

Arcadis U.S., Inc.



Ms. Rebekah Reams
Alaska Department of Environmental Conservation
Spill Prevention and Response, Contaminated Sites Program
610 University Avenue
Fairbanks, Alaska 99709

Arcadis U.S., Inc.
500 Ala Moana Blvd
Suite 7400
Honolulu
Hawaii 96813
Phone: 808-522-0321
www.arcadis.com

Date: July 14, 2023

Our Ref: 30064208

Subject: First Half 2023, Semi-Annual Status Report
Chevron - #90430 (Former Chevron Service Station 90430)
Former Chevron Branded Service Station No. 90430
6470 Debarr Road, Anchorage, Alaska
ADEC File No.: 2100.26.010
ADEC Hazard ID: 23615

Dear Ms. Reams,

On behalf of Chevron Environmental Management Company (CEMC), Arcadis U.S., Inc. (Arcadis), has prepared this report to document the first half 2023 groundwater monitoring activities of for the Chevron- #90430 (Former Chevron Service Station 90430), located at 6470 Debarr Road, Anchorage, Alaska (site). This work was conducted under the direction of a "Qualified Environmental Professional" (QEP) and "Qualified Sampler" (18 Alaska Administrative Code [AAC] 75.333).

If you have any questions, please do not hesitate to contact me.

Sincerely,

Arcadis U.S., Inc.

A handwritten signature in blue ink that reads "Nick Wood".

Nick Wood
Project Manager
Email: nick.wood@arcadis.com
Direct Line: (808) 522-0342

Copies

James Kiernan, CEMC (*electronic copy*)
Mark Engelke, Cook Inlet Marketing Group, Inc. (*electronic copy*)

SEMI-ANNUAL STATUS REPORT

First Half 2023

July 14, 2023

Work Conducted This Period [First Half 2023]:

1. Conducted quarterly groundwater monitoring activities on April 17 and 18, 2023.
2. Prepared the *Semi-Annual Status Report, First Half 2023*.

Work Proposed Next Period [Second Half 2023]:

3. Conduct the second half 2023 groundwater monitoring activities.
4. Prepare the *Semi-Annual Status Report, Second Half 2023*.

Site Description

The site is east of Cook Inlet within south-central Alaska. Regional bedrock consists of Cretaceous to Upper Jurassic slate greywacke, argillite, conglomerate, and volcanic units beneath the surface sediments. The Anchorage area is classified as glacial lowland bounded by the Chugach Mountains to the southeast. Anchorage area bedrock consists of Mesozoic metamorphic and igneous rocks overlain by densely consolidated Kenai group sediments. Series of marine transgressive sequences along with fluvial sediments, deposited in a lacustrine environment and created by ice fronts surrounding the area are overlain by the most recent glacial sediments (CRA 2010). The soil stratigraphy at the Site consists of sands with silt and gravel, and gravel with sand to the total explored depth of 26 feet below ground surface (ft bgs) (CRA 2012). From 1993 until present, static groundwater depths at the site have ranged between 7.62 to 22.60 feet below top of casing (ft btoc). Groundwater flow direction has been variable. The site currently consists of a vacant lot with secured fenced area and a drive-thru coffee shop. The site originally included five underground storage tanks (USTs), one used oil UST, one heating oil UST, and piping. Station facilities were upgraded in 1995 and included three USTs, five dispenser pumps, and an oil/water separator. In 2000, the site was decommissioned and the facility building, USTs, dispenser pumps, and oil/water separator were removed from the property. The site currently has a network of 13 monitoring wells (**Table 1**) which are monitored semi-annually. The surrounding properties are mixed commercial and residential; properties to the west are primarily commercial businesses, and those to the north, south, and east are residences. A site location map and site plan are shown as **Figure 1** and **Figure 2**, respectively.

Site Activities this Reporting Period

Current phase of project:

Monitoring

Frequency of monitoring and sampling:

Semi Annual

Monitoring wells containing light non-aqueous phase liquid (LNAPL):

None

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Cumulative LNAPL recovered to date: (gallons)	0.00
Approximate depth to groundwater: (feet below top of casing)	9.15 (MW-9) to 18.35 (MW-8)
Approximate groundwater elevation: (feet relative to NAVD88)	207.41 (MW-16) to 213.04 (MW-9)
Groundwater flow direction	Northwest
Groundwater gradient (feet per foot)	0.042
Current remediation techniques:	None
Summary of unusual activity:	None
Agency directive requirements:	None

Groundwater Gauging and Sampling Methods

On April 17 and 18, the first semiannual 2023 groundwater monitoring and sampling activities were conducted. Groundwater monitoring wells scheduled to be gauged and/or sampled are summarized in **Table 1**. Monitoring wells were gauged with an oil/water interface probe in the order of lowest to highest historical petroleum hydrocarbon concentrations in groundwater to determine groundwater elevations and ascertain if LNAPL was present. Following gauging, groundwater was purged and sampled using low flow purge technology via bladder pump in accordance with the Field Sampling Guidance (ADEC 2022) and *Standard Groundwater Sampling and Monitoring Wells* (Arcadis 2022). Non-disposable groundwater gauging equipment was decontaminated prior to and after each use with a detergent solution and rinsed in potable water. Water table drawdown was continuously monitored during purging with an oil/water interface probe and the flow rate of the pump was adjusted to limit drawdown to 0.1 meter. Water quality parameters were monitored during purging with a multi-parameter water quality meter equipped with a flow through cell and turbidity meter. Parameters were recorded every 3 to 5 minutes until a minimum of three (minimum of four if using temperature as an indicator) of the parameters listed below stabilized. Water quality parameters were considered stable when three successive readings were within the following ADEC limits:

- $\pm 3\%$ for temperature (minimum of ± 0.2 °C),
- ± 0.1 for pH,
- $\pm 3\%$ for conductivity,
- ± 10 mV for redox potential,
- $\pm 10\%$ for dissolved oxygen, and
- $\pm 10\%$ for turbidity.

Following well stabilization, the flow rate was reduced to between 100 to 150 milliliters per minute and samples were collected into laboratory sample bottles. Groundwater samples were collected from the top foot of the water

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column in monitoring wells per the sampling schedule (**Table 1**). The groundwater potentiometric surface elevation and a rose diagram of historical groundwater flow directions are illustrated on **Figure 3**.

Groundwater samples collected were analyzed by Pace Analytical National Center for Testing & Innovation (Pace) of Mt. Juliet, Tennessee for the following constituents:

- Volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) Method 8260D
- Lead by United States Environmental Protection Agency (USEPA) Method 6010D
- Total petroleum hydrocarbons as gasoline range organics (GRO) by Alaska Method AK101.

Two duplicate groundwater samples were collected from monitoring wells MW-4R and MW-5R (BD-1 and BD-2, respectively) and submitted blind to Pace. Additionally, an equipment blank sample was collected and trip blanks were included in sample coolers for quality assurance purposes. Field notes collected during groundwater monitoring activities including monitoring well purge rates and drawdown are presented in **Attachment A**.

Groundwater Sampling Results

Groundwater analytical results obtained during this event indicate constituents of potential concern (COPCs) exceed the ADEC Oil Pollution Prevention Requirements (18 AAC 75) identified in Table C - Groundwater Cleanup Levels (GCLs). Analytical data are summarized in **Table 2**. COPCs exceeding GCLs are summarized below and are illustrated on **Figure 4**. The laboratory report is included as **Attachment B**.

- GRO was detected at concentrations above the ADEC GCL of 2,200 micrograms per liter ($\mu\text{g/L}$) in MW-4R at a concentration of 5,810 $\mu\text{g/L}$ and 6,310 $\mu\text{g/L}$ in BD-1.
- Benzene was detected at concentrations above the ADEC GCL of 4.6 $\mu\text{g/L}$ in MW-3 at a concentration of 41.5 $\mu\text{g/L}$, in MW-4R at a concentration of 36.5 $\mu\text{g/L}$ and 44.3 $\mu\text{g/L}$ in BD-1, in MW-5R at a concentration of 966 $\mu\text{g/L}$ and 756 D $\mu\text{g/L}$ in BD-2, and in MW-7 at a concentration of 243 $\mu\text{g/L}$.
- Ethylbenzene was detected at concentrations above the ADEC GCL of 15 $\mu\text{g/L}$ in MW-4R at a concentration of 872 $\mu\text{g/L}$ and 1000 D $\mu\text{g/L}$ in BD-1, and in MW-7 at a concentration of 60.9 $\mu\text{g/L}$.
- Total Xylenes was detected at concentrations above the ADEC GCL of 190 $\mu\text{g/L}$ in MW-4R at a concentration of 2,450 $\mu\text{g/L}$ and 2,890 D $\mu\text{g/L}$ in BD-1, and in MW-7 at a concentration of 194 $\mu\text{g/L}$.
- Methyl-tert-butyl ether (MTBE) was detected at concentrations above the ADEC GCL of 140 $\mu\text{g/L}$ in MW-5R at a concentration of 588 $\mu\text{g/L}$ and 699 D $\mu\text{g/L}$ in BD-2.
- Naphthalene was detected at concentrations above the ADEC GCL of 1.7 $\mu\text{g/L}$ in MW-4R at a concentration of 15.9 J $\mu\text{g/L}$, and 16.8 J $\mu\text{g/L}$ in BD-1.
- 1,2,4-Trimethylbenzene was detected at concentrations above the ADEC GCL of 56 $\mu\text{g/L}$ in MW-4R at a concentration of 790 J $\mu\text{g/L}$, and 1,060 D $\mu\text{g/L}$ in BD-1.
- 1,3,5-Trimethylbenzene was detected at concentrations above the ADEC GCL of 60 $\mu\text{g/L}$ in MW-4R at a concentration of 72.0 J $\mu\text{g/L}$, and 103 J $\mu\text{g/L}$ in the BD-1.

Historical groundwater analytical results (pre-2023) are presented in **Attachment C**.

Laboratory Data Review

As required by the ADEC Guidelines for Data Reporting (ADEC 2022), Arcadis completed a laboratory data review checklist for the laboratory report generated for this event. The data review checklist is included as

Attachment D. Quality assurance and quality control parameters related to the precision, accuracy, representativeness, comparability, completeness, and sensitivity of the data presented in this report suggest that the data quality objectives have been met with the following exceptions:

- Accuracy:
 - Laboratory control sample (LCS) recovery was exceeded for compound 1,1,2-trichlorotrifluoroethane for method USEPA 8260D. Analytical results in the associated sample location trip blank (TB) were qualified as estimated.
 - Continuing calibration recovery were less than the control limit for compounds 1,2,4-trichlorobenzene, 1,2,4-trimethylbenzene, acrolein, bromoform, bromomethane, naphthalene, n-butylbenzene, and trichlorofluoromethane for method USEPA 8260D. Analytical results in the associated sample locations MW-17, MW-10, MW-11, MW-16, MW-4R, MW-3, MW-5R, MW-7, and BD-2 were qualified as estimated.
 - Continuing calibration recovery were less than the control limit for compounds 1,2,4-trichlorobenzene, acrolein, bromoform, bromomethane, naphthalene, n-butylbenzene, and trichlorofluoromethane for method USEPA 8260D. Analytical results in the associated sample location BD-1 were qualified as estimated.
 - Continuing calibration recovery were less than the control limit for compounds 1,2,3-trichlorobenzene, 1,2,4-trichlorobenzene, bromomethane, hexachloro-1,3-butadiene, and naphthalene for method USEPA 8260D. Analytical results in the associated sample locations MW-14 and equipment blank (EB) were qualified as estimated.
 - Continuing calibration recovery were less than the control limit for compounds 1,2,3-trichlorobenzene, 1,2,4-trimethylbenzene, and naphthalene for method USEPA 8260D. Analytical results in the associated sample location TB were qualified as estimated.
- Precision:
 - The relative percent difference (RPD) between Laboratory control sample / Laboratory control sample Duplicate (LCS/LCSD) were exceeded for compounds acetone and 1,2,4-trichlorobenzene for method USEPA 8260D. Analytical results in the associated sample locations MW-17, MW-10, MW-11, MW-16, MW-4R, MW-3, BD-1, BD-2, MW-5R, and MW-7 were qualified as estimated.
 - The relative percent difference between (RPD) for LCS / LCSD were exceeded for compounds dichlorodifluoromethane, 1,1,2-trichlorotrifluoroethane and vinyl chloride for method USEPA 8260D. Analytical results in the associated sample locations BD-1 and BD-2, MW-14, and EB were qualified as estimated.
 - The relative percent difference (RPD) between the blind duplicate (BD) and parent sample was exceeded for compounds n-propylbenzene and 1,3,5-trimethylbenzene in parent/ dup association MW-4R / BD-1 for method USEPA 8260D. Analytical results in the associated sample locations were qualified as estimated.
- Comparability:
 - Compound chloroform was detected below the reporting limit in the equipment blank for method USEPA 8260D. Based on blank evaluation, the results at sample location MW-10 were qualified as non-detect.
- Sensitivity:

- The concentration of GRO exceeded the ADEC groundwater cleanup levels (GCLs) in sample locations MW-4R and BD-1.
- The concentration of benzene exceeded the ADEC GCLs in sample locations MW-3, MW-4R, MW-5R, BD-1, and BD-2.
- The concentration of ethylbenzene and total xylenes exceeded the ADEC GCLs in sample locations MW-4R, BD-,1 and MW-7.
- The concentration of MTBE exceeded the ADEC GCLs in sample locations MW-5R and BD-2.
- The concentration of naphthalene exceeded the ADEC GCLs in sample locations MW-4R and BD-1.
- The concentration of 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene exceeded the ADEC GCLs in sample locations MW-4R and BD-1.
- The laboratory reported detection limit for compounds ethylbenzene, 1,2-Dibromoethane (EDB), 1,2-Dichloroethane (EDC), naphthalene, bromodichloromethane, bromoform, bromomethane, carbon tetrachloride, chlorodibromo-methane, chloroform, dibromomethane, 1,4-dichlorobenzene, Dichlorodifluoromethane, 1,1-dichloroethane, cis-1,2-dichloroethene, 1,2-dichloropropane, hexachloro-1,3-butadiene, methylene chloride, 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane, tetrachloroethene, 1,2,3-trichlorobenzene, 1,2,4-trichlorobenzene, 1,1,2-trichloroethane, trichloroethene, 1,2,3-trichloropropane, and vinyl chloride exceeded the ADEC groundwater cleanup level; however, the laboratory method detection limit is below the ADEC groundwater cleanup levels therefore the sensitivity of the analyses was still adequate for the samples. The sensitivity of the analyses was adequate for the samples as the detection limits were less than the ADEC GCLs for compounds with above exceptions.

Investigation Derived Waste

Purge water and decontamination water collected during groundwater sampling was temporarily collected into 5-gallon buckets and treated onsite via a Granular Activated Carbon (GAC) bucket. The treatment of purge water and decontamination water was completed per the Arcadis *Summary of Procedures for Investigation Derived Waste Treatment Utilizing Granular Activated Carbon (Arcadis 2022)*. Approximately 10 gallons of groundwater were treated during this event.

Conclusion and Recommendations

The observed groundwater flow direction and hydraulic gradient during this event are generally consistent with historical data. Analytical results from the monitoring wells are generally consistent with historical data.

Arcadis recommends groundwater sampling continues in accordance with the current semiannual schedule. The second semiannual sampling event will be conducted in fall of 2023. Additionally, Arcadis submitted a *Groundwater Analyte Adjustment Request* to ADEC on June 29, 2023. Upon ADEC review and approval, Arcadis will implement the proposed adjustments to the groundwater sampling program as early as the second semiannual sampling event of 2023.

References

ADEC. 2022. Technical Memorandum 22-001; Guidelines for Data Reporting. ADEC, Division of Spill Prevention and Response Contaminated Sites Program. August 15.

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ADEC. 2022. Field Sampling Guidance. ADEC, Division of Spill Prevention and Response Contaminated Sites Program. August.

ADEC. 2023. 18-AAC-75 Oil and Other Hazardous Substances Pollution Control. ADEC. Amended February 5th.

Arcadis. 2022. Standard Groundwater Sampling for Monitoring Well. April.

Arcadis. 2022. Summary of Procedures for Investigation Derived Waste Treatment Utilizing Granular Activated Carbon. September.

GHD Inc. 2018. Second Semiannual 2018 Groundwater Monitoring Report: Former Chevron-Branded Service Station 90430, 6470 Debarr Road, Anchorage, AK. November.

CRA. Subsurface Investigation Report, Former Chevron Service Station 9-0430, 6470 Debarr Road, Anchorage, Alaska. May.

CRA. 2012. Conceptual Site Model, Former Chevron-Branded Service Station 9-0430, 6470 Debarr Road, Anchorage, Alaska. September.

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Alaska Department of Environmental Conservation
Date: July 14, 2023

Should you have any questions or concerns regarding this submittal please do not hesitate to contact us.

Sincerely,

Arcadis U.S., Inc.



Matthew Wood
Staff Scientist



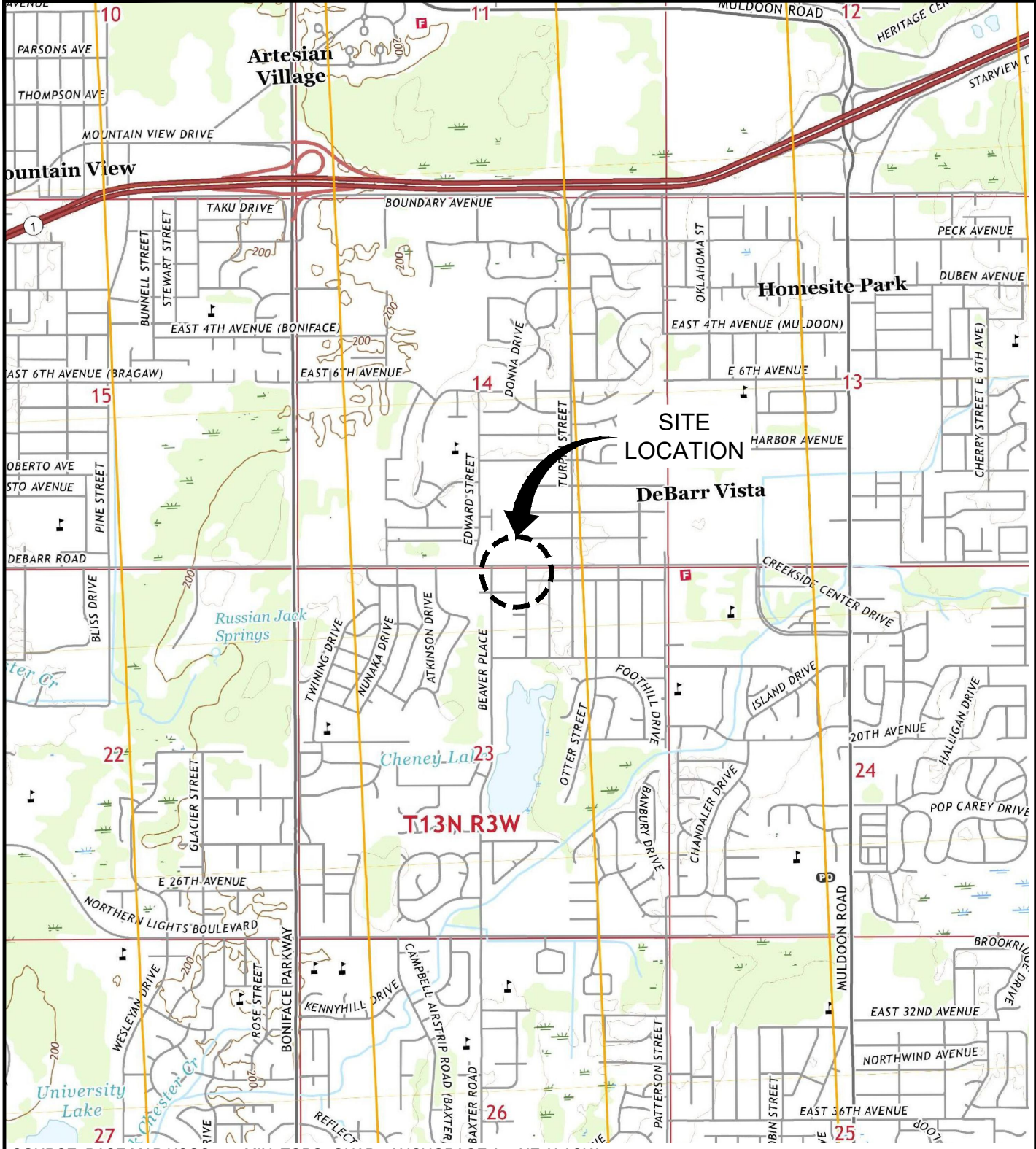
Nick Wood
Project Manager

Enclosures:

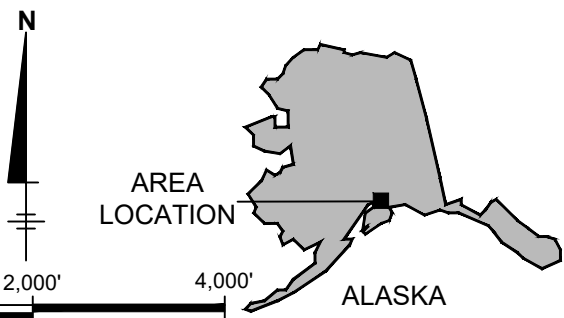
- Figure 1. Site Location Map
- Figure 2. Site Plan
- Figure 3. Groundwater Elevation Contour Map
- Figure 4. Groundwater Analytical Results Map
- Table 1. Groundwater Monitoring Schedule
- Table 2. Current Groundwater Gauging and Analytical Results
- Attachment A. Field Notes
- Attachment B. Laboratory Analytical Results
- Attachment C. Historical Groundwater Monitoring Results- Third Quarter 1992 to 2022
- Attachment D. ADEC Data Review Checklist

Figures

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SOURCE: BASE MAP USGS 7.5. MIN. TOPO. QUAD., ANCHORAGE A-8 NE ALASKA, 2021.

