
(S) 1,2-Dichloroethane-d4	*80.8*			*70.0-130*		*08/09/2022 00:46*	WG1907699

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	~~12.4~~	J	7.40	214 UB	1	08/09/2022 03:50	WG1907345
(S) o-Terphenyl	*82.0*			*50.0-150*		*08/09/2022 03:50*	WG1907345

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00246	0.00642	1	08/09/2022 02:06	WG1907009
Acenaphthene	U		0.00224	0.00642	1	08/09/2022 02:06	WG1907009
Acenaphthylene	U		0.00231	0.00642	1	08/09/2022 02:06	WG1907009
Benzo(a)anthracene	U		0.00185	0.00642	1	08/09/2022 02:06	WG1907009
Benzo(a)pyrene	U		0.00192	0.00642	1	08/09/2022 02:06	WG1907009
Benzo(b)fluoranthene	U		0.00164	0.00642	1	08/09/2022 02:06	WG1907009
Benzo(g,h,i)perylene	U		0.00189	0.00642	1	08/09/2022 02:06	WG1907009
Benzo(k)fluoranthene	U		0.00230	0.00642	1	08/09/2022 02:06	WG1907009
Chrysene	U		0.00248	0.00642	1	08/09/2022 02:06	WG1907009
Dibenz(a,h)anthracene	U		0.00184	0.00642	1	08/09/2022 02:06	WG1907009
Fluoranthene	U		0.00243	0.00642	1	08/09/2022 02:06	WG1907009
Fluorene	U		0.00219	0.00642	1	08/09/2022 02:06	WG1907009
Indeno(1,2,3-cd)pyrene	U		0.00194	0.00642	1	08/09/2022 02:06	WG1907009
Naphthalene	U		0.00437	0.0214	1	08/09/2022 02:06	WG1907009
Phenanthrene	U		0.00247	0.00642	1	08/09/2022 02:06	WG1907009
Pyrene	U		0.00214	0.00642	1	08/09/2022 02:06	WG1907009
1-Methylnaphthalene	U		0.00480	0.0214	1	08/09/2022 02:06	WG1907009
2-Methylnaphthalene	U		0.00457	0.0214	1	08/09/2022 02:06	WG1907009
2-Chloronaphthalene	U		0.00499	0.0214	1	08/09/2022 02:06	WG1907009
(S) Nitrobenzene-d5	*55.8*			*14.0-149*		*08/09/2022 02:06*	WG1907009
(S) 2-Fluorobiphenyl	*56.2*			*34.0-125*		*08/09/2022 02:06*	WG1907009

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) p-Terphenyl-d14	*55.4*			*23.0-120*		*08/09/2022 02:06*	WG1907009

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	86.2		1	08/10/2022 08:11	WG1907557

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHGAK C6 to C10	26.4		2.20	5.80	2	08/10/2022 06:05	WG1908093
(S) a,a,a-Trifluorotoluene(FID)	*84.6*			*50.0-150*		*08/10/2022 06:05*	WG1908093

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0488	0.0669	1	08/09/2022 01:05	WG1907699
Acrylonitrile	U	UJ C3	0.00483	0.0167	1	08/09/2022 01:05	WG1907699
Benzene	0.0181		0.000625	0.00134	1	08/09/2022 01:05	WG1907699
Bromobenzene	U		0.00120	0.0167	1	08/09/2022 01:05	WG1907699
Bromodichloromethane	U		0.000970	0.00334	1	08/09/2022 01:05	WG1907699
Bromoform	U		0.00156	0.0334	1	08/09/2022 01:05	WG1907699
Bromomethane	U		0.00263	0.0167	1	08/09/2022 01:05	WG1907699
n-Butylbenzene	U		0.00702	0.0167	1	08/09/2022 01:05	WG1907699
sec-Butylbenzene	0.0415		0.00385	0.0167	1	08/09/2022 01:05	WG1907699
tert-Butylbenzene	0.0133		0.00261	0.00669	1	08/09/2022 01:05	WG1907699
Carbon tetrachloride	U		0.00120	0.00669	1	08/09/2022 01:05	WG1907699
Chlorobenzene	U		0.000281	0.00334	1	08/09/2022 01:05	WG1907699
Chlorodibromomethane	U		0.000818	0.00334	1	08/09/2022 01:05	WG1907699
Chloroethane	U		0.00227	0.00669	1	08/09/2022 01:05	WG1907699
Chloroform	U		0.00138	0.00334	1	08/09/2022 01:05	WG1907699
Chloromethane	U	UJ C3	0.00582	0.0167	1	08/09/2022 01:05	WG1907699
2-Chlorotoluene	U		0.00116	0.00334	1	08/09/2022 01:05	WG1907699
4-Chlorotoluene	U		0.000602	0.00669	1	08/09/2022 01:05	WG1907699
1,2-Dibromo-3-Chloropropane	U		0.00522	0.0334	1	08/09/2022 01:05	WG1907699
1,2-Dibromoethane	U		0.000867	0.00334	1	08/09/2022 01:05	WG1907699
Dibromomethane	U		0.00100	0.00669	1	08/09/2022 01:05	WG1907699
1,2-Dichlorobenzene	U		0.000568	0.00669	1	08/09/2022 01:05	WG1907699
1,3-Dichlorobenzene	U		0.000802	0.00669	1	08/09/2022 01:05	WG1907699
1,4-Dichlorobenzene	U		0.000936	0.00669	1	08/09/2022 01:05	WG1907699
Dichlorodifluoromethane	U	UJ C3	0.00215	0.00334	1	08/09/2022 01:05	WG1907699
1,1-Dichloroethane	U		0.000657	0.00334	1	08/09/2022 01:05	WG1907699
1,2-Dichloroethane	U	UJ C3	0.000868	0.00334	1	08/09/2022 01:05	WG1907699
1,1-Dichloroethene	U		0.000810	0.00334	1	08/09/2022 01:05	WG1907699
cis-1,2-Dichloroethene	U		0.000982	0.00334	1	08/09/2022 01:05	WG1907699
trans-1,2-Dichloroethene	U		0.00139	0.00669	1	08/09/2022 01:05	WG1907699
1,2-Dichloropropane	U		0.00190	0.00669	1	08/09/2022 01:05	WG1907699
1,1-Dichloropropene	U		0.00108	0.00334	1	08/09/2022 01:05	WG1907699
1,3-Dichloropropane	U		0.000670	0.00669	1	08/09/2022 01:05	WG1907699
cis-1,3-Dichloropropene	U		0.00101	0.00334	1	08/09/2022 01:05	WG1907699
trans-1,3-Dichloropropene	U		0.00152	0.00669	1	08/09/2022 01:05	WG1907699
2,2-Dichloropropane	U		0.00185	0.00334	1	08/09/2022 01:05	WG1907699
Di-isopropyl ether	U		0.000548	0.00134	1	08/09/2022 01:05	WG1907699
Ethylbenzene	0.0173		0.000986	0.00334	1	08/09/2022 01:05	WG1907699
Hexachloro-1,3-butadiene	U		0.00802	0.0334	1	08/09/2022 01:05	WG1907699
Isopropylbenzene	0.0109		0.000568	0.00334	1	08/09/2022 01:05	WG1907699
p-Isopropyltoluene	0.0522		0.00341	0.00669	1	08/09/2022 01:05	WG1907699
2-Butanone (MEK)	U		0.0849	0.134	1	08/09/2022 01:05	WG1907699
Methylene Chloride	U		0.00888	0.0334	1	08/09/2022 01:05	WG1907699
4-Methyl-2-pentanone (MIBK)	U		0.00305	0.0334	1	08/09/2022 01:05	WG1907699

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Methyl tert-butyl ether	U		0.000468	0.00134	1	08/09/2022 01:05	WG1907699
Naphthalene	U		0.00653	0.0167	1	08/09/2022 01:05	WG1907699
n-Propylbenzene	0.0231		0.00127	0.00669	1	08/09/2022 01:05	WG1907699
Styrene	U		0.000306	0.0167	1	08/09/2022 01:05	WG1907699
1,1,1,2-Tetrachloroethane	U		0.00127	0.00334	1	08/09/2022 01:05	WG1907699
1,1,2,2-Tetrachloroethane	U		0.000929	0.00334	1	08/09/2022 01:05	WG1907699
1,1,2-Trichlorotrifluoroethane	U		0.00101	0.00334	1	08/09/2022 01:05	WG1907699
Tetrachloroethene	U		0.00120	0.00334	1	08/09/2022 01:05	WG1907699
Toluene	0.00566	J	0.00174	0.00669	1	08/09/2022 01:05	WG1907699
1,2,3-Trichlorobenzene	U		0.00980	0.0167	1	08/09/2022 01:05	WG1907699
1,2,4-Trichlorobenzene	U		0.00588	0.0167	1	08/09/2022 01:05	WG1907699
1,1,1-Trichloroethane	U		0.00123	0.00334	1	08/09/2022 01:05	WG1907699
1,1,2-Trichloroethane	U		0.000798	0.00334	1	08/09/2022 01:05	WG1907699
Trichloroethene	U		0.000781	0.00134	1	08/09/2022 01:05	WG1907699
Trichlorofluoromethane	U		0.00111	0.00334	1	08/09/2022 01:05	WG1907699
1,2,3-Trichloropropane	U		0.00217	0.0167	1	08/09/2022 01:05	WG1907699
1,2,4-Trimethylbenzene	0.173		0.00211	0.00669	1	08/09/2022 01:05	WG1907699
1,2,3-Trimethylbenzene	0.118		0.00211	0.00669	1	08/09/2022 01:05	WG1907699
Vinyl chloride	U		0.00155	0.00334	1	08/09/2022 01:05	WG1907699
1,3,5-Trimethylbenzene	0.229		0.00267	0.00669	1	08/09/2022 01:05	WG1907699
Xylenes, Total	0.167		0.00118	0.00869	1	08/09/2022 01:05	WG1907699
(S) Toluene-d8	*108*			*75.0-131*		*08/09/2022 01:05*	WG1907699
(S) 4-Bromofluorobenzene	*98.3*			*67.0-138*		*08/09/2022 01:05*	WG1907699
(S) 1,2-Dichloroethane-d4	*81.9*			*70.0-130*		*08/09/2022 01:05*	WG1907699

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	672		8.03	232	1	08/09/2022 04:15	WG1907345
(S) o-Terphenyl	*88.0*			*50.0-150*		*08/09/2022 04:15*	WG1907345

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	0.0152		0.00267	0.00696	1	08/12/2022 18:20	WG1909236
Acenaphthene	0.0374		0.00242	0.00696	1	08/12/2022 18:20	WG1909236
Acenaphthylene	U		0.00251	0.00696	1	08/12/2022 18:20	WG1909236
Benzo(a)anthracene	0.00889		0.00201	0.00696	1	08/12/2022 18:20	WG1909236
Benzo(a)pyrene	0.00241	J	0.00208	0.00696	1	08/12/2022 18:20	WG1909236
Benzo(b)fluoranthene	0.00487	J	0.00177	0.00696	1	08/12/2022 18:20	WG1909236
Benzo(g,h,i)perylene	0.00260	J	0.00205	0.00696	1	08/12/2022 18:20	WG1909236
Benzo(k)fluoranthene	U		0.00249	0.00696	1	08/12/2022 18:20	WG1909236
Chrysene	0.00771		0.00269	0.00696	1	08/12/2022 18:20	WG1909236
Dibenz(a,h)anthracene	U		0.00200	0.00696	1	08/12/2022 18:20	WG1909236
Fluoranthene	0.0684		0.00263	0.00696	1	08/12/2022 18:20	WG1909236
Fluorene	0.0470		0.00238	0.00696	1	08/12/2022 18:20	WG1909236
Indeno(1,2,3-cd)pyrene	U		0.00210	0.00696	1	08/12/2022 18:20	WG1909236
Naphthalene	0.00965	J	0.00473	0.0232	1	08/12/2022 18:20	WG1909236
Phenanthrene	0.148		0.00268	0.00696	1	08/12/2022 18:20	WG1909236
Pyrene	0.0559		0.00232	0.00696	1	08/12/2022 18:20	WG1909236
1-Methylnaphthalene	0.0217	J	0.00521	0.0232	1	08/12/2022 18:20	WG1909236
2-Methylnaphthalene	0.0495		0.00495	0.0232	1	08/12/2022 18:20	WG1909236
2-Chloronaphthalene	U		0.00541	0.0232	1	08/12/2022 18:20	WG1909236
(S) Nitrobenzene-d5	*18.4*			*14.0-149*		*08/12/2022 18:20*	WG1909236
(S) 2-Fluorobiphenyl	*43.8*			*34.0-125*		*08/12/2022 18:20*	WG1909236

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) p-Terphenyl-d14	*62.2*			*23.0-120*		*08/12/2022 18:20*	WG1909236

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	87.0		1	08/10/2022 08:11	WG1907557

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHGAK C6 to C10	21.1		2.18	5.75	2	08/10/2022 06:31	WG1908093
(S) a,a,a-Trifluorotoluene(FID)	*85.5*			*50.0-150*		*08/10/2022 06:31*	WG1908093

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	0.0916		0.0479	0.0656	1	08/09/2022 01:23	WG1907699
Acrylonitrile	U	UJ C3	0.00474	0.0164	1	08/09/2022 01:23	WG1907699
Benzene	0.0140		0.000613	0.00131	1	08/09/2022 01:23	WG1907699
Bromobenzene	U		0.00118	0.0164	1	08/09/2022 01:23	WG1907699
Bromodichloromethane	U		0.000951	0.00328	1	08/09/2022 01:23	WG1907699
Bromoform	U		0.00153	0.0328	1	08/09/2022 01:23	WG1907699
Bromomethane	U		0.00258	0.0164	1	08/09/2022 01:23	WG1907699
n-Butylbenzene	U		0.00689	0.0164	1	08/09/2022 01:23	WG1907699
sec-Butylbenzene	0.0314		0.00378	0.0164	1	08/09/2022 01:23	WG1907699
tert-Butylbenzene	0.00947		0.00256	0.00656	1	08/09/2022 01:23	WG1907699
Carbon tetrachloride	U		0.00118	0.00656	1	08/09/2022 01:23	WG1907699
Chlorobenzene	U		0.000275	0.00328	1	08/09/2022 01:23	WG1907699
Chlorodibromomethane	U		0.000803	0.00328	1	08/09/2022 01:23	WG1907699
Chloroethane	U		0.00223	0.00656	1	08/09/2022 01:23	WG1907699
Chloroform	U		0.00135	0.00328	1	08/09/2022 01:23	WG1907699
Chloromethane	U	UJ C3	0.00571	0.0164	1	08/09/2022 01:23	WG1907699
2-Chlorotoluene	U		0.00113	0.00328	1	08/09/2022 01:23	WG1907699
4-Chlorotoluene	U		0.000590	0.00656	1	08/09/2022 01:23	WG1907699
1,2-Dibromo-3-Chloropropane	U		0.00512	0.0328	1	08/09/2022 01:23	WG1907699
1,2-Dibromoethane	U		0.000850	0.00328	1	08/09/2022 01:23	WG1907699
Dibromomethane	U		0.000984	0.00656	1	08/09/2022 01:23	WG1907699
1,2-Dichlorobenzene	U		0.000558	0.00656	1	08/09/2022 01:23	WG1907699
1,3-Dichlorobenzene	U		0.000787	0.00656	1	08/09/2022 01:23	WG1907699
1,4-Dichlorobenzene	U		0.000918	0.00656	1	08/09/2022 01:23	WG1907699
Dichlorodifluoromethane	U	UJ C3	0.00211	0.00328	1	08/09/2022 01:23	WG1907699
1,1-Dichloroethane	U		0.000644	0.00328	1	08/09/2022 01:23	WG1907699
1,2-Dichloroethane	U	UJ C3	0.000851	0.00328	1	08/09/2022 01:23	WG1907699
1,1-Dichloroethene	U		0.000795	0.00328	1	08/09/2022 01:23	WG1907699
cis-1,2-Dichloroethene	U		0.000963	0.00328	1	08/09/2022 01:23	WG1907699
trans-1,2-Dichloroethene	U		0.00136	0.00656	1	08/09/2022 01:23	WG1907699
1,2-Dichloropropane	U		0.00186	0.00656	1	08/09/2022 01:23	WG1907699
1,1-Dichloropropene	U		0.00106	0.00328	1	08/09/2022 01:23	WG1907699
1,3-Dichloropropane	U		0.000657	0.00656	1	08/09/2022 01:23	WG1907699
cis-1,3-Dichloropropene	U		0.000993	0.00328	1	08/09/2022 01:23	WG1907699
trans-1,3-Dichloropropene	U		0.00150	0.00656	1	08/09/2022 01:23	WG1907699
2,2-Dichloropropane	U		0.00181	0.00328	1	08/09/2022 01:23	WG1907699
Di-isopropyl ether	U		0.000538	0.00131	1	08/09/2022 01:23	WG1907699
Ethylbenzene	0.0172		0.000967	0.00328	1	08/09/2022 01:23	WG1907699
Hexachloro-1,3-butadiene	U		0.00787	0.0328	1	08/09/2022 01:23	WG1907699
Isopropylbenzene	0.0106		0.000558	0.00328	1	08/09/2022 01:23	WG1907699
p-Isopropyltoluene	0.0426		0.00335	0.00656	1	08/09/2022 01:23	WG1907699
2-Butanone (MEK)	U		0.0833	0.131	1	08/09/2022 01:23	WG1907699
Methylene Chloride	U		0.00871	0.0328	1	08/09/2022 01:23	WG1907699
4-Methyl-2-pentanone (MIBK)	U		0.00299	0.0328	1	08/09/2022 01:23	WG1907699

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Methyl tert-butyl ether	U		0.000459	0.00131	1	08/09/2022 01:23	WG1907699
Naphthalene	U		0.00640	0.0164	1	08/09/2022 01:23	WG1907699
n-Propylbenzene	U		0.00125	0.00656	1	08/09/2022 01:23	WG1907699
Styrene	U		0.000300	0.0164	1	08/09/2022 01:23	WG1907699
1,1,1,2-Tetrachloroethane	U		0.00124	0.00328	1	08/09/2022 01:23	WG1907699
1,1,2,2-Tetrachloroethane	U		0.000912	0.00328	1	08/09/2022 01:23	WG1907699
1,1,2-Trichlorotrifluoroethane	U		0.000989	0.00328	1	08/09/2022 01:23	WG1907699
Tetrachloroethene	U		0.00118	0.00328	1	08/09/2022 01:23	WG1907699
Toluene	0.00453	J	0.00171	0.00656	1	08/09/2022 01:23	WG1907699
1,2,3-Trichlorobenzene	U		0.00962	0.0164	1	08/09/2022 01:23	WG1907699
1,2,4-Trichlorobenzene	U		0.00577	0.0164	1	08/09/2022 01:23	WG1907699
1,1,1-Trichloroethane	U		0.00121	0.00328	1	08/09/2022 01:23	WG1907699
1,1,2-Trichloroethane	U		0.000783	0.00328	1	08/09/2022 01:23	WG1907699
Trichloroethene	U		0.000766	0.00131	1	08/09/2022 01:23	WG1907699
Trichlorofluoromethane	U		0.00108	0.00328	1	08/09/2022 01:23	WG1907699
1,2,3-Trichloropropane	U		0.00213	0.0164	1	08/09/2022 01:23	WG1907699
1,2,4-Trimethylbenzene	0.138		0.00207	0.00656	1	08/09/2022 01:23	WG1907699
1,2,3-Trimethylbenzene	0.0912		0.00207	0.00656	1	08/09/2022 01:23	WG1907699
Vinyl chloride	U		0.00152	0.00328	1	08/09/2022 01:23	WG1907699
1,3,5-Trimethylbenzene	0.177		0.00262	0.00656	1	08/09/2022 01:23	WG1907699
Xylenes, Total	0.151		0.00115	0.00853	1	08/09/2022 01:23	WG1907699
(S) Toluene-d8	*111*			*75.0-131*		*08/09/2022 01:23*	WG1907699
(S) 4-Bromofluorobenzene	*70.4*			*67.0-138*		*08/09/2022 01:23*	WG1907699
(S) 1,2-Dichloroethane-d4	*83.6*			*70.0-130*		*08/09/2022 01:23*	WG1907699

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	457		7.95	230	1	08/09/2022 04:02	WG1907345
(S) o-Terphenyl	*95.1*			*50.0-150*		*08/09/2022 04:02*	WG1907345

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	0.00931		0.00264	0.00689	1	08/12/2022 18:38	WG1909236
Acenaphthene	0.0978		0.00240	0.00689	1	08/12/2022 18:38	WG1909236
Acenaphthylene	U		0.00248	0.00689	1	08/12/2022 18:38	WG1909236
Benzo(a)anthracene	0.00384	J	0.00199	0.00689	1	08/12/2022 18:38	WG1909236
Benzo(a)pyrene	U		0.00206	0.00689	1	08/12/2022 18:38	WG1909236
Benzo(b)fluoranthene	0.00216	J	0.00176	0.00689	1	08/12/2022 18:38	WG1909236
Benzo(g,h,i)perylene	0.00209	J	0.00203	0.00689	1	08/12/2022 18:38	WG1909236
Benzo(k)fluoranthene	U		0.00247	0.00689	1	08/12/2022 18:38	WG1909236
Chrysene	0.00290	J	0.00267	0.00689	1	08/12/2022 18:38	WG1909236
Dibenz(a,h)anthracene	U		0.00198	0.00689	1	08/12/2022 18:38	WG1909236
Fluoranthene	0.0336		0.00261	0.00689	1	08/12/2022 18:38	WG1909236
Fluorene	0.0565		0.00236	0.00689	1	08/12/2022 18:38	WG1909236
Indeno(1,2,3-cd)pyrene	U		0.00208	0.00689	1	08/12/2022 18:38	WG1909236
Naphthalene	0.0171	J	0.00469	0.0230	1	08/12/2022 18:38	WG1909236
Phenanthrene	0.0951		0.00265	0.00689	1	08/12/2022 18:38	WG1909236
Pyrene	0.0284		0.00230	0.00689	1	08/12/2022 18:38	WG1909236
1-Methylnaphthalene	0.0804		0.00516	0.0230	1	08/12/2022 18:38	WG1909236
2-Methylnaphthalene	0.115		0.00491	0.0230	1	08/12/2022 18:38	WG1909236
2-Chloronaphthalene	U		0.00536	0.0230	1	08/12/2022 18:38	WG1909236
(S) Nitrobenzene-d5	*78.8*			*14.0-149*		*08/12/2022 18:38*	WG1909236
(S) 2-Fluorobiphenyl	*67.6*			*34.0-125*		*08/12/2022 18:38*	WG1909236

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) p-Terphenyl-d14	*70.2*			*23.0-120*		*08/12/2022 18:38*	WG1909236

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	78.5		1	08/10/2022 08:11	WG1907557

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHGAK C6 to C10	12.7		2.42	6.37	2	08/16/2022 06:11	WG1911247
(S) a,a,a-Trifluorotoluene(FID)	*83.6*			*50.0-150*		*08/16/2022 06:11*	WG1911247

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0585	0.0802	1	08/09/2022 01:42	WG1907699
Acrylonitrile	U	UJ C3	0.00579	0.0200	1	08/09/2022 01:42	WG1907699
Benzene	0.105		0.000749	0.00160	1	08/09/2022 01:42	WG1907699
Bromobenzene	U		0.00144	0.0200	1	08/09/2022 01:42	WG1907699
Bromodichloromethane	U		0.00116	0.00401	1	08/09/2022 01:42	WG1907699
Bromoform	U		0.00188	0.0401	1	08/09/2022 01:42	WG1907699
Bromomethane	U		0.00316	0.0200	1	08/09/2022 01:42	WG1907699
n-Butylbenzene	0.125		0.00842	0.0200	1	08/09/2022 01:42	WG1907699
sec-Butylbenzene	0.170		0.00462	0.0200	1	08/09/2022 01:42	WG1907699
tert-Butylbenzene	0.0208		0.00313	0.00802	1	08/09/2022 01:42	WG1907699
Carbon tetrachloride	U		0.00144	0.00802	1	08/09/2022 01:42	WG1907699
Chlorobenzene	U		0.000337	0.00401	1	08/09/2022 01:42	WG1907699
Chlorodibromomethane	U		0.000981	0.00401	1	08/09/2022 01:42	WG1907699
Chloroethane	U		0.00273	0.00802	1	08/09/2022 01:42	WG1907699
Chloroform	U		0.00165	0.00401	1	08/09/2022 01:42	WG1907699
Chloromethane	U	UJ C3	0.00698	0.0200	1	08/09/2022 01:42	WG1907699
2-Chlorotoluene	U		0.00139	0.00401	1	08/09/2022 01:42	WG1907699
4-Chlorotoluene	U		0.000722	0.00802	1	08/09/2022 01:42	WG1907699
1,2-Dibromo-3-Chloropropane	U		0.00625	0.0401	1	08/09/2022 01:42	WG1907699
1,2-Dibromoethane	U		0.00104	0.00401	1	08/09/2022 01:42	WG1907699
Dibromomethane	U		0.00120	0.00802	1	08/09/2022 01:42	WG1907699
1,2-Dichlorobenzene	U		0.000681	0.00802	1	08/09/2022 01:42	WG1907699
1,3-Dichlorobenzene	U		0.000962	0.00802	1	08/09/2022 01:42	WG1907699
1,4-Dichlorobenzene	U		0.00112	0.00802	1	08/09/2022 01:42	WG1907699
Dichlorodifluoromethane	U	UJ C3	0.00258	0.00401	1	08/09/2022 01:42	WG1907699
1,1-Dichloroethane	U		0.000787	0.00401	1	08/09/2022 01:42	WG1907699
1,2-Dichloroethane	U	UJ C3	0.00104	0.00401	1	08/09/2022 01:42	WG1907699
1,1-Dichloroethene	U		0.000972	0.00401	1	08/09/2022 01:42	WG1907699
cis-1,2-Dichloroethene	U		0.00118	0.00401	1	08/09/2022 01:42	WG1907699
trans-1,2-Dichloroethene	U		0.00167	0.00802	1	08/09/2022 01:42	WG1907699
1,2-Dichloropropane	U		0.00228	0.00802	1	08/09/2022 01:42	WG1907699
1,1-Dichloropropene	U		0.00130	0.00401	1	08/09/2022 01:42	WG1907699
1,3-Dichloropropane	U		0.000803	0.00802	1	08/09/2022 01:42	WG1907699
cis-1,3-Dichloropropene	U		0.00121	0.00401	1	08/09/2022 01:42	WG1907699
trans-1,3-Dichloropropene	U		0.00183	0.00802	1	08/09/2022 01:42	WG1907699
2,2-Dichloropropane	U		0.00221	0.00401	1	08/09/2022 01:42	WG1907699
Di-isopropyl ether	U		0.000657	0.00160	1	08/09/2022 01:42	WG1907699
Ethylbenzene	0.306		0.00118	0.00401	1	08/09/2022 01:42	WG1907699
Hexachloro-1,3-butadiene	U		0.00962	0.0401	1	08/09/2022 01:42	WG1907699
Isopropylbenzene	0.124		0.000681	0.00401	1	08/09/2022 01:42	WG1907699
p-Isopropyltoluene	0.685		0.00409	0.00802	1	08/09/2022 01:42	WG1907699
2-Butanone (MEK)	U		0.102	0.160	1	08/09/2022 01:42	WG1907699
Methylene Chloride	U		0.0106	0.0401	1	08/09/2022 01:42	WG1907699
4-Methyl-2-pentanone (MIBK)	U		0.00366	0.0401	1	08/09/2022 01:42	WG1907699

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Methyl tert-butyl ether	U		0.000561	0.00160	1	08/09/2022 01:42	WG1907699
Naphthalene	1.07		0.00783	0.0200	1	08/09/2022 01:42	WG1907699
n-Propylbenzene	0.228		0.00152	0.00802	1	08/09/2022 01:42	WG1907699
Styrene	U		0.000367	0.0200	1	08/09/2022 01:42	WG1907699
1,1,1,2-Tetrachloroethane	U		0.00152	0.00401	1	08/09/2022 01:42	WG1907699
1,1,2,2-Tetrachloroethane	U		0.00111	0.00401	1	08/09/2022 01:42	WG1907699
1,1,2-Trichlorotrifluoroethane	U		0.00121	0.00401	1	08/09/2022 01:42	WG1907699
Tetrachloroethene	U		0.00144	0.00401	1	08/09/2022 01:42	WG1907699
Toluene	0.0175		0.00208	0.00802	1	08/09/2022 01:42	WG1907699
1,2,3-Trichlorobenzene	U		0.0118	0.0200	1	08/09/2022 01:42	WG1907699
1,2,4-Trichlorobenzene	U		0.00706	0.0200	1	08/09/2022 01:42	WG1907699
1,1,1-Trichloroethane	U		0.00148	0.00401	1	08/09/2022 01:42	WG1907699
1,1,2-Trichloroethane	U		0.000957	0.00401	1	08/09/2022 01:42	WG1907699
Trichloroethene	U		0.000936	0.00160	1	08/09/2022 01:42	WG1907699
Trichlorofluoromethane	U		0.00133	0.00401	1	08/09/2022 01:42	WG1907699
1,2,3-Trichloropropane	U		0.00260	0.0200	1	08/09/2022 01:42	WG1907699
1,2,4-Trimethylbenzene	2.68		0.00253	0.00802	1	08/09/2022 01:42	WG1907699
1,2,3-Trimethylbenzene	1.94		0.00253	0.00802	1	08/09/2022 01:42	WG1907699
Vinyl chloride	U		0.00186	0.00401	1	08/09/2022 01:42	WG1907699
1,3,5-Trimethylbenzene	1.31		0.00321	0.00802	1	08/09/2022 01:42	WG1907699
Xylenes, Total	4.35		0.00141	0.0104	1	08/09/2022 01:42	WG1907699
(S) Toluene-d8	*110*			*75.0-131*		*08/09/2022 01:42*	WG1907699
(S) 4-Bromofluorobenzene	*98.2*			*67.0-138*		*08/09/2022 01:42*	WG1907699
(S) 1,2-Dichloroethane-d4	*82.7*			*70.0-130*		*08/09/2022 01:42*	WG1907699

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	45.5	J	8.82	255	1	08/12/2022 09:05	WG1909501
(S) o-Terphenyl	*50.0*			*50.0-150*		*08/12/2022 09:05*	WG1909501

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	0.0163		0.00293	0.00764	1	08/12/2022 16:15	WG1909236
Acenaphthene	0.203		0.00266	0.00764	1	08/12/2022 16:15	WG1909236
Acenaphthylene	U		0.00275	0.00764	1	08/12/2022 16:15	WG1909236
Benzo(a)anthracene	0.0186		0.00220	0.00764	1	08/12/2022 16:15	WG1909236
Benzo(a)pyrene	0.00786		0.00228	0.00764	1	08/12/2022 16:15	WG1909236
Benzo(b)fluoranthene	0.0131		0.00195	0.00764	1	08/12/2022 16:15	WG1909236
Benzo(g,h,i)perylene	0.00255	J	0.00225	0.00764	1	08/12/2022 16:15	WG1909236
Benzo(k)fluoranthene	0.00534	J	0.00274	0.00764	1	08/12/2022 16:15	WG1909236
Chrysene	0.0266		0.00296	0.00764	1	08/12/2022 16:15	WG1909236
Dibenz(a,h)anthracene	U		0.00219	0.00764	1	08/12/2022 16:15	WG1909236
Fluoranthene	0.0961		0.00289	0.00764	1	08/12/2022 16:15	WG1909236
Fluorene	0.0726		0.00261	0.00764	1	08/12/2022 16:15	WG1909236
Indeno(1,2,3-cd)pyrene	0.00324	J	0.00231	0.00764	1	08/12/2022 16:15	WG1909236
Naphthalene	0.373		0.00520	0.0255	1	08/12/2022 16:15	WG1909236
Phenanthrene	0.0868		0.00294	0.00764	1	08/12/2022 16:15	WG1909236
Pyrene	0.0865		0.00255	0.00764	1	08/12/2022 16:15	WG1909236
1-Methylnaphthalene	0.322		0.00572	0.0255	1	08/12/2022 16:15	WG1909236
2-Methylnaphthalene	0.417		0.00544	0.0255	1	08/12/2022 16:15	WG1909236
2-Chloronaphthalene	U		0.00594	0.0255	1	08/12/2022 16:15	WG1909236
(S) Nitrobenzene-d5	*65.1*			*14.0-149*		*08/12/2022 16:15*	WG1909236
(S) 2-Fluorobiphenyl	*75.7*			*34.0-125*		*08/12/2022 16:15*	WG1909236

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) p-Terphenyl-d14	*80.1*			*23.0-120*		*08/12/2022 16:15*	WG1909236

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	97.3		1	08/10/2022 08:11	WG1907557

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHGAK C6 to C10	U		1.95	5.14	2	08/16/2022 06:48	WG1911247
(S) a,a,a-Trifluorotoluene(FID)	*84.1*			*50.0-150*		*08/16/2022 06:48*	WG1911247

Sample Narrative:

L1522335-06 WG1911247: Lowest possible dilution due to sample foaming.

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier		MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg			mg/kg	mg/kg		date / time	
Acetone	U			0.0423	0.0580	1.1	08/09/2022 02:01	WG1907699
Acrylonitrile	U	UJ	C3	0.00418	0.0145	1.1	08/09/2022 02:01	WG1907699
Benzene	U			0.000542	0.00116	1.1	08/09/2022 02:01	WG1907699
Bromobenzene	U			0.00104	0.0145	1.1	08/09/2022 02:01	WG1907699
Bromodichloromethane	U			0.000840	0.00290	1.1	08/09/2022 02:01	WG1907699
Bromoform	U			0.00136	0.0290	1.1	08/09/2022 02:01	WG1907699
Bromomethane	U			0.00229	0.0145	1.1	08/09/2022 02:01	WG1907699
n-Butylbenzene	U			0.00609	0.0145	1.1	08/09/2022 02:01	WG1907699
sec-Butylbenzene	U			0.00334	0.0145	1.1	08/09/2022 02:01	WG1907699
tert-Butylbenzene	U			0.00227	0.00580	1.1	08/09/2022 02:01	WG1907699
Carbon tetrachloride	U			0.00104	0.00580	1.1	08/09/2022 02:01	WG1907699
Chlorobenzene	U			0.000243	0.00290	1.1	08/09/2022 02:01	WG1907699
Chlorodibromomethane	U			0.000709	0.00290	1.1	08/09/2022 02:01	WG1907699
Chloroethane	U			0.00197	0.00580	1.1	08/09/2022 02:01	WG1907699
Chloroform	U			0.00119	0.00290	1.1	08/09/2022 02:01	WG1907699
Chloromethane	U	UJ	C3	0.00505	0.0145	1.1	08/09/2022 02:01	WG1907699
2-Chlorotoluene	U			0.00100	0.00290	1.1	08/09/2022 02:01	WG1907699
4-Chlorotoluene	U			0.000522	0.00580	1.1	08/09/2022 02:01	WG1907699
1,2-Dibromo-3-Chloropropane	U			0.00452	0.0290	1.1	08/09/2022 02:01	WG1907699
1,2-Dibromoethane	U			0.000751	0.00290	1.1	08/09/2022 02:01	WG1907699
Dibromomethane	U			0.000869	0.00580	1.1	08/09/2022 02:01	WG1907699
1,2-Dichlorobenzene	U			0.000493	0.00580	1.1	08/09/2022 02:01	WG1907699
1,3-Dichlorobenzene	U			0.000695	0.00580	1.1	08/09/2022 02:01	WG1907699
1,4-Dichlorobenzene	U			0.000811	0.00580	1.1	08/09/2022 02:01	WG1907699
Dichlorodifluoromethane	U	UJ	C3	0.00187	0.00290	1.1	08/09/2022 02:01	WG1907699
1,1-Dichloroethane	U			0.000569	0.00290	1.1	08/09/2022 02:01	WG1907699
1,2-Dichloroethane	U	UJ	C3	0.000752	0.00290	1.1	08/09/2022 02:01	WG1907699
1,1-Dichloroethene	U			0.000703	0.00290	1.1	08/09/2022 02:01	WG1907699
cis-1,2-Dichloroethene	U			0.000850	0.00290	1.1	08/09/2022 02:01	WG1907699
trans-1,2-Dichloroethene	U			0.00120	0.00580	1.1	08/09/2022 02:01	WG1907699
1,2-Dichloropropane	U			0.00164	0.00580	1.1	08/09/2022 02:01	WG1907699
1,1-Dichloropropene	U			0.000938	0.00290	1.1	08/09/2022 02:01	WG1907699
1,3-Dichloropropane	U			0.000581	0.00580	1.1	08/09/2022 02:01	WG1907699
cis-1,3-Dichloropropene	U			0.000878	0.00290	1.1	08/09/2022 02:01	WG1907699
trans-1,3-Dichloropropene	U			0.00132	0.00580	1.1	08/09/2022 02:01	WG1907699
2,2-Dichloropropane	U			0.00160	0.00290	1.1	08/09/2022 02:01	WG1907699
Di-isopropyl ether	U			0.000475	0.00116	1.1	08/09/2022 02:01	WG1907699
Ethylbenzene	U			0.000855	0.00290	1.1	08/09/2022 02:01	WG1907699
Hexachloro-1,3-butadiene	U			0.00695	0.0290	1.1	08/09/2022 02:01	WG1907699
Isopropylbenzene	U			0.000493	0.00290	1.1	08/09/2022 02:01	WG1907699
p-Isopropyltoluene	U			0.00296	0.00580	1.1	08/11/2022 20:43	WG1909280