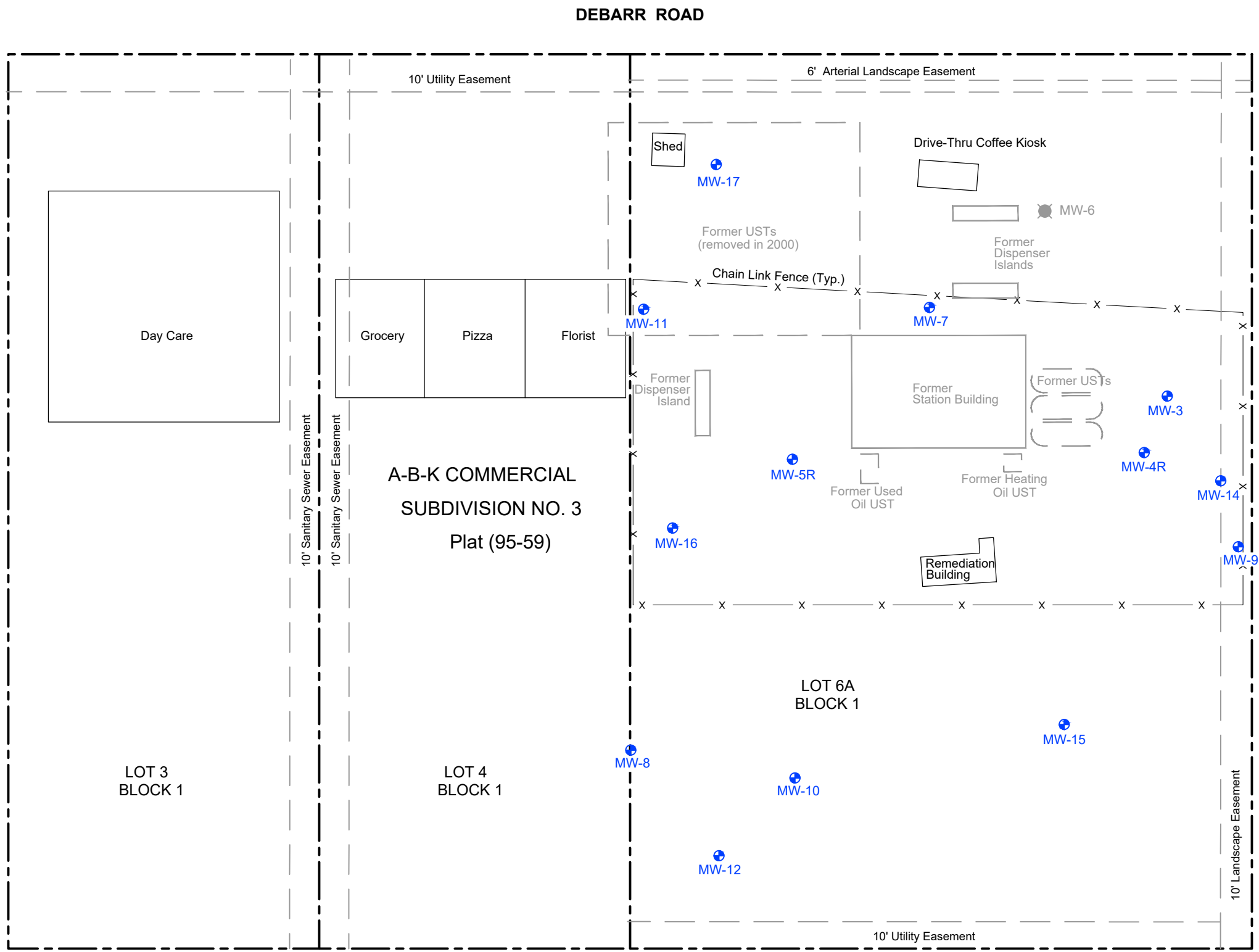


CHEVRON- #90430 (FORMER CHEVRON SERVICE STATION 90430) 6470 DEBARR ROAD ANCHORAGE, ALASKA	
SITE LOCATION MAP	
	FIGURE 1

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MW-13

BEAVER PLACE

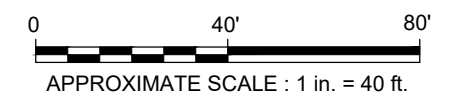


DEBARR ROAD

MINK AVENUE

LEGEND

- PROPERTY BOUNDARY
- MW-3 GROUNDWATER MONITORING WELL
- MW-6 ABANDONED GROUNDWATER MONITORING WELL
- EXISTING FENCE
- UST UNDERGROUND STORAGE TANK

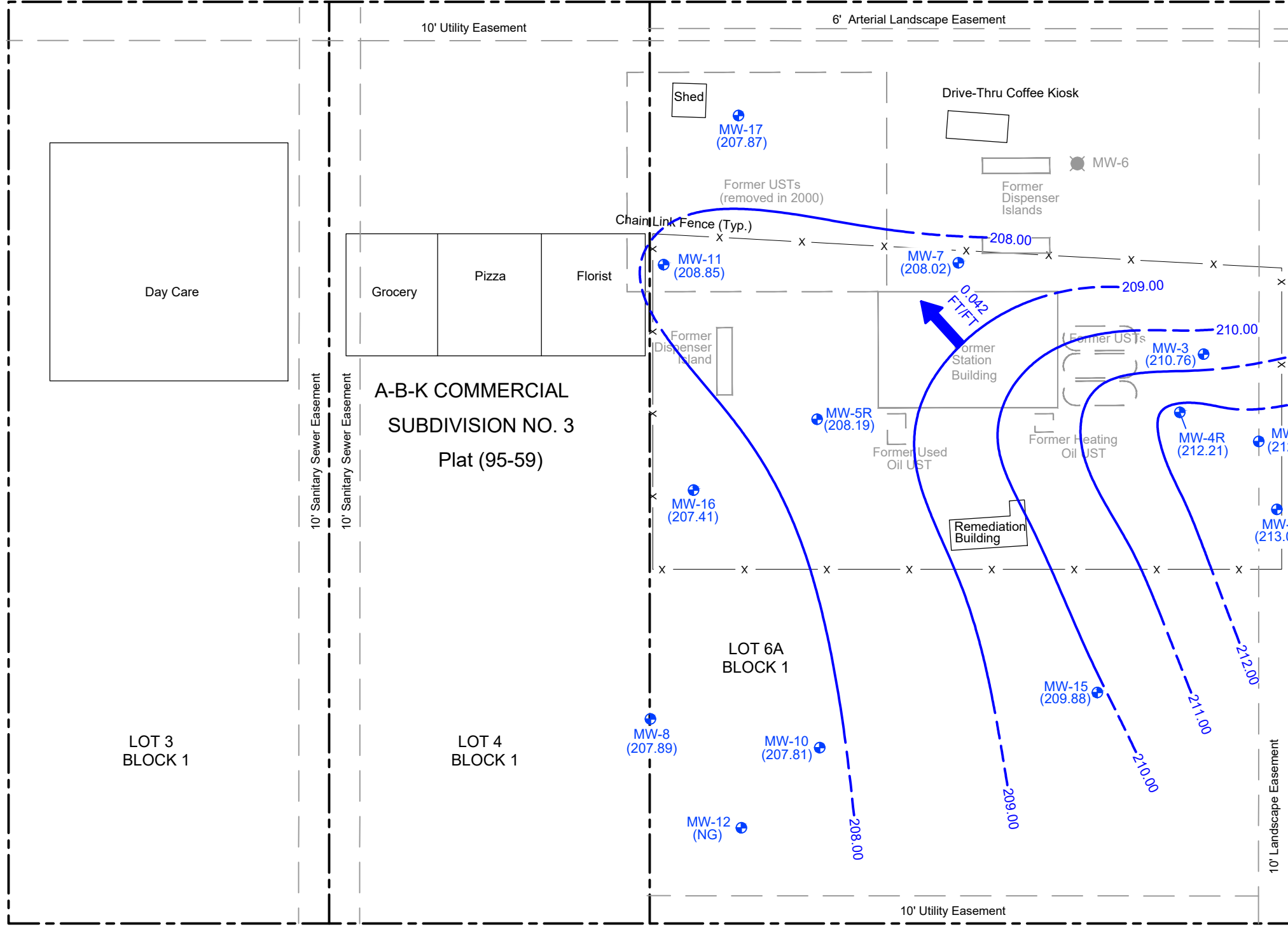


CHEVRON- #90430 (FORMER CHEVRON SERVICE STATION 90430) 6470 DEBARR ROAD ANCHORAGE, ALASKA	
SITE PLAN	
	FIGURE 2

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MW-13
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BEAVER PLACE

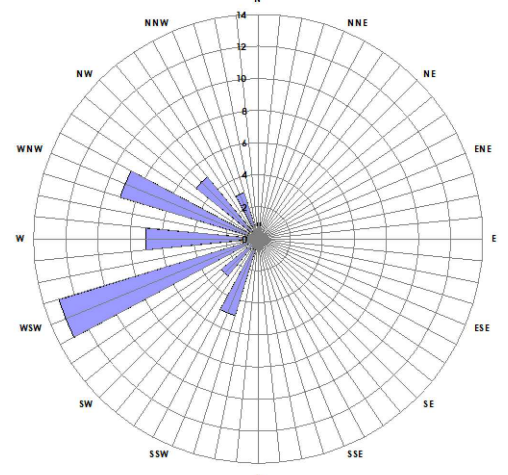


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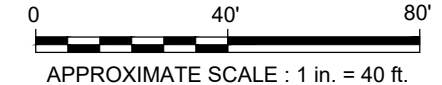
MINK AVENUE

LEGEND

- PROPERTY BOUNDARY
- MW-3 GROUNDWATER MONITORING WELL
- MW-6 ABANDONED GROUNDWATER MONITORING WELL
- EXISTING FENCE
- UST UNDERGROUND STORAGE TANK
- (213.04) GROUNDWATER ELEVATION IN FEET
- 212.00 GROUNDWATER ELEVATION CONTOUR (DASHED WHERE INFERRED)
- APPROXIMATE DIRECTION OF GROUNDWATER FLOW
- 0.042 FT/FT APPROXIMATE HYDRAULIC GRADIENT (FEET/FOOT)
- (NG) NOT GAUGED



HISTORIC GROUNDWATER FLOW DIRECTION



APPROXIMATE SCALE : 1 in. = 40 ft.

CHEVRON- #90430
 (FORMER CHEVRON SERVICE STATION 90430)
 6470 DEBARR ROAD
 ANCHORAGE, ALASKA

**GROUNDWATER ELEVATION
 CONTOUR MAP
 APRIL 17 AND 18, 2023**



FIGURE

3

DEBARR ROAD

LEGEND

- PROPERTY BOUNDARY
- GROUNDWATER MONITORING WELL
- EXISTING FENCE
- UST UNDERGROUND STORAGE TANK
- GRO TOTAL PETROLEUM HYDROCARBONS - GASOLINE RANGE
- MTBE METHYL TERT-BUTYL ETHER
- <1.00 NOT DETECTED AT OR ABOVE THE REPORTED DETECTION LIMIT (RDL)
- SAMPLE NOT TESTED FOR SPECIFIC CONSTITUENT
- BOLD** VALUE EXCEEDS METHOD DETECTION LIMIT (MDL)
- BOLD** VALUE EXCEEDS ADEC GROUNDWATER CLEANUP LEVEL
- BOLD** CONSTITUENT CONSIDERED NON-DETECT, HOWEVER LABORATORY RDL IS GREATER THAN THE ADEC GROUNDWATER CLEANUP LEVEL
- J THE ASSOCIATED NUMERICAL VALUE IS AN ESTIMATED CONCENTRATION ONLY
- D THE DILUTED RESULTS WERE REPORTED AND QUALIFIED AS BEING REPORTED AT A DILUTION
- (NS) NOT SAMPLED
- [] BLANK DUPLICATE SAMPLE RESULTS
- ADEC ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
- µg/L MICROGRAMS PER LITER



MW-5R		MW-11		MW-7		MW-17		MW-3	
Sample Date	4/18/2023	Sample Date	4/17/2023	Sample Date	4/18/2023	Sample Date	4/17/2023	Sample Date	4/17/2023
GRO	1,570 [1,250]	GRO	<100	GRO	928	GRO	33.2 J	GRO	176
Benzene	966 [756 D]	Benzene	<1.00	Benzene	243	Benzene	<1.00	Benzene	41.5
Ethylbenzene	<50.0 [1.32]	Ethylbenzene	<1.00	Ethylbenzene	60.9	Ethylbenzene	<1.00	Ethylbenzene	2.84
Total Xylenes	<150 [2.97 J]	Total Xylenes	<3.00	Total Xylenes	194	Total Xylenes	<3.00	Total Xylenes	35.4
MTBE	588 [699 D]	MTBE	<1.00	MTBE	<25.0	MTBE	<1.00	MTBE	2.39
Naphthalene	<250 J [<5.00 J]	Naphthalene	<5.00 J	Naphthalene	<125 J	Naphthalene	<5.00 J	Naphthalene	<5.00 J
1,2,4-Trimethylbenzene	<50.0 J [2.29 J]	1,2,4-Trimethylbenzene	<1.00 J	1,2,4-Trimethylbenzene	41.3 J	1,2,4-Trimethylbenzene	<1.00 J	1,2,4-Trimethylbenzene	10.1 J
1,3,5-Trimethylbenzene	<50.0 [<1.00]	1,3,5-Trimethylbenzene	<1.00	1,3,5-Trimethylbenzene	9.59 J	1,3,5-Trimethylbenzene	<1.00	1,3,5-Trimethylbenzene	3.84

MW-16	
Sample Date	4/17/2023
GRO	<100
Benzene	<1.00
Ethylbenzene	<1.00
Total Xylenes	<3.00
MTBE	0.484 J
Naphthalene	<5.00 J
1,2,4-Trimethylbenzene	<1.00 J
1,3,5-Trimethylbenzene	<1.00

MW-4R	
Sample Date	4/17/2023
GRO	5,810 [6,310]
Benzene	36.5 [44.3]
Ethylbenzene	872 [1,000 D]
Total Xylenes	2,450 [2,890 D]
MTBE	<10.0 [<1.00]
Naphthalene	15.9 J [16.8 J]
1,2,4-Trimethylbenzene	790 J [1,060 D]
1,3,5-Trimethylbenzene	72.0 J [103 J]

MW-8	
Sample Date	4/17/2023
GRO	<100
Benzene	--
Ethylbenzene	--
Total Xylenes	--
MTBE	--
Naphthalene	--
1,2,4-Trimethylbenzene	--
1,3,5-Trimethylbenzene	--

MW-14	
Sample Date	4/17/2023
GRO	164
Benzene	0.159 J
Ethylbenzene	14.4
Total Xylenes	44.5
MTBE	<1.00
Naphthalene	<5.00 J
1,2,4-Trimethylbenzene	6.10
1,3,5-Trimethylbenzene	0.556 J

MW-10	
Sample Date	4/17/2023
GRO	<100
Benzene	<1.00
Ethylbenzene	<1.00
Total Xylenes	<3.00
MTBE	<1.00
Naphthalene	<5.00 J
1,2,4-Trimethylbenzene	<1.00 J
1,3,5-Trimethylbenzene	<1.00

MW-15	
Sample Date	4/17/2023
GRO	<100
Benzene	--
Ethylbenzene	--
Total Xylenes	--
MTBE	--
Naphthalene	--
1,2,4-Trimethylbenzene	--
1,3,5-Trimethylbenzene	--

Analyte	ADEC Groundwater Cleanup level (µg/L)
GRO	2,200
Benzene	4.6
Ethylbenzene	15
Total Xylenes	190
MTBE	140
Naphthalene	1.7
1,2,4-Trimethylbenzene	56
1,3,5-Trimethylbenzene	60

Concentration in µg/L



NOTE:

ONLY CONSTITUENTS WITH ONE OR MORE EXCEEDANCES ABOVE CLEANUP LEVELS ARE SHOWN ON THIS FIGURE.

CHEVRON- #90430
 (FORMER CHEVRON SERVICE STATION 90430)
 6470 DEBARR ROAD
 ANCHORAGE, ALASKA

**GROUNDWATER ANALYTICAL RESULTS
 APRIL 17 AND 18, 2023**



Tables

Table 1
Groundwater Monitoring Schedule
First Semi Annual 2023
Chevron - #90430
Chevon Station 90430
6470 Debarr Rd,
Anchorage, Alaska

Well ID	Sample Schedule	Gauge	Sample	Comment
MW-3	Semi Annual	Y	Y	
MW-4R	Semi Annual	Y	Y	
MW-5R	Semi Annual	Y	Y	
MW-7	Semi Annual	Y	Y	
MW-8	Semi Annual	Y	Y	
MW-9	Semi Annual	Y	Y	
MW-10	Semi Annual	Y	Y	
MW-11	Semi Annual	Y	Y	
MW-12	Semi Annual	Y	N	
MW-14	Semi Annual	Y	Y	
MW-15	Semi Annual	Y	Y	
MW-16	Semi Annual	Y	Y	
MW-17	Semi Annual	Y	Y	
BD-1	Semi Annual	N	Y	
BD-2	Semi Annual	N	Y	
TB	Semi Annual	N	Y	
EQB	Semi Annual	N	Y	
MS/MSD	Semi Annual	N	Y	

Note:

All wells sampled for Volatile Organic Compounds (GC/MS) 8260D and 123-TCP/EDB Low level 524/8260D, Total Lead 6010 and Alaska AK101 Determination of DRO.

Table 2
 Current Groundwater Gauging and Analytical Results
 First Semi Annual 2023
 Chevron - #90430
 Chevron Station 90430
 6470 Debarr Rd,
 Anchorage, Alaska



Well ID	Sample Date	TOC (ft bTOC)	DTW (feet bTOC)	GW Elev. (feet)	GRO (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	EDB (µg/L)	EDC (µg/L)	Naphthalene (µg/L)	Lead (µg/L)	Comments
ADEC Groundwater Cleanup Levels					2,200	4.6	1,100	15	190	140	0.075	1.7	1.7	15	
MW-3	04/17/23	221.47	10.71	210.76	176	41.5	19.5	2.84	35.4	2.39	<0.0500	<1.00	<5.00 J	--	
MW-4R	04/17/23	223.21	11.00	212.21	5,810 [6,310]	36.5 [44.3]	28.8 [40.8]	872 [1,000 D]	2,450 [2,890 D]	<10.0 [<1.00]	<2.50 [<2.50]	<10.0 [<1.00]	15.9 J [16.8 J]	3.50 J [3.21 J]	
MW-5R	04/18/23	224.73	16.54	208.19	1,570 [1,250]	966 [756 D]	<50.0 [<1.00]	<50.0 [1.32]	<150 [2.97 J]	588 [699 D]	<0.500 [<0.500]	<50.0 [<1.00]	<250 J [<5.00 J]	--	
MW-7	04/18/23	224.52	16.50	208.02	928	243	12.4 J	60.9	194	<25.0	<0.500	<25.0	<125 J	--	
MW-8	04/17/23	226.24	18.35	207.89	<100	--	--	--	--	--	<0.00500	--	--	--	
MW-9	04/18/23	222.19	9.15	213.04	<100	--	--	--	--	--	<0.00500	--	--	--	
MW-10	04/17/23	222.57	14.76	207.81	<100	<1.00	<1.00	<1.00	<3.00	<1.00	<0.00500	<1.00	<5.00 J	--	
MW-11	04/17/23	225.73	16.88	208.85	<100	<1.00	<1.00	<1.00	<3.00	<1.00	<0.00500	<1.00	<5.00 J	--	
MW-12	04/17/23	222.27	--	--	--	--	--	--	--	--	--	--	--	--	Gauge only
MW-14	04/18/23	222.16	9.71	212.45	164	0.159 J	8.67	14.4	44.5	<1.00	<0.500	<1.00	<5.00 J	--	
MW-15	04/17/23	226.12	16.24	209.88	<100	--	--	--	--	--	<0.00500	--	--	--	
MW-16	04/17/23	223.57	16.16	207.41	<100	<1.00	<1.00	<1.00	<3.00	0.484 J	<0.00500	<1.00	<5.00 J	--	
MW-17	04/17/23	223.07	15.20	207.87	33.2 J	<1.00	<1.00	<1.00	<3.00	<1.00	<0.00500	<1.00	<5.00 J	--	

Table 3
 Additional VOCs Analytical Results
 First Semi Annual 2023
 Chevron - #90430
 Chevron Station 90430
 6470 Debarr Rd,
 Anchorage, Alaska



Well ID	Sample Date	Acetone (µg/L)	Acrolein (µg/L)	Acrylonitrile (µg/L)	Bromobenzene (µg/L)	Bromochloromethane (µg/L)	Bromodichloromethane (µg/L)	Bromoform (µg/L)	Bromomethane (µg/L)	n-Butylbenzene (µg/L)	sec-Butylbenzene (µg/L)
ADEC Groundwater Cleanup Levels		14,000	--	--	62	--	1.3	33	7.5	1,000	2,000
MW-3	04/17/23	<50.0 J	<50.0 J	<10.0	<1.00	<1.00	<1.00	<1.00 J	<5.00 J	<1.00 J	<1.00
MW-4R	04/17/23	<500 J [<i><50.0 J</i>]	<500 J [49.5 J]	<100 [<i><10.0</i>]	<10.0 [<i><1.00</i>]	<10.0 [<i><1.00</i>]	<10.0 [<i><1.00</i>]	<10.0 J [<i><1.00 J</i>]	<50.0 J [<i><5.00 J</i>]	<10.0 J [<i><1.00 J</i>]	<10.0 [<i>1.42</i>]
MW-5R	04/18/23	<2,500 J [<i><50.0 J</i>]	<2,500 J [<i><50.0 J</i>]	<500 [<i><10.0</i>]	<50.0 [<i><1.00</i>]	<50.0 [<i><1.00</i>]	<50.0 [<i><1.00</i>]	<50.0 J [<i><1.00 J</i>]	<250 J [<i><5.00 J</i>]	<50.0 J [<i><1.00 J</i>]	<50.0 [<i><1.00</i>]
MW-7	04/18/23	<1,250 J	<1,250 J	<250	<25.0	<25.0	<25.0	<25.0 J	<125 J	<25.0 J	<25.0
MW-8	04/17/23	--	--	--	--	--	--	--	--	--	--
MW-9	04/18/23	--	--	--	--	--	--	--	--	--	--
MW-10	04/17/23	<50.0 J	<50.0 J	<10.0	<1.00	<1.00	<1.00	<1.00 J	<5.00 J	<1.00 J	<1.00
MW-11	04/17/23	<50.0 J	<50.0 J	<10.0	<1.00	<1.00	<1.00	<1.00 J	<5.00 J	<1.00 J	<1.00
MW-12	04/17/23	--	--	--	--	--	--	--	--	--	--
MW-14	04/18/23	<50.0	<50.0	<10.0	<1.00	<1.00	<1.00	<1.00	<5.00 J	<1.00	<1.00
MW-15	04/17/23	--	--	--	--	--	--	--	--	--	--
MW-16	04/17/23	<50.0 J	<50.0 J	<10.0	<1.00	<1.00	<1.00	<1.00 J	<5.00 J	<1.00 J	<1.00
MW-17	04/17/23	<50.0 J	<50.0 J	<10.0	<1.00	<1.00	<1.00	<1.00 J	<5.00 J	<1.00 J	<1.00