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2-Butanone (MEK)	U		0.0737	0.116	1.1	08/09/2022 02:01	WG1907699
Methylene Chloride	U		0.00769	0.0290	1.1	08/09/2022 02:01	WG1907699
4-Methyl-2-pentanone (MIBK)	U		0.00264	0.0290	1.1	08/09/2022 02:01	WG1907699
Methyl tert-butyl ether	U		0.000406	0.00116	1.1	08/09/2022 02:01	WG1907699
Naphthalene	0.00896	J	0.00566	0.0145	1.1	08/11/2022 20:43	WG1909280
n-Propylbenzene	U		0.00111	0.00580	1.1	08/09/2022 02:01	WG1907699
Styrene	U		0.000266	0.0145	1.1	08/09/2022 02:01	WG1907699
1,1,1,2-Tetrachloroethane	U		0.00110	0.00290	1.1	08/09/2022 02:01	WG1907699
1,1,2,2-Tetrachloroethane	U		0.000806	0.00290	1.1	08/09/2022 02:01	WG1907699
1,1,2-Trichlorotrifluoroethane	U		0.000873	0.00290	1.1	08/09/2022 02:01	WG1907699
Tetrachloroethene	U		0.00104	0.00290	1.1	08/09/2022 02:01	WG1907699
Toluene	U		0.00151	0.00580	1.1	08/09/2022 02:01	WG1907699
1,2,3-Trichlorobenzene	U		0.00849	0.0145	1.1	08/09/2022 02:01	WG1907699
1,2,4-Trichlorobenzene	U		0.00510	0.0145	1.1	08/09/2022 02:01	WG1907699
1,1,1-Trichloroethane	U		0.00107	0.00290	1.1	08/09/2022 02:01	WG1907699
1,1,2-Trichloroethane	U		0.000692	0.00290	1.1	08/09/2022 02:01	WG1907699
Trichloroethene	U		0.000676	0.00116	1.1	08/09/2022 02:01	WG1907699
Trichlorofluoromethane	U		0.000959	0.00290	1.1	08/09/2022 02:01	WG1907699
1,2,3-Trichloropropane	U		0.00188	0.0145	1.1	08/09/2022 02:01	WG1907699
1,2,4-Trimethylbenzene	0.00623		0.00183	0.00580	1.1	08/11/2022 20:43	WG1909280
1,2,3-Trimethylbenzene	U		0.00183	0.00580	1.1	08/11/2022 20:43	WG1909280
Vinyl chloride	U		0.00135	0.00290	1.1	08/09/2022 02:01	WG1907699
1,3,5-Trimethylbenzene	0.00270	J	0.00232	0.00580	1.1	08/11/2022 20:43	WG1909280
Xylenes, Total	0.00426	J	0.00102	0.00753	1.1	08/11/2022 20:43	WG1909280
(S) Toluene-d8	*105*			*75.0-131*		*08/09/2022 02:01*	WG1907699
(S) Toluene-d8	*99.1*			*75.0-131*		*08/11/2022 20:43*	WG1909280
(S) 4-Bromofluorobenzene	*97.7*			*67.0-138*		*08/09/2022 02:01*	WG1907699
(S) 4-Bromofluorobenzene	*97.4*			*67.0-138*		*08/11/2022 20:43*	WG1909280
(S) 1,2-Dichloroethane-d4	*80.4*			*70.0-130*		*08/09/2022 02:01*	WG1907699
(S) 1,2-Dichloroethane-d4	*94.9*			*70.0-130*		*08/11/2022 20:43*	WG1909280

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	~~23.6~~	J	7.11	206 UB	1	08/09/2022 04:28	WG1907345
(S) o-Terphenyl	*94.7*			*50.0-150*		*08/09/2022 04:28*	WG1907345

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00236	0.00617	1	08/09/2022 02:26	WG1907009
Acenaphthene	U		0.00215	0.00617	1	08/09/2022 02:26	WG1907009
Acenaphthylene	U		0.00222	0.00617	1	08/09/2022 02:26	WG1907009
Benzo(a)anthracene	U		0.00178	0.00617	1	08/09/2022 02:26	WG1907009
Benzo(a)pyrene	U		0.00184	0.00617	1	08/09/2022 02:26	WG1907009
Benzo(b)fluoranthene	U		0.00157	0.00617	1	08/09/2022 02:26	WG1907009
Benzo(g,h,i)perylene	U		0.00182	0.00617	1	08/09/2022 02:26	WG1907009
Benzo(k)fluoranthene	U		0.00221	0.00617	1	08/09/2022 02:26	WG1907009
Chrysene	U		0.00239	0.00617	1	08/09/2022 02:26	WG1907009
Dibenz(a,h)anthracene	U		0.00177	0.00617	1	08/09/2022 02:26	WG1907009
Fluoranthene	U		0.00233	0.00617	1	08/09/2022 02:26	WG1907009
Fluorene	U		0.00211	0.00617	1	08/09/2022 02:26	WG1907009
Indeno(1,2,3-cd)pyrene	U		0.00186	0.00617	1	08/09/2022 02:26	WG1907009
Naphthalene	U		0.00419	0.0206	1	08/09/2022 02:26	WG1907009
Phenanthrene	U		0.00237	0.00617	1	08/09/2022 02:26	WG1907009

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Pyrene	U		0.00206	0.00617	1	08/09/2022 02:26	WG1907009
1-Methylnaphthalene	U		0.00462	0.0206	1	08/09/2022 02:26	WG1907009
2-Methylnaphthalene	U		0.00439	0.0206	1	08/09/2022 02:26	WG1907009
2-Chloronaphthalene	U		0.00479	0.0206	1	08/09/2022 02:26	WG1907009
(S) Nitrobenzene-d5	*46.2*			*14.0-149*		*08/09/2022 02:26*	WG1907009
(S) 2-Fluorobiphenyl	*53.5*			*34.0-125*		*08/09/2022 02:26*	WG1907009
(S) p-Terphenyl-d14	*54.8*			*23.0-120*		*08/09/2022 02:26*	WG1907009

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	89.0		1	08/10/2022 08:11	WG1907557

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHGAK C6 to C10	U		2.14	5.62	2	08/10/2022 06:58	WG1908093
(S) a,a,a-Trifluorotoluene(FID)	*83.0*			*50.0-150*		*08/10/2022 06:58*	WG1908093

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0466	0.0638	1	08/09/2022 02:19	WG1907699
Acrylonitrile	U	UJ C3	0.00460	0.0159	1	08/09/2022 02:19	WG1907699
Benzene	U		0.000596	0.00128	1	08/09/2022 02:19	WG1907699
Bromobenzene	U		0.00115	0.0159	1	08/09/2022 02:19	WG1907699
Bromodichloromethane	U		0.000925	0.00319	1	08/09/2022 02:19	WG1907699
Bromoform	U		0.00149	0.0319	1	08/09/2022 02:19	WG1907699
Bromomethane	U		0.00251	0.0159	1	08/09/2022 02:19	WG1907699
n-Butylbenzene	U		0.00670	0.0159	1	08/09/2022 02:19	WG1907699
sec-Butylbenzene	U		0.00367	0.0159	1	08/09/2022 02:19	WG1907699
tert-Butylbenzene	U		0.00249	0.00638	1	08/09/2022 02:19	WG1907699
Carbon tetrachloride	U		0.00115	0.00638	1	08/09/2022 02:19	WG1907699
Chlorobenzene	U		0.000268	0.00319	1	08/09/2022 02:19	WG1907699
Chlorodibromomethane	U		0.000781	0.00319	1	08/09/2022 02:19	WG1907699
Chloroethane	U		0.00217	0.00638	1	08/09/2022 02:19	WG1907699
Chloroform	U		0.00131	0.00319	1	08/09/2022 02:19	WG1907699
Chloromethane	U	UJ C3	0.00555	0.0159	1	08/09/2022 02:19	WG1907699
2-Chlorotoluene	U		0.00110	0.00319	1	08/09/2022 02:19	WG1907699
4-Chlorotoluene	U		0.000574	0.00638	1	08/09/2022 02:19	WG1907699
1,2-Dibromo-3-Chloropropane	U		0.00497	0.0319	1	08/09/2022 02:19	WG1907699
1,2-Dibromoethane	U		0.000826	0.00319	1	08/09/2022 02:19	WG1907699
Dibromomethane	U		0.000957	0.00638	1	08/09/2022 02:19	WG1907699
1,2-Dichlorobenzene	U		0.000542	0.00638	1	08/09/2022 02:19	WG1907699
1,3-Dichlorobenzene	U		0.000765	0.00638	1	08/09/2022 02:19	WG1907699
1,4-Dichlorobenzene	U		0.000893	0.00638	1	08/09/2022 02:19	WG1907699
Dichlorodifluoromethane	U	UJ C3	0.00205	0.00319	1	08/09/2022 02:19	WG1907699
1,1-Dichloroethane	U		0.000626	0.00319	1	08/09/2022 02:19	WG1907699
1,2-Dichloroethane	U	UJ C3	0.000828	0.00319	1	08/09/2022 02:19	WG1907699
1,1-Dichloroethene	U		0.000773	0.00319	1	08/09/2022 02:19	WG1907699
cis-1,2-Dichloroethene	U		0.000936	0.00319	1	08/09/2022 02:19	WG1907699
trans-1,2-Dichloroethene	U		0.00133	0.00638	1	08/09/2022 02:19	WG1907699
1,2-Dichloropropane	U		0.00181	0.00638	1	08/09/2022 02:19	WG1907699
1,1-Dichloropropene	U		0.00103	0.00319	1	08/09/2022 02:19	WG1907699
1,3-Dichloropropane	U		0.000639	0.00638	1	08/09/2022 02:19	WG1907699
cis-1,3-Dichloropropene	U		0.000965	0.00319	1	08/09/2022 02:19	WG1907699
trans-1,3-Dichloropropene	U		0.00145	0.00638	1	08/09/2022 02:19	WG1907699
2,2-Dichloropropane	U		0.00176	0.00319	1	08/09/2022 02:19	WG1907699
Di-isopropyl ether	U		0.000523	0.00128	1	08/09/2022 02:19	WG1907699
Ethylbenzene	U		0.000940	0.00319	1	08/09/2022 02:19	WG1907699
Hexachloro-1,3-butadiene	U		0.00765	0.0319	1	08/09/2022 02:19	WG1907699
Isopropylbenzene	U		0.000542	0.00319	1	08/09/2022 02:19	WG1907699
p-Isopropyltoluene	U		0.00325	0.00638	1	08/09/2022 02:19	WG1907699
2-Butanone (MEK)	U		0.0810	0.128	1	08/09/2022 02:19	WG1907699
Methylene Chloride	U		0.00847	0.0319	1	08/09/2022 02:19	WG1907699
4-Methyl-2-pentanone (MIBK)	U		0.00291	0.0319	1	08/09/2022 02:19	WG1907699

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Methyl tert-butyl ether	U		0.000446	0.00128	1	08/09/2022 02:19	WG1907699
Naphthalene	U		0.00622	0.0159	1	08/11/2022 21:02	WG1909280
n-Propylbenzene	U		0.00121	0.00638	1	08/09/2022 02:19	WG1907699
Styrene	U		0.000292	0.0159	1	08/09/2022 02:19	WG1907699
1,1,1,2-Tetrachloroethane	U		0.00121	0.00319	1	08/09/2022 02:19	WG1907699
1,1,2,2-Tetrachloroethane	U		0.000886	0.00319	1	08/09/2022 02:19	WG1907699
1,1,2-Trichlorotrifluoroethane	U		0.000962	0.00319	1	08/09/2022 02:19	WG1907699
Tetrachloroethene	U		0.00114	0.00319	1	08/09/2022 02:19	WG1907699
Toluene	U		0.00166	0.00638	1	08/09/2022 02:19	WG1907699
1,2,3-Trichlorobenzene	U		0.00935	0.0159	1	08/09/2022 02:19	WG1907699
1,2,4-Trichlorobenzene	U		0.00561	0.0159	1	08/09/2022 02:19	WG1907699
1,1,1-Trichloroethane	U		0.00118	0.00319	1	08/09/2022 02:19	WG1907699
1,1,2-Trichloroethane	U		0.000761	0.00319	1	08/09/2022 02:19	WG1907699
Trichloroethene	U		0.000745	0.00128	1	08/09/2022 02:19	WG1907699
Trichlorofluoromethane	U		0.00105	0.00319	1	08/09/2022 02:19	WG1907699
1,2,3-Trichloropropane	U		0.00207	0.0159	1	08/09/2022 02:19	WG1907699
1,2,4-Trimethylbenzene	U		0.00202	0.00638	1	08/09/2022 02:19	WG1907699
1,2,3-Trimethylbenzene	U		0.00202	0.00638	1	08/09/2022 02:19	WG1907699
Vinyl chloride	U		0.00148	0.00319	1	08/09/2022 02:19	WG1907699
1,3,5-Trimethylbenzene	U		0.00255	0.00638	1	08/09/2022 02:19	WG1907699
Xylenes, Total	0.00172	J	0.00112	0.00829	1	08/11/2022 21:02	WG1909280
(S) Toluene-d8	*110*			*75.0-131*		*08/09/2022 02:19*	WG1907699
(S) Toluene-d8	*99.5*			*75.0-131*		*08/11/2022 21:02*	WG1909280
(S) 4-Bromofluorobenzene	*99.3*			*67.0-138*		*08/09/2022 02:19*	WG1907699
(S) 4-Bromofluorobenzene	*97.8*			*67.0-138*		*08/11/2022 21:02*	WG1909280
(S) 1,2-Dichloroethane-d4	*81.0*			*70.0-130*		*08/09/2022 02:19*	WG1907699
(S) 1,2-Dichloroethane-d4	*86.6*			*70.0-130*		*08/11/2022 21:02*	WG1909280

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	~~20.6~~	J	7.78	225 UB	1	08/09/2022 04:41	WG1907345
(S) o-Terphenyl	*95.4*			*50.0-150*		*08/09/2022 04:41*	WG1907345

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00259	0.00674	1	08/12/2022 18:56	WG1909236
Acenaphthene	U		0.00235	0.00674	1	08/12/2022 18:56	WG1909236
Acenaphthylene	U		0.00243	0.00674	1	08/12/2022 18:56	WG1909236
Benzo(a)anthracene	0.00413	J	0.00194	0.00674	1	08/12/2022 18:56	WG1909236
Benzo(a)pyrene	0.00446	J	0.00201	0.00674	1	08/12/2022 18:56	WG1909236
Benzo(b)fluoranthene	0.00527	J	0.00172	0.00674	1	08/12/2022 18:56	WG1909236
Benzo(g,h,i)perylene	0.00400	J	0.00199	0.00674	1	08/12/2022 18:56	WG1909236
Benzo(k)fluoranthene	U		0.00242	0.00674	1	08/12/2022 18:56	WG1909236
Chrysene	0.00495	J	0.00261	0.00674	1	08/12/2022 18:56	WG1909236
Dibenz(a,h)anthracene	U		0.00193	0.00674	1	08/12/2022 18:56	WG1909236
Fluoranthene	0.00817		0.00255	0.00674	1	08/12/2022 18:56	WG1909236
Fluorene	U		0.00230	0.00674	1	08/12/2022 18:56	WG1909236
Indeno(1,2,3-cd)pyrene	0.00393	J	0.00203	0.00674	1	08/12/2022 18:56	WG1909236
Naphthalene	U		0.00459	0.0225	1	08/12/2022 18:56	WG1909236
Phenanthrene	0.00418	J	0.00260	0.00674	1	08/12/2022 18:56	WG1909236
Pyrene	0.00953		0.00225	0.00674	1	08/12/2022 18:56	WG1909236
1-Methylnaphthalene	U		0.00505	0.0225	1	08/12/2022 18:56	WG1909236
2-Methylnaphthalene	U		0.00480	0.0225	1	08/12/2022 18:56	WG1909236

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2-Chloronaphthalene	U		0.00524	0.0225	1	08/12/2022 18:56	WG1909236
(S) Nitrobenzene-d5	*53.1*			*14.0-149*		*08/12/2022 18:56*	WG1909236
(S) 2-Fluorobiphenyl	*64.1*			*34.0-125*		*08/12/2022 18:56*	WG1909236
(S) p-Terphenyl-d14	*66.0*			*23.0-120*		*08/12/2022 18:56*	WG1909236

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	91.9		1	08/10/2022 08:11	WG1907557

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHGAK C6 to C10	U		2.07	5.44	2	08/10/2022 07:24	WG1908093
(S) a,a,a-Trifluorotoluene(FID)	*87.1*			*50.0-150*		*08/10/2022 07:24*	WG1908093

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0431	0.0590	1	08/09/2022 02:38	WG1907699
Acrylonitrile	U	UJ C3	0.00426	0.0147	1	08/09/2022 02:38	WG1907699
Benzene	0.00110	J	0.000551	0.00118	1	08/09/2022 02:38	WG1907699
Bromobenzene	U		0.00106	0.0147	1	08/09/2022 02:38	WG1907699
Bromodichloromethane	U		0.000855	0.00295	1	08/09/2022 02:38	WG1907699
Bromoform	U		0.00138	0.0295	1	08/09/2022 02:38	WG1907699
Bromomethane	U		0.00232	0.0147	1	08/09/2022 02:38	WG1907699
n-Butylbenzene	U		0.00619	0.0147	1	08/09/2022 02:38	WG1907699
sec-Butylbenzene	U		0.00340	0.0147	1	08/09/2022 02:38	WG1907699
tert-Butylbenzene	U		0.00230	0.00590	1	08/09/2022 02:38	WG1907699
Carbon tetrachloride	U		0.00106	0.00590	1	08/09/2022 02:38	WG1907699
Chlorobenzene	U		0.000248	0.00295	1	08/09/2022 02:38	WG1907699
Chlorodibromomethane	U		0.000722	0.00295	1	08/09/2022 02:38	WG1907699
Chloroethane	U		0.00201	0.00590	1	08/09/2022 02:38	WG1907699
Chloroform	U		0.00122	0.00295	1	08/09/2022 02:38	WG1907699
Chloromethane	U	UJ C3	0.00513	0.0147	1	08/09/2022 02:38	WG1907699
2-Chlorotoluene	U		0.00102	0.00295	1	08/09/2022 02:38	WG1907699
4-Chlorotoluene	U		0.000531	0.00590	1	08/09/2022 02:38	WG1907699
1,2-Dibromo-3-Chloropropane	U		0.00460	0.0295	1	08/09/2022 02:38	WG1907699
1,2-Dibromoethane	U		0.000765	0.00295	1	08/09/2022 02:38	WG1907699
Dibromomethane	U		0.000885	0.00590	1	08/09/2022 02:38	WG1907699
1,2-Dichlorobenzene	U		0.000501	0.00590	1	08/09/2022 02:38	WG1907699
1,3-Dichlorobenzene	U		0.000708	0.00590	1	08/09/2022 02:38	WG1907699
1,4-Dichlorobenzene	U		0.000826	0.00590	1	08/09/2022 02:38	WG1907699
Dichlorodifluoromethane	U	UJ C3	0.00190	0.00295	1	08/09/2022 02:38	WG1907699
1,1-Dichloroethane	U		0.000579	0.00295	1	08/09/2022 02:38	WG1907699
1,2-Dichloroethane	U	UJ C3	0.000766	0.00295	1	08/09/2022 02:38	WG1907699
1,1-Dichloroethene	U		0.000715	0.00295	1	08/09/2022 02:38	WG1907699
cis-1,2-Dichloroethene	U		0.000866	0.00295	1	08/09/2022 02:38	WG1907699
trans-1,2-Dichloroethene	U		0.00123	0.00590	1	08/09/2022 02:38	WG1907699
1,2-Dichloropropane	U		0.00168	0.00590	1	08/09/2022 02:38	WG1907699
1,1-Dichloropropene	U		0.000955	0.00295	1	08/09/2022 02:38	WG1907699
1,3-Dichloropropane	U		0.000591	0.00590	1	08/09/2022 02:38	WG1907699
cis-1,3-Dichloropropene	U		0.000893	0.00295	1	08/09/2022 02:38	WG1907699
trans-1,3-Dichloropropene	U		0.00135	0.00590	1	08/09/2022 02:38	WG1907699
2,2-Dichloropropane	U		0.00163	0.00295	1	08/09/2022 02:38	WG1907699
Di-isopropyl ether	U		0.000484	0.00118	1	08/09/2022 02:38	WG1907699
Ethylbenzene	0.00153	J	0.000870	0.00295	1	08/09/2022 02:38	WG1907699
Hexachloro-1,3-butadiene	U		0.00708	0.0295	1	08/09/2022 02:38	WG1907699
Isopropylbenzene	U		0.000501	0.00295	1	08/09/2022 02:38	WG1907699
p-Isopropyltoluene	U		0.00301	0.00590	1	08/09/2022 02:38	WG1907699
2-Butanone (MEK)	U		0.0749	0.118	1	08/09/2022 02:38	WG1907699
Methylene Chloride	U		0.00783	0.0295	1	08/09/2022 02:38	WG1907699
4-Methyl-2-pentanone (MIBK)	U		0.00269	0.0295	1	08/09/2022 02:38	WG1907699

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Methyl tert-butyl ether	U		0.000413	0.00118	1	08/09/2022 02:38	WG1907699
Naphthalene	U		0.00576	0.0147	1	08/09/2022 02:38	WG1907699
n-Propylbenzene	U		0.00112	0.00590	1	08/09/2022 02:38	WG1907699
Styrene	U		0.000270	0.0147	1	08/09/2022 02:38	WG1907699
1,1,1,2-Tetrachloroethane	U		0.00112	0.00295	1	08/09/2022 02:38	WG1907699
1,1,2,2-Tetrachloroethane	U		0.000820	0.00295	1	08/09/2022 02:38	WG1907699
1,1,2-Trichlorotrifluoroethane	U		0.000890	0.00295	1	08/09/2022 02:38	WG1907699
Tetrachloroethene	U		0.00106	0.00295	1	08/09/2022 02:38	WG1907699
Toluene	0.00522	J	0.00153	0.00590	1	08/09/2022 02:38	WG1907699
1,2,3-Trichlorobenzene	U		0.00865	0.0147	1	08/09/2022 02:38	WG1907699
1,2,4-Trichlorobenzene	U		0.00519	0.0147	1	08/09/2022 02:38	WG1907699
1,1,1-Trichloroethane	U		0.00109	0.00295	1	08/09/2022 02:38	WG1907699
1,1,2-Trichloroethane	U		0.000704	0.00295	1	08/09/2022 02:38	WG1907699
Trichloroethene	U		0.000689	0.00118	1	08/09/2022 02:38	WG1907699
Trichlorofluoromethane	U		0.000976	0.00295	1	08/09/2022 02:38	WG1907699
1,2,3-Trichloropropane	U		0.00191	0.0147	1	08/09/2022 02:38	WG1907699
1,2,4-Trimethylbenzene	0.00190	J	0.00186	0.00590	1	08/09/2022 02:38	WG1907699
1,2,3-Trimethylbenzene	U		0.00186	0.00590	1	08/09/2022 02:38	WG1907699
Vinyl chloride	U		0.00137	0.00295	1	08/09/2022 02:38	WG1907699
1,3,5-Trimethylbenzene	U		0.00236	0.00590	1	08/09/2022 02:38	WG1907699
Xylenes, Total	0.00504	J	0.00104	0.00767	1	08/09/2022 02:38	WG1907699
(S) Toluene-d8	*111*			*75.0-131*		*08/09/2022 02:38*	WG1907699
(S) 4-Bromofluorobenzene	*97.9*			*67.0-138*		*08/09/2022 02:38*	WG1907699
(S) 1,2-Dichloroethane-d4	*78.6*			*70.0-130*		*08/09/2022 02:38*	WG1907699

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	~~66.3~~	~~J~~	7.53	218 UB	1	08/09/2022 04:53	WG1907345
(S) o-Terphenyl	*90.4*			*50.0-150*		*08/09/2022 04:53*	WG1907345

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00250	0.00653	1	08/12/2022 19:31	WG1909236
Acenaphthene	U		0.00227	0.00653	1	08/12/2022 19:31	WG1909236
Acenaphthylene	U		0.00235	0.00653	1	08/12/2022 19:31	WG1909236
Benzo(a)anthracene	0.00259	J	0.00188	0.00653	1	08/12/2022 19:31	WG1909236
Benzo(a)pyrene	0.00366	J	0.00195	0.00653	1	08/12/2022 19:31	WG1909236
Benzo(b)fluoranthene	0.00514	J	0.00166	0.00653	1	08/12/2022 19:31	WG1909236
Benzo(g,h,i)perylene	0.00504	J	0.00193	0.00653	1	08/12/2022 19:31	WG1909236
Benzo(k)fluoranthene	U		0.00234	0.00653	1	08/12/2022 19:31	WG1909236
Chrysene	0.00363	J	0.00252	0.00653	1	08/12/2022 19:31	WG1909236
Dibenz(a,h)anthracene	U		0.00187	0.00653	1	08/12/2022 19:31	WG1909236
Fluoranthene	0.00625	J	0.00247	0.00653	1	08/12/2022 19:31	WG1909236
Fluorene	U		0.00223	0.00653	1	08/12/2022 19:31	WG1909236
Indeno(1,2,3-cd)pyrene	0.00276	J	0.00197	0.00653	1	08/12/2022 19:31	WG1909236
Naphthalene	U		0.00444	0.0218	1	08/12/2022 19:31	WG1909236
Phenanthrene	0.00371	J	0.00251	0.00653	1	08/12/2022 19:31	WG1909236
Pyrene	0.00921		0.00218	0.00653	1	08/12/2022 19:31	WG1909236
1-Methylnaphthalene	U		0.00489	0.0218	1	08/12/2022 19:31	WG1909236
2-Methylnaphthalene	U		0.00465	0.0218	1	08/12/2022 19:31	WG1909236
2-Chloronaphthalene	U		0.00507	0.0218	1	08/12/2022 19:31	WG1909236
(S) Nitrobenzene-d5	*61.1*			*14.0-149*		*08/12/2022 19:31*	WG1909236
(S) 2-Fluorobiphenyl	*58.7*			*34.0-125*		*08/12/2022 19:31*	WG1909236

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) p-Terphenyl-d14	*66.2*			*23.0-120*		*08/12/2022 19:31*	WG1909236

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	96.9		1	08/10/2022 08:11	WG1907557

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHGAK C6 to C10	U		1.96	5.16	2	08/16/2022 07:14	WG1911247
(S) a,a,a-Trifluorotoluene(FID)	*80.4*			*50.0-150*		*08/16/2022 07:14*	WG1911247

Sample Narrative:

L1522335-09 WG1911247: Lowest possible dilution due to sample foaming.

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0391	0.0536	1	08/09/2022 06:46	WG1907703
Acrylonitrile	U		0.00387	0.0134	1	08/09/2022 06:46	WG1907703
Benzene	U		0.000500	0.00107	1	08/09/2022 06:46	WG1907703
Bromobenzene	U		0.000964	0.0134	1	08/09/2022 06:46	WG1907703
Bromodichloromethane	U		0.000777	0.00268	1	08/09/2022 06:46	WG1907703
Bromoform	U		0.00125	0.0268	1	08/09/2022 06:46	WG1907703
Bromomethane	U		0.00211	0.0134	1	08/09/2022 06:46	WG1907703
n-Butylbenzene	U		0.00562	0.0134	1	08/09/2022 06:46	WG1907703
sec-Butylbenzene	U		0.00309	0.0134	1	08/09/2022 06:46	WG1907703
tert-Butylbenzene	U		0.00209	0.00536	1	08/09/2022 06:46	WG1907703
Carbon tetrachloride	U		0.000962	0.00536	1	08/09/2022 06:46	WG1907703
Chlorobenzene	U		0.000225	0.00268	1	08/09/2022 06:46	WG1907703
Chlorodibromomethane	U		0.000656	0.00268	1	08/09/2022 06:46	WG1907703
Chloroethane	U		0.00182	0.00536	1	08/09/2022 06:46	WG1907703
Chloroform	U		0.00110	0.00268	1	08/09/2022 06:46	WG1907703
Chloromethane	U		0.00466	0.0134	1	08/09/2022 06:46	WG1907703
2-Chlorotoluene	U		0.000927	0.00268	1	08/09/2022 06:46	WG1907703
4-Chlorotoluene	U		0.000482	0.00536	1	08/09/2022 06:46	WG1907703
1,2-Dibromo-3-Chloropropane	U		0.00418	0.0268	1	08/09/2022 06:46	WG1907703
1,2-Dibromoethane	U		0.000694	0.00268	1	08/09/2022 06:46	WG1907703
Dibromomethane	U		0.000803	0.00536	1	08/09/2022 06:46	WG1907703
1,2-Dichlorobenzene	U		0.000455	0.00536	1	08/09/2022 06:46	WG1907703
1,3-Dichlorobenzene	U		0.000643	0.00536	1	08/09/2022 06:46	WG1907703
1,4-Dichlorobenzene	U		0.000750	0.00536	1	08/09/2022 06:46	WG1907703
Dichlorodifluoromethane	U		0.00172	0.00268	1	08/09/2022 06:46	WG1907703
1,1-Dichloroethane	U		0.000526	0.00268	1	08/09/2022 06:46	WG1907703
1,2-Dichloroethane	U	J4	0.000695	0.00268	1	08/09/2022 06:46	WG1907703
1,1-Dichloroethene	U		0.000649	0.00268	1	08/09/2022 06:46	WG1907703
cis-1,2-Dichloroethene	U		0.000786	0.00268	1	08/09/2022 06:46	WG1907703
trans-1,2-Dichloroethene	U		0.00111	0.00536	1	08/09/2022 06:46	WG1907703
1,2-Dichloropropane	U		0.00152	0.00536	1	08/09/2022 06:46	WG1907703
1,1-Dichloropropene	U		0.000867	0.00268	1	08/09/2022 06:46	WG1907703
1,3-Dichloropropane	U		0.000537	0.00536	1	08/09/2022 06:46	WG1907703
cis-1,3-Dichloropropene	U		0.000811	0.00268	1	08/09/2022 06:46	WG1907703
trans-1,3-Dichloropropene	U		0.00122	0.00536	1	08/09/2022 06:46	WG1907703
2,2-Dichloropropane	U		0.00148	0.00268	1	08/09/2022 06:46	WG1907703
Di-isopropyl ether	U		0.000439	0.00107	1	08/09/2022 06:46	WG1907703
Ethylbenzene	U		0.000790	0.00268	1	08/09/2022 06:46	WG1907703
Hexachloro-1,3-butadiene	U		0.00643	0.0268	1	08/09/2022 06:46	WG1907703
Isopropylbenzene	U		0.000455	0.00268	1	08/09/2022 06:46	WG1907703
p-Isopropyltoluene	U		0.00273	0.00536	1	08/09/2022 06:46	WG1907703

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2-Butanone (MEK)	U		0.0680	0.107	1	08/09/2022 06:46	WG1907703
Methylene Chloride	U		0.00711	0.0268	1	08/09/2022 06:46	WG1907703
4-Methyl-2-pentanone (MIBK)	U		0.00244	0.0268	1	08/09/2022 06:46	WG1907703
Methyl tert-butyl ether	U		0.000375	0.00107	1	08/09/2022 06:46	WG1907703
Naphthalene	0.0304		0.00523	0.0134	1	08/14/2022 20:36	WG1910644
n-Propylbenzene	U		0.00102	0.00536	1	08/09/2022 06:46	WG1907703
Styrene	U		0.000245	0.0134	1	08/09/2022 06:46	WG1907703
1,1,1,2-Tetrachloroethane	U		0.00102	0.00268	1	08/09/2022 06:46	WG1907703
1,1,2,2-Tetrachloroethane	U		0.000745	0.00268	1	08/09/2022 06:46	WG1907703
1,1,2-Trichlorotrifluoroethane	U		0.000808	0.00268	1	08/09/2022 06:46	WG1907703
Tetrachloroethene	U		0.000960	0.00268	1	08/09/2022 06:46	WG1907703
Toluene	U		0.00139	0.00536	1	08/09/2022 06:46	WG1907703
1,2,3-Trichlorobenzene	U	UJ C3	0.00785	0.0134	1	08/09/2022 06:46	WG1907703
1,2,4-Trichlorobenzene	U		0.00471	0.0134	1	08/09/2022 06:46	WG1907703
1,1,1-Trichloroethane	U		0.000989	0.00268	1	08/09/2022 06:46	WG1907703
1,1,2-Trichloroethane	U		0.000640	0.00268	1	08/09/2022 06:46	WG1907703
Trichloroethene	U		0.000626	0.00107	1	08/09/2022 06:46	WG1907703
Trichlorofluoromethane	U		0.000886	0.00268	1	08/09/2022 06:46	WG1907703
1,2,3-Trichloropropane	U	J4	0.00174	0.0134	1	08/09/2022 06:46	WG1907703
1,2,4-Trimethylbenzene	U		0.00169	0.00536	1	08/09/2022 06:46	WG1907703
1,2,3-Trimethylbenzene	U		0.00169	0.00536	1	08/09/2022 06:46	WG1907703
Vinyl chloride	U		0.00124	0.00268	1	08/09/2022 06:46	WG1907703
1,3,5-Trimethylbenzene	U		0.00214	0.00536	1	08/09/2022 06:46	WG1907703
Xylenes, Total	0.00745		0.000943	0.00696	1	08/14/2022 20:36	WG1910644
(S) Toluene-d8	*102*			*75.0-131*		*08/09/2022 06:46*	WG1907703
(S) Toluene-d8	*109*			*75.0-131*		*08/14/2022 20:36*	WG1910644
(S) 4-Bromofluorobenzene	*77.2*			*67.0-138*		*08/09/2022 06:46*	WG1907703
(S) 4-Bromofluorobenzene	*104*			*67.0-138*		*08/14/2022 20:36*	WG1910644
(S) 1,2-Dichloroethane-d4	*112*			*70.0-130*		*08/09/2022 06:46*	WG1907703
(S) 1,2-Dichloroethane-d4	*87.9*			*70.0-130*		*08/14/2022 20:36*	WG1910644

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	371		7.14	206	1	08/09/2022 05:06	WG1907345
(S) o-Terphenyl	*102*			*50.0-150*		*08/09/2022 05:06*	WG1907345

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.0119	0.0310	5	08/12/2022 21:18	WG1909236
Acenaphthene	U		0.0108	0.0310	5	08/12/2022 21:18	WG1909236
Acenaphthylene	U		0.0112	0.0310	5	08/12/2022 21:18	WG1909236
Benzo(a)anthracene	U		0.00893	0.0310	5	08/12/2022 21:18	WG1909236
Benzo(a)pyrene	0.0805		0.00924	0.0310	5	08/12/2022 21:18	WG1909236
Benzo(b)fluoranthene	0.106		0.00790	0.0310	5	08/12/2022 21:18	WG1909236
Benzo(g,h,i)perylene	0.0917		0.00914	0.0310	5	08/12/2022 21:18	WG1909236
Benzo(k)fluoranthene	U		0.0110	0.0310	5	08/12/2022 21:18	WG1909236
Chrysene	0.0472		0.0120	0.0310	5	08/12/2022 21:18	WG1909236
Dibenz(a,h)anthracene	0.0346		0.00888	0.0310	5	08/12/2022 21:18	WG1909236
Fluoranthene	0.0243	J	0.0117	0.0310	5	08/12/2022 21:18	WG1909236
Fluorene	U		0.0106	0.0310	5	08/12/2022 21:18	WG1909236
Indeno(1,2,3-cd)pyrene	0.0386		0.00934	0.0310	5	08/12/2022 21:18	WG1909236
Naphthalene	0.0234	J	0.0211	0.103	5	08/12/2022 21:18	WG1909236
Phenanthrene	0.0371		0.0119	0.0310	5	08/12/2022 21:18	WG1909236

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Pyrene	0.0724		0.0103	0.0310	5	08/12/2022 21:18	WG1909236
1-Methylnaphthalene	0.0512	J	0.0232	0.103	5	08/12/2022 21:18	WG1909236
2-Methylnaphthalene	0.0714	J	0.0221	0.103	5	08/12/2022 21:18	WG1909236
2-Chloronaphthalene	U		0.0241	0.103	5	08/12/2022 21:18	WG1909236
(S) Nitrobenzene-d5	*67.4*			*14.0-149*		*08/12/2022 21:18*	WG1909236
(S) 2-Fluorobiphenyl	*74.0*			*34.0-125*		*08/12/2022 21:18*	WG1909236
(S) p-Terphenyl-d14	*70.0*			*23.0-120*		*08/12/2022 21:18*	WG1909236

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.6		1	08/10/2022 08:11	WG1907557

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHGAK C6 to C10	U		2.18	5.74	2	08/16/2022 07:40	WG1911247
(S) a,a,a-Trifluorotoluene(FID)	*80.9*			*50.0-150*		*08/16/2022 07:40*	WG1911247

Sample Narrative:

L1522335-10 WG1911247: Lowest possible dilution due to sample foaming.