Table 3
 Additional VOCs Analytical Results
 First Semi Annual 2023
 Chevron - #90430
 Chevron Station 90430
 6470 Debarr Rd,
 Anchorage, Alaska



Well ID	Sample Date	tert-Butylbenzene (µg/L)	Carbon Disulfide (µg/L)	Carbon Tetrachloride (µg/L)	Chlorobenzene (µg/L)	Chlorodibromo-methane (Dibromochloro-methane) (µg/L)	Chloroethane (Ethyl Chloride) (µg/L)	Chloroform (µg/L)	Chloromethane (µg/L)	2-Chlorotoluene (o-Chlorotoluene) (µg/L)	4-Chlorotoluene (p-Chlorotoluene) (µg/L)
ADEC Groundwater Cleanup Levels		690	810	4.6	78	8.7	21,000	2.2	190	--	--
MW-3	04/17/23	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	<5.00	<2.50	<1.00	<1.00
MW-4R	04/17/23	<10.0 [<1.00]	<10.0 [<1.00]	<10.0 [<1.00]	<10.0 [<1.00]	<10.0 [<1.00]	<50.0 [<5.00]	<50.0 [<5.00]	<25.0 [<2.50]	<10.0 [<1.00]	<10.0 [<1.00]
MW-5R	04/18/23	<50.0 [<1.00]	<50.0 [<1.00]	<50.0 [<1.00]	<50.0 [<1.00]	<50.0 [<1.00]	<250 [<5.00]	<250 [<5.00]	<125 [<2.50]	<50.0 [<1.00]	<50.0 [<1.00]
MW-7	04/18/23	<25.0	<25.0	<25.0	<25.0	<25.0	<125	<125	<62.5	<25.0	<25.0
MW-8	04/17/23	--	--	--	--	--	--	--	--	--	--
MW-9	04/18/23	--	--	--	--	--	--	--	--	--	--
MW-10	04/17/23	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	<5.00 B	<2.50	<1.00	<1.00
MW-11	04/17/23	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	<5.00	<2.50	<1.00	<1.00
MW-12	04/17/23	--	--	--	--	--	--	--	--	--	--
MW-14	04/18/23	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	<5.00	<2.50	<1.00	<1.00
MW-15	04/17/23	--	--	--	--	--	--	--	--	--	--
MW-16	04/17/23	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	<5.00	<2.50	<1.00	<1.00
MW-17	04/17/23	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	<5.00	<2.50	<1.00	<1.00

Table 3
 Additional VOCs Analytical Results
 First Semi Annual 2023
 Chevron - #90430
 Chevron Station 90430
 6470 Debarr Rd,
 Anchorage, Alaska



Well ID	Sample Date	1,2-Dibromo-3-chloropropane (µg/L)	Dibromomethane (Methylene bromide) (µg/L)	1,2-Dichlorobenzene (µg/L)	1,3-Dichlorobenzene (µg/L)	1,4-Dichlorobenzene (µg/L)	Dichlorodifluoromethane (Freon 12) (µg/L)	1,1-Dichloroethane (µg/L)	1,1-Dichloroethene (µg/L)	cis-1,2-Dichloroethene (cis-1,2-Dichloroethylene) (µg/L)	trans-1,2-Dichloroethene (trans-1,2-Dichloroethylene) (µg/L)
ADEC Groundwater Cleanup Levels		--	8.3	300	300	4.8	200	28	280	36	360
MW-3	04/17/23	<5.00	<1.00	<1.00	<1.00	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00
MW-4R	04/17/23	<50.0 [<5.00]	<10.0 [<1.00]	<10.0 [<1.00]	<10.0 [<1.00]	<10.0 [<1.00]	<50.0 [<5.00 J]	<10.0 [<1.00]	<10.0 [<1.00]	<10.0 [<1.00]	<10.0 [<1.00]
MW-5R	04/18/23	<250 [<5.00]	<50.0 [<1.00]	<50.0 [<1.00]	<50.0 [<1.00]	<50.0 [<1.00]	<250 [<5.00 J]	<50.0 [<1.00]	<50.0 [<1.00]	<50.0 [<1.00]	<50.0 [<1.00]
MW-7	04/18/23	<125	<25.0	<25.0	<25.0	<25.0	<125	<25.0	<25.0	<25.0	<25.0
MW-8	04/17/23	--	--	--	--	--	--	--	--	--	--
MW-9	04/18/23	--	--	--	--	--	--	--	--	--	--
MW-10	04/17/23	<5.00	<1.00	<1.00	<1.00	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00
MW-11	04/17/23	<5.00	<1.00	<1.00	<1.00	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00
MW-12	04/17/23	--	--	--	--	--	--	--	--	--	--
MW-14	04/18/23	<5.00	<1.00	<1.00	<1.00	<1.00	<5.00 J	<1.00	<1.00	<1.00	<1.00
MW-15	04/17/23	--	--	--	--	--	--	--	--	--	--
MW-16	04/17/23	<5.00	<1.00	<1.00	<1.00	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00
MW-17	04/17/23	<5.00	<1.00	<1.00	<1.00	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00

Table 3
 Additional VOCs Analytical Results
 First Semi Annual 2023
 Chevron - #90430
 Chevron Station 90430
 6470 Debarr Rd,
 Anchorage, Alaska



Well ID	Sample Date	2-Butanone (Methyl ethyl ketone) (µg/L)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone) (µg/L)	Methylene chloride (µg/L)	n-Propylbenzene (Propylbenzene) (µg/L)	Styrene (µg/L)	1,1,1,2-Tetrachloroethane (µg/L)	1,1,2,2-Tetrachloroethane (µg/L)	Tetrachloroethene (Tetrachloroethylene) (µg/L)	1,2,3-Trichlorobenzene (µg/L)	1,2,4-Trichlorobenzene (µg/L)
ADEC Groundwater Cleanup Levels		5,600	6,300	110	660	1,200	5.7	0.76	41	7	4
MW-3	04/17/23	<10.0	<10.0	<5.00	0.175 J	0.747 J	<1.00	<1.00	<1.00	<1.00	<1.00 J
MW-4R	04/17/23	<100 [<10.0]	<100 [<10.0]	<50.0 [<5.00]	66.9 J [93.2 J]	<10.0 [<1.00]	<10.0 [<1.00]	<10.0 [<1.00]	<10.0 [<1.00]	<10.0 [<1.00]	<10.0 J [$<1.00 J$]
MW-5R	04/18/23	<500 [<10.0]	<500 [<10.0]	<250 [<5.00]	<50.0 [0.600 J]	<50.0 [<1.00]	<50.0 [<1.00]	<50.0 [<1.00]	<50.0 [<1.00]	<50.0 [<1.00]	<50.0 J [$<1.00 J$]
MW-7	04/18/23	<250	<250	<125	2.55 J	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0 J
MW-8	04/17/23	--	--	--	--	--	--	--	--	--	--
MW-9	04/18/23	--	--	--	--	--	--	--	--	--	--
MW-10	04/17/23	<10.0	<10.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00 J
MW-11	04/17/23	<10.0	<10.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00 J
MW-12	04/17/23	--	--	--	--	--	--	--	--	--	--
MW-14	04/18/23	<10.0	<10.0	<5.00	0.708 J	<1.00	<1.00	<1.00	<1.00	<1.00 J	<1.00 J
MW-15	04/17/23	--	--	--	--	--	--	--	--	--	--
MW-16	04/17/23	<10.0	<10.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00 J
MW-17	04/17/23	<10.0	<10.0	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00 J

Table 3
 Additional VOCs Analytical Results
 First Semi Annual 2023
 Chevron - #90430
 Chevron Station 90430
 6470 Debarr Rd,
 Anchorage, Alaska



Well ID	Sample Date	1,1,1-Trichloroethane (µg/L)	1,1,2-Trichloroethane (µg/L)	Trichloroethene (Trichloroethylene) (µg/L)	Trichlorofluoromethane (Freon 11) (µg/L)	1,2,3-Trichloropropane (µg/L)	1,1,2-Trichlorotrifluoroethane (1,1,2-Trichloro-1,2,2- trifluoroethane) (Freon 113) (µg/L)	1,2,3-Trimethylbenzene (µg/L)
ADEC Groundwater Cleanup Levels		8,000	0.41	2.8	5,200	0.0075	10,000	--
MW-3	04/17/23	<1.00	<1.00	<1.00	<5.00 J	<0.0500	<1.00	5.00
MW-4R	04/17/23	<10.0 [<1.00]	<10.0 [<1.00]	<10.0 [<1.00]	<50.0 J [<5.00 J]	<2.50 [<2.50]	<10.0 [<1.00 J]	105 [133]
MW-5R	04/18/23	<50.0 [<1.00]	<50.0 [<1.00]	<50.0 [<1.00]	<250 J [<5.00 J]	<0.500 [<0.500]	<50.0 [<1.00 J]	<50.0 [<1.00]
MW-7	04/18/23	<25.0	<25.0	<25.0	<125 J	<0.500	<25.0	<25.0
MW-8	04/17/23	--	--	--	--	<0.00500	--	--
MW-9	04/18/23	--	--	--	--	<0.00500	--	--
MW-10	04/17/23	<1.00	<1.00	<1.00	<5.00 J	<0.00500	<1.00	<1.00
MW-11	04/17/23	<1.00	<1.00	<1.00	<5.00 J	<0.00500	<1.00	<1.00
MW-12	04/17/23	--	--	--	--	--	--	--
MW-14	04/18/23	<1.00	<1.00	<1.00	<5.00	<0.500	<1.00 J	1.11
MW-15	04/17/23	--	--	--	--	<0.00500	--	--
MW-16	04/17/23	<1.00	<1.00	<1.00	<5.00 J	<0.00500	<1.00	<1.00
MW-17	04/17/23	<1.00	<1.00	<1.00	<5.00 J	<0.00500	<1.00	<1.00

Table 3
 Additional VOCs Analytical Results
 First Semi Annual 2023
 Chevron - #90430
 Chevron Station 90430
 6470 Debarr Rd,
 Anchorage, Alaska

Well ID	Sample Date	1,2,4-Trimethylbenzene (µg/L)	1,3,5-Trimethylbenzene (µg/L)	Vinyl Chloride (µg/L)	Comments
ADEC Groundwater Cleanup Levels		56	60	0.19	
MW-3	04/17/23	10.1 J	3.84	<1.00	
MW-4R	04/17/23	790 J [1,060 D]	72.0 J [103 J]	<10.0 [<1.00 J]	
MW-5R	04/18/23	<50.0 J [2.29 J]	<50.0 [<1.00]	<50.0 [<1.00 J]	
MW-7	04/18/23	41.3 J	9.59 J	<25.0	
MW-8	04/17/23	--	--	--	
MW-9	04/18/23	--	--	--	
MW-10	04/17/23	<1.00 J	<1.00	<1.00	
MW-11	04/17/23	<1.00 J	<1.00	<1.00	
MW-12	04/17/23	--	--	--	Gauge only
MW-14	04/18/23	6.10	0.556 J	<1.00 J	
MW-15	04/17/23	--	--	--	
MW-16	04/17/23	<1.00 J	<1.00	<1.00	
MW-17	04/17/23	<1.00 J	<1.00	<1.00	

Acronyms and Abbreviations:

- = Not Available or Not Analyzed
- [] = Blind Duplicate Sample Result
- <0.00100 = Not detected at or above the reported detection limit (RDL)
- µg/L = Micrograms per liter
- ADEC = Alaska Department of Environmental Conservation
- Bold** = Detected above laboratory method detection limit (MDL)
- Bold and Italicized** = Constituent considered non-detect, however Laboratory RDL is greater than the ADEC Groundwater Cleanup Level
- Bold and Shaded** = Value exceeds ADEC Groundwater Cleanup Level
- DTW = Depth to groundwater
- EB = Equipment Blank
- feet = Relative to NAVD88

- ID = Identification
- MW = Groundwater monitoring well
- TB = Trip Blank
- TOC = Top of casing
- GRO = Total petroleum hydrocarbons, gasoline range organics
- MTBE = Methyl tert-butyl ether
- EDB = 1,2-Dibromoethane
- EDC = 1,2-Dichloroethane
- J = The associated numerical value is an estimated concentration only
- B = The same analyte is found in the associated blank
- D = Concentration is based on a diluted sample analysis.

Analytical Methods:

1. GRO analyzed by Alaska Method AK101
2. Lead analyzed by United States Environmental Protection Agency (USEPA) Method 6010D.
3. Napthalene analyzed by United States Environmental Protection Agency (USEPA) Method 8260D.
4. Tables 2 and 3 constituents of concern analyzed by United States Environmental Protection Agency (USEPA) Method 8260D except where noted above.

Reference:

18 AAC 75. Department of Environmental Conservation, State of Alaska, Oil and Other Hazardous Substances Pollution Control, Table C. Groundwater Cleanup Levels, as amended through February 5, 2023.

Notes
Chevron - #90430
Chevron Station 90430
6470 Debarr Rd,
Anchorage, Alaska



Acronyms and Abbreviations:

-- = Not Available or Not Analyzed
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<0.00100 = Not detected at or above the reported detection limit (RDL)
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ADEC = Alaska Department of Environmental Conservation
Bold = Detected above laboratory method detection limit (MDL)
Bold and *Italicized* = Constituent considered non-detect, however Laboratory RDL is greater than the ADEC Groundwater Cleanup Level
Bold and Shaded = Value exceeds ADEC Groundwater Cleanup Level
DTW = Depth to groundwater
EB = Equipment Blank
feet = Relative to NAVD88
bTOC = Below top of casing
GW Elev = Groundwater elevation
ID = Identification
MW = Groundwater monitoring well
TB = Trip Blank
TOC = Top of casing
GRO = Total petroleum hydrocarbons, gasoline range organics
MTBE = Methyl tert-butyl ether
EDB = 1,2-Dibromoethane
EDC = 1,2-Dichloroethane
J = The associated numerical value is an estimated concentration only
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Attachment A

Field Notes

Project Number : 30064208

Prepared By: Evan Wujcik

Site ID: 90430

Site Name: Debarr

City: Anchorage

State: Alaska

Project Manager: Wood, Nicholas

Portfolio: COP 5.0

Subportfolio: West

Inside Chevron Operational Control? Yes No

Staff on Site Evan Wujcik

Weather(°F)	PPE	Equipment
Clear		Water Quality Meter (i.e. YSI), Water Level Meter (WLM), Bladder Pump, Photoionization Detector (PID)

Date	Time	Description of Activities
04/18/2023	06:00	Arrive on site Locate Wells
04/18/2023	07:00	Sample MW9 Decon equipment See COC for analysis
04/18/2023	08:00	Sample MW14 Decon equipment See COC for analysis
04/18/2023	09:00	Sample MW5R BD/MS/MSD samples collected from this location Decon equipment See COC for analysis
04/18/2023	10:00	Sample MW7 Decon equipment See COC for analysis
04/18/2023	10:30	Load vehicle Mobilize offsite

Equipment and Calibration Information:

Supplier: Pine Model:
 Rental Number: Calibrated:
 Bump Calibration yes
 Checked: Passed:

Water Quality Meter SN:

Date	Time	Calibrated Fluid and Value	Lot #	Expiration Date	Initial Reading	Final Reading
04/18/2023	15:14:00					

Equipment and Calibration Information:

Supplier: Pine Model:
 Rental Number: Calibrated:
 Bump Calibration yes
 Checked: Passed:

PIDSN:

Date	Time	Calibrated Fluid and Value	Lot #	Expiration Date	Initial Reading	Final Reading
04/18/2023	15:14					

End of Day Questions	Yes	No	Comments			
Was waste generated?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Approximate volume of waste	10		
			Container type	55 gallon drum		
			Confirm container is not leaking	Yes	<input checked="" type="checkbox"/>	No
Have you performed work in accordance with the applicable QP/TGI?	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
Change in plans (project delays)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
Discovery of significant new site characteristics?	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
Upcoming regulatory, community, or other stakeholder views change?	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
Incident at the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
Is there a potential dispute?	<input type="checkbox"/>	<input type="checkbox"/>				
Identification of strategic opportunity?	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
New application, renewal, or permit modification?	<input type="checkbox"/>	<input checked="" type="checkbox"/>				

Signature



Project Number : 30064208

Prepared By: Evan Wujcik

Site ID: 90430

Site Name: Debarr

City: Anchorage

State: Alaska

Project Manager: Wood, Nicholas

Portfolio: COP 5.0

Subportfolio: West

Inside Chevron Operational Control? Yes No

Staff on Site

Evan Wujcik

Weather(°F)	PPE	Equipment
Clear		Water Quality Meter (i.e. YSI), Water Level Meter (WLM), Bladder Pump, Photoionization Detector (PID)

Date	Time	Description of Activities
04/17/2023	06:00	Arrive on site Locate Wells
04/17/2023	07:00	Sample MW17 Decon equipment See COC for analysis
04/17/2023	08:00	Sample MW15 Decon equipment See COC for analysis
04/17/2023	09:00	Sample MW8 Decon equipment See COC for analysis
04/17/2023	10:00	Sample MW10 Decon equipment See COC for analysis
04/17/2023	11:00	Sample MW11 Decon equipment See COC for analysis
04/17/2023	12:00	Sample MW16 Decon equipment See COC for analysis
04/17/2023	13:00	Sample MW4R BD samples collected at this location Decon equipment See COC for analysis
04/17/2023	14:00	Sample MW3 Decon equipment See COC for analysis
04/17/2023	14:30	Load vehicle Mobilize offsite

Equipment and Calibration Information:

Supplier: Pine Model:
 Rental Number: Calibrated:
 Bump Calibration yes
 Checked: Passed:

Water Quality Meter SN:

Date	Time	Calibrated Fluid and Value	Lot #	Expiration Date	Initial Reading	Final Reading
04/17/2023	15:14:00					

Equipment and Calibration Information:

Supplier: Pine Model:
 Rental Number: Calibrated:
 Bump Calibration yes
 Checked: Passed:

PIDSN:

Date	Time	Calibrated Fluid and Value	Lot #	Expiration Date	Initial Reading	Final Reading
04/17/2023	15:14					

End of Day Questions	Yes	No	Comments			
Was waste generated?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Approximate volume of waste	10		
			Container type	55 gallon drum		
			Confirm container is not leaking	Yes	<input checked="" type="checkbox"/>	No
Have you performed work in accordance with the applicable QP/TGI?	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
Change in plans (project delays)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
Discovery of significant new site characteristics?	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
Upcoming regulatory, community, or other stakeholder views change?	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
Incident at the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
Is there a potential dispute?	<input type="checkbox"/>	<input type="checkbox"/>				
Identification of strategic opportunity?	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
New application, renewal, or permit modification?	<input type="checkbox"/>	<input checked="" type="checkbox"/>				



Daily Log



Signature

A handwritten signature in black ink, appearing to be 'M. W.' or similar, written in a cursive style.