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0838	0.115	2	08/09/2022 07:06	WG1907703
Acrylonitrile	U		0.00829	0.0287	2	08/09/2022 07:06	WG1907703
Benzene	U		0.00107	0.00230	2	08/09/2022 07:06	WG1907703
Bromobenzene	U		0.00207	0.0287	2	08/09/2022 07:06	WG1907703
Bromodichloromethane	U		0.00166	0.00574	2	08/09/2022 07:06	WG1907703
Bromoform	U		0.00269	0.0574	2	08/09/2022 07:06	WG1907703
Bromomethane	U		0.00452	0.0287	2	08/09/2022 07:06	WG1907703
n-Butylbenzene	U		0.0121	0.0287	2	08/09/2022 07:06	WG1907703
sec-Butylbenzene	U		0.00661	0.0287	2	08/09/2022 07:06	WG1907703
tert-Butylbenzene	U		0.00448	0.0115	2	08/09/2022 07:06	WG1907703
Carbon tetrachloride	U		0.00207	0.0115	2	08/09/2022 07:06	WG1907703
Chlorobenzene	U		0.000482	0.00574	2	08/09/2022 07:06	WG1907703
Chlorodibromomethane	U		0.00140	0.00574	2	08/09/2022 07:06	WG1907703
Chloroethane	U		0.00390	0.0115	2	08/09/2022 07:06	WG1907703
Chloroform	U		0.00236	0.00574	2	08/09/2022 07:06	WG1907703
Chloromethane	U		0.00998	0.0287	2	08/09/2022 07:06	WG1907703
2-Chlorotoluene	U		0.00199	0.00574	2	08/09/2022 07:06	WG1907703
4-Chlorotoluene	U		0.00103	0.0115	2	08/09/2022 07:06	WG1907703
1,2-Dibromo-3-Chloropropane	U		0.00895	0.0574	2	08/09/2022 07:06	WG1907703
1,2-Dibromoethane	U		0.00149	0.00574	2	08/09/2022 07:06	WG1907703
Dibromomethane	U		0.00172	0.0115	2	08/09/2022 07:06	WG1907703
1,2-Dichlorobenzene	U		0.000975	0.0115	2	08/09/2022 07:06	WG1907703
1,3-Dichlorobenzene	U		0.00138	0.0115	2	08/09/2022 07:06	WG1907703
1,4-Dichlorobenzene	U		0.00161	0.0115	2	08/09/2022 07:06	WG1907703
Dichlorodifluoromethane	U		0.00370	0.00574	2	08/09/2022 07:06	WG1907703
1,1-Dichloroethane	U		0.00113	0.00574	2	08/09/2022 07:06	WG1907703
1,2-Dichloroethane	U	J4	0.00149	0.00574	2	08/09/2022 07:06	WG1907703
1,1-Dichloroethene	U		0.00139	0.00574	2	08/09/2022 07:06	WG1907703
cis-1,2-Dichloroethene	U		0.00169	0.00574	2	08/09/2022 07:06	WG1907703
trans-1,2-Dichloroethene	U		0.00239	0.0115	2	08/09/2022 07:06	WG1907703
1,2-Dichloropropane	U		0.00326	0.0115	2	08/09/2022 07:06	WG1907703
1,1-Dichloropropene	U		0.00186	0.00574	2	08/09/2022 07:06	WG1907703
1,3-Dichloropropane	U		0.00115	0.0115	2	08/09/2022 07:06	WG1907703
cis-1,3-Dichloropropene	U		0.00173	0.00574	2	08/09/2022 07:06	WG1907703
trans-1,3-Dichloropropene	U		0.00262	0.0115	2	08/09/2022 07:06	WG1907703
2,2-Dichloropropane	U		0.00317	0.00574	2	08/09/2022 07:06	WG1907703
Di-isopropyl ether	U		0.000941	0.00230	2	08/09/2022 07:06	WG1907703
Ethylbenzene	U		0.00169	0.00574	2	08/09/2022 07:06	WG1907703
Hexachloro-1,3-butadiene	U		0.0138	0.0574	2	08/09/2022 07:06	WG1907703
Isopropylbenzene	U		0.000975	0.00574	2	08/09/2022 07:06	WG1907703
p-Isopropyltoluene	U		0.00585	0.0115	2	08/09/2022 07:06	WG1907703

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2-Butanone (MEK)	U		0.146	0.230	2	08/09/2022 07:06	WG1907703
Methylene Chloride	U		0.0153	0.0574	2	08/09/2022 07:06	WG1907703
4-Methyl-2-pentanone (MIBK)	U		0.00523	0.0574	2	08/09/2022 07:06	WG1907703
Methyl tert-butyl ether	U		0.000803	0.00230	2	08/09/2022 07:06	WG1907703
Naphthalene	0.0342 J	~~C3~~	0.0112	0.0287	2	08/09/2022 07:06	WG1907703
n-Propylbenzene	U		0.00218	0.0115	2	08/09/2022 07:06	WG1907703
Styrene	U		0.000526	0.0287	2	08/09/2022 07:06	WG1907703
1,1,1,2-Tetrachloroethane	U		0.00218	0.00574	2	08/09/2022 07:06	WG1907703
1,1,2,2-Tetrachloroethane	U		0.00160	0.00574	2	08/09/2022 07:06	WG1907703
1,1,2-Trichlorotrifluoroethane	U		0.00173	0.00574	2	08/09/2022 07:06	WG1907703
Tetrachloroethene	U		0.00205	0.00574	2	08/09/2022 07:06	WG1907703
Toluene	U		0.00298	0.0115	2	08/09/2022 07:06	WG1907703
1,2,3-Trichlorobenzene	U UJ	~~C3~~	0.0169	0.0287	2	08/09/2022 07:06	WG1907703
1,2,4-Trichlorobenzene	U		0.0101	0.0287	2	08/09/2022 07:06	WG1907703
1,1,1-Trichloroethane	U		0.00212	0.00574	2	08/09/2022 07:06	WG1907703
1,1,2-Trichloroethane	U		0.00137	0.00574	2	08/09/2022 07:06	WG1907703
Trichloroethene	U		0.00134	0.00230	2	08/09/2022 07:06	WG1907703
Trichlorofluoromethane	U		0.00189	0.00574	2	08/09/2022 07:06	WG1907703
1,2,3-Trichloropropane	U	~~J4~~	0.00372	0.0287	2	08/09/2022 07:06	WG1907703
1,2,4-Trimethylbenzene	0.0131		0.00363	0.0115	2	08/09/2022 07:06	WG1907703
1,2,3-Trimethylbenzene	0.0270		0.00363	0.0115	2	08/09/2022 07:06	WG1907703
Vinyl chloride	U		0.00266	0.00574	2	08/09/2022 07:06	WG1907703
1,3,5-Trimethylbenzene	U		0.00459	0.0115	2	08/09/2022 07:06	WG1907703
Xylenes, Total	U		0.00202	0.0149	2	08/09/2022 07:06	WG1907703
(S) Toluene-d8	*108*			*75.0-131*		*08/09/2022 07:06*	WG1907703
(S) 4-Bromofluorobenzene	*91.1*			*67.0-138*		*08/09/2022 07:06*	WG1907703
(S) 1,2-Dichloroethane-d4	*110*			*70.0-130*		*08/09/2022 07:06*	WG1907703

Sample Narrative:

L1522335-10 WG1907703: Lowest possible dilution due to sample foaming.

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	~~67.0~~	~~J~~	7.39	214 UB	1	08/09/2022 05:19	WG1907345
(S) o-Terphenyl	*99.6*			*50.0-150*		*08/09/2022 05:19*	WG1907345

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	0.00361	J	0.00246	0.00641	1	08/12/2022 21:00	WG1909236
Acenaphthene	U		0.00223	0.00641	1	08/12/2022 21:00	WG1909236
Acenaphthylene	U		0.00231	0.00641	1	08/12/2022 21:00	WG1909236
Benzo(a)anthracene	0.0158		0.00185	0.00641	1	08/12/2022 21:00	WG1909236
Benzo(a)pyrene	0.0224		0.00191	0.00641	1	08/12/2022 21:00	WG1909236
Benzo(b)fluoranthene	0.0240		0.00163	0.00641	1	08/12/2022 21:00	WG1909236
Benzo(g,h,i)perylene	0.0298		0.00189	0.00641	1	08/12/2022 21:00	WG1909236
Benzo(k)fluoranthene	0.00600	J	0.00230	0.00641	1	08/12/2022 21:00	WG1909236
Chrysene	0.0203		0.00248	0.00641	1	08/12/2022 21:00	WG1909236
Dibenz(a,h)anthracene	0.00916		0.00184	0.00641	1	08/12/2022 21:00	WG1909236
Fluoranthene	0.0341		0.00242	0.00641	1	08/12/2022 21:00	WG1909236
Fluorene	U		0.00219	0.00641	1	08/12/2022 21:00	WG1909236
Indeno(1,2,3-cd)pyrene	0.0135		0.00193	0.00641	1	08/12/2022 21:00	WG1909236
Naphthalene	U		0.00436	0.0214	1	08/12/2022 21:00	WG1909236
Phenanthrene	0.0241		0.00247	0.00641	1	08/12/2022 21:00	WG1909236

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Pyrene	0.0435		0.00214	0.00641	1	08/12/2022 21:00	WG1909236
1-Methylnaphthalene	0.00600	J	0.00480	0.0214	1	08/12/2022 21:00	WG1909236
2-Methylnaphthalene	0.00673	J	0.00456	0.0214	1	08/12/2022 21:00	WG1909236
2-Chloronaphthalene	U		0.00498	0.0214	1	08/12/2022 21:00	WG1909236
(S) Nitrobenzene-d5	*67.0*			*14.0-149*		*08/12/2022 21:00*	WG1909236
(S) 2-Fluorobiphenyl	*72.8*			*34.0-125*		*08/12/2022 21:00*	WG1909236
(S) p-Terphenyl-d14	*74.3*			*23.0-120*		*08/12/2022 21:00*	WG1909236

Laboratory Data Review Checklist

Completed By:

Bhagyashree A Fulzele

Title:

Project Chemist

Date:

September 30, 2022

Consultant Firm:

ARCADIS U.S., Inc

Laboratory Name:

Pace Analytical

Laboratory Report Number:

L1522335

Laboratory Report Date:

08/19/2022

CS Site Name:

Third Quarter 2022 Groundwater Monitoring Report

ADEC File Number:

100.38.206

Hazard Identification Number:

4314

Note: Any N/A or No box checked must have an explanation in the comments box.

1. Laboratory

   a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?

   Yes☒ No☐ N/A☐ Comments:

Yes.

   b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?

   Yes☐ No☐ N/A☒ Comments:

Not applicable.

2. Chain of Custody (CoC)

   a. CoC information completed, signed, and dated (including released/received by)?

   Yes☒ No☐ N/A☐ Comments:

Yes.

   b. Correct analyses requested?

   Yes☒ No☐ N/A☐ Comments:

Yes.

3. Laboratory Sample Receipt Documentation

   a. Sample/cooler temperature documented and within range at receipt (0° to 6° C)?

   Yes☒ No☐ N/A☐ Comments:

Yes.

   b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

   Yes☒ No☐ N/A☐ Comments:

Yes.

   c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?

   Yes☒ No☐ N/A☐ Comments:

Yes.

   d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?

   Yes☒ No☐ N/A☐ Comments:

Yes, no discrepancies.

e. Data quality or usability affected?

Comments:

Data quality/usability was not affected.

4. Case Narrative

a. Present and understandable?

Yes☒ No☐ N/A☐ Comments:

Yes.

b. Discrepancies, errors, or QC failures identified by the lab?

Yes☒ No☐ N/A☐ Comments:

Yes.

c. Were all corrective actions documented?

Yes☒ No☐ N/A☐ Comments:

Yes.

d. What is the effect on data quality/usability according to the case narrative?

Comments:

Data quality/usability was not affected.

5. Samples Results

a. Correct analyses performed/reported as requested on COC?

Yes☒ No☐ N/A☐ Comments:

Yes.

b. All applicable holding times met?

Yes☒ No☐ N/A☐ Comments:

Yes.

c. All soils reported on a dry weight basis?

Yes☒ No☐ N/A☐ Comments:

Yes.

d. Are the reported LOQs less than the Cleanup Level or the minimum required detection level for the project?

Yes☒ No☐ N/A☐ Comments:

Yes.

e. Data quality or usability affected?

Data quality/usability was not affected.

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

Yes☒ No☐ N/A☐ Comments:

Yes.

ii. All method blank results less than limit of quantitation (LOQ) or project specified objectives?

Yes☐ No☒ N/A☐ Comments:

No.

iii. If above LOQ or project specified objectives, what samples are affected?

Comments:

Method AK102: Compound AK102 DRO C10-C25 (7.95 J mg/kg) was detected below the reporting limit in method blank batch WG1907345. A blank action level was established at five times of the reported blank concentration. Compound result in sample IDs MW-24-S-0.5-1_220803, MW-23-S-0.5-1_220803, MW-23-S-4.5-5_220803, DUP-1_220803, MW-22-S-0.5-1_220803, MW-24-S-4.5-5_220803, MW-24-S-9.5-10_220803, MW-22-S-4.5-5_220803 and MW-22-S-5-5.5_220803 was qualified as non-detect (UB) at reporting limit.

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes☒ No☐ N/A☐ Comments:

Yes.

v. Data quality or usability affected?

Comments:

Method blank contamination considered as minor and would result in the non-detect of the associated data. The reported data should still consider as usable.

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)

Yes☒ No☐ N/A☐ Comments:

Yes.

ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

Yes☐ No☐ N/A☒ Comments:

Not applicable.

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

Yes☐ No☒ N/A☐ Comments:

Method SW 846 8260D: LCS recovery for compounds 1,2-dichloroethane and 1,2,3-trichloropropane were greater than the control limit in preparation batch WG1907703. Compound were non-detected in any of the associated sample; hence no other qualification of the data was required.

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? RPD reported from LCS/LCSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

Yes☒ No☐ N/A☐ Comments:

Yes.

v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

None of the samples were affected.

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes☒ No☐ N/A☐ Comments:

Yes.

vii. Data quality or usability affected? (Use comment box to explain.)

Comments:

Data quality or usability was not affected.

c. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Note: Leave blank if not required for project

i. Organics – One MS/MSD reported per matrix, analysis and 20 samples?

Yes☐ No☒ N/A☐ Comments:

MS/MSD analysis was not performed on any of the samples from this SDG.

ii. Metals/Inorganics – one MS and one MSD reported per matrix, analysis and 20 samples?

Yes☐ No☐ N/A☒ Comments:

Not applicable.

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

Yes☐ No☐ N/A☒ Comments:

Not applicable.

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? RPD reported from MS/MSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

Yes☐ No☐ N/A☒ Comments:

Not applicable.

v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

None of the samples were affected.

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes☐ No☐ N/A☒ Comments:

Not applicable.

vii. Data quality or usability affected? (Use comment box to explain.)

Comments:

Data quality or usability was not affected.

d. Surrogates – Organics Only or Isotope Dilution Analytes (IDA) – Isotope Dilution Methods Only

i. Are surrogate/IDA recoveries reported for organic analyses – field, QC and laboratory samples?

Yes☒ No☐ N/A☐ Comments:

Yes.

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)

Yes☒ No☐ N/A☐ Comments:

Yes.

iii. Do the sample results with failed surrogate/IDA recoveries have data flags? If so, are the data flags clearly defined?

Yes☐ No☐ N/A☒ Comments:

Not applicable.

iv. Data quality or usability affected?

Comments:

Data quality or usability was not affected.

e. Trip Blanks

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? (If not, enter explanation below.)

Yes☒ No☐ N/A☐ Comments:

Trip blank sample was not collected from this SDG.

ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC? (If not, a comment explaining why must be entered below)

Yes☐ No☐ N/A☒ Comments:

Not applicable.

iii. All results less than LOQ and project specified objectives?

Yes☐ No☐ N/A☒ Comments:

Not applicable.

iv. If above LOQ or project specified objectives, what samples are affected?

Comments:

None of the samples were affected.

v. Data quality or usability affected?

Comments:

Data quality or usability was not affected.

f. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

Yes☒ No☐ N/A☐ Comments:

Yes.

ii. Submitted blind to lab?

Yes☒ No☐ N/A☐ Comments:

Field duplicate DUP-1_220803 was collected from sample MW-23-S-4.5-5_220803.

iii. Precision – All relative percent differences (RPD) less than specified project objectives? (Recommended: 30% water, 50% soil)

$$\text{RPD (\%)} = \text{Absolute value of: } \frac{(R_1-R_2)}{((R_1+R_2)/2)} \times 100$$

Where R_1 = Sample Concentration
R_2 = Field Duplicate Concentration

Yes☒ No☐ N/A☐ Comments:

Yes.

iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

Comments:

Data quality or usability was not affected.

g. Decontamination or Equipment Blank (If not applicable, a comment stating why must be entered below)?