Groundwater Gauging Log

Project Number		30064208						
Client:		Chevron						
Site ID:		90430						
Site Location:		Anchorage, Alaska						
Measuring Point:		Top of Casing						
Date(s):		04/17/2023						
Sampler(s):		Evan Wujcik						
Gauging Equipment:		Water Level Meter						
Well ID	Date	Gauging Time	Static Water Level (ft bmp)	Depth to Product (ft bmp)	Total Depth (ft bmp)	PID Reading (ppm)	LNAPL Removed (gal)	Comments
MW-3	04/17/2023	06:18	10.71	ND	17.40	0	--	--
MW-4R	04/17/2023	06:51	11	ND	17.40	0	--	--
MW-5R	04/17/2023	06:04	16.54	ND	21.20	0	--	--
MW-7	04/17/2023	06:45	16.5	ND	18.00	0	--	--
MW-8	04/17/2023	06:58	18.35	ND	23.50	0	--	--
MW-9	04/17/2023	06:06	9.15	ND	28.60	0	--	--
MW-10	04/17/2023	06:20	14.76	ND	24.80	0	--	--
MW-11	04/17/2023	06:02	16.88	ND	21.60	0	--	--
MW-14	04/17/2023	06:39	9.71	ND	18.00	0	--	--
MW-15	04/17/2023	06:32	16.24	ND	19.80	0	--	--
MW-16	04/17/2023	06:27	16.16	ND	24.00	0	--	--
MW-17	04/17/2023	05:57	15.2	ND	23.60	0	--	--

ft-bmp = feet below measuring point

ND = Not Detected

PID = Photoionization Detector Reading

ppm = parts per million

-- = Not Recorded

Project Number	30064208	Well ID	MW-3	Date	4/17/2023	
Site Location	Anchorage, Alaska	Site ID	90430	Weather (°F)	Clear	Sampled by Evan Wujcik
Measuring Point Description	Top of Casing	Screen Depth Interval (ft-bmp)	-- to --	Casing Diameter (in.)	4	Well Casing Material PVC
Static Water Level (ft-bmp)	10.71	Total Depth (ft-bmp)	17.4	Water Column (ft)	6.69	Gallons in Well 4.35
Water Quality Meter Make/Model	Horiba U-52	Purge Method	Low-Flow	Sample Method	Grab	
Sample Time	14:00	Well Volumes Purged	0.15	Sample ID	MW-3-W-20230417	Evacuation Equipment Bladder
Purge Start	13:30	Gallons Purged	0.63	Duplicate ID	--	
Purge End	13:50	Total Purge Time (h:m)	0:20			

Time	Rate (ml/min)	Depth to Water (ft)	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Redox (mV)	Appearance	
									Color	Odor
13:33	200	10.73	7.39	0.458	8.1	1.44	1.54	-34	--	--
13:36	200	10.75	7.34	0.434	3.4	0.98	1.59	-31	--	--
13:39	200	10.77	7.32	0.427	2.6	0.83	1.62	-28	--	--
13:42	200	10.78	7.29	0.421	2.1	0.67	1.64	-24	--	--

Comments: None

Well Casing Volume Conversion

Well diameter (in.) = 1 = 0.04 1.5 = 0.09 2.5 = 0.26 3.5 = 0.50 6 = 1.47
gallons per foot 1.25 = 0.06 2 = 0.16 3 = 0.37 4 = 0.65

Sample Information

Sample ID: MW-3-W-20230417 Sample Time: 14:00 Sample Depth (ft-bmp): 12
Analytes and Methods: See Chain-of-Custody.

ft-bmp = feet below measuring point
in. = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
PVC = Polyvinyl Chloride

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius
-- = Not Recorded

Project Number	30064208	Well ID	MW-4R	Date	4/17/2023	
Site Location	Anchorage, Alaska	Site ID	90430	Weather (°F)	Clear	Sampled by Evan Wujcik
Measuring Point Description	Top of Casing	Screen Depth Interval (ft-bmp)	-- to --	Casing Diameter (in.)	2	Well Casing Material PVC
Static Water Level (ft-bmp)	11	Total Depth (ft-bmp)	17.4	Water Column (ft)	6.40	Gallons in Well 1.04
Water Quality Meter Make/Model	Horiba U-52	Purge Method	Low-Flow	Sample Method	Grab	
Sample Time	13:00	Well Volumes Purged	0.61	Sample ID	MW-4R-W-20230417	Evacuation Equipment Bladder
Purge Start	12:30	Gallons Purged	0.63	Duplicate ID	BD	
Purge End	12:50	Total Purge Time (h:m)	0:20			

Time	Rate (ml/min)	Depth to Water (ft)	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Redox (mV)	Appearance	
									Color	Odor
12:33	200	11.03	7.11	0.819	79.9	3.62	1.26	0	--	--
12:36	200	11.05	7.10	0.841	76.5	3.52	1.29	-9	--	--
12:39	200	11.08	7.10	0.857	72.9	3.48	1.31	-13	--	--
12:42	200	11.11	7.09	0.869	68.4	3.46	1.30	-17	--	--

Comments: None

Well Casing Volume Conversion

Well diameter (in.) = 1 = 0.04 1.5 = 0.09 2.5 = 0.26 3.5 = 0.50 6 = 1.47
gallons per foot 1.25 = 0.06 2 = 0.16 3 = 0.37 4 = 0.65

Sample Information

Sample ID: MW-4R-W-20230417 Sample Time: 13:00 Sample Depth (ft-bmp): 12
Analytes and Methods: See Chain-of-Custody.

ft-bmp = feet below measuring point
in. = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
PVC = Polyvinyl Chloride

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius
-- = Not Recorded

Project Number	30064208	Well ID	MW-5R	Date	4/18/2023	
Site Location	Anchorage, Alaska	Site ID	90430	Weather (°F)	Clear	Sampled by Evan Wujcik
Measuring Point Description	Top of Casing	Screen Depth Interval (ft-bmp)	-- to --	Casing Diameter (in.)	2	Well Casing Material PVC
Static Water Level (ft-bmp)	16.54	Total Depth (ft-bmp)	21.2	Water Column (ft)	4.66	Gallons in Well 0.76
Water Quality Meter Make/Model	Horiba U-52	Purge Method	Low-Flow	Sample Method	Grab	
Sample Time	09:00	Well Volumes Purged	0.83	Sample ID	MW-5R-W-20230418	Evacuation Equipment Bladder
Purge Start	08:30	Gallons Purged	0.63	Duplicate ID	BD/MS/MSD	
Purge End	08:50	Total Purge Time (h:m)	0:20			

Time	Rate (ml/min)	Depth to Water (ft)	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Redox (mV)	Appearance	
									Color	Odor
08:33	200	16.58	7.27	1.26	292	2.22	0.72	109	--	--
08:36	200	16.64	7.28	1.26	194	2.35	1.00	68	--	--
08:39	200	16.67	7.29	1.25	159	2.43	1.10	36	--	--
08:42	200	16.70	7.29	1.25	186	2.41	1.13	15	--	--

Comments: None

Well Casing Volume Conversion

Well diameter (in.) = 1 = 0.04 1.5 = 0.09 2.5 = 0.26 3.5 = 0.50 6 = 1.47
gallons per foot 1.25 = 0.06 2 = 0.16 3 = 0.37 4 = 0.65

Sample Information

Sample ID: MW-5R-W-20230418 Sample Time: 09:00 Sample Depth (ft-bmp): 18
Analytes and Methods: See Chain-of-Custody.

ft-bmp = feet below measuring point
in. = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
PVC = Polyvinyl Chloride

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius
-- = Not Recorded

Project Number	30064208	Well ID	MW-7	Date	4/18/2023	
Site Location	Anchorage, Alaska	Site ID	90430	Weather (°F)	Clear	Sampled by Evan Wujcik
Measuring Point Description	Top of Casing	Screen Depth Interval (ft-bmp)	-- to --	Casing Diameter (in.)	4	Well Casing Material PVC
Static Water Level (ft-bmp)	16.5	Total Depth (ft-bmp)	18	Water Column (ft)	1.50	Gallons in Well 0.97
Water Quality Meter Make/Model	Horiba U-52	Purge Method	Low-Flow	Sample Method	Grab	
Sample Time	10:00	Well Volumes Purged	0.82	Sample ID	MW-7-W-20230418	Evacuation Equipment Bladder
Purge Start	09:30	Gallons Purged	0.79	Duplicate ID	--	
Purge End	09:50	Total Purge Time (h:m)	0:20			

Time	Rate (ml/min)	Depth to Water (ft)	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Redox (mV)	Appearance	
									Color	Odor
09:33	200	16.52	7.52	0.701	171	9.07	0.13	19	--	--
09:36	200	16.54	7.26	0.630	73.0	9.50	0.20	26	--	--
09:39	200	16.57	7.14	0.622	40.3	9.57	0.38	33	--	--
09:42	200	16.60	7.09	0.625	28.8	9.44	0.41	37	--	--
09:45	200	16.61	7.04	0.628	22.0	9.37	0.50	41	--	--

Comments: None

Well Casing Volume Conversion

Well diameter (in.) = 1 = 0.04 1.5 = 0.09 2.5 = 0.26 3.5 = 0.50 6 = 1.47
gallons per foot 1.25 = 0.06 2 = 0.16 3 = 0.37 4 = 0.65

Sample Information

Sample ID: MW-7-W-20230418 Sample Time: 10:00 Sample Depth (ft-bmp): 17
Analytes and Methods: See Chain-of-Custody.

ft-bmp = feet below measuring point
in. = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
PVC = Polyvinyl Chloride

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius
-- = Not Recorded

Project Number	30064208	Well ID	MW-8	Date	4/17/2023	
Site Location	Anchorage, Alaska	Site ID	90430	Weather (°F)	Clear	Sampled by Evan Wujcik
Measuring Point Description	Top of Casing	Screen Depth Interval (ft-bmp)	-- to --	Casing Diameter (in.)	2	Well Casing Material PVC
Static Water Level (ft-bmp)	18.35	Total Depth (ft-bmp)	23.5	Water Column (ft)	5.15	Gallons in Well 0.84
Water Quality Meter Make/Model	Horiba U-52	Purge Method	Low-Flow	Sample Method	Grab	
Sample Time	09:00	Well Volumes Purged	0.75	Sample ID	MW-8-W-20230417	Evacuation Equipment Bladder
Purge Start	08:30	Gallons Purged	0.63	Duplicate ID	--	
Purge End	08:50	Total Purge Time (h:m)	0:20			

Time	Rate (ml/min)	Depth to Water (ft)	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Redox (mV)	Appearance	
									Color	Odor
08:33	200	18.37	7.15	0.910	317	1.71	1.50	-4	--	--
08:36	200	18.39	7.10	0.912	229	1.58	1.42	-21	--	--
08:39	200	18.42	7.06	0.909	171	1.63	1.37	-26	--	--
08:42	200	18.45	7.02	0.907	150	1.68	1.35	-29	--	--

Comments: None

Well Casing Volume Conversion

Well diameter (in.) = 1 = 0.04 1.5 = 0.09 2.5 = 0.26 3.5 = 0.50 6 = 1.47
gallons per foot 1.25 = 0.06 2 = 0.16 3 = 0.37 4 = 0.65

Sample Information

Sample ID: MW-8-W-20230417 Sample Time: 09:00 Sample Depth (ft-bmp): 20
Analytes and Methods: See Chain-of-Custody.

ft-bmp = feet below measuring point
in. = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
PVC = Polyvinyl Chloride

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius
-- = Not Recorded

Project Number	30064208	Well ID	MW-9	Date	4/18/2023	
Site Location	Anchorage, Alaska	Site ID	90430	Weather (°F)	Clear	Sampled by Evan Wujcik
Measuring Point Description	Top of Casing	Screen Depth Interval (ft-bmp)	-- to --	Casing Diameter (in.)	4	Well Casing Material PVC
Static Water Level (ft-bmp)	9.15	Total Depth (ft-bmp)	28.6	Water Column (ft)	19.45	Gallons in Well 12.64
Water Quality Meter Make/Model	Horiba U-52	Purge Method	Low-Flow	Sample Method	Grab	
Sample Time	07:00	Well Volumes Purged	0.05	Sample ID	MW-9-W-20230418	Evacuation Equipment Bladder
Purge Start	06:30	Gallons Purged	0.63	Duplicate ID	--	
Purge End	06:50	Total Purge Time (h:m)	0:20			

Time	Rate (ml/min)	Depth to Water (ft)	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Redox (mV)	Appearance	
									Color	Odor
06:33	200	9.16	7.52	0.719	15.2	9.73	0.40	207	--	--
06:36	200	9.18	7.39	0.715	14.3	8.86	0.28	209	--	--
06:39	200	9.21	7.26	0.714	13.6	8.36	0.11	211	--	--
06:42	200	9.23	7.20	0.712	14.0	8.28	0.07	212	--	--

Comments: None

Well Casing Volume Conversion

Well diameter (in.) = 1 = 0.04 1.5 = 0.09 2.5 = 0.26 3.5 = 0.50 6 = 1.47
gallons per foot 1.25 = 0.06 2 = 0.16 3 = 0.37 4 = 0.65

Sample Information

Sample ID: MW-9-W-20230418 Sample Time: 07:00 Sample Depth (ft-bmp): 10
Analytes and Methods: See Chain-of-Custody.

ft-bmp = feet below measuring point
in. = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
PVC = Polyvinyl Chloride

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius
-- = Not Recorded

Project Number	30064208	Well ID	MW-10	Date	4/17/2023	
Site Location	Anchorage, Alaska	Site ID	90430	Weather (°F)	Clear	Sampled by Evan Wujcik
Measuring Point Description	Top of Casing	Screen Depth Interval (ft-bmp)	-- to --	Casing Diameter (in.)	2	Well Casing Material PVC
Static Water Level (ft-bmp)	14.76	Total Depth (ft-bmp)	24.8	Water Column (ft)	10.04	Gallons in Well 1.63
Water Quality Meter Make/Model	Horiba U-52	Purge Method	Low-Flow	Sample Method	Grab	
Sample Time	10:00	Well Volumes Purged	0.39	Sample ID	MW-10-W-20230417	Evacuation Equipment Bladder
Purge Start	09:30	Gallons Purged	0.63	Duplicate ID	--	
Purge End	09:50	Total Purge Time (h:m)	0:20			

Time	Rate (ml/min)	Depth to Water (ft)	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Redox (mV)	Appearance	
									Color	Odor
09:33	200	14.78	6.98	0.737	308	3.81	1.33	-33	--	--
09:36	200	14.80	6.95	0.725	311	4.12	1.38	-26	--	--
09:39	200	14.82	6.93	0.718	291	4.37	1.38	-22	--	--
09:42	200	14.84	6.92	0.717	287	4.55	1.39	-18	--	--

Comments: None

Well Casing Volume Conversion

Well diameter (in.) = 1 = 0.04 1.5 = 0.09 2.5 = 0.26 3.5 = 0.50 6 = 1.47
gallons per foot 1.25 = 0.06 2 = 0.16 3 = 0.37 4 = 0.65

Sample Information

Sample ID: MW-10-W-20230417 Sample Time: 10:00 Sample Depth (ft-bmp): 16
Analytes and Methods: See Chain-of-Custody.

ft-bmp = feet below measuring point
in. = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
PVC = Polyvinyl Chloride

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius
-- = Not Recorded

Project Number	30064208	Well ID	MW-11	Date	4/17/2023	
Site Location	Anchorage, Alaska	Site ID	90430	Weather (°F)	Clear	Sampled by Evan Wujcik
Measuring Point Description	Top of Casing	Screen Depth Interval (ft-bmp)	-- to --	Casing Diameter (in.)	4	Well Casing Material PVC
Static Water Level (ft-bmp)	16.88	Total Depth (ft-bmp)	21.6	Water Column (ft)	4.72	Gallons in Well 3.07
Water Quality Meter Make/Model	Horiba U-52	Purge Method	Low-Flow	Sample Method	Grab	
Sample Time	11:00	Well Volumes Purged	0.21	Sample ID	MW-11-W-20230417	Evacuation Equipment Bladder
Purge Start	10:30	Gallons Purged	0.63	Duplicate ID	--	
Purge End	10:50	Total Purge Time (h:m)	0:20			

Time	Rate (ml/min)	Depth to Water (ft)	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Redox (mV)	Appearance	
									Color	Odor
10:33	200	16.89	7.29	0.554	213	2.71	2.40	75	--	--
10:36	200	16.90	7.23	0.546	167	2.71	2.59	71	--	--
10:39	200	16.92	7.22	0.538	132	2.83	2.70	69	--	--
10:42	200	16.93	7.19	0.534	116	2.88	2.72	66	--	--

Comments: None

Well Casing Volume Conversion

Well diameter (in.) = 1 = 0.04 1.5 = 0.09 2.5 = 0.26 3.5 = 0.50 6 = 1.47
gallons per foot 1.25 = 0.06 2 = 0.16 3 = 0.37 4 = 0.65

Sample Information

Sample ID: MW-11-W-20230417 Sample Time: 11:00 Sample Depth (ft-bmp): 18
Analytes and Methods: See Chain-of-Custody.

ft-bmp = feet below measuring point
in. = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
PVC = Polyvinyl Chloride

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius
-- = Not Recorded

Project Number	30064208	Well ID	MW-14	Date	4/18/2023	
Site Location	Anchorage, Alaska	Site ID	90430	Weather (°F)	Clear	Sampled by Evan Wujcik
Measuring Point Description	Top of Casing	Screen Depth Interval (ft-bmp)	-- to --	Casing Diameter (in.)	2	Well Casing Material PVC
Static Water Level (ft-bmp)	9.71	Total Depth (ft-bmp)	18	Water Column (ft)	8.29	Gallons in Well 1.35
Water Quality Meter Make/Model	Horiba U-52	Purge Method	Low-Flow	Sample Method	Grab	
Sample Time	08:00	Well Volumes Purged	0.59	Sample ID	MW-14-W-20230418	Evacuation Equipment Bladder
Purge Start	07:30	Gallons Purged	0.79	Duplicate ID	--	
Purge End	07:50	Total Purge Time (h:m)	0:20			

Time	Rate (ml/min)	Depth to Water (ft)	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Redox (mV)	Appearance	
									Color	Odor
07:33	200	9.75	7.00	0.962	29.0	2.33	0.24	218	--	--
07:36	200	9.77	6.94	0.868	24.4	2.22	0.35	218	--	--
07:39	200	9.80	6.87	0.970	20.9	2.17	0.51	215	--	--
07:42	200	9.84	6.83	0.968	17.6	2.20	0.60	211	--	--
07:45	200	9.87	6.80	0.973	15.5	2.23	0.66	206	--	--

Comments: None

Well Casing Volume Conversion

Well diameter (in.) = 1 = 0.04 1.5 = 0.09 2.5 = 0.26 3.5 = 0.50 6 = 1.47
gallons per foot 1.25 = 0.06 2 = 0.16 3 = 0.37 4 = 0.65

Sample Information

Sample ID: MW-14-W-20230418 Sample Time: 08:00 Sample Depth (ft-bmp): 11
Analytes and Methods: See Chain-of-Custody.

ft-bmp = feet below measuring point
in. = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
PVC = Polyvinyl Chloride

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius
-- = Not Recorded

Project Number	30064208	Well ID	MW-15	Date	4/17/2023	
Site Location	Anchorage, Alaska	Site ID	90430	Weather (°F)	Clear	Sampled by Evan Wujcik
Measuring Point Description	Top of Casing	Screen Depth Interval (ft-bmp)	-- to --	Casing Diameter (in.)	4	Well Casing Material PVC
Static Water Level (ft-bmp)	16.24	Total Depth (ft-bmp)	19.8	Water Column (ft)	3.56	Gallons in Well 2.31
Water Quality Meter Make/Model	Horiba U-52	Purge Method	Low-Flow	Sample Method	Grab	
Sample Time	08:00	Well Volumes Purged	0.34	Sample ID	MW-15-W-20230417	Evacuation Equipment Bladder
Purge Start	07:30	Gallons Purged	0.79	Duplicate ID	--	
Purge End	07:50	Total Purge Time (h:m)	0:20			

Time	Rate (ml/min)	Depth to Water (ft)	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Redox (mV)	Appearance	
									Color	Odor
07:33	200	16.25	7.60	0.567	137	5.33	2.85	209	--	--
07:36	200	16.27	7.27	0.605	69.1	3.38	2.28	180	--	--
07:39	200	16.29	7.07	0.617	92.2	2.39	2.23	121	--	--
07:42	200	16.31	7.03	0.616	88.9	2.18	2.25	103	--	--
07:45	200	16.32	7.01	0.615	87.1	2.06	2.24	96	--	--

Comments: None

Well Casing Volume Conversion

Well diameter (in.) = 1 = 0.04 1.5 = 0.09 2.5 = 0.26 3.5 = 0.50 6 = 1.47
gallons per foot 1.25 = 0.06 2 = 0.16 3 = 0.37 4 = 0.65

Sample Information

Sample ID: MW-15-W-20230417 Sample Time: 08:00 Sample Depth (ft-bmp): 18
Analytes and Methods: See Chain-of-Custody.

ft-bmp = feet below measuring point
in. = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
PVC = Polyvinyl Chloride

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius
-- = Not Recorded

Project Number	30064208	Well ID	MW-16	Date	4/17/2023	
Site Location	Anchorage, Alaska	Site ID	90430	Weather (°F)	Clear	Sampled by Evan Wujcik
Measuring Point Description	Top of Casing	Screen Depth Interval (ft-bmp)	-- to --	Casing Diameter (in.)	2	Well Casing Material PVC
Static Water Level (ft-bmp)	16.16	Total Depth (ft-bmp)	24	Water Column (ft)	7.84	Gallons in Well 1.27
Water Quality Meter Make/Model	Horiba U-52	Purge Method	Low-Flow	Sample Method	Grab	
Sample Time	12:00	Well Volumes Purged	0.50	Sample ID	MW-16-W-20230417	Evacuation Equipment Bladder
Purge Start	11:30	Gallons Purged	0.63	Duplicate ID	--	
Purge End	11:50	Total Purge Time (h:m)	0:20			

Time	Rate (ml/min)	Depth to Water (ft)	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Redox (mV)	Appearance	
									Color	Odor
11:33	200	16.19	7.15	0.552	448	6.76	1.83	79	--	--
11:36	200	19.22	6.92	0.552	418	6.29	1.97	87	--	--
11:39	200	16.26	6.89	0.552	377	6.15	2.01	88	--	--
11:42	200	16.30	6.86	0.551	324	6.20	2.03	90	--	--

Comments: None

Well Casing Volume Conversion

Well diameter (in.) = 1 = 0.04 1.5 = 0.09 2.5 = 0.26 3.5 = 0.50 6 = 1.47
gallons per foot 1.25 = 0.06 2 = 0.16 3 = 0.37 4 = 0.65

Sample Information

Sample ID: MW-16-W-20230417 Sample Time: 12:00 Sample Depth (ft-bmp): 18
Analytes and Methods: See Chain-of-Custody.

ft-bmp = feet below measuring point
in. = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
PVC = Polyvinyl Chloride

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius
-- = Not Recorded

Project Number	30064208	Well ID	MW-17	Date	4/17/2023	
Site Location	Anchorage, Alaska	Site ID	90430	Weather (°F)	Clear	Sampled by Evan Wujcik
Measuring Point Description	Top of Casing	Screen Depth Interval (ft-bmp)	-- to --	Casing Diameter (in.)	2	Well Casing Material PVC
Static Water Level (ft-bmp)	15.2	Total Depth (ft-bmp)	23.6	Water Column (ft)	8.40	Gallons in Well 1.36
Water Quality Meter Make/Model	Horiba U-52	Purge Method	Low-Flow	Sample Method	Grab	
Sample Time	07:00	Well Volumes Purged	0.47	Sample ID	MW-17-W-20230417	Evacuation Equipment Bladder
Purge Start	06:30	Gallons Purged	0.63	Duplicate ID	--	
Purge End	06:50	Total Purge Time (h:m)	0:20			

Time	Rate (ml/min)	Depth to Water (ft)	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Redox (mV)	Appearance	
									Color	Odor
06:33	200	15.22	7.90	0.385	564	15.57	5.21	207	--	--
06:36	200	15.25	7.54	0.378	329	12.83	4.15	211	--	--
06:39	200	15.27	7.39	0.377	183	12.07	3.68	213	--	--
06:42	200	15.29	7.35	0.377	156	11.99	3.61	214	--	--