Yes☒ No☐ N/A☐ Comments:

Equipment blank sample was not collected from this SDG.

i. All results less than LOQ and project specified objectives?

Yes☐ No☐ N/A☐ Comments:

Not applicable.

ii. If above LOQ or project specified objectives, what samples are affected?

Comments:

None of the samples were affected.

iii. Data quality or usability affected?

Comments:

Data quality or usability was not affected.

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Defined and appropriate?

Yes☒ No☐ N/A☐ Comments:

Yes.

8. Additional Laboratory Data Qualification

Method SW846 8260D: Continuing calibration for compounds 1,2-dichloroethane, acrylonitrile, chloromethane and dichlorodifluoromethane exhibited a low bias recovery. Compounds result in sample IDs MW-24-S-0.5-1_220803, MW-23-S-0.5-1_220803, MW-23-S-4.5-5_220803, DUP-1_220803, MW-23-S-9.5-10_220803, MW-22-S-0.5-1_220803, MW-24-S-4.5-5_220803 and MW-24-S-9.5-10_220803 were qualified as estimated (UJ/J). Continuing calibration for compound 1,2,3-trichlorobenzene exhibited a low bias recovery. Compound result in sample ID MW-22-S-4.5-5_220803 was qualified as estimated (UJ). Continuing calibration for compounds 1,2,3-trichlorobenzene and naphthalene exhibited a low bias recovery. Compound result in sample ID MW-22-S-5-5.5_220803was qualified as estimated (UJ).

Company Name/Address:
Arcadis - Chevron - AK

880 H St.
Anchorage, AK 99501

Billing Information:
Attn: Acounts Payable
630 Plaza Dr Ste 600
Highlands Ranch, CO 80129

Pres Chk

Report to:
Erika Midkiff/Sydney Clark/Nick Wood

Email To:
Sydney.Clark@arcadis.com;Nick.Wood@arcadis.

Project Description:
309152

City/State Collected: Fairbanks, AK

Please Circle: RT MT CT ET (AKST)

Phone: 907-276-8095

Client Project #
30064227.07.42

Lab Project #
CHEVARCAK-309152

Collected by (print): C. Wojcik M. Moe

Site/Facility ID #
501 EAST 30TH AVE,

P.O. #
30043353.5134

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day X Standard

Quote #

Date Results Needed

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN
12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1523339
Table # C001
Acctnum: CHEVARCAK
Template: T213302
Prelogin: P939493
PM: 110 - Brian Ford
PB: 8/8/22
Shipped Via: FedEX 2nd Day

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	AK101 40mlAmb HCl	AK102 100ml Amb HCl	Diss Lead 6020 250mlHDPE-NoPres	EDB 8011 40mlClr-NaThio	EDB/123TCP 524LL 40mlAmb-HCl	VOCs 8260D LL 40mlAmb-HCl	Remarks	Sample # (lab only)
EB-1	Grab	GW	-	8.3.22	1520	15	X	X	X	X	X	X		-01
MW-22		GW		8.6.22	1430									-02
MW-23		GW			1117									-03
MW-24		GW			1800									-06
DUP-1		GW			—									-04

do not report EDB 524LL per Sean Parry's request-bjf 08/10/22

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS X FedEx __ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCl / MeoH TBR	
	8.8.22	0900			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 2.6 °C Bottles Received: 75	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 8/9/22 Time: 1445	Hold: Condition: NCF / OK

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Lead,Dissolved	U		0.849	2.00	1	08/13/2022 17:21	WG1908982

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TPHGAK C6 to C10	U		28.7	100	1	08/16/2022 22:14	WG1910867
(S) a,a,a-Trifluorotoluene(FID)	*88.8*			*50.0-150*		*08/16/2022 22:14*	WG1910867

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,2,3-Trichloropropane	U		0.00200	0.00500	1	08/11/2022 10:41	WG1908394
Acetone	U		11.3	25.0	1	08/14/2022 22:50	WG1910764
Acrylonitrile	U		0.671	5.00	1	08/14/2022 22:50	WG1910764
Benzene	U		0.0941	0.500	1	08/14/2022 22:50	WG1910764
Bromobenzene	U		0.118	0.500	1	08/14/2022 22:50	WG1910764
Bromodichloromethane	U		0.136	0.500	1	08/14/2022 22:50	WG1910764
Bromochloromethane	U		0.128	0.500	1	08/14/2022 22:50	WG1910764
Bromoform	U		0.129	0.500	1	08/14/2022 22:50	WG1910764
Bromomethane	U		0.605	2.50	1	08/14/2022 22:50	WG1910764
n-Butylbenzene	U		0.157	0.500	1	08/14/2022 22:50	WG1910764
sec-Butylbenzene	U		0.125	0.500	1	08/14/2022 22:50	WG1910764
tert-Butylbenzene	U		0.127	0.500	1	08/14/2022 22:50	WG1910764
Carbon disulfide	U		0.0962	0.500	1	08/14/2022 22:50	WG1910764
Carbon tetrachloride	U		0.128	0.500	1	08/14/2022 22:50	WG1910764
Chlorobenzene	U		0.117	0.500	1	08/14/2022 22:50	WG1910764
Chlorodibromomethane	U		0.140	0.500	1	08/14/2022 22:50	WG1910764
Chloroethane	U		0.192	2.50	1	08/14/2022 22:50	WG1910764
2-Chloroethyl vinyl ether	U		0.575	50.0	1	08/14/2022 22:50	WG1910764
Chloroform	U		0.111	0.500	1	08/14/2022 22:50	WG1910764
Chloromethane	U		0.960	1.25	1	08/14/2022 22:50	WG1910764
2-Chlorotoluene	U		0.106	0.500	1	08/14/2022 22:50	WG1910764
4-Chlorotoluene	U		0.114	0.500	1	08/14/2022 22:50	WG1910764
1,2-Dibromo-3-Chloropropane	U		0.276	2.50	1	08/14/2022 22:50	WG1910764
1,2-Dibromoethane	U		0.126	0.500	1	08/14/2022 22:50	WG1910764
Dibromomethane	U		0.122	0.500	1	08/14/2022 22:50	WG1910764
1,2-Dichlorobenzene	U		0.107	0.500	1	08/14/2022 22:50	WG1910764
1,3-Dichlorobenzene	U		0.299	0.500	1	08/14/2022 22:50	WG1910764
1,4-Dichlorobenzene	U		0.120	0.500	1	08/14/2022 22:50	WG1910764
Dichlorodifluoromethane	U		0.374	2.50	1	08/14/2022 22:50	WG1910764
1,1-Dichloroethane	U		0.100	0.500	1	08/14/2022 22:50	WG1910764
1,2-Dichloroethane	U		0.0819	0.500	1	08/14/2022 22:50	WG1910764
1,1-Dichloroethene	U		0.188	0.500	1	08/14/2022 22:50	WG1910764
cis-1,2-Dichloroethene	U		0.126	0.500	1	08/14/2022 22:50	WG1910764
trans-1,2-Dichloroethene	U		0.149	0.500	1	08/14/2022 22:50	WG1910764
1,2-Dichloropropane	U		0.149	0.500	1	08/14/2022 22:50	WG1910764
1,1-Dichloropropene	U		0.142	0.500	1	08/14/2022 22:50	WG1910764
1,3-Dichloropropane	U		0.109	1.00	1	08/14/2022 22:50	WG1910764
cis-1,3-Dichloropropene	U		0.111	0.500	1	08/14/2022 22:50	WG1910764
trans-1,3-Dichloropropene	U		0.118	0.500	1	08/14/2022 22:50	WG1910764
trans-1,4-Dichloro-2-butene	U		0.467	5.00	1	08/14/2022 22:50	WG1910764
2,2-Dichloropropane	U		0.161	0.500	1	08/14/2022 22:50	WG1910764
Di-isopropyl ether	U		0.105	0.500	1	08/14/2022 22:50	WG1910764
Ethylbenzene	U		0.137	0.500	1	08/14/2022 22:50	WG1910764

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Hexachloro-1,3-butadiene	U	UJ C3	0.337	1.00	1	08/14/2022 22:50	WG1910764
2-Hexanone	U		0.787	5.00	1	08/14/2022 22:50	WG1910764
n-Hexane	U		0.749	5.00	1	08/14/2022 22:50	WG1910764
Iodomethane	U		0.554	5.00	1	08/14/2022 22:50	WG1910764
Isopropylbenzene	U		0.105	0.500	1	08/14/2022 22:50	WG1910764
p-Isopropyltoluene	U		0.120	0.500	1	08/14/2022 22:50	WG1910764
2-Butanone (MEK)	U		1.19	5.00	1	08/14/2022 22:50	WG1910764
Methylene Chloride	U		0.430	2.50	1	08/14/2022 22:50	WG1910764
4-Methyl-2-pentanone (MIBK)	U		0.478	5.00	1	08/14/2022 22:50	WG1910764
Methyl tert-butyl ether	U		0.101	0.500	1	08/14/2022 22:50	WG1910764
Naphthalene	U	UJ C3	0.174	2.50	1	08/14/2022 22:50	WG1910764
n-Propylbenzene	U		0.0993	0.500	1	08/14/2022 22:50	WG1910764
Styrene	U		0.118	0.500	1	08/14/2022 22:50	WG1910764
1,1,1,2-Tetrachloroethane	U		0.147	0.500	1	08/14/2022 22:50	WG1910764
1,1,2,2-Tetrachloroethane	U		0.133	0.500	1	08/14/2022 22:50	WG1910764
1,1,2-Trichlorotrifluoroethane	U		0.180	0.500	1	08/14/2022 22:50	WG1910764
Tetrachloroethene	U		0.300	0.500	1	08/14/2022 22:50	WG1910764
Toluene	U		0.278	0.500	1	08/14/2022 22:50	WG1910764
1,2,3-Trichlorobenzene	U	UJ C4	0.164	0.500	1	08/14/2022 22:50	WG1910764
1,2,4-Trichlorobenzene	U	C4	0.481	1.00	1	08/14/2022 22:50	WG1910764
1,1,1-Trichloroethane	U		0.149	0.500	1	08/14/2022 22:50	WG1910764
1,1,2-Trichloroethane	U		0.158	0.500	1	08/14/2022 22:50	WG1910764
Trichloroethene	U		0.190	0.500	1	08/14/2022 22:50	WG1910764
Trichlorofluoromethane	U		0.160	2.50	1	08/14/2022 22:50	WG1910764
1,2,3-Trichloropropane	U		0.237	2.50	1	08/14/2022 22:50	WG1910764
1,2,4-Trimethylbenzene	U		0.322	0.500	1	08/14/2022 22:50	WG1910764
1,2,3-Trimethylbenzene	U		0.104	0.500	1	08/14/2022 22:50	WG1910764
1,3,5-Trimethylbenzene	U		0.104	0.500	1	08/14/2022 22:50	WG1910764
Vinyl acetate	U	UJ C3 J3	0.692	5.00	1	08/14/2022 22:50	WG1910764
Vinyl chloride	U		0.234	0.500	1	08/14/2022 22:50	WG1910764
Xylenes, Total	U		0.174	1.50	1	08/14/2022 22:50	WG1910764
(S) Toluene-d8	*102*			*80.0-120*		*08/14/2022 22:50*	WG1910764
(S) 4-Bromofluorobenzene	*103*			*77.0-126*		*08/14/2022 22:50*	WG1910764
(S) 1,2-Dichloroethane-d4	*105*			*70.0-130*		*08/14/2022 22:50*	WG1910764

EDB / DBCP by Method 8011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Ethylene Dibromide	U		0.00547	0.0204	1.02	08/16/2022 22:49	WG1909574

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	U		254	888	1.11	08/10/2022 21:38	WG1908113
(S) o-Terphenyl	*56.5*			*50.0-150*		*08/10/2022 21:38*	WG1908113

Sample Narrative:

L1523339-01 WG1908113: Dilution due to sample volume.

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Lead,Dissolved	U		0.849	2.00	1	08/13/2022 17:24	WG1908982

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TPHGAK C6 to C10	1370		28.7	100	1	08/16/2022 22:52	WG1910867
(S) a,a,a-Trifluorotoluene(FID)	*90.1*			*50.0-150*		*08/16/2022 22:52*	WG1910867

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,2,3-Trichloropropane	U		0.100	0.250	50	08/11/2022 11:05	WG1908394
Acetone	U		11.3	25.0	1	08/15/2022 03:01	WG1910764
Acrylonitrile	U		0.671	5.00	1	08/15/2022 03:01	WG1910764
Benzene	53.3		0.0941	0.500	1	08/15/2022 03:01	WG1910764
Bromobenzene	U		0.118	0.500	1	08/15/2022 03:01	WG1910764
Bromodichloromethane	U		0.136	0.500	1	08/15/2022 03:01	WG1910764
Bromochloromethane	U		0.128	0.500	1	08/15/2022 03:01	WG1910764
Bromoform	U		0.129	0.500	1	08/15/2022 03:01	WG1910764
Bromomethane	U		0.605	2.50	1	08/15/2022 03:01	WG1910764
n-Butylbenzene	0.952		0.157	0.500	1	08/15/2022 03:01	WG1910764
sec-Butylbenzene	2.65		0.125	0.500	1	08/15/2022 03:01	WG1910764
tert-Butylbenzene	0.478	J	0.127	0.500	1	08/15/2022 03:01	WG1910764
Carbon disulfide	U		0.0962	0.500	1	08/15/2022 03:01	WG1910764
Carbon tetrachloride	U		0.128	0.500	1	08/15/2022 03:01	WG1910764
Chlorobenzene	U		0.117	0.500	1	08/15/2022 03:01	WG1910764
Chlorodibromomethane	U		0.140	0.500	1	08/15/2022 03:01	WG1910764
Chloroethane	U		0.192	2.50	1	08/15/2022 03:01	WG1910764
2-Chloroethyl vinyl ether	U		0.575	50.0	1	08/15/2022 03:01	WG1910764
Chloroform	U		0.111	0.500	1	08/15/2022 03:01	WG1910764
Chloromethane	U		0.960	1.25	1	08/15/2022 03:01	WG1910764
2-Chlorotoluene	U		0.106	0.500	1	08/15/2022 03:01	WG1910764
4-Chlorotoluene	U		0.114	0.500	1	08/15/2022 03:01	WG1910764
1,2-Dibromo-3-Chloropropane	U		0.276	2.50	1	08/15/2022 03:01	WG1910764
1,2-Dibromoethane	U		0.126	0.500	1	08/15/2022 03:01	WG1910764
Dibromomethane	U		0.122	0.500	1	08/15/2022 03:01	WG1910764
1,2-Dichlorobenzene	U		0.107	0.500	1	08/15/2022 03:01	WG1910764
1,3-Dichlorobenzene	U		0.299	0.500	1	08/15/2022 03:01	WG1910764
1,4-Dichlorobenzene	U		0.120	0.500	1	08/15/2022 03:01	WG1910764
Dichlorodifluoromethane	U		0.374	2.50	1	08/15/2022 03:01	WG1910764
1,1-Dichloroethane	U		0.100	0.500	1	08/15/2022 03:01	WG1910764
1,2-Dichloroethane	U		0.0819	0.500	1	08/15/2022 03:01	WG1910764
1,1-Dichloroethene	U		0.188	0.500	1	08/15/2022 03:01	WG1910764
cis-1,2-Dichloroethene	U		0.126	0.500	1	08/15/2022 03:01	WG1910764
trans-1,2-Dichloroethene	U		0.149	0.500	1	08/15/2022 03:01	WG1910764
1,2-Dichloropropane	U		0.149	0.500	1	08/15/2022 03:01	WG1910764
1,1-Dichloropropene	U		0.142	0.500	1	08/15/2022 03:01	WG1910764
1,3-Dichloropropane	U		0.109	1.00	1	08/15/2022 03:01	WG1910764
cis-1,3-Dichloropropene	U		0.111	0.500	1	08/15/2022 03:01	WG1910764
trans-1,3-Dichloropropene	U		0.118	0.500	1	08/15/2022 03:01	WG1910764
trans-1,4-Dichloro-2-butene	U		0.467	5.00	1	08/15/2022 03:01	WG1910764
2,2-Dichloropropane	U		0.161	0.500	1	08/15/2022 03:01	WG1910764
Di-isopropyl ether	U		0.105	0.500	1	08/15/2022 03:01	WG1910764
Ethylbenzene	17.1		0.137	0.500	1	08/15/2022 03:01	WG1910764

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Hexachloro-1,3-butadiene	U UJ	~~C3~~	0.337	1.00	1	08/15/2022 03:01	WG1910764
2-Hexanone	U		0.787	5.00	1	08/15/2022 03:01	WG1910764
n-Hexane	6.75		0.749	5.00	1	08/15/2022 03:01	WG1910764
Iodomethane	U		0.554	5.00	1	08/15/2022 03:01	WG1910764
Isopropylbenzene	6.78		0.105	0.500	1	08/15/2022 03:01	WG1910764
p-Isopropyltoluene	U		0.120	0.500	1	08/15/2022 03:01	WG1910764
2-Butanone (MEK)	U		1.19	5.00	1	08/15/2022 03:01	WG1910764
Methylene Chloride	U		0.430	2.50	1	08/15/2022 03:01	WG1910764
4-Methyl-2-pentanone (MIBK)	U		0.478	5.00	1	08/15/2022 03:01	WG1910764
Methyl tert-butyl ether	U		0.101	0.500	1	08/15/2022 03:01	WG1910764
Naphthalene	35.1 J	~~C3~~	0.174	2.50	1	08/15/2022 03:01	WG1910764
n-Propylbenzene	11.7		0.0993	0.500	1	08/15/2022 03:01	WG1910764
Styrene	U		0.118	0.500	1	08/15/2022 03:01	WG1910764
1,1,1,2-Tetrachloroethane	U		0.147	0.500	1	08/15/2022 03:01	WG1910764
1,1,2,2-Tetrachloroethane	U		0.133	0.500	1	08/15/2022 03:01	WG1910764
1,1,2-Trichlorotrifluoroethane	U		0.180	0.500	1	08/15/2022 03:01	WG1910764
Tetrachloroethene	U		0.300	0.500	1	08/15/2022 03:01	WG1910764
Toluene	0.422	J	0.278	0.500	1	08/15/2022 03:01	WG1910764
1,2,3-Trichlorobenzene	U UJ	~~C4~~	0.164	0.500	1	08/15/2022 03:01	WG1910764
1,2,4-Trichlorobenzene	U	~~C4~~	0.481	1.00	1	08/15/2022 03:01	WG1910764
1,1,1-Trichloroethane	U		0.149	0.500	1	08/15/2022 03:01	WG1910764
1,1,2-Trichloroethane	U		0.158	0.500	1	08/15/2022 03:01	WG1910764
Trichloroethene	U		0.190	0.500	1	08/15/2022 03:01	WG1910764
Trichlorofluoromethane	U		0.160	2.50	1	08/15/2022 03:01	WG1910764
1,2,3-Trichloropropane	U		0.237	2.50	1	08/15/2022 03:01	WG1910764
1,2,4-Trimethylbenzene	102		0.322	0.500	1	08/15/2022 03:01	WG1910764
1,2,3-Trimethylbenzene	44.3		0.104	0.500	1	08/15/2022 03:01	WG1910764
1,3,5-Trimethylbenzene	27.9		0.104	0.500	1	08/15/2022 03:01	WG1910764
Vinyl acetate	U UJ	~~C3 J3~~	0.692	5.00	1	08/15/2022 03:01	WG1910764
Vinyl chloride	U		0.234	0.500	1	08/15/2022 03:01	WG1910764
Xylenes, Total	595		1.74	15.0	10	08/17/2022 03:25	WG1911477
(S) Toluene-d8	*100*			*80.0-120*		*08/15/2022 03:01*	WG1910764
(S) Toluene-d8	*99.2*			*80.0-120*		*08/17/2022 03:25*	WG1911477
(S) 4-Bromofluorobenzene	*102*			*77.0-126*		*08/15/2022 03:01*	WG1910764
(S) 4-Bromofluorobenzene	*99.3*			*77.0-126*		*08/17/2022 03:25*	WG1911477
(S) 1,2-Dichloroethane-d4	*105*			*70.0-130*		*08/15/2022 03:01*	WG1910764
(S) 1,2-Dichloroethane-d4	*108*			*70.0-130*		*08/17/2022 03:25*	WG1911477

Sample Narrative:

L1523339-02 WG1908394: Non-target compounds too high to run at a lower dilution.

EDB / DBCP by Method 8011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Ethylene Dibromide	U	~~J4~~	0.00552	0.0206	1.03	08/16/2022 20:04	WG1911861

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
AK102 DRO C10-C25	3850		229	800	1	08/10/2022 22:00	WG1908113
(S) o-Terphenyl	*58.4*			*50.0-150*		*08/10/2022 22:00*	WG1908113

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Lead,Dissolved	U		0.849	2.00	1	08/13/2022 17:27	WG1908982

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TPHGAK C6 to C10	2200		28.7	100	1	08/16/2022 23:42	WG1910867
(S) a,a,a-Trifluorotoluene(FID)	*92.1*			*50.0-150*		*08/16/2022 23:42*	WG1910867

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,2,3-Trichloropropane	U		0.100	0.250	50	08/11/2022 11:29	WG1908394
Acetone	U		11.3	25.0	1	08/15/2022 03:21	WG1910764
Acrylonitrile	U		0.671	5.00	1	08/15/2022 03:21	WG1910764
Benzene	80.0		0.0941	0.500	1	08/15/2022 03:21	WG1910764
Bromobenzene	U		0.118	0.500	1	08/15/2022 03:21	WG1910764
Bromodichloromethane	U		0.136	0.500	1	08/15/2022 03:21	WG1910764
Bromochloromethane	U		0.128	0.500	1	08/15/2022 03:21	WG1910764
Bromoform	U		0.129	0.500	1	08/15/2022 03:21	WG1910764
Bromomethane	U		0.605	2.50	1	08/15/2022 03:21	WG1910764
n-Butylbenzene	U		0.157	0.500	1	08/15/2022 03:21	WG1910764
sec-Butylbenzene	1.98		0.125	0.500	1	08/15/2022 03:21	WG1910764
tert-Butylbenzene	0.654		0.127	0.500	1	08/15/2022 03:21	WG1910764
Carbon disulfide	U		0.0962	0.500	1	08/15/2022 03:21	WG1910764
Carbon tetrachloride	U		0.128	0.500	1	08/15/2022 03:21	WG1910764
Chlorobenzene	U		0.117	0.500	1	08/15/2022 03:21	WG1910764
Chlorodibromomethane	U		0.140	0.500	1	08/15/2022 03:21	WG1910764
Chloroethane	U		0.192	2.50	1	08/15/2022 03:21	WG1910764
2-Chloroethyl vinyl ether	U		0.575	50.0	1	08/15/2022 03:21	WG1910764
Chloroform	U		0.111	0.500	1	08/15/2022 03:21	WG1910764
Chloromethane	U		0.960	1.25	1	08/15/2022 03:21	WG1910764
2-Chlorotoluene	U		0.106	0.500	1	08/15/2022 03:21	WG1910764
4-Chlorotoluene	U		0.114	0.500	1	08/15/2022 03:21	WG1910764
1,2-Dibromo-3-Chloropropane	U		0.276	2.50	1	08/15/2022 03:21	WG1910764
1,2-Dibromoethane	U		0.126	0.500	1	08/15/2022 03:21	WG1910764
Dibromomethane	U		0.122	0.500	1	08/15/2022 03:21	WG1910764
1,2-Dichlorobenzene	U		0.107	0.500	1	08/15/2022 03:21	WG1910764
1,3-Dichlorobenzene	U		0.299	0.500	1	08/15/2022 03:21	WG1910764
1,4-Dichlorobenzene	U		0.120	0.500	1	08/15/2022 03:21	WG1910764
Dichlorodifluoromethane	U		0.374	2.50	1	08/15/2022 03:21	WG1910764
1,1-Dichloroethane	U		0.100	0.500	1	08/15/2022 03:21	WG1910764
1,2-Dichloroethane	0.958		0.0819	0.500	1	08/15/2022 03:21	WG1910764
1,1-Dichloroethene	U		0.188	0.500	1	08/15/2022 03:21	WG1910764
cis-1,2-Dichloroethene	U		0.126	0.500	1	08/15/2022 03:21	WG1910764
trans-1,2-Dichloroethene	U		0.149	0.500	1	08/15/2022 03:21	WG1910764
1,2-Dichloropropane	U		0.149	0.500	1	08/15/2022 03:21	WG1910764
1,1-Dichloropropene	U		0.142	0.500	1	08/15/2022 03:21	WG1910764
1,3-Dichloropropane	U		0.109	1.00	1	08/15/2022 03:21	WG1910764
cis-1,3-Dichloropropene	U		0.111	0.500	1	08/15/2022 03:21	WG1910764
trans-1,3-Dichloropropene	U		0.118	0.500	1	08/15/2022 03:21	WG1910764
trans-1,4-Dichloro-2-butene	U		0.467	5.00	1	08/15/2022 03:21	WG1910764
2,2-Dichloropropane	U		0.161	0.500	1	08/15/2022 03:21	WG1910764
Di-isopropyl ether	U		0.105	0.500	1	08/15/2022 03:21	WG1910764
Ethylbenzene	4.39		0.137	0.500	1	08/15/2022 03:21	WG1910764

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Hexachloro-1,3-butadiene	U UJ	~~C3~~	0.337	1.00	1	08/15/2022 03:21	WG1910764
2-Hexanone	U		0.787	5.00	1	08/15/2022 03:21	WG1910764
n-Hexane	4.35	J	0.749	5.00	1	08/15/2022 03:21	WG1910764
Iodomethane	U		0.554	5.00	1	08/15/2022 03:21	WG1910764
Isopropylbenzene	6.54		0.105	0.500	1	08/15/2022 03:21	WG1910764
p-Isopropyltoluene	U		0.120	0.500	1	08/15/2022 03:21	WG1910764
2-Butanone (MEK)	U		1.19	5.00	1	08/15/2022 03:21	WG1910764
Methylene Chloride	U		0.430	2.50	1	08/15/2022 03:21	WG1910764
4-Methyl-2-pentanone (MIBK)	U		0.478	5.00	1	08/15/2022 03:21	WG1910764
Methyl tert-butyl ether	0.309	J	0.101	0.500	1	08/15/2022 03:21	WG1910764
Naphthalene	4.68 J	~~C3~~	0.174	2.50	1	08/15/2022 03:21	WG1910764
n-Propylbenzene	4.75		0.0993	0.500	1	08/15/2022 03:21	WG1910764
Styrene	U		0.118	0.500	1	08/15/2022 03:21	WG1910764
1,1,1,2-Tetrachloroethane	U		0.147	0.500	1	08/15/2022 03:21	WG1910764
1,1,2,2-Tetrachloroethane	U		0.133	0.500	1	08/15/2022 03:21	WG1910764
1,1,2-Trichlorotrifluoroethane	U		0.180	0.500	1	08/15/2022 03:21	WG1910764
Tetrachloroethene	U		0.300	0.500	1	08/15/2022 03:21	WG1910764
Toluene	0.764		0.278	0.500	1	08/15/2022 03:21	WG1910764
1,2,3-Trichlorobenzene	U UJ	~~C4~~	0.164	0.500	1	08/15/2022 03:21	WG1910764
1,2,4-Trichlorobenzene	U	~~C4~~	0.481	1.00	1	08/15/2022 03:21	WG1910764
1,1,1-Trichloroethane	U		0.149	0.500	1	08/15/2022 03:21	WG1910764
1,1,2-Trichloroethane	U		0.158	0.500	1	08/15/2022 03:21	WG1910764
Trichloroethene	U		0.190	0.500	1	08/15/2022 03:21	WG1910764
Trichlorofluoromethane	U		0.160	2.50	1	08/15/2022 03:21	WG1910764
1,2,3-Trichloropropane	U		0.237	2.50	1	08/15/2022 03:21	WG1910764
1,2,4-Trimethylbenzene	103		0.322	0.500	1	08/15/2022 03:21	WG1910764
1,2,3-Trimethylbenzene	58.7		0.104	0.500	1	08/15/2022 03:21	WG1910764
1,3,5-Trimethylbenzene	28.7		0.104	0.500	1	08/15/2022 03:21	WG1910764
Vinyl acetate	U UJ	~~C3 J3~~	0.692	5.00	1	08/15/2022 03:21	WG1910764
Vinyl chloride	U		0.234	0.500	1	08/15/2022 03:21	WG1910764
Xylenes, Total	1070		1.74	15.0	10	08/17/2022 03:45	WG1911477
(S) Toluene-d8	*99.2*			*80.0-120*		*08/15/2022 03:21*	WG1910764
(S) Toluene-d8	*98.3*			*80.0-120*		*08/17/2022 03:45*	WG1911477
(S) 4-Bromofluorobenzene	*101*			*77.0-126*		*08/15/2022 03:21*	WG1910764
(S) 4-Bromofluorobenzene	*98.3*			*77.0-126*		*08/17/2022 03:45*	WG1911477
(S) 1,2-Dichloroethane-d4	*105*			*70.0-130*		*08/15/2022 03:21*	WG1910764
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*		*08/17/2022 03:45*	WG1911477

Sample Narrative:

L1523339-03 WG1908394: Non-target compounds too high to run at a lower dilution.

EDB / DBCP by Method 8011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Ethylene Dibromide	U	J4	0.00552	0.0206	1.03	08/16/2022 20:16	WG1911861

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
AK102 DRO C10-C25	2460		229	800	1	08/10/2022 22:23	WG1908113
(S) o-Terphenyl	*52.4*			*50.0-150*		*08/10/2022 22:23*	WG1908113

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Lead,Dissolved	U		0.849	2.00	1	08/13/2022 17:30	WG1908982

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TPHGAK C6 to C10	1990		287	1000	10	08/17/2022 00:08	WG1910867
(S) a,a,a-Trifluorotoluene(FID)	*85.0*			*50.0-150*		*08/17/2022 00:08*	WG1910867

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,2,3-Trichloropropane	U		0.100	0.250	50	08/11/2022 11:53	WG1908394
Acetone	U		113	250	10	08/15/2022 07:10	WG1910764
Acrylonitrile	U		6.71	50.0	10	08/15/2022 07:10	WG1910764
Benzene	75.8		0.941	5.00	10	08/15/2022 07:10	WG1910764
Bromobenzene	U		1.18	5.00	10	08/15/2022 07:10	WG1910764
Bromodichloromethane	U		1.36	5.00	10	08/15/2022 07:10	WG1910764
Bromochloromethane	U		1.28	5.00	10	08/15/2022 07:10	WG1910764
Bromoform	U		1.29	5.00	10	08/15/2022 07:10	WG1910764
Bromomethane	U		6.05	25.0	10	08/15/2022 07:10	WG1910764
n-Butylbenzene	U		1.57	5.00	10	08/15/2022 07:10	WG1910764
sec-Butylbenzene	2.25	J	1.25	5.00	10	08/15/2022 07:10	WG1910764
tert-Butylbenzene	U		1.27	5.00	10	08/15/2022 07:10	WG1910764
Carbon disulfide	U		0.962	5.00	10	08/15/2022 07:10	WG1910764
Carbon tetrachloride	U		1.28	5.00	10	08/15/2022 07:10	WG1910764
Chlorobenzene	U		1.17	5.00	10	08/15/2022 07:10	WG1910764
Chlorodibromomethane	U		1.40	5.00	10	08/15/2022 07:10	WG1910764
Chloroethane	U		1.92	25.0	10	08/15/2022 07:10	WG1910764
2-Chloroethyl vinyl ether	U		5.75	500	10	08/15/2022 07:10	WG1910764
Chloroform	U		1.11	5.00	10	08/15/2022 07:10	WG1910764
Chloromethane	U		9.60	12.5	10	08/15/2022 07:10	WG1910764
2-Chlorotoluene	U		1.06	5.00	10	08/15/2022 07:10	WG1910764
4-Chlorotoluene	U		1.14	5.00	10	08/15/2022 07:10	WG1910764
1,2-Dibromo-3-Chloropropane	U		2.76	25.0	10	08/15/2022 07:10	WG1910764
1,2-Dibromoethane	U		1.26	5.00	10	08/15/2022 07:10	WG1910764
Dibromomethane	U		1.22	5.00	10	08/15/2022 07:10	WG1910764
1,2-Dichlorobenzene	U		1.07	5.00	10	08/15/2022 07:10	WG1910764
1,3-Dichlorobenzene	U		2.99	5.00	10	08/15/2022 07:10	WG1910764
1,4-Dichlorobenzene	U		1.20	5.00	10	08/15/2022 07:10	WG1910764
Dichlorodifluoromethane	U		3.74	25.0	10	08/15/2022 07:10	WG1910764
1,1-Dichloroethane	U		1.00	5.00	10	08/15/2022 07:10	WG1910764
1,2-Dichloroethane	U		0.819	5.00	10	08/15/2022 07:10	WG1910764
1,1-Dichloroethene	U		1.88	5.00	10	08/15/2022 07:10	WG1910764
cis-1,2-Dichloroethene	U		1.26	5.00	10	08/15/2022 07:10	WG1910764
trans-1,2-Dichloroethene	U		1.49	5.00	10	08/15/2022 07:10	WG1910764
1,2-Dichloropropane	U		1.49	5.00	10	08/15/2022 07:10	WG1910764
1,1-Dichloropropene	U		1.42	5.00	10	08/15/2022 07:10	WG1910764
1,3-Dichloropropane	U		1.09	10.0	10	08/15/2022 07:10	WG1910764
cis-1,3-Dichloropropene	U		1.11	5.00	10	08/15/2022 07:10	WG1910764
trans-1,3-Dichloropropene	U		1.18	5.00	10	08/15/2022 07:10	WG1910764
trans-1,4-Dichloro-2-butene	U		4.67	50.0	10	08/15/2022 07:10	WG1910764
2,2-Dichloropropane	U		1.61	5.00	10	08/15/2022 07:10	WG1910764
Di-isopropyl ether	U		1.05	5.00	10	08/15/2022 07:10	WG1910764
Ethylbenzene	3.82	J	1.37	5.00	10	08/15/2022 07:10	WG1910764

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result		Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l			ug/l	ug/l		date / time	
Hexachloro-1,3-butadiene	U	UJ	~~C3~~	3.37	10.0	10	08/15/2022 07:10	WG1910764
2-Hexanone	U			7.87	50.0	10	08/15/2022 07:10	WG1910764
n-Hexane	U			7.49	50.0	10	08/15/2022 07:10	WG1910764
Iodomethane	U			5.54	50.0	10	08/15/2022 07:10	WG1910764
Isopropylbenzene	6.40			1.05	5.00	10	08/15/2022 07:10	WG1910764
p-Isopropyltoluene	U			1.20	5.00	10	08/15/2022 07:10	WG1910764
2-Butanone (MEK)	U			11.9	50.0	10	08/15/2022 07:10	WG1910764
Methylene Chloride	U			4.30	25.0	10	08/15/2022 07:10	WG1910764
4-Methyl-2-pentanone (MIBK)	U			4.78	50.0	10	08/15/2022 07:10	WG1910764
Methyl tert-butyl ether	U			1.01	5.00	10	08/15/2022 07:10	WG1910764
Naphthalene	2.61	J	~~C3 J~~	1.74	25.0	10	08/15/2022 07:10	WG1910764
n-Propylbenzene	4.75		J	0.993	5.00	10	08/15/2022 07:10	WG1910764
Styrene	U			1.18	5.00	10	08/15/2022 07:10	WG1910764
1,1,1,2-Tetrachloroethane	U			1.47	5.00	10	08/15/2022 07:10	WG1910764
1,1,2,2-Tetrachloroethane	U			1.33	5.00	10	08/15/2022 07:10	WG1910764
1,1,2-Trichlorotrifluoroethane	U			1.80	5.00	10	08/15/2022 07:10	WG1910764
Tetrachloroethene	U			3.00	5.00	10	08/15/2022 07:10	WG1910764
Toluene	U			2.78	5.00	10	08/15/2022 07:10	WG1910764
1,2,3-Trichlorobenzene	U	UJ	~~C4~~	1.64	5.00	10	08/15/2022 07:10	WG1910764
1,2,4-Trichlorobenzene	U		~~C4~~	4.81	10.0	10	08/15/2022 07:10	WG1910764
1,1,1-Trichloroethane	U			1.49	5.00	10	08/15/2022 07:10	WG1910764
1,1,2-Trichloroethane	U			1.58	5.00	10	08/15/2022 07:10	WG1910764
Trichloroethene	U			1.90	5.00	10	08/15/2022 07:10	WG1910764
Trichlorofluoromethane	U			1.60	25.0	10	08/15/2022 07:10	WG1910764
1,2,3-Trichloropropane	U			2.37	25.0	10	08/15/2022 07:10	WG1910764
1,2,4-Trimethylbenzene	100			3.22	5.00	10	08/15/2022 07:10	WG1910764
1,2,3-Trimethylbenzene	56.7			1.04	5.00	10	08/15/2022 07:10	WG1910764
1,3,5-Trimethylbenzene	27.7			1.04	5.00	10	08/15/2022 07:10	WG1910764
Vinyl acetate	U	UJ	~~C3 J3~~	6.92	50.0	10	08/15/2022 07:10	WG1910764
Vinyl chloride	U			2.34	5.00	10	08/15/2022 07:10	WG1910764
Xylenes, Total	1050			1.74	15.0	10	08/15/2022 07:10	WG1910764
(S) Toluene-d8	*101*				*80.0-120*		*08/15/2022 07:10*	WG1910764
(S) 4-Bromofluorobenzene	*103*				*77.0-126*		*08/15/2022 07:10*	WG1910764
(S) 1,2-Dichloroethane-d4	*105*				*70.0-130*		*08/15/2022 07:10*	WG1910764

Sample Narrative:

L1523339-04 WG1908394: Non-target compounds too high to run at a lower dilution.