Comments: None

Well Casing Volume Conversion

Well diameter (in.) = 1 = 0.04 1.5 = 0.09 2.5 = 0.26 3.5 = 0.50 6 = 1.47
gallons per foot 1.25 = 0.06 2 = 0.16 3 = 0.37 4 = 0.65

Sample Information

Sample ID: MW-17-W-20230417 Sample Time: 07:00 Sample Depth (ft-bmp): 17
Analytes and Methods: See Chain-of-Custody.

ft-bmp = feet below measuring point
in. = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
PVC = Polyvinyl Chloride

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius
-- = Not Recorded

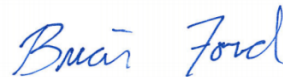
Attachment B

Laboratory Analytical Results

Arcadis - Chevron - AK

Sample Delivery Group: L1606782
Samples Received: 04/19/2023
Project Number: 30064208.19.45
Description: 90430
Site: 6470 DEBARR RD. ANCHORAGE, AK
Report To: Nick Wood/Sydney Clark/Erika Midkiff
880 H St.
Anchorage, AK 99501

Entire Report Reviewed By:



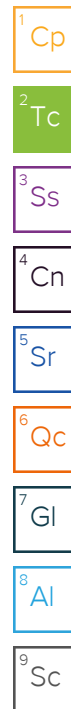
Brian Ford
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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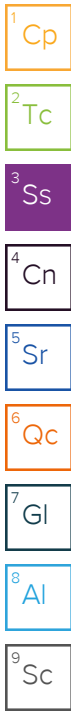


SAMPLE SUMMARY

MW-17-W-20230417 L1606782-01 GW

Collected by E. Wujcik Collected date/time 04/17/23 07:00 Received date/time 04/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method AK101	WG2045887	1	04/23/23 23:01	04/23/23 23:01	NCC	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2044985	1	04/20/23 16:24	04/20/23 16:24	BRA	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2045178	1	04/20/23 01:09	04/20/23 01:09	GH	Mt. Juliet, TN



MW-15-W-20230417 L1606782-02 GW

Collected by E. Wujcik Collected date/time 04/17/23 08:00 Received date/time 04/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method AK101	WG2045887	1	04/23/23 23:28	04/23/23 23:28	NCC	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2044985	1	04/20/23 16:00	04/20/23 16:00	BRA	Mt. Juliet, TN

MW-8-W-20230417 L1606782-03 GW

Collected by E. Wujcik Collected date/time 04/17/23 09:00 Received date/time 04/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method AK101	WG2045887	1	04/23/23 23:54	04/23/23 23:54	NCC	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2044985	1	04/20/23 15:36	04/20/23 15:36	BRA	Mt. Juliet, TN

MW-10-W-20230417 L1606782-04 GW

Collected by E. Wujcik Collected date/time 04/17/23 10:00 Received date/time 04/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method AK101	WG2045887	1	04/24/23 00:21	04/24/23 00:21	NCC	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2044985	1	04/20/23 15:12	04/20/23 15:12	BRA	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2045178	1	04/20/23 01:30	04/20/23 01:30	GH	Mt. Juliet, TN

MW-11-W-20230417 L1606782-05 GW

Collected by E. Wujcik Collected date/time 04/17/23 11:00 Received date/time 04/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method AK101	WG2045887	1	04/24/23 00:47	04/24/23 00:47	NCC	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2044985	1	04/20/23 14:48	04/20/23 14:48	BRA	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2045178	1	04/20/23 01:51	04/20/23 01:51	GH	Mt. Juliet, TN

MW-16-W-20230417 L1606782-06 GW

Collected by E. Wujcik Collected date/time 04/17/23 12:00 Received date/time 04/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method AK101	WG2045887	1	04/24/23 03:00	04/24/23 03:00	NCC	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2044985	1	04/20/23 14:24	04/20/23 14:24	BRA	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2045178	1	04/20/23 02:12	04/20/23 02:12	GH	Mt. Juliet, TN

MW-4R-W-20230417 L1606782-07 GW

Collected by E. Wujcik Collected date/time 04/17/23 13:00 Received date/time 04/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010D	WG2045348	1	04/20/23 13:39	04/22/23 22:51	ZSA	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG2045887	5	04/24/23 06:06	04/24/23 06:06	NCC	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2045178	10	04/20/23 03:58	04/20/23 03:58	GH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2046212	500	04/21/23 11:20	04/21/23 11:20	BRA	Mt. Juliet, TN

SAMPLE SUMMARY

MW-3-W-20230417 L1606782-08 GW

Collected by E. Wujcik Collected date/time 04/17/23 14:00 Received date/time 04/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method AK101	WG2045887	1	04/24/23 03:27	04/24/23 03:27	NCC	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2044985	10	04/20/23 17:12	04/20/23 17:12	BRA	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2045178	1	04/20/23 02:33	04/20/23 02:33	GH	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

BD-1-W-20230417 L1606782-09 GW

Collected by E. Wujcik Collected date/time 04/17/23 00:00 Received date/time 04/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010D	WG2045348	1	04/20/23 13:39	04/22/23 23:03	ZSA	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG2045887	5	04/24/23 06:33	04/24/23 06:33	NCC	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2045178	1	04/20/23 02:55	04/20/23 02:55	GH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2045833	50	04/20/23 21:57	04/20/23 21:57	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2046212	500	04/21/23 11:44	04/21/23 11:44	BRA	Mt. Juliet, TN

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

MW-9-W-20230418 L1606782-10 GW

Collected by E. Wujcik Collected date/time 04/18/23 07:00 Received date/time 04/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method AK101	WG2045887	1	04/24/23 03:54	04/24/23 03:54	NCC	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2044985	1	04/20/23 14:01	04/20/23 14:01	BRA	Mt. Juliet, TN

9 Sc

MW-14-W-20230418 L1606782-11 GW

Collected by E. Wujcik Collected date/time 04/18/23 08:00 Received date/time 04/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method AK101	WG2045887	1	04/24/23 04:20	04/24/23 04:20	NCC	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2044985	100	04/20/23 18:00	04/20/23 18:00	BRA	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2045833	1	04/20/23 21:14	04/20/23 21:14	ACG	Mt. Juliet, TN

MW-5R-W-20230418 L1606782-12 GW

Collected by E. Wujcik Collected date/time 04/18/23 09:00 Received date/time 04/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method AK101	WG2047014	1	04/25/23 22:06	04/25/23 22:06	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2044985	100	04/20/23 18:24	04/20/23 18:24	BRA	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2045178	50	04/20/23 04:40	04/20/23 04:40	GH	Mt. Juliet, TN

MW-7-W-20230418 L1606782-13 GW

Collected by E. Wujcik Collected date/time 04/18/23 10:00 Received date/time 04/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method AK101	WG2045887	1	04/24/23 04:47	04/24/23 04:47	NCC	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2044985	100	04/20/23 18:47	04/20/23 18:47	BRA	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2045178	25	04/20/23 05:02	04/20/23 05:02	GH	Mt. Juliet, TN

SAMPLE SUMMARY

BD-2-W-20230418 L1606782-14 GW

Collected by: E. Wujcik
 Collected date/time: 04/18/23 00:00
 Received date/time: 04/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method AK101	WG2045887	1	04/24/23 05:13	04/24/23 05:13	NCC	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2044985	100	04/20/23 19:11	04/20/23 19:11	BRA	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2045178	1	04/20/23 03:15	04/20/23 03:15	GH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2045833	20	04/20/23 22:18	04/20/23 22:18	ACG	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

EQB-1-W-20230418 L1606782-15 GW

Collected by: E. Wujcik
 Collected date/time: 04/18/23 11:00
 Received date/time: 04/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method AK101	WG2045887	1	04/24/23 05:40	04/24/23 05:40	NCC	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2044985	1	04/20/23 13:37	04/20/23 13:37	BRA	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2045833	1	04/20/23 21:35	04/20/23 21:35	ACG	Mt. Juliet, TN

5 Sr

6 Qc

7 Gl

TRIP BLANK-20230418 L1606782-16 GW

Collected by: E. Wujcik
 Collected date/time: 04/18/23 00:00
 Received date/time: 04/19/23 09:05


Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method AK101	WG2045887	1	04/23/23 22:08	04/23/23 22:08	NCC	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2044985	1	04/20/23 13:13	04/20/23 13:13	BRA	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2046881	1	04/22/23 10:28	04/22/23 10:28	JAH	Mt. Juliet, TN

8 Al

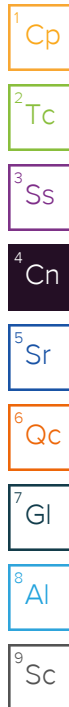
9 Sc

CASE NARRATIVE

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
WG2045178	L1606782-01	1,2,4-Trichlorobenzene, 1,2,4-Trimethylbenzene, Acrolein, Bromoform, Bromomethane, Naphthalene, n-Butylbenzene and Trichlorofluoromethane
WG2045178	L1606782-04	1,2,4-Trichlorobenzene, 1,2,4-Trimethylbenzene, Acrolein, Bromoform, Bromomethane, Naphthalene, n-Butylbenzene and Trichlorofluoromethane
WG2045178	L1606782-05	1,2,4-Trichlorobenzene, 1,2,4-Trimethylbenzene, Acrolein, Bromoform, Bromomethane, Naphthalene, n-Butylbenzene and Trichlorofluoromethane
WG2045178	L1606782-06	1,2,4-Trichlorobenzene, 1,2,4-Trimethylbenzene, Acrolein, Bromoform, Bromomethane, Naphthalene, n-Butylbenzene and Trichlorofluoromethane
WG2045178	L1606782-07	1,2,4-Trichlorobenzene, 1,2,4-Trimethylbenzene, Acrolein, Bromoform, Bromomethane, Naphthalene, n-Butylbenzene and Trichlorofluoromethane
WG2045178	L1606782-08	1,2,4-Trichlorobenzene, 1,2,4-Trimethylbenzene, Acrolein, Bromoform, Bromomethane, Naphthalene, n-Butylbenzene and Trichlorofluoromethane
WG2045178	L1606782-09	1,2,4-Trichlorobenzene, Acrolein, Bromoform, Bromomethane, Naphthalene, n-Butylbenzene and Trichlorofluoromethane
WG2045178	L1606782-12	1,2,4-Trichlorobenzene, 1,2,4-Trimethylbenzene, Acrolein, Bromoform, Bromomethane, Naphthalene, n-Butylbenzene and Trichlorofluoromethane
WG2045178	L1606782-13	1,2,4-Trichlorobenzene, 1,2,4-Trimethylbenzene, Acrolein, Bromoform, Bromomethane, Naphthalene, n-Butylbenzene and Trichlorofluoromethane
WG2045178	L1606782-14	1,2,4-Trichlorobenzene, 1,2,4-Trimethylbenzene, Acrolein, Bromoform, Bromomethane, Naphthalene, n-Butylbenzene and Trichlorofluoromethane
WG2045833	L1606782-11	1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene, Bromomethane, Hexachloro-1,3-butadiene and Naphthalene
WG2045833	L1606782-15	1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene, Bromomethane, Hexachloro-1,3-butadiene and Naphthalene
WG2046881	L1606782-16	1,2,3-Trichlorobenzene, 1,2,4-Trimethylbenzene and Naphthalene

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

Batch	Lab Sample ID	Analytes
WG2046881	(LCS) R3916296-1, L1606782-16	1,1,2-Trichlorotrifluoroethane

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

Batch	Lab Sample ID	Analytes
WG2045178	(LCSD) R3915476-2, L1606782-01, 04, 05, 06, 07, 08, 09, 13, 14	1,2,4-Trichlorobenzene and Acetone
WG2045833	(LCSD) R3915722-2, L1606782-11, 15	1,1,2-Trichlorotrifluoroethane, Dichlorodifluoromethane and Vinyl chloride

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	33.2	J	28.7	100	1	04/23/2023 23:01	WG2045887
(S) a,a,a-Trifluorotoluene(FID)	86.8			50.0-150		04/23/2023 23:01	WG2045887

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U	J3	11.3	50.0	1	04/20/2023 01:09	WG2045178
1,2,3-Trichloropropane	U		0.00200	0.00500	1	04/20/2023 16:24	WG2044985
Acrolein	U	C3	2.54	50.0	1	04/20/2023 01:09	WG2045178
1,2-Dibromoethane	U		0.00410	0.00500	1	04/20/2023 16:24	WG2044985
Acrylonitrile	U		0.671	10.0	1	04/20/2023 01:09	WG2045178
Benzene	U		0.0941	1.00	1	04/20/2023 01:09	WG2045178
Bromobenzene	U		0.118	1.00	1	04/20/2023 01:09	WG2045178
Bromochloromethane	U		0.128	1.00	1	04/20/2023 01:09	WG2045178
Bromodichloromethane	U		0.136	1.00	1	04/20/2023 01:09	WG2045178
Bromoform	U	C3	0.129	1.00	1	04/20/2023 01:09	WG2045178
Bromomethane	U	C3	0.605	5.00	1	04/20/2023 01:09	WG2045178
n-Butylbenzene	U	C3	0.157	1.00	1	04/20/2023 01:09	WG2045178
sec-Butylbenzene	U		0.125	1.00	1	04/20/2023 01:09	WG2045178
tert-Butylbenzene	U		0.127	1.00	1	04/20/2023 01:09	WG2045178
Carbon disulfide	U		0.0962	1.00	1	04/20/2023 01:09	WG2045178
Carbon tetrachloride	U		0.128	1.00	1	04/20/2023 01:09	WG2045178
Chlorobenzene	U		0.116	1.00	1	04/20/2023 01:09	WG2045178
Chlorodibromomethane	U		0.140	1.00	1	04/20/2023 01:09	WG2045178
Chloroethane	U		0.192	5.00	1	04/20/2023 01:09	WG2045178
Chloroform	U		0.111	5.00	1	04/20/2023 01:09	WG2045178
Chloromethane	U		0.960	2.50	1	04/20/2023 01:09	WG2045178
2-Chlorotoluene	U		0.106	1.00	1	04/20/2023 01:09	WG2045178
4-Chlorotoluene	U		0.114	1.00	1	04/20/2023 01:09	WG2045178
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	04/20/2023 01:09	WG2045178
Dibromomethane	U		0.122	1.00	1	04/20/2023 01:09	WG2045178
1,2-Dichlorobenzene	U		0.107	1.00	1	04/20/2023 01:09	WG2045178
1,3-Dichlorobenzene	U		0.110	1.00	1	04/20/2023 01:09	WG2045178
1,4-Dichlorobenzene	U		0.120	1.00	1	04/20/2023 01:09	WG2045178
Dichlorodifluoromethane	U		0.374	5.00	1	04/20/2023 01:09	WG2045178
1,1-Dichloroethane	U		0.100	1.00	1	04/20/2023 01:09	WG2045178
1,2-Dichloroethane	U		0.0819	1.00	1	04/20/2023 01:09	WG2045178
1,1-Dichloroethene	U		0.188	1.00	1	04/20/2023 01:09	WG2045178
cis-1,2-Dichloroethene	U		0.126	1.00	1	04/20/2023 01:09	WG2045178
trans-1,2-Dichloroethene	U		0.149	1.00	1	04/20/2023 01:09	WG2045178
1,2-Dichloropropane	U		0.149	1.00	1	04/20/2023 01:09	WG2045178
1,1-Dichloropropene	U		0.142	1.00	1	04/20/2023 01:09	WG2045178
1,3-Dichloropropane	U		0.110	1.00	1	04/20/2023 01:09	WG2045178
cis-1,3-Dichloropropene	U		0.111	1.00	1	04/20/2023 01:09	WG2045178
trans-1,3-Dichloropropene	U		0.118	1.00	1	04/20/2023 01:09	WG2045178
2,2-Dichloropropane	U		0.161	1.00	1	04/20/2023 01:09	WG2045178
Di-isopropyl ether	U		0.105	1.00	1	04/20/2023 01:09	WG2045178
Ethylbenzene	U		0.137	1.00	1	04/20/2023 01:09	WG2045178
Hexachloro-1,3-butadiene	U		0.337	1.00	1	04/20/2023 01:09	WG2045178
Isopropylbenzene	U		0.105	1.00	1	04/20/2023 01:09	WG2045178
p-Isopropyltoluene	U		0.120	1.00	1	04/20/2023 01:09	WG2045178
2-Butanone (MEK)	U		1.19	10.0	1	04/20/2023 01:09	WG2045178
Methylene Chloride	U		0.430	5.00	1	04/20/2023 01:09	WG2045178
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	04/20/2023 01:09	WG2045178
Methyl tert-butyl ether	U		0.101	1.00	1	04/20/2023 01:09	WG2045178

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
Naphthalene	U	<u>C3</u>	1.00	5.00	1	04/20/2023 01:09	WG2045178
n-Propylbenzene	U		0.0993	1.00	1	04/20/2023 01:09	WG2045178
Styrene	U		0.118	1.00	1	04/20/2023 01:09	WG2045178
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	04/20/2023 01:09	WG2045178
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	04/20/2023 01:09	WG2045178
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	04/20/2023 01:09	WG2045178
Tetrachloroethene	U		0.300	1.00	1	04/20/2023 01:09	WG2045178
Toluene	U		0.278	1.00	1	04/20/2023 01:09	WG2045178
1,2,3-Trichlorobenzene	U		0.230	1.00	1	04/20/2023 01:09	WG2045178
1,2,4-Trichlorobenzene	U	<u>C3 J3</u>	0.481	1.00	1	04/20/2023 01:09	WG2045178
1,1,1-Trichloroethane	U		0.149	1.00	1	04/20/2023 01:09	WG2045178
1,1,2-Trichloroethane	U		0.158	1.00	1	04/20/2023 01:09	WG2045178
Trichloroethene	U		0.190	1.00	1	04/20/2023 01:09	WG2045178
Trichlorofluoromethane	U	<u>C3</u>	0.160	5.00	1	04/20/2023 01:09	WG2045178
1,2,4-Trimethylbenzene	U	<u>C3</u>	0.322	1.00	1	04/20/2023 01:09	WG2045178
1,2,3-Trimethylbenzene	U		0.104	1.00	1	04/20/2023 01:09	WG2045178
1,3,5-Trimethylbenzene	U		0.104	1.00	1	04/20/2023 01:09	WG2045178
Vinyl chloride	U		0.234	1.00	1	04/20/2023 01:09	WG2045178
Xylenes, Total	U		0.174	3.00	1	04/20/2023 01:09	WG2045178
o-Xylene	U		0.174	1.00	1	04/20/2023 01:09	WG2045178
m&p-Xylene	U		0.430	2.00	1	04/20/2023 01:09	WG2045178
(S) Toluene-d8	101			80.0-120		04/20/2023 01:09	WG2045178
(S) 4-Bromofluorobenzene	93.1			77.0-126		04/20/2023 01:09	WG2045178
(S) 1,2-Dichloroethane-d4	102			70.0-130		04/20/2023 01:09	WG2045178

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
TPHGAK C6 to C10	U		28.7	100	1	04/23/2023 23:28	WG2045887
(S) a,a,a-Trifluorotoluene(FID)	89.6			50.0-150		04/23/2023 23:28	WG2045887

- 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 date / time	Batch
1,2,3-Trichloropropane	U		0.00200	0.00500	1	04/20/2023 16:00	WG2044985
1,2-Dibromoethane	U		0.00410	0.00500	1	04/20/2023 16:00	WG2044985

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
TPHGAK C6 to C10	U		28.7	100	1	04/23/2023 23:54	WG2045887
(S) a,a,a-Trifluorotoluene(FID)	90.3			50.0-150		04/23/2023 23:54	WG2045887

1 Cp

2 Tc

3 Ss

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
1,2,3-Trichloropropane	U		0.00200	0.00500	1	04/20/2023 15:36	WG2044985
1,2-Dibromoethane	U		0.00410	0.00500	1	04/20/2023 15:36	WG2044985

4 Cn

5 Sr

6 Qc

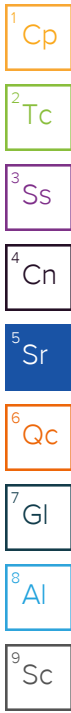
7 Gl

8 Al

9 Sc

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	04/24/2023 00:21	WG2045887
(S) a,a,a-Trifluorotoluene(FID)	86.8			50.0-150		04/24/2023 00:21	WG2045887



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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U	<u>J3</u>	11.3	50.0	1	04/20/2023 01:30	WG2045178
1,2,3-Trichloropropane	U		0.00200	0.00500	1	04/20/2023 15:12	WG2044985
Acrolein	U	<u>C3</u>	2.54	50.0	1	04/20/2023 01:30	WG2045178
1,2-Dibromoethane	U		0.00410	0.00500	1	04/20/2023 15:12	WG2044985
Acrylonitrile	U		0.671	10.0	1	04/20/2023 01:30	WG2045178
Benzene	U		0.0941	1.00	1	04/20/2023 01:30	WG2045178
Bromobenzene	U		0.118	1.00	1	04/20/2023 01:30	WG2045178
Bromochloromethane	U		0.128	1.00	1	04/20/2023 01:30	WG2045178
Bromodichloromethane	U		0.136	1.00	1	04/20/2023 01:30	WG2045178
Bromoform	U	<u>C3</u>	0.129	1.00	1	04/20/2023 01:30	WG2045178
Bromomethane	U	<u>C3</u>	0.605	5.00	1	04/20/2023 01:30	WG2045178
n-Butylbenzene	U	<u>C3</u>	0.157	1.00	1	04/20/2023 01:30	WG2045178
sec-Butylbenzene	U		0.125	1.00	1	04/20/2023 01:30	WG2045178
tert-Butylbenzene	U		0.127	1.00	1	04/20/2023 01:30	WG2045178
Carbon disulfide	U		0.0962	1.00	1	04/20/2023 01:30	WG2045178
Carbon tetrachloride	U		0.128	1.00	1	04/20/2023 01:30	WG2045178
Chlorobenzene	U		0.116	1.00	1	04/20/2023 01:30	WG2045178
Chlorodibromomethane	U		0.140	1.00	1	04/20/2023 01:30	WG2045178
Chloroethane	U		0.192	5.00	1	04/20/2023 01:30	WG2045178
Chloroform	0.727	<u>J</u>	0.111	5.00	1	04/20/2023 01:30	WG2045178
Chloromethane	U		0.960	2.50	1	04/20/2023 01:30	WG2045178
2-Chlorotoluene	U		0.106	1.00	1	04/20/2023 01:30	WG2045178
4-Chlorotoluene	U		0.114	1.00	1	04/20/2023 01:30	WG2045178
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	04/20/2023 01:30	WG2045178
Dibromomethane	U		0.122	1.00	1	04/20/2023 01:30	WG2045178
1,2-Dichlorobenzene	U		0.107	1.00	1	04/20/2023 01:30	WG2045178
1,3-Dichlorobenzene	U		0.110	1.00	1	04/20/2023 01:30	WG2045178
1,4-Dichlorobenzene	U		0.120	1.00	1	04/20/2023 01:30	WG2045178
Dichlorodifluoromethane	U		0.374	5.00	1	04/20/2023 01:30	WG2045178
1,1-Dichloroethane	U		0.100	1.00	1	04/20/2023 01:30	WG2045178
1,2-Dichloroethane	U		0.0819	1.00	1	04/20/2023 01:30	WG2045178
1,1-Dichloroethene	U		0.188	1.00	1	04/20/2023 01:30	WG2045178
cis-1,2-Dichloroethene	U		0.126	1.00	1	04/20/2023 01:30	WG2045178
trans-1,2-Dichloroethene	U		0.149	1.00	1	04/20/2023 01:30	WG2045178
1,2-Dichloropropane	U		0.149	1.00	1	04/20/2023 01:30	WG2045178
1,1-Dichloropropene	U		0.142	1.00	1	04/20/2023 01:30	WG2045178
1,3-Dichloropropane	U		0.110	1.00	1	04/20/2023 01:30	WG2045178
cis-1,3-Dichloropropene	U		0.111	1.00	1	04/20/2023 01:30	WG2045178
trans-1,3-Dichloropropene	U		0.118	1.00	1	04/20/2023 01:30	WG2045178
2,2-Dichloropropane	U		0.161	1.00	1	04/20/2023 01:30	WG2045178
Di-isopropyl ether	U		0.105	1.00	1	04/20/2023 01:30	WG2045178
Ethylbenzene	U		0.137	1.00	1	04/20/2023 01:30	WG2045178
Hexachloro-1,3-butadiene	U		0.337	1.00	1	04/20/2023 01:30	WG2045178
Isopropylbenzene	U		0.105	1.00	1	04/20/2023 01:30	WG2045178
p-Isopropyltoluene	U		0.120	1.00	1	04/20/2023 01:30	WG2045178
2-Butanone (MEK)	U		1.19	10.0	1	04/20/2023 01:30	WG2045178
Methylene Chloride	U		0.430	5.00	1	04/20/2023 01:30	WG2045178
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	04/20/2023 01:30	WG2045178
Methyl tert-butyl ether	U		0.101	1.00	1	04/20/2023 01:30	WG2045178

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Naphthalene	U	<u>C3</u>	1.00	5.00	1	04/20/2023 01:30	WG2045178
n-Propylbenzene	U		0.0993	1.00	1	04/20/2023 01:30	WG2045178
Styrene	U		0.118	1.00	1	04/20/2023 01:30	WG2045178
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	04/20/2023 01:30	WG2045178
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	04/20/2023 01:30	WG2045178
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	04/20/2023 01:30	WG2045178
Tetrachloroethene	U		0.300	1.00	1	04/20/2023 01:30	WG2045178
Toluene	U		0.278	1.00	1	04/20/2023 01:30	WG2045178
1,2,3-Trichlorobenzene	U		0.230	1.00	1	04/20/2023 01:30	WG2045178
1,2,4-Trichlorobenzene	U	<u>C3 J3</u>	0.481	1.00	1	04/20/2023 01:30	WG2045178
1,1,1-Trichloroethane	U		0.149	1.00	1	04/20/2023 01:30	WG2045178
1,1,2-Trichloroethane	U		0.158	1.00	1	04/20/2023 01:30	WG2045178
Trichloroethene	U		0.190	1.00	1	04/20/2023 01:30	WG2045178
Trichlorofluoromethane	U	<u>C3</u>	0.160	5.00	1	04/20/2023 01:30	WG2045178
1,2,4-Trimethylbenzene	U	<u>C3</u>	0.322	1.00	1	04/20/2023 01:30	WG2045178
1,2,3-Trimethylbenzene	U		0.104	1.00	1	04/20/2023 01:30	WG2045178
1,3,5-Trimethylbenzene	U		0.104	1.00	1	04/20/2023 01:30	WG2045178
Vinyl chloride	U		0.234	1.00	1	04/20/2023 01:30	WG2045178
Xylenes, Total	U		0.174	3.00	1	04/20/2023 01:30	WG2045178
o-Xylene	U		0.174	1.00	1	04/20/2023 01:30	WG2045178
m&p-Xylene	U		0.430	2.00	1	04/20/2023 01:30	WG2045178
(S) Toluene-d8	102			80.0-120		04/20/2023 01:30	WG2045178
(S) 4-Bromofluorobenzene	98.3			77.0-126		04/20/2023 01:30	WG2045178
(S) 1,2-Dichloroethane-d4	101			70.0-130		04/20/2023 01:30	WG2045178

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

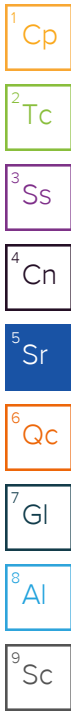
9
Sc

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	04/24/2023 00:47	WG2045887
(S) a,a,a-Trifluorotoluene(FID)	90.0			50.0-150		04/24/2023 00:47	WG2045887

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U	<u>J3</u>	11.3	50.0	1	04/20/2023 01:51	WG2045178
1,2,3-Trichloropropane	U		0.00200	0.00500	1	04/20/2023 14:48	WG2044985
Acrolein	U	<u>C3</u>	2.54	50.0	1	04/20/2023 01:51	WG2045178
1,2-Dibromoethane	U		0.00410	0.00500	1	04/20/2023 14:48	WG2044985
Acrylonitrile	U		0.671	10.0	1	04/20/2023 01:51	WG2045178
Benzene	U		0.0941	1.00	1	04/20/2023 01:51	WG2045178
Bromobenzene	U		0.118	1.00	1	04/20/2023 01:51	WG2045178
Bromochloromethane	U		0.128	1.00	1	04/20/2023 01:51	WG2045178
Bromodichloromethane	U		0.136	1.00	1	04/20/2023 01:51	WG2045178
Bromoform	U	<u>C3</u>	0.129	1.00	1	04/20/2023 01:51	WG2045178
Bromomethane	U	<u>C3</u>	0.605	5.00	1	04/20/2023 01:51	WG2045178
n-Butylbenzene	U	<u>C3</u>	0.157	1.00	1	04/20/2023 01:51	WG2045178
sec-Butylbenzene	U		0.125	1.00	1	04/20/2023 01:51	WG2045178
tert-Butylbenzene	U		0.127	1.00	1	04/20/2023 01:51	WG2045178
Carbon disulfide	U		0.0962	1.00	1	04/20/2023 01:51	WG2045178
Carbon tetrachloride	U		0.128	1.00	1	04/20/2023 01:51	WG2045178
Chlorobenzene	U		0.116	1.00	1	04/20/2023 01:51	WG2045178
Chlorodibromomethane	U		0.140	1.00	1	04/20/2023 01:51	WG2045178
Chloroethane	U		0.192	5.00	1	04/20/2023 01:51	WG2045178
Chloroform	U		0.111	5.00	1	04/20/2023 01:51	WG2045178
Chloromethane	U		0.960	2.50	1	04/20/2023 01:51	WG2045178
2-Chlorotoluene	U		0.106	1.00	1	04/20/2023 01:51	WG2045178
4-Chlorotoluene	U		0.114	1.00	1	04/20/2023 01:51	WG2045178
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	04/20/2023 01:51	WG2045178
Dibromomethane	U		0.122	1.00	1	04/20/2023 01:51	WG2045178
1,2-Dichlorobenzene	U		0.107	1.00	1	04/20/2023 01:51	WG2045178
1,3-Dichlorobenzene	U		0.110	1.00	1	04/20/2023 01:51	WG2045178
1,4-Dichlorobenzene	U		0.120	1.00	1	04/20/2023 01:51	WG2045178
Dichlorodifluoromethane	U		0.374	5.00	1	04/20/2023 01:51	WG2045178
1,1-Dichloroethane	U		0.100	1.00	1	04/20/2023 01:51	WG2045178
1,2-Dichloroethane	U		0.0819	1.00	1	04/20/2023 01:51	WG2045178
1,1-Dichloroethene	U		0.188	1.00	1	04/20/2023 01:51	WG2045178
cis-1,2-Dichloroethene	U		0.126	1.00	1	04/20/2023 01:51	WG2045178
trans-1,2-Dichloroethene	U		0.149	1.00	1	04/20/2023 01:51	WG2045178
1,2-Dichloropropane	U		0.149	1.00	1	04/20/2023 01:51	WG2045178
1,1-Dichloropropene	U		0.142	1.00	1	04/20/2023 01:51	WG2045178
1,3-Dichloropropane	U		0.110	1.00	1	04/20/2023 01:51	WG2045178
cis-1,3-Dichloropropene	U		0.111	1.00	1	04/20/2023 01:51	WG2045178
trans-1,3-Dichloropropene	U		0.118	1.00	1	04/20/2023 01:51	WG2045178
2,2-Dichloropropane	U		0.161	1.00	1	04/20/2023 01:51	WG2045178
Di-isopropyl ether	U		0.105	1.00	1	04/20/2023 01:51	WG2045178
Ethylbenzene	U		0.137	1.00	1	04/20/2023 01:51	WG2045178
Hexachloro-1,3-butadiene	U		0.337	1.00	1	04/20/2023 01:51	WG2045178
Isopropylbenzene	U		0.105	1.00	1	04/20/2023 01:51	WG2045178
p-Isopropyltoluene	U		0.120	1.00	1	04/20/2023 01:51	WG2045178
2-Butanone (MEK)	U		1.19	10.0	1	04/20/2023 01:51	WG2045178
Methylene Chloride	U		0.430	5.00	1	04/20/2023 01:51	WG2045178
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	04/20/2023 01:51	WG2045178
Methyl tert-butyl ether	U		0.101	1.00	1	04/20/2023 01:51	WG2045178



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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Naphthalene	U	<u>C3</u>	1.00	5.00	1	04/20/2023 01:51	WG2045178
n-Propylbenzene	U		0.0993	1.00	1	04/20/2023 01:51	WG2045178
Styrene	U		0.118	1.00	1	04/20/2023 01:51	WG2045178
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	04/20/2023 01:51	WG2045178
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	04/20/2023 01:51	WG2045178
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	04/20/2023 01:51	WG2045178
Tetrachloroethene	U		0.300	1.00	1	04/20/2023 01:51	WG2045178
Toluene	U		0.278	1.00	1	04/20/2023 01:51	WG2045178
1,2,3-Trichlorobenzene	U		0.230	1.00	1	04/20/2023 01:51	WG2045178
1,2,4-Trichlorobenzene	U	<u>C3 J3</u>	0.481	1.00	1	04/20/2023 01:51	WG2045178
1,1,1-Trichloroethane	U		0.149	1.00	1	04/20/2023 01:51	WG2045178
1,1,2-Trichloroethane	U		0.158	1.00	1	04/20/2023 01:51	WG2045178
Trichloroethene	U		0.190	1.00	1	04/20/2023 01:51	WG2045178
Trichlorofluoromethane	U	<u>C3</u>	0.160	5.00	1	04/20/2023 01:51	WG2045178
1,2,4-Trimethylbenzene	U	<u>C3</u>	0.322	1.00	1	04/20/2023 01:51	WG2045178
1,2,3-Trimethylbenzene	U		0.104	1.00	1	04/20/2023 01:51	WG2045178
1,3,5-Trimethylbenzene	U		0.104	1.00	1	04/20/2023 01:51	WG2045178
Vinyl chloride	U		0.234	1.00	1	04/20/2023 01:51	WG2045178
Xylenes, Total	U		0.174	3.00	1	04/20/2023 01:51	WG2045178
o-Xylene	U		0.174	1.00	1	04/20/2023 01:51	WG2045178
m&p-Xylene	U		0.430	2.00	1	04/20/2023 01:51	WG2045178
(S) Toluene-d8	105			80.0-120		04/20/2023 01:51	WG2045178
(S) 4-Bromofluorobenzene	95.5			77.0-126		04/20/2023 01:51	WG2045178
(S) 1,2-Dichloroethane-d4	101			70.0-130		04/20/2023 01:51	WG2045178

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

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	04/24/2023 03:00	WG2045887
(S) a,a,a-Trifluorotoluene(FID)	89.7			50.0-150		04/24/2023 03:00	WG2045887

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U	<u>J3</u>	11.3	50.0	1	04/20/2023 02:12	WG2045178
1,2,3-Trichloropropane	U		0.00200	0.00500	1	04/20/2023 14:24	WG2044985
Acrolein	U	<u>C3</u>	2.54	50.0	1	04/20/2023 02:12	WG2045178
1,2-Dibromoethane	U		0.00410	0.00500	1	04/20/2023 14:24	WG2044985
Acrylonitrile	U		0.671	10.0	1	04/20/2023 02:12	WG2045178
Benzene	U		0.0941	1.00	1	04/20/2023 02:12	WG2045178
Bromobenzene	U		0.118	1.00	1	04/20/2023 02:12	WG2045178
Bromochloromethane	U		0.128	1.00	1	04/20/2023 02:12	WG2045178
Bromodichloromethane	U		0.136	1.00	1	04/20/2023 02:12	WG2045178
Bromoform	U	<u>C3</u>	0.129	1.00	1	04/20/2023 02:12	WG2045178
Bromomethane	U	<u>C3</u>	0.605	5.00	1	04/20/2023 02:12	WG2045178
n-Butylbenzene	U	<u>C3</u>	0.157	1.00	1	04/20/2023 02:12	WG2045178
sec-Butylbenzene	U		0.125	1.00	1	04/20/2023 02:12	WG2045178
tert-Butylbenzene	U		0.127	1.00	1	04/20/2023 02:12	WG2045178
Carbon disulfide	U		0.0962	1.00	1	04/20/2023 02:12	WG2045178
Carbon tetrachloride	U		0.128	1.00	1	04/20/2023 02:12	WG2045178
Chlorobenzene	U		0.116	1.00	1	04/20/2023 02:12	WG2045178
Chlorodibromomethane	U		0.140	1.00	1	04/20/2023 02:12	WG2045178
Chloroethane	U		0.192	5.00	1	04/20/2023 02:12	WG2045178
Chloroform	U		0.111	5.00	1	04/20/2023 02:12	WG2045178
Chloromethane	U		0.960	2.50	1	04/20/2023 02:12	WG2045178
2-Chlorotoluene	U		0.106	1.00	1	04/20/2023 02:12	WG2045178
4-Chlorotoluene	U		0.114	1.00	1	04/20/2023 02:12	WG2045178
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	04/20/2023 02:12	WG2045178
Dibromomethane	U		0.122	1.00	1	04/20/2023 02:12	WG2045178
1,2-Dichlorobenzene	U		0.107	1.00	1	04/20/2023 02:12	WG2045178
1,3-Dichlorobenzene	U		0.110	1.00	1	04/20/2023 02:12	WG2045178
1,4-Dichlorobenzene	U		0.120	1.00	1	04/20/2023 02:12	WG2045178
Dichlorodifluoromethane	U		0.374	5.00	1	04/20/2023 02:12	WG2045178
1,1-Dichloroethane	U		0.100	1.00	1	04/20/2023 02:12	WG2045178
1,2-Dichloroethane	U		0.0819	1.00	1	04/20/2023 02:12	WG2045178
1,1-Dichloroethene	U		0.188	1.00	1	04/20/2023 02:12	WG2045178
cis-1,2-Dichloroethene	U		0.126	1.00	1	04/20/2023 02:12	WG2045178
trans-1,2-Dichloroethene	U		0.149	1.00	1	04/20/2023 02:12	WG2045178
1,2-Dichloropropane	U		0.149	1.00	1	04/20/2023 02:12	WG2045178
1,1-Dichloropropene	U		0.142	1.00	1	04/20/2023 02:12	WG2045178
1,3-Dichloropropane	U		0.110	1.00	1	04/20/2023 02:12	WG2045178
cis-1,3-Dichloropropene	U		0.111	1.00	1	04/20/2023 02:12	WG2045178
trans-1,3-Dichloropropene	U		0.118	1.00	1	04/20/2023 02:12	WG2045178
2,2-Dichloropropane	U		0.161	1.00	1	04/20/2023 02:12	WG2045178
Di-isopropyl ether	U		0.105	1.00	1	04/20/2023 02:12	WG2045178
Ethylbenzene	U		0.137	1.00	1	04/20/2023 02:12	WG2045178
Hexachloro-1,3-butadiene	U		0.337	1.00	1	04/20/2023 02:12	WG2045178
Isopropylbenzene	U		0.105	1.00	1	04/20/2023 02:12	WG2045178
p-Isopropyltoluene	U		0.120	1.00	1	04/20/2023 02:12	WG2045178
2-Butanone (MEK)	U		1.19	10.0	1	04/20/2023 02:12	WG2045178
Methylene Chloride	U		0.430	5.00	1	04/20/2023 02:12	WG2045178
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	04/20/2023 02:12	WG2045178
Methyl tert-butyl ether	0.484	<u>J</u>	0.101	1.00	1	04/20/2023 02:12	WG2045178

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
Naphthalene	U	<u>C3</u>	1.00	5.00	1	04/20/2023 02:12	WG2045178
n-Propylbenzene	U		0.0993	1.00	1	04/20/2023 02:12	WG2045178
Styrene	U		0.118	1.00	1	04/20/2023 02:12	WG2045178
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	04/20/2023 02:12	WG2045178
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	04/20/2023 02:12	WG2045178
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	04/20/2023 02:12	WG2045178
Tetrachloroethene	U		0.300	1.00	1	04/20/2023 02:12	WG2045178
Toluene	U		0.278	1.00	1	04/20/2023 02:12	WG2045178
1,2,3-Trichlorobenzene	U		0.230	1.00	1	04/20/2023 02:12	WG2045178
1,2,4-Trichlorobenzene	U	<u>C3 J3</u>	0.481	1.00	1	04/20/2023 02:12	WG2045178
1,1,1-Trichloroethane	U		0.149	1.00	1	04/20/2023 02:12	WG2045178
1,1,2-Trichloroethane	U		0.158	1.00	1	04/20/2023 02:12	WG2045178
Trichloroethene	U		0.190	1.00	1	04/20/2023 02:12	WG2045178
Trichlorofluoromethane	U	<u>C3</u>	0.160	5.00	1	04/20/2023 02:12	WG2045178
1,2,4-Trimethylbenzene	U	<u>C3</u>	0.322	1.00	1	04/20/2023 02:12	WG2045178
1,2,3-Trimethylbenzene	U		0.104	1.00	1	04/20/2023 02:12	WG2045178
1,3,5-Trimethylbenzene	U		0.104	1.00	1	04/20/2023 02:12	WG2045178
Vinyl chloride	U		0.234	1.00	1	04/20/2023 02:12	WG2045178
Xylenes, Total	U		0.174	3.00	1	04/20/2023 02:12	WG2045178
o-Xylene	U		0.174	1.00	1	04/20/2023 02:12	WG2045178
m&p-Xylene	U		0.430	2.00	1	04/20/2023 02:12	WG2045178
(S) Toluene-d8	102			80.0-120		04/20/2023 02:12	WG2045178
(S) 4-Bromofluorobenzene	94.8			77.0-126		04/20/2023 02:12	WG2045178
(S) 1,2-Dichloroethane-d4	103			70.0-130		04/20/2023 02:12	WG2045178

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Lead	3.50	J	2.99	6.00	1	04/22/2023 22:51	WG2045348

Volatile Organic Compounds (GC) by Method AK101

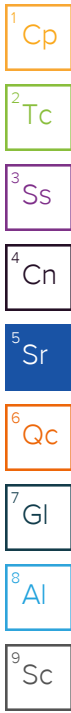
Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TPHGAK C6 to C10	5810		143	500	5	04/24/2023 06:06	WG2045887
(S) a,a,a-Trifluorotoluene(FID)	88.3			50.0-150		04/24/2023 06:06	WG2045887

Sample Narrative:

L1606782-07 WG2045887: Lowest possible dilution due to sample foaming.