EDB / DBCP by Method 8011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Ethylene Dibromide	U		0.00547	0.0204	1.02	08/16/2022 21:05	WG1911861

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
AK102 DRO C10-C25	2380		229	800	1	08/10/2022 22:46	WG1908113
(S) o-Terphenyl	*63.1*			*50.0-150*		*08/10/2022 22:46*	WG1908113

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Lead,Dissolved	U		0.849	2.00	1	08/13/2022 17:34	WG1908982

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TPHGAK C6 to C10	1050		287	1000	10	08/17/2022 02:11	WG1910867
(S) a,a,a-Trifluorotoluene(FID)	*84.3*			*50.0-150*		*08/17/2022 02:11*	WG1910867

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,2,3-Trichloropropane	U		0.100	0.250	50	08/11/2022 12:17	WG1908394
Acetone	U		113	250	10	08/15/2022 07:30	WG1910764
Acrylonitrile	U		6.71	50.0	10	08/15/2022 07:30	WG1910764
Benzene	12.0		0.941	5.00	10	08/15/2022 07:30	WG1910764
Bromobenzene	U		1.18	5.00	10	08/15/2022 07:30	WG1910764
Bromodichloromethane	U		1.36	5.00	10	08/15/2022 07:30	WG1910764
Bromochloromethane	U		1.28	5.00	10	08/15/2022 07:30	WG1910764
Bromoform	U		1.29	5.00	10	08/15/2022 07:30	WG1910764
Bromomethane	U		6.05	25.0	10	08/15/2022 07:30	WG1910764
n-Butylbenzene	U		1.57	5.00	10	08/15/2022 07:30	WG1910764
sec-Butylbenzene	2.13	J	1.25	5.00	10	08/15/2022 07:30	WG1910764
tert-Butylbenzene	U		1.27	5.00	10	08/15/2022 07:30	WG1910764
Carbon disulfide	U		0.962	5.00	10	08/15/2022 07:30	WG1910764
Carbon tetrachloride	U		1.28	5.00	10	08/15/2022 07:30	WG1910764
Chlorobenzene	U		1.17	5.00	10	08/15/2022 07:30	WG1910764
Chlorodibromomethane	U		1.40	5.00	10	08/15/2022 07:30	WG1910764
Chloroethane	U		1.92	25.0	10	08/15/2022 07:30	WG1910764
2-Chloroethyl vinyl ether	U		5.75	500	10	08/15/2022 07:30	WG1910764
Chloroform	U		1.11	5.00	10	08/15/2022 07:30	WG1910764
Chloromethane	U		9.60	12.5	10	08/15/2022 07:30	WG1910764
2-Chlorotoluene	U		1.06	5.00	10	08/15/2022 07:30	WG1910764
4-Chlorotoluene	U		1.14	5.00	10	08/15/2022 07:30	WG1910764
1,2-Dibromo-3-Chloropropane	U		2.76	25.0	10	08/15/2022 07:30	WG1910764
1,2-Dibromoethane	U		1.26	5.00	10	08/15/2022 07:30	WG1910764
Dibromomethane	U		1.22	5.00	10	08/15/2022 07:30	WG1910764
1,2-Dichlorobenzene	U		1.07	5.00	10	08/15/2022 07:30	WG1910764
1,3-Dichlorobenzene	U		2.99	5.00	10	08/15/2022 07:30	WG1910764
1,4-Dichlorobenzene	U		1.20	5.00	10	08/15/2022 07:30	WG1910764
Dichlorodifluoromethane	U		3.74	25.0	10	08/15/2022 07:30	WG1910764
1,1-Dichloroethane	U		1.00	5.00	10	08/15/2022 07:30	WG1910764
1,2-Dichloroethane	U		0.819	5.00	10	08/15/2022 07:30	WG1910764
1,1-Dichloroethene	U		1.88	5.00	10	08/15/2022 07:30	WG1910764
cis-1,2-Dichloroethene	U		1.26	5.00	10	08/15/2022 07:30	WG1910764
trans-1,2-Dichloroethene	U		1.49	5.00	10	08/15/2022 07:30	WG1910764
1,2-Dichloropropane	U		1.49	5.00	10	08/15/2022 07:30	WG1910764
1,1-Dichloropropene	U		1.42	5.00	10	08/15/2022 07:30	WG1910764
1,3-Dichloropropane	U		1.09	10.0	10	08/15/2022 07:30	WG1910764
cis-1,3-Dichloropropene	U		1.11	5.00	10	08/15/2022 07:30	WG1910764
trans-1,3-Dichloropropene	U		1.18	5.00	10	08/15/2022 07:30	WG1910764
trans-1,4-Dichloro-2-butene	U		4.67	50.0	10	08/15/2022 07:30	WG1910764
2,2-Dichloropropane	U		1.61	5.00	10	08/15/2022 07:30	WG1910764
Di-isopropyl ether	U		1.05	5.00	10	08/15/2022 07:30	WG1910764
Ethylbenzene	5.23		1.37	5.00	10	08/15/2022 07:30	WG1910764

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Hexachloro-1,3-butadiene	U UJ	~~C3~~	3.37	10.0	10	08/15/2022 07:30	WG1910764
2-Hexanone	U		7.87	50.0	10	08/15/2022 07:30	WG1910764
n-Hexane	U		7.49	50.0	10	08/15/2022 07:30	WG1910764
Iodomethane	U		5.54	50.0	10	08/15/2022 07:30	WG1910764
Isopropylbenzene	4.18	J	1.05	5.00	10	08/15/2022 07:30	WG1910764
p-Isopropyltoluene	2.50	J	1.20	5.00	10	08/15/2022 07:30	WG1910764
2-Butanone (MEK)	U		11.9	50.0	10	08/15/2022 07:30	WG1910764
Methylene Chloride	U		4.30	25.0	10	08/15/2022 07:30	WG1910764
4-Methyl-2-pentanone (MIBK)	U		4.78	50.0	10	08/15/2022 07:30	WG1910764
Methyl tert-butyl ether	U		1.01	5.00	10	08/15/2022 07:30	WG1910764
Naphthalene	18.8 J	~~C3 J~~	1.74	25.0	10	08/15/2022 07:30	WG1910764
n-Propylbenzene	5.40		0.993	5.00	10	08/15/2022 07:30	WG1910764
Styrene	U		1.18	5.00	10	08/15/2022 07:30	WG1910764
1,1,1,2-Tetrachloroethane	U		1.47	5.00	10	08/15/2022 07:30	WG1910764
1,1,2,2-Tetrachloroethane	U		1.33	5.00	10	08/15/2022 07:30	WG1910764
1,1,2-Trichlorotrifluoroethane	U		1.80	5.00	10	08/15/2022 07:30	WG1910764
Tetrachloroethene	U		3.00	5.00	10	08/15/2022 07:30	WG1910764
Toluene	U		2.78	5.00	10	08/15/2022 07:30	WG1910764
1,2,3-Trichlorobenzene	U UJ	~~C4~~	1.64	5.00	10	08/15/2022 07:30	WG1910764
1,2,4-Trichlorobenzene	U	~~C4~~	4.81	10.0	10	08/15/2022 07:30	WG1910764
1,1,1-Trichloroethane	U		1.49	5.00	10	08/15/2022 07:30	WG1910764
1,1,2-Trichloroethane	U		1.58	5.00	10	08/15/2022 07:30	WG1910764
Trichloroethene	U		1.90	5.00	10	08/15/2022 07:30	WG1910764
Trichlorofluoromethane	U		1.60	25.0	10	08/15/2022 07:30	WG1910764
1,2,3-Trichloropropane	U		2.37	25.0	10	08/15/2022 07:30	WG1910764
1,2,4-Trimethylbenzene	63.4		3.22	5.00	10	08/15/2022 07:30	WG1910764
1,2,3-Trimethylbenzene	32.6		1.04	5.00	10	08/15/2022 07:30	WG1910764
1,3,5-Trimethylbenzene	15.8		1.04	5.00	10	08/15/2022 07:30	WG1910764
Vinyl acetate	U UJ	~~C3 J3~~	6.92	50.0	10	08/15/2022 07:30	WG1910764
Vinyl chloride	U		2.34	5.00	10	08/15/2022 07:30	WG1910764
Xylenes, Total	268		1.74	15.0	10	08/15/2022 07:30	WG1910764
(S) Toluene-d8	*101*			*80.0-120*		*08/15/2022 07:30*	WG1910764
(S) 4-Bromofluorobenzene	*102*			*77.0-126*		*08/15/2022 07:30*	WG1910764
(S) 1,2-Dichloroethane-d4	*105*			*70.0-130*		*08/15/2022 07:30*	WG1910764

Sample Narrative:

L1523339-06 WG1908394: Non-target compounds too high to run at a lower dilution.

EDB / DBCP by Method 8011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Ethylene Dibromide	U		0.00557	0.0208	1.04	08/16/2022 21:17	WG1911861

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
AK102 DRO C10-C25	2260		229	800	1	08/10/2022 23:09	WG1908113
(S) o-Terphenyl	*60.5*			*50.0-150*		*08/10/2022 23:09*	WG1908113

Laboratory Data Review Checklist

Completed By:

Bhagyashree A Fulzele

Title:

Project Chemist

Date:

September 25, 2022

Consultant Firm:

ARCADIS U.S., Inc

Laboratory Name:

Pace Analytical

Laboratory Report Number:

L1523339

Laboratory Report Date:

08/18/2022

CS Site Name:

Third Quarter 2022 Groundwater Monitoring Report

ADEC File Number:

100.38.206

Hazard Identification Number:

4314

Note: Any N/A or No box checked must have an explanation in the comments box.

1. Laboratory

   a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?

   Yes☒ No☐ N/A☐ Comments:

Yes.

   b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?

   Yes☐ No☐ N/A☒ Comments:

Not applicable.

2. Chain of Custody (CoC)

   a. CoC information completed, signed, and dated (including released/received by)?

   Yes☒ No☐ N/A☐ Comments:

Yes.

   b. Correct analyses requested?

   Yes☒ No☐ N/A☐ Comments:

Yes.

3. Laboratory Sample Receipt Documentation

   a. Sample/cooler temperature documented and within range at receipt (0° to 6° C)?

   Yes☒ No☐ N/A☐ Comments:

Yes.

   b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

   Yes☒ No☐ N/A☐ Comments:

Yes.

   c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?

   Yes☒ No☐ N/A☐ Comments:

Yes.

   d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?

   Yes☒ No☐ N/A☐ Comments:

Yes, no discrepancies.

e. Data quality or usability affected?

Comments:

Data quality/usability was not affected.

4. Case Narrative

a. Present and understandable?

Yes☒ No☐ N/A☐ Comments:

Yes.

b. Discrepancies, errors, or QC failures identified by the lab?

Yes☒ No☐ N/A☐ Comments:

Yes.

c. Were all corrective actions documented?

Yes☒ No☐ N/A☐ Comments:

Yes.

d. What is the effect on data quality/usability according to the case narrative?

Comments:

Data quality/usability was not affected.

5. Samples Results

a. Correct analyses performed/reported as requested on COC?

Yes☒ No☐ N/A☐ Comments:

Yes.

b. All applicable holding times met?

Yes☒ No☐ N/A☐ Comments:

Yes.

c. All soils reported on a dry weight basis?

Yes☐ No☒ N/A☐ Comments:

No soil samples were submitted for analysis.

d. Are the reported LOQs less than the Cleanup Level or the minimum required detection level for the project?

Yes☒ No☐ N/A☐ Comments:

Yes.

e. Data quality or usability affected?

Data quality/usability was not affected.

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

Yes☒ No☐ N/A☐ Comments:

Yes.

ii. All method blank results less than limit of quantitation (LOQ) or project specified objectives?

Yes☒ No☐ N/A☐ Comments:

Yes.

iii. If above LOQ or project specified objectives, what samples are affected?

Comments:

None of the samples were affected.

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes☐ No☐ N/A☒ Comments:

Not applicable.

v. Data quality or usability affected?

Comments:

Data quality or usability was not affected.

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)

Yes☒ No☐ N/A☐ Comments:

Yes.

ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

Yes☒ No☐ N/A☐ Comments:

Yes.

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

Yes☐ No☒ N/A☐ Comments:

Method 8011: LCSD recovery for compound ethylene dibromide was greater than the control limit in preparation batch WG1911861. Compound was non-detected in any of the associated sample; hence no other qualification of the data was required.

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? RPD reported from LCS/LCSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

Yes☐ No☒ N/A☐ Comments:

Method SW 846 8260D: The LCS/LCSD RPD was greater than the control limit for compound vinyl acetate in preparation batch WG1910764.
Compound result in sample IDs EB-1_220803, MW-22_220806, MW-23_220806, DUP-1_220806 and MW-24_220806 was qualified as estimated (UJ/J).

v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

Precision
Compound vinyl acetate result in sample IDs EB-1_220803, MW-22_220806, MW-23_220806, DUP-1_220806 and MW-24_220806 was qualified as estimated.

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes☒ No☐ N/A☐ Comments:

Yes.

vii. Data quality or usability affected? (Use comment box to explain.)

Comments:

The LCS/LCSD recoveries and RPD exceedances are considered minor and would result in the estimation of the associated data. The reported data should still consider as usable.

c. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Note: Leave blank if not required for project

i. Organics – One MS/MSD reported per matrix, analysis and 20 samples?

Yes☐ No☒ N/A☐ Comments:

The MS/MSD analysis was not performed on any of the samples from this SDG.

ii. Metals/Inorganics – one MS and one MSD reported per matrix, analysis and 20 samples?

Yes☐ No☒ N/A☐ Comments:

The MS/MSD analysis was not performed on any of the samples from this SDG.

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

Yes☐ No☐ N/A☒ Comments:

Not applicable.

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? RPD reported from MS/MSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

Yes☐ No☐ N/A☒ Comments:

Not applicable.

v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

None of the samples were affected.

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes☐ No☐ N/A☒ Comments:

Not applicable.

vii. Data quality or usability affected? (Use comment box to explain.)

Comments:

Data quality or usability was not affected.

d. Surrogates – Organics Only or Isotope Dilution Analytes (IDA) – Isotope Dilution Methods Only

i. Are surrogate/IDA recoveries reported for organic analyses – field, QC and laboratory samples?

Yes☒ No☐ N/A☐ Comments:

Yes.

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)

Yes☒ No☐ N/A☐ Comments:

Yes.

iii. Do the sample results with failed surrogate/IDA recoveries have data flags? If so, are the data flags clearly defined?

Yes☐ No☐ N/A☒ Comments:

Not applicable.

iv. Data quality or usability affected?

Comments:

Data quality or usability was not affected.

e. Trip Blanks

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? (If not, enter explanation below.)

Yes☒ No☐ N/A☐ Comments:

Trip blank sample was not collected from this SDG.

ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC? (If not, a comment explaining why must be entered below)

Yes☒ No☐ N/A☐ Comments:

Yes.

iii. All results less than LOQ and project specified objectives?

Yes☐ No☐ N/A☒ Comments:

Not applicable.

iv. If above LOQ or project specified objectives, what samples are affected?

Comments:

Not applicable.

v. Data quality or usability affected?

Comments:

Data quality or usability was not affected.

f. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

Yes☒ No☐ N/A☐ Comments:

Yes.

ii. Submitted blind to lab?

Yes☒ No☐ N/A☐ Comments:

Field duplicate DUP-1_220806 was collected from sample MW-23_220806.

iii. Precision – All relative percent differences (RPD) less than specified project objectives? (Recommended: 30% water, 50% soil)

RPD (%) = Absolute value of: $\frac{(R_1-R_2)}{((R_1+R_2)/2)} \times 100$

Where R_1 = Sample Concentration
R_2 = Field Duplicate Concentration

Yes☒ No☐ N/A☐ Comments:

Yes.

iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

Comments:

Data quality or usability was not affected.

g. Decontamination or Equipment Blank (If not applicable, a comment stating why must be entered below)?

Yes☒ No☐ N/A☐ Comments:

Equipment blank sample was collected as EB-1_220803.

i. All results less than LOQ and project specified objectives?

Yes☒ No☐ N/A☐ Comments:

Yes.

ii. If above LOQ or project specified objectives, what samples are affected?

Comments:

None of the samples were affected.

iii. Data quality or usability affected?

Comments:

Data quality or usability was not affected.

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Defined and appropriate?

Yes☒ No☐ N/A☐ Comments:

Yes.

8. Additional Laboratory Data Qualification

Method SW846 8260D: Continuing calibration for compounds 1,2,3-trichlorobenzene, hexachloro-1,3-butadiene, naphthalene, vinyl acetate and 1,2,4-trichlorobenzene exhibited a low bias recovery. Compounds result in sample IDs EB-1_220803, MW-22_220806, MW-23_220806, DUP-1_220806 and MW-24_220806 were qualified as estimated (UJ/J).