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U	J3	113	500	10	04/20/2023 03:58	WG2045178
1,2,3-Trichloropropane	U		1.00	2.50	500	04/21/2023 11:20	WG2046212
Acrolein	U	C3	25.4	500	10	04/20/2023 03:58	WG2045178
1,2-Dibromoethane	U		2.05	2.50	500	04/21/2023 11:20	WG2046212
Acrylonitrile	U		6.71	100	10	04/20/2023 03:58	WG2045178
Benzene	36.5		0.941	10.0	10	04/20/2023 03:58	WG2045178
Bromobenzene	U		1.18	10.0	10	04/20/2023 03:58	WG2045178
Bromochloromethane	U		1.28	10.0	10	04/20/2023 03:58	WG2045178
Bromodichloromethane	U		1.36	10.0	10	04/20/2023 03:58	WG2045178
Bromoform	U	C3	1.29	10.0	10	04/20/2023 03:58	WG2045178
Bromomethane	U	C3	6.05	50.0	10	04/20/2023 03:58	WG2045178
n-Butylbenzene	U	C3	1.57	10.0	10	04/20/2023 03:58	WG2045178
sec-Butylbenzene	U		1.25	10.0	10	04/20/2023 03:58	WG2045178
tert-Butylbenzene	U		1.27	10.0	10	04/20/2023 03:58	WG2045178
Carbon disulfide	U		0.962	10.0	10	04/20/2023 03:58	WG2045178
Carbon tetrachloride	U		1.28	10.0	10	04/20/2023 03:58	WG2045178
Chlorobenzene	U		1.16	10.0	10	04/20/2023 03:58	WG2045178
Chlorodibromomethane	U		1.40	10.0	10	04/20/2023 03:58	WG2045178
Chloroethane	U		1.92	50.0	10	04/20/2023 03:58	WG2045178
Chloroform	U		1.11	50.0	10	04/20/2023 03:58	WG2045178
Chloromethane	U		9.60	25.0	10	04/20/2023 03:58	WG2045178
2-Chlorotoluene	U		1.06	10.0	10	04/20/2023 03:58	WG2045178
4-Chlorotoluene	U		1.14	10.0	10	04/20/2023 03:58	WG2045178
1,2-Dibromo-3-Chloropropane	U		2.76	50.0	10	04/20/2023 03:58	WG2045178
Dibromomethane	U		1.22	10.0	10	04/20/2023 03:58	WG2045178
1,2-Dichlorobenzene	U		1.07	10.0	10	04/20/2023 03:58	WG2045178
1,3-Dichlorobenzene	U		1.10	10.0	10	04/20/2023 03:58	WG2045178
1,4-Dichlorobenzene	U		1.20	10.0	10	04/20/2023 03:58	WG2045178
Dichlorodifluoromethane	U		3.74	50.0	10	04/20/2023 03:58	WG2045178
1,1-Dichloroethane	U		1.00	10.0	10	04/20/2023 03:58	WG2045178
1,2-Dichloroethane	U		0.819	10.0	10	04/20/2023 03:58	WG2045178
1,1-Dichloroethene	U		1.88	10.0	10	04/20/2023 03:58	WG2045178
cis-1,2-Dichloroethene	U		1.26	10.0	10	04/20/2023 03:58	WG2045178
trans-1,2-Dichloroethene	U		1.49	10.0	10	04/20/2023 03:58	WG2045178
1,2-Dichloropropane	U		1.49	10.0	10	04/20/2023 03:58	WG2045178
1,1-Dichloropropene	U		1.42	10.0	10	04/20/2023 03:58	WG2045178
1,3-Dichloropropane	U		1.10	10.0	10	04/20/2023 03:58	WG2045178
cis-1,3-Dichloropropene	U		1.11	10.0	10	04/20/2023 03:58	WG2045178
trans-1,3-Dichloropropene	U		1.18	10.0	10	04/20/2023 03:58	WG2045178
2,2-Dichloropropane	U		1.61	10.0	10	04/20/2023 03:58	WG2045178



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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Di-isopropyl ether	U		1.05	10.0	10	04/20/2023 03:58	WG2045178
Ethylbenzene	872		1.37	10.0	10	04/20/2023 03:58	WG2045178
Hexachloro-1,3-butadiene	U		3.37	10.0	10	04/20/2023 03:58	WG2045178
Isopropylbenzene	37.4		1.05	10.0	10	04/20/2023 03:58	WG2045178
p-Isopropyltoluene	4.70	<u>J</u>	1.20	10.0	10	04/20/2023 03:58	WG2045178
2-Butanone (MEK)	U		11.9	100	10	04/20/2023 03:58	WG2045178
Methylene Chloride	U		4.30	50.0	10	04/20/2023 03:58	WG2045178
4-Methyl-2-pentanone (MIBK)	U		4.78	100	10	04/20/2023 03:58	WG2045178
Methyl tert-butyl ether	U		1.01	10.0	10	04/20/2023 03:58	WG2045178
Naphthalene	15.9	<u>C3 J</u>	10.0	50.0	10	04/20/2023 03:58	WG2045178
n-Propylbenzene	66.9		0.993	10.0	10	04/20/2023 03:58	WG2045178
Styrene	U		1.18	10.0	10	04/20/2023 03:58	WG2045178
1,1,1,2-Tetrachloroethane	U		1.47	10.0	10	04/20/2023 03:58	WG2045178
1,1,2,2-Tetrachloroethane	U		1.33	10.0	10	04/20/2023 03:58	WG2045178
1,1,2-Trichlorotrifluoroethane	U		1.80	10.0	10	04/20/2023 03:58	WG2045178
Tetrachloroethene	U		3.00	10.0	10	04/20/2023 03:58	WG2045178
Toluene	28.8		2.78	10.0	10	04/20/2023 03:58	WG2045178
1,2,3-Trichlorobenzene	U		2.30	10.0	10	04/20/2023 03:58	WG2045178
1,2,4-Trichlorobenzene	U	<u>C3 J3</u>	4.81	10.0	10	04/20/2023 03:58	WG2045178
1,1,1-Trichloroethane	U		1.49	10.0	10	04/20/2023 03:58	WG2045178
1,1,2-Trichloroethane	U		1.58	10.0	10	04/20/2023 03:58	WG2045178
Trichloroethene	U		1.90	10.0	10	04/20/2023 03:58	WG2045178
Trichlorofluoromethane	U	<u>C3</u>	1.60	50.0	10	04/20/2023 03:58	WG2045178
1,2,4-Trimethylbenzene	790	<u>C3</u>	3.22	10.0	10	04/20/2023 03:58	WG2045178
1,2,3-Trimethylbenzene	105		1.04	10.0	10	04/20/2023 03:58	WG2045178
1,3,5-Trimethylbenzene	72.0		1.04	10.0	10	04/20/2023 03:58	WG2045178
Vinyl chloride	U		2.34	10.0	10	04/20/2023 03:58	WG2045178
Xylenes, Total	2450		1.74	30.0	10	04/20/2023 03:58	WG2045178
o-Xylene	714		1.74	10.0	10	04/20/2023 03:58	WG2045178
m&p-Xylene	1740		4.30	20.0	10	04/20/2023 03:58	WG2045178
(S) Toluene-d8	91.6			80.0-120		04/20/2023 03:58	WG2045178
(S) 4-Bromofluorobenzene	98.6			77.0-126		04/20/2023 03:58	WG2045178
(S) 1,2-Dichloroethane-d4	94.7			70.0-130		04/20/2023 03:58	WG2045178

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Sample Narrative:

L1606782-07 WG2046212: Non-target compounds too high to run at a lower dilution.

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	176		28.7	100	1	04/24/2023 03:27	WG2045887
(S) a,a,a-Trifluorotoluene(FID)	88.6			50.0-150		04/24/2023 03:27	WG2045887

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U	<u>J3</u>	11.3	50.0	1	04/20/2023 02:33	WG2045178
1,2,3-Trichloropropane	U		0.0200	0.0500	10	04/20/2023 17:12	WG2044985
Acrolein	U	<u>C3</u>	2.54	50.0	1	04/20/2023 02:33	WG2045178
1,2-Dibromoethane	U		0.0410	0.0500	10	04/20/2023 17:12	WG2044985
Acrylonitrile	U		0.671	10.0	1	04/20/2023 02:33	WG2045178
Benzene	41.5		0.0941	1.00	1	04/20/2023 02:33	WG2045178
Bromobenzene	U		0.118	1.00	1	04/20/2023 02:33	WG2045178
Bromochloromethane	U		0.128	1.00	1	04/20/2023 02:33	WG2045178
Bromodichloromethane	U		0.136	1.00	1	04/20/2023 02:33	WG2045178
Bromoform	U	<u>C3</u>	0.129	1.00	1	04/20/2023 02:33	WG2045178
Bromomethane	U	<u>C3</u>	0.605	5.00	1	04/20/2023 02:33	WG2045178
n-Butylbenzene	U	<u>C3</u>	0.157	1.00	1	04/20/2023 02:33	WG2045178
sec-Butylbenzene	U		0.125	1.00	1	04/20/2023 02:33	WG2045178
tert-Butylbenzene	U		0.127	1.00	1	04/20/2023 02:33	WG2045178
Carbon disulfide	U		0.0962	1.00	1	04/20/2023 02:33	WG2045178
Carbon tetrachloride	U		0.128	1.00	1	04/20/2023 02:33	WG2045178
Chlorobenzene	U		0.116	1.00	1	04/20/2023 02:33	WG2045178
Chlorodibromomethane	U		0.140	1.00	1	04/20/2023 02:33	WG2045178
Chloroethane	U		0.192	5.00	1	04/20/2023 02:33	WG2045178
Chloroform	U		0.111	5.00	1	04/20/2023 02:33	WG2045178
Chloromethane	U		0.960	2.50	1	04/20/2023 02:33	WG2045178
2-Chlorotoluene	U		0.106	1.00	1	04/20/2023 02:33	WG2045178
4-Chlorotoluene	U		0.114	1.00	1	04/20/2023 02:33	WG2045178
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	04/20/2023 02:33	WG2045178
Dibromomethane	U		0.122	1.00	1	04/20/2023 02:33	WG2045178
1,2-Dichlorobenzene	U		0.107	1.00	1	04/20/2023 02:33	WG2045178
1,3-Dichlorobenzene	U		0.110	1.00	1	04/20/2023 02:33	WG2045178
1,4-Dichlorobenzene	U		0.120	1.00	1	04/20/2023 02:33	WG2045178
Dichlorodifluoromethane	U		0.374	5.00	1	04/20/2023 02:33	WG2045178
1,1-Dichloroethane	U		0.100	1.00	1	04/20/2023 02:33	WG2045178
1,2-Dichloroethane	U		0.0819	1.00	1	04/20/2023 02:33	WG2045178
1,1-Dichloroethene	U		0.188	1.00	1	04/20/2023 02:33	WG2045178
cis-1,2-Dichloroethene	U		0.126	1.00	1	04/20/2023 02:33	WG2045178
trans-1,2-Dichloroethene	U		0.149	1.00	1	04/20/2023 02:33	WG2045178
1,2-Dichloropropane	U		0.149	1.00	1	04/20/2023 02:33	WG2045178
1,1-Dichloropropene	U		0.142	1.00	1	04/20/2023 02:33	WG2045178
1,3-Dichloropropane	U		0.110	1.00	1	04/20/2023 02:33	WG2045178
cis-1,3-Dichloropropene	U		0.111	1.00	1	04/20/2023 02:33	WG2045178
trans-1,3-Dichloropropene	U		0.118	1.00	1	04/20/2023 02:33	WG2045178
2,2-Dichloropropane	U		0.161	1.00	1	04/20/2023 02:33	WG2045178
Di-isopropyl ether	U		0.105	1.00	1	04/20/2023 02:33	WG2045178
Ethylbenzene	2.84		0.137	1.00	1	04/20/2023 02:33	WG2045178
Hexachloro-1,3-butadiene	U		0.337	1.00	1	04/20/2023 02:33	WG2045178
Isopropylbenzene	0.135	<u>J</u>	0.105	1.00	1	04/20/2023 02:33	WG2045178
p-Isopropyltoluene	U		0.120	1.00	1	04/20/2023 02:33	WG2045178
2-Butanone (MEK)	U		1.19	10.0	1	04/20/2023 02:33	WG2045178
Methylene Chloride	U		0.430	5.00	1	04/20/2023 02:33	WG2045178
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	04/20/2023 02:33	WG2045178
Methyl tert-butyl ether	2.39		0.101	1.00	1	04/20/2023 02:33	WG2045178

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
Naphthalene	U	<u>C3</u>	1.00	5.00	1	04/20/2023 02:33	WG2045178
n-Propylbenzene	0.175	<u>J</u>	0.0993	1.00	1	04/20/2023 02:33	WG2045178
Styrene	0.747	<u>J</u>	0.118	1.00	1	04/20/2023 02:33	WG2045178
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	04/20/2023 02:33	WG2045178
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	04/20/2023 02:33	WG2045178
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	04/20/2023 02:33	WG2045178
Tetrachloroethene	U		0.300	1.00	1	04/20/2023 02:33	WG2045178
Toluene	19.5		0.278	1.00	1	04/20/2023 02:33	WG2045178
1,2,3-Trichlorobenzene	U		0.230	1.00	1	04/20/2023 02:33	WG2045178
1,2,4-Trichlorobenzene	U	<u>C3 J3</u>	0.481	1.00	1	04/20/2023 02:33	WG2045178
1,1,1-Trichloroethane	U		0.149	1.00	1	04/20/2023 02:33	WG2045178
1,1,2-Trichloroethane	U		0.158	1.00	1	04/20/2023 02:33	WG2045178
Trichloroethene	U		0.190	1.00	1	04/20/2023 02:33	WG2045178
Trichlorofluoromethane	U	<u>C3</u>	0.160	5.00	1	04/20/2023 02:33	WG2045178
1,2,4-Trimethylbenzene	10.1	<u>C3</u>	0.322	1.00	1	04/20/2023 02:33	WG2045178
1,2,3-Trimethylbenzene	5.00		0.104	1.00	1	04/20/2023 02:33	WG2045178
1,3,5-Trimethylbenzene	3.84		0.104	1.00	1	04/20/2023 02:33	WG2045178
Vinyl chloride	U		0.234	1.00	1	04/20/2023 02:33	WG2045178
Xylenes, Total	35.4		0.174	3.00	1	04/20/2023 02:33	WG2045178
o-Xylene	20.5		0.174	1.00	1	04/20/2023 02:33	WG2045178
m&p-Xylene	14.9		0.430	2.00	1	04/20/2023 02:33	WG2045178
(S) Toluene-d8	98.2			80.0-120		04/20/2023 02:33	WG2045178
(S) 4-Bromofluorobenzene	99.7			77.0-126		04/20/2023 02:33	WG2045178
(S) 1,2-Dichloroethane-d4	98.6			70.0-130		04/20/2023 02:33	WG2045178

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

Sample Narrative:

L1606782-08 WG2044985: Non-target compounds too high to run at a lower dilution.

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Lead	3.21	J	2.99	6.00	1	04/22/2023 23:03	WG2045348

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
TPHGAK C6 to C10	6310		143	500	5	04/24/2023 06:33	WG2045887
(S) a,a,a-Trifluorotoluene(FID)	90.1			50.0-150		04/24/2023 06:33	WG2045887

Sample Narrative:

L1606782-09 WG2045887: Lowest possible dilution due to sample foaming.

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Acetone	U	J3	11.3	50.0	1	04/20/2023 02:55	WG2045178
1,2,3-Trichloropropane	U		1.00	2.50	500	04/21/2023 11:44	WG2046212
Acrolein	49.5	C3 J	2.54	50.0	1	04/20/2023 02:55	WG2045178
1,2-Dibromoethane	U		2.05	2.50	500	04/21/2023 11:44	WG2046212
Acrylonitrile	U		0.671	10.0	1	04/20/2023 02:55	WG2045178
Benzene	44.3		0.0941	1.00	1	04/20/2023 02:55	WG2045178
Bromobenzene	U		0.118	1.00	1	04/20/2023 02:55	WG2045178
Bromochloromethane	U		0.128	1.00	1	04/20/2023 02:55	WG2045178
Bromodichloromethane	U		0.136	1.00	1	04/20/2023 02:55	WG2045178
Bromoform	U	C3	0.129	1.00	1	04/20/2023 02:55	WG2045178
Bromomethane	U	C3	0.605	5.00	1	04/20/2023 02:55	WG2045178
n-Butylbenzene	U	C3	0.157	1.00	1	04/20/2023 02:55	WG2045178
sec-Butylbenzene	1.42		0.125	1.00	1	04/20/2023 02:55	WG2045178
tert-Butylbenzene	U		0.127	1.00	1	04/20/2023 02:55	WG2045178
Carbon disulfide	U		0.0962	1.00	1	04/20/2023 02:55	WG2045178
Carbon tetrachloride	U		0.128	1.00	1	04/20/2023 02:55	WG2045178
Chlorobenzene	U		0.116	1.00	1	04/20/2023 02:55	WG2045178
Chlorodibromomethane	U		0.140	1.00	1	04/20/2023 02:55	WG2045178
Chloroethane	U		0.192	5.00	1	04/20/2023 02:55	WG2045178
Chloroform	U		0.111	5.00	1	04/20/2023 02:55	WG2045178
Chloromethane	U		0.960	2.50	1	04/20/2023 02:55	WG2045178
2-Chlorotoluene	U		0.106	1.00	1	04/20/2023 02:55	WG2045178
4-Chlorotoluene	U		0.114	1.00	1	04/20/2023 02:55	WG2045178
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	04/20/2023 02:55	WG2045178
Dibromomethane	U		0.122	1.00	1	04/20/2023 02:55	WG2045178
1,2-Dichlorobenzene	U		0.107	1.00	1	04/20/2023 02:55	WG2045178
1,3-Dichlorobenzene	U		0.110	1.00	1	04/20/2023 02:55	WG2045178
1,4-Dichlorobenzene	U		0.120	1.00	1	04/20/2023 02:55	WG2045178
Dichlorodifluoromethane	U		0.374	5.00	1	04/20/2023 02:55	WG2045178
1,1-Dichloroethane	U		0.100	1.00	1	04/20/2023 02:55	WG2045178
1,2-Dichloroethane	U		0.0819	1.00	1	04/20/2023 02:55	WG2045178
1,1-Dichloroethene	U		0.188	1.00	1	04/20/2023 02:55	WG2045178
cis-1,2-Dichloroethene	U		0.126	1.00	1	04/20/2023 02:55	WG2045178
trans-1,2-Dichloroethene	U		0.149	1.00	1	04/20/2023 02:55	WG2045178
1,2-Dichloropropane	U		0.149	1.00	1	04/20/2023 02:55	WG2045178
1,1-Dichloropropene	U		0.142	1.00	1	04/20/2023 02:55	WG2045178
1,3-Dichloropropane	U		0.110	1.00	1	04/20/2023 02:55	WG2045178
cis-1,3-Dichloropropene	U		0.111	1.00	1	04/20/2023 02:55	WG2045178
trans-1,3-Dichloropropene	U		0.118	1.00	1	04/20/2023 02:55	WG2045178
2,2-Dichloropropane	U		0.161	1.00	1	04/20/2023 02:55	WG2045178

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
Di-isopropyl ether	U		0.105	1.00	1	04/20/2023 02:55	WG2045178
Ethylbenzene	1000		6.85	50.0	50	04/20/2023 21:57	WG2045833
Hexachloro-1,3-butadiene	U		0.337	1.00	1	04/20/2023 02:55	WG2045178
Isopropylbenzene	49.3		0.105	1.00	1	04/20/2023 02:55	WG2045178
p-Isopropyltoluene	5.91		0.120	1.00	1	04/20/2023 02:55	WG2045178
2-Butanone (MEK)	U		1.19	10.0	1	04/20/2023 02:55	WG2045178
Methylene Chloride	U		0.430	5.00	1	04/20/2023 02:55	WG2045178
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	04/20/2023 02:55	WG2045178
Methyl tert-butyl ether	U		0.101	1.00	1	04/20/2023 02:55	WG2045178
Naphthalene	16.8	C3	1.00	5.00	1	04/20/2023 02:55	WG2045178
n-Propylbenzene	93.2		0.0993	1.00	1	04/20/2023 02:55	WG2045178
Styrene	U		0.118	1.00	1	04/20/2023 02:55	WG2045178
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	04/20/2023 02:55	WG2045178
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	04/20/2023 02:55	WG2045178
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	04/20/2023 02:55	WG2045178
Tetrachloroethene	U		0.300	1.00	1	04/20/2023 02:55	WG2045178
Toluene	40.8		0.278	1.00	1	04/20/2023 02:55	WG2045178
1,2,3-Trichlorobenzene	U		0.230	1.00	1	04/20/2023 02:55	WG2045178
1,2,4-Trichlorobenzene	U	C3 J3	0.481	1.00	1	04/20/2023 02:55	WG2045178
1,1,1-Trichloroethane	U		0.149	1.00	1	04/20/2023 02:55	WG2045178
1,1,2-Trichloroethane	U		0.158	1.00	1	04/20/2023 02:55	WG2045178
Trichloroethene	U		0.190	1.00	1	04/20/2023 02:55	WG2045178
Trichlorofluoromethane	U	C3	0.160	5.00	1	04/20/2023 02:55	WG2045178
1,2,4-Trimethylbenzene	1060		16.1	50.0	50	04/20/2023 21:57	WG2045833
1,2,3-Trimethylbenzene	133		0.104	1.00	1	04/20/2023 02:55	WG2045178
1,3,5-Trimethylbenzene	103		0.104	1.00	1	04/20/2023 02:55	WG2045178
Vinyl chloride	U		0.234	1.00	1	04/20/2023 02:55	WG2045178
Xylenes, Total	2890		8.70	150	50	04/20/2023 21:57	WG2045833
o-Xylene	850		8.70	50.0	50	04/20/2023 21:57	WG2045833
m&p-Xylene	2040		21.5	100	50	04/20/2023 21:57	WG2045833
(S) Toluene-d8	86.8			80.0-120		04/20/2023 02:55	WG2045178
(S) Toluene-d8	101			80.0-120		04/20/2023 21:57	WG2045833
(S) 4-Bromofluorobenzene	97.0			77.0-126		04/20/2023 02:55	WG2045178
(S) 4-Bromofluorobenzene	96.6			77.0-126		04/20/2023 21:57	WG2045833
(S) 1,2-Dichloroethane-d4	92.2			70.0-130		04/20/2023 02:55	WG2045178
(S) 1,2-Dichloroethane-d4	118			70.0-130		04/20/2023 21:57	WG2045833

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Cp

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Tc

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Ss

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Cn

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Sr

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Gl

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Sample Narrative:

L1606782-09 WG2046212: Non-target compounds too high to run at a lower dilution.

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
TPHGAK C6 to C10	U		28.7	100	1	04/24/2023 03:54	WG2045887
(S) a,a,a-Trifluorotoluene(FID)	88.8			50.0-150		04/24/2023 03:54	WG2045887

- 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 date / time	Batch
1,2,3-Trichloropropane	U		0.00200	0.00500	1	04/20/2023 14:01	WG2044985
1,2-Dibromoethane	U		0.00410	0.00500	1	04/20/2023 14:01	WG2044985

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	164		28.7	100	1	04/24/2023 04:20	WG2045887
(S) a,a,a-Trifluorotoluene(FID)	78.5			50.0-150		04/24/2023 04:20	WG2045887

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	04/20/2023 21:14	WG2045833
1,2,3-Trichloropropane	U		0.200	0.500	100	04/20/2023 18:00	WG2044985
Acrolein	U		2.54	50.0	1	04/20/2023 21:14	WG2045833
1,2-Dibromoethane	U		0.410	0.500	100	04/20/2023 18:00	WG2044985
Acrylonitrile	U		0.671	10.0	1	04/20/2023 21:14	WG2045833
Benzene	0.159	J	0.0941	1.00	1	04/20/2023 21:14	WG2045833
Bromobenzene	U		0.118	1.00	1	04/20/2023 21:14	WG2045833
Bromochloromethane	U		0.128	1.00	1	04/20/2023 21:14	WG2045833
Bromodichloromethane	U		0.136	1.00	1	04/20/2023 21:14	WG2045833
Bromoform	U		0.129	1.00	1	04/20/2023 21:14	WG2045833
Bromomethane	U	C3	0.605	5.00	1	04/20/2023 21:14	WG2045833
n-Butylbenzene	U		0.157	1.00	1	04/20/2023 21:14	WG2045833
sec-Butylbenzene	U		0.125	1.00	1	04/20/2023 21:14	WG2045833
tert-Butylbenzene	U		0.127	1.00	1	04/20/2023 21:14	WG2045833
Carbon disulfide	U		0.0962	1.00	1	04/20/2023 21:14	WG2045833
Carbon tetrachloride	U		0.128	1.00	1	04/20/2023 21:14	WG2045833
Chlorobenzene	U		0.116	1.00	1	04/20/2023 21:14	WG2045833
Chlorodibromomethane	U		0.140	1.00	1	04/20/2023 21:14	WG2045833
Chloroethane	U		0.192	5.00	1	04/20/2023 21:14	WG2045833
Chloroform	U		0.111	5.00	1	04/20/2023 21:14	WG2045833
Chloromethane	U		0.960	2.50	1	04/20/2023 21:14	WG2045833
2-Chlorotoluene	U		0.106	1.00	1	04/20/2023 21:14	WG2045833
4-Chlorotoluene	U		0.114	1.00	1	04/20/2023 21:14	WG2045833
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	04/20/2023 21:14	WG2045833
Dibromomethane	U		0.122	1.00	1	04/20/2023 21:14	WG2045833
1,2-Dichlorobenzene	U		0.107	1.00	1	04/20/2023 21:14	WG2045833
1,3-Dichlorobenzene	U		0.110	1.00	1	04/20/2023 21:14	WG2045833
1,4-Dichlorobenzene	U		0.120	1.00	1	04/20/2023 21:14	WG2045833
Dichlorodifluoromethane	U	J3	0.374	5.00	1	04/20/2023 21:14	WG2045833
1,1-Dichloroethane	U		0.100	1.00	1	04/20/2023 21:14	WG2045833
1,2-Dichloroethane	U		0.0819	1.00	1	04/20/2023 21:14	WG2045833
1,1-Dichloroethene	U		0.188	1.00	1	04/20/2023 21:14	WG2045833
cis-1,2-Dichloroethene	U		0.126	1.00	1	04/20/2023 21:14	WG2045833
trans-1,2-Dichloroethene	U		0.149	1.00	1	04/20/2023 21:14	WG2045833
1,2-Dichloropropane	U		0.149	1.00	1	04/20/2023 21:14	WG2045833
1,1-Dichloropropene	U		0.142	1.00	1	04/20/2023 21:14	WG2045833
1,3-Dichloropropane	U		0.110	1.00	1	04/20/2023 21:14	WG2045833
cis-1,3-Dichloropropene	U		0.111	1.00	1	04/20/2023 21:14	WG2045833
trans-1,3-Dichloropropene	U		0.118	1.00	1	04/20/2023 21:14	WG2045833
2,2-Dichloropropane	U		0.161	1.00	1	04/20/2023 21:14	WG2045833
Di-isopropyl ether	U		0.105	1.00	1	04/20/2023 21:14	WG2045833
Ethylbenzene	14.4		0.137	1.00	1	04/20/2023 21:14	WG2045833
Hexachloro-1,3-butadiene	U	C3	0.337	1.00	1	04/20/2023 21:14	WG2045833
Isopropylbenzene	0.343	J	0.105	1.00	1	04/20/2023 21:14	WG2045833
p-Isopropyltoluene	U		0.120	1.00	1	04/20/2023 21:14	WG2045833
2-Butanone (MEK)	U		1.19	10.0	1	04/20/2023 21:14	WG2045833
Methylene Chloride	U		0.430	5.00	1	04/20/2023 21:14	WG2045833
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	04/20/2023 21:14	WG2045833
Methyl tert-butyl ether	U		0.101	1.00	1	04/20/2023 21:14	WG2045833

1 Cp
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7 Gl
8 Al
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Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Naphthalene	U	<u>C3</u>	1.00	5.00	1	04/20/2023 21:14	WG2045833
n-Propylbenzene	0.708	<u>J</u>	0.0993	1.00	1	04/20/2023 21:14	WG2045833
Styrene	U		0.118	1.00	1	04/20/2023 21:14	WG2045833
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	04/20/2023 21:14	WG2045833
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	04/20/2023 21:14	WG2045833
1,1,2-Trichlorotrifluoroethane	U	<u>J3</u>	0.180	1.00	1	04/20/2023 21:14	WG2045833
Tetrachloroethene	U		0.300	1.00	1	04/20/2023 21:14	WG2045833
Toluene	8.67		0.278	1.00	1	04/20/2023 21:14	WG2045833
1,2,3-Trichlorobenzene	U	<u>C3</u>	0.230	1.00	1	04/20/2023 21:14	WG2045833
1,2,4-Trichlorobenzene	U	<u>C3</u>	0.481	1.00	1	04/20/2023 21:14	WG2045833
1,1,1-Trichloroethane	U		0.149	1.00	1	04/20/2023 21:14	WG2045833
1,1,2-Trichloroethane	U		0.158	1.00	1	04/20/2023 21:14	WG2045833
Trichloroethene	U		0.190	1.00	1	04/20/2023 21:14	WG2045833
Trichlorofluoromethane	U		0.160	5.00	1	04/20/2023 21:14	WG2045833
1,2,4-Trimethylbenzene	6.10		0.322	1.00	1	04/20/2023 21:14	WG2045833
1,2,3-Trimethylbenzene	1.11		0.104	1.00	1	04/20/2023 21:14	WG2045833
1,3,5-Trimethylbenzene	0.556	<u>J</u>	0.104	1.00	1	04/20/2023 21:14	WG2045833
Vinyl chloride	U	<u>J3</u>	0.234	1.00	1	04/20/2023 21:14	WG2045833
Xylenes, Total	44.5		0.174	3.00	1	04/20/2023 21:14	WG2045833
o-Xylene	9.25		0.174	1.00	1	04/20/2023 21:14	WG2045833
m&p-Xylene	35.2		0.430	2.00	1	04/20/2023 21:14	WG2045833
(S) Toluene-d8	99.1			80.0-120		04/20/2023 21:14	WG2045833
(S) 4-Bromofluorobenzene	95.3			77.0-126		04/20/2023 21:14	WG2045833
(S) 1,2-Dichloroethane-d4	117			70.0-130		04/20/2023 21:14	WG2045833

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Cp

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Tc

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Al

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Sc

Sample Narrative:

L1606782-11 WG2044985: Non-target compounds too high to run at a lower dilution.

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	1570		28.7	100	1	04/25/2023 22:06	WG2047014
(S) a,a,a-Trifluorotoluene(FID)	89.6			50.0-150		04/25/2023 22:06	WG2047014

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		565	2500	50	04/20/2023 04:40	WG2045178
1,2,3-Trichloropropane	U		0.200	0.500	100	04/20/2023 18:24	WG2044985
Acrolein	U	C3	127	2500	50	04/20/2023 04:40	WG2045178
1,2-Dibromoethane	U		0.410	0.500	100	04/20/2023 18:24	WG2044985
Acrylonitrile	U		33.6	500	50	04/20/2023 04:40	WG2045178
Benzene	966		4.71	50.0	50	04/20/2023 04:40	WG2045178
Bromobenzene	U		5.90	50.0	50	04/20/2023 04:40	WG2045178
Bromochloromethane	U		6.40	50.0	50	04/20/2023 04:40	WG2045178
Bromodichloromethane	U		6.80	50.0	50	04/20/2023 04:40	WG2045178
Bromoform	U	C3	6.45	50.0	50	04/20/2023 04:40	WG2045178
Bromomethane	U	C3	30.3	250	50	04/20/2023 04:40	WG2045178
n-Butylbenzene	U	C3	7.85	50.0	50	04/20/2023 04:40	WG2045178
sec-Butylbenzene	U		6.25	50.0	50	04/20/2023 04:40	WG2045178
tert-Butylbenzene	U		6.35	50.0	50	04/20/2023 04:40	WG2045178
Carbon disulfide	U		4.81	50.0	50	04/20/2023 04:40	WG2045178
Carbon tetrachloride	U		6.40	50.0	50	04/20/2023 04:40	WG2045178
Chlorobenzene	U		5.80	50.0	50	04/20/2023 04:40	WG2045178
Chlorodibromomethane	U		7.00	50.0	50	04/20/2023 04:40	WG2045178
Chloroethane	U		9.60	250	50	04/20/2023 04:40	WG2045178
Chloroform	U		5.55	250	50	04/20/2023 04:40	WG2045178
Chloromethane	U		48.0	125	50	04/20/2023 04:40	WG2045178
2-Chlorotoluene	U		5.30	50.0	50	04/20/2023 04:40	WG2045178
4-Chlorotoluene	U		5.70	50.0	50	04/20/2023 04:40	WG2045178
1,2-Dibromo-3-Chloropropane	U		13.8	250	50	04/20/2023 04:40	WG2045178
Dibromomethane	U		6.10	50.0	50	04/20/2023 04:40	WG2045178
1,2-Dichlorobenzene	U		5.35	50.0	50	04/20/2023 04:40	WG2045178
1,3-Dichlorobenzene	U		5.50	50.0	50	04/20/2023 04:40	WG2045178
1,4-Dichlorobenzene	U		6.00	50.0	50	04/20/2023 04:40	WG2045178
Dichlorodifluoromethane	U		18.7	250	50	04/20/2023 04:40	WG2045178
1,1-Dichloroethane	U		5.00	50.0	50	04/20/2023 04:40	WG2045178
1,2-Dichloroethane	U		4.09	50.0	50	04/20/2023 04:40	WG2045178
1,1-Dichloroethene	U		9.40	50.0	50	04/20/2023 04:40	WG2045178
cis-1,2-Dichloroethene	U		6.30	50.0	50	04/20/2023 04:40	WG2045178
trans-1,2-Dichloroethene	U		7.45	50.0	50	04/20/2023 04:40	WG2045178
1,2-Dichloropropane	U		7.45	50.0	50	04/20/2023 04:40	WG2045178
1,1-Dichloropropene	U		7.10	50.0	50	04/20/2023 04:40	WG2045178
1,3-Dichloropropane	U		5.50	50.0	50	04/20/2023 04:40	WG2045178
cis-1,3-Dichloropropene	U		5.55	50.0	50	04/20/2023 04:40	WG2045178
trans-1,3-Dichloropropene	U		5.90	50.0	50	04/20/2023 04:40	WG2045178
2,2-Dichloropropane	U		8.05	50.0	50	04/20/2023 04:40	WG2045178
Di-isopropyl ether	U		5.25	50.0	50	04/20/2023 04:40	WG2045178
Ethylbenzene	U		6.85	50.0	50	04/20/2023 04:40	WG2045178
Hexachloro-1,3-butadiene	U		16.9	50.0	50	04/20/2023 04:40	WG2045178
Isopropylbenzene	U		5.25	50.0	50	04/20/2023 04:40	WG2045178
p-Isopropyltoluene	U		6.00	50.0	50	04/20/2023 04:40	WG2045178
2-Butanone (MEK)	U		59.5	500	50	04/20/2023 04:40	WG2045178
Methylene Chloride	U		21.5	250	50	04/20/2023 04:40	WG2045178
4-Methyl-2-pentanone (MIBK)	U		23.9	500	50	04/20/2023 04:40	WG2045178
Methyl tert-butyl ether	588		5.05	50.0	50	04/20/2023 04:40	WG2045178

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	
Naphthalene	U	<u>C3</u>	50.0	250	50	04/20/2023 04:40	WG2045178
n-Propylbenzene	U		4.97	50.0	50	04/20/2023 04:40	WG2045178
Styrene	U		5.90	50.0	50	04/20/2023 04:40	WG2045178
1,1,1,2-Tetrachloroethane	U		7.35	50.0	50	04/20/2023 04:40	WG2045178
1,1,2,2-Tetrachloroethane	U		6.65	50.0	50	04/20/2023 04:40	WG2045178
1,1,2-Trichlorotrifluoroethane	U		9.00	50.0	50	04/20/2023 04:40	WG2045178
Tetrachloroethene	U		15.0	50.0	50	04/20/2023 04:40	WG2045178
Toluene	U		13.9	50.0	50	04/20/2023 04:40	WG2045178
1,2,3-Trichlorobenzene	U		11.5	50.0	50	04/20/2023 04:40	WG2045178
1,2,4-Trichlorobenzene	U	<u>C3</u>	24.1	50.0	50	04/20/2023 04:40	WG2045178
1,1,1-Trichloroethane	U		7.45	50.0	50	04/20/2023 04:40	WG2045178
1,1,2-Trichloroethane	U		7.90	50.0	50	04/20/2023 04:40	WG2045178
Trichloroethene	U		9.50	50.0	50	04/20/2023 04:40	WG2045178
Trichlorofluoromethane	U	<u>C3</u>	8.00	250	50	04/20/2023 04:40	WG2045178
1,2,4-Trimethylbenzene	U	<u>C3</u>	16.1	50.0	50	04/20/2023 04:40	WG2045178
1,2,3-Trimethylbenzene	U		5.20	50.0	50	04/20/2023 04:40	WG2045178
1,3,5-Trimethylbenzene	U		5.20	50.0	50	04/20/2023 04:40	WG2045178
Vinyl chloride	U		11.7	50.0	50	04/20/2023 04:40	WG2045178
Xylenes, Total	U		8.70	150	50	04/20/2023 04:40	WG2045178
o-Xylene	U		8.70	50.0	50	04/20/2023 04:40	WG2045178
m&p-Xylene	U		21.5	100	50	04/20/2023 04:40	WG2045178
(S) Toluene-d8	104			80.0-120		04/20/2023 04:40	WG2045178
(S) 4-Bromofluorobenzene	98.7			77.0-126		04/20/2023 04:40	WG2045178
(S) 1,2-Dichloroethane-d4	95.7			70.0-130		04/20/2023 04:40	WG2045178

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Sample Narrative:

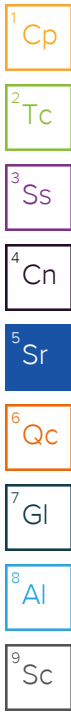
L1606782-12 WG2044985: Non-target compounds too high to run at a lower dilution.

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	928		28.7	100	1	04/24/2023 04:47	WG2045887
(S) a,a,a-Trifluorotoluene(FID)	89.2			50.0-150		04/24/2023 04:47	WG2045887

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U	<u>J3</u>	282	1250	25	04/20/2023 05:02	WG2045178
1,2,3-Trichloropropane	U		0.200	0.500	100	04/20/2023 18:47	WG2044985
Acrolein	U	<u>C3</u>	63.5	1250	25	04/20/2023 05:02	WG2045178
1,2-Dibromoethane	U		0.410	0.500	100	04/20/2023 18:47	WG2044985
Acrylonitrile	U		16.8	250	25	04/20/2023 05:02	WG2045178
Benzene	243		2.35	25.0	25	04/20/2023 05:02	WG2045178
Bromobenzene	U		2.95	25.0	25	04/20/2023 05:02	WG2045178
Bromochloromethane	U		3.20	25.0	25	04/20/2023 05:02	WG2045178
Bromodichloromethane	U		3.40	25.0	25	04/20/2023 05:02	WG2045178
Bromoform	U	<u>C3</u>	3.22	25.0	25	04/20/2023 05:02	WG2045178
Bromomethane	U	<u>C3</u>	15.1	125	25	04/20/2023 05:02	WG2045178
n-Butylbenzene	U	<u>C3</u>	3.93	25.0	25	04/20/2023 05:02	WG2045178
sec-Butylbenzene	U		3.13	25.0	25	04/20/2023 05:02	WG2045178
tert-Butylbenzene	U		3.18	25.0	25	04/20/2023 05:02	WG2045178
Carbon disulfide	U		2.41	25.0	25	04/20/2023 05:02	WG2045178
Carbon tetrachloride	U		3.20	25.0	25	04/20/2023 05:02	WG2045178
Chlorobenzene	U		2.90	25.0	25	04/20/2023 05:02	WG2045178
Chlorodibromomethane	U		3.50	25.0	25	04/20/2023 05:02	WG2045178
Chloroethane	U		4.80	125	25	04/20/2023 05:02	WG2045178
Chloroform	U		2.78	125	25	04/20/2023 05:02	WG2045178
Chloromethane	U		24.0	62.5	25	04/20/2023 05:02	WG2045178
2-Chlorotoluene	U		2.65	25.0	25	04/20/2023 05:02	WG2045178
4-Chlorotoluene	U		2.85	25.0	25	04/20/2023 05:02	WG2045178
1,2-Dibromo-3-Chloropropane	U		6.90	125	25	04/20/2023 05:02	WG2045178
Dibromomethane	U		3.05	25.0	25	04/20/2023 05:02	WG2045178
1,2-Dichlorobenzene	U		2.68	25.0	25	04/20/2023 05:02	WG2045178
1,3-Dichlorobenzene	U		2.75	25.0	25	04/20/2023 05:02	WG2045178
1,4-Dichlorobenzene	U		3.00	25.0	25	04/20/2023 05:02	WG2045178
Dichlorodifluoromethane	U		9.35	125	25	04/20/2023 05:02	WG2045178
1,1-Dichloroethane	U		2.50	25.0	25	04/20/2023 05:02	WG2045178
1,2-Dichloroethane	U		2.05	25.0	25	04/20/2023 05:02	WG2045178
1,1-Dichloroethene	U		4.70	25.0	25	04/20/2023 05:02	WG2045178
cis-1,2-Dichloroethene	U		3.15	25.0	25	04/20/2023 05:02	WG2045178
trans-1,2-Dichloroethene	U		3.73	25.0	25	04/20/2023 05:02	WG2045178
1,2-Dichloropropane	U		3.73	25.0	25	04/20/2023 05:02	WG2045178
1,1-Dichloropropene	U		3.55	25.0	25	04/20/2023 05:02	WG2045178
1,3-Dichloropropane	U		2.75	25.0	25	04/20/2023 05:02	WG2045178
cis-1,3-Dichloropropene	U		2.78	25.0	25	04/20/2023 05:02	WG2045178
trans-1,3-Dichloropropene	U		2.95	25.0	25	04/20/2023 05:02	WG2045178
2,2-Dichloropropane	U		4.03	25.0	25	04/20/2023 05:02	WG2045178
Di-isopropyl ether	U		2.63	25.0	25	04/20/2023 05:02	WG2045178
Ethylbenzene	60.9		3.43	25.0	25	04/20/2023 05:02	WG2045178
Hexachloro-1,3-butadiene	U		8.43	25.0	25	04/20/2023 05:02	WG2045178
Isopropylbenzene	U		2.63	25.0	25	04/20/2023 05:02	WG2045178
p-Isopropyltoluene	U		3.00	25.0	25	04/20/2023 05:02	WG2045178
2-Butanone (MEK)	U		29.8	250	25	04/20/2023 05:02	WG2045178
Methylene Chloride	U		10.7	125	25	04/20/2023 05:02	WG2045178
4-Methyl-2-pentanone (MIBK)	U		12.0	250	25	04/20/2023 05:02	WG2045178
Methyl tert-butyl ether	U		2.53	25.0	25	04/20/2023 05:02	WG2045178



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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Naphthalene	U	<u>C3</u>	25.0	125	25	04/20/2023 05:02	WG2045178
n-Propylbenzene	2.55	<u>J</u>	2.48	25.0	25	04/20/2023 05:02	WG2045178
Styrene	U		2.95	25.0	25	04/20/2023 05:02	WG2045178
1,1,1,2-Tetrachloroethane	U		3.68	25.0	25	04/20/2023 05:02	WG2045178
1,1,2,2-Tetrachloroethane	U		3.33	25.0	25	04/20/2023 05:02	WG2045178
1,1,2-Trichlorotrifluoroethane	U		4.50	25.0	25	04/20/2023 05:02	WG2045178
Tetrachloroethene	U		7.50	25.0	25	04/20/2023 05:02	WG2045178
Toluene	12.4	<u>J</u>	6.95	25.0	25	04/20/2023 05:02	WG2045178
1,2,3-Trichlorobenzene	U		5.75	25.0	25	04/20/2023 05:02	WG2045178
1,2,4-Trichlorobenzene	U	<u>C3 J3</u>	12.0	25.0	25	04/20/2023 05:02	WG2045178
1,1,1-Trichloroethane	U		3.73	25.0	25	04/20/2023 05:02	WG2045178
1,1,2-Trichloroethane	U		3.95	25.0	25	04/20/2023 05:02	WG2045178
Trichloroethene	U		4.75	25.0	25	04/20/2023 05:02	WG2045178
Trichlorofluoromethane	U	<u>C3</u>	4.00	125	25	04/20/2023 05:02	WG2045178
1,2,4-Trimethylbenzene	41.3	<u>C3</u>	8.05	25.0	25	04/20/2023 05:02	WG2045178
1,2,3-Trimethylbenzene	U		2.60	25.0	25	04/20/2023 05:02	WG2045178
1,3,5-Trimethylbenzene	9.59	<u>J</u>	2.60	25.0	25	04/20/2023 05:02	WG2045178
Vinyl chloride	U		5.85	25.0	25	04/20/2023 05:02	WG2045178
Xylenes, Total	194		4.35	75.0	25	04/20/2023 05:02	WG2045178
o-Xylene	28.4		4.35	25.0	25	04/20/2023 05:02	WG2045178
m&p-Xylene	166		10.7	50.0	25	04/20/2023 05:02	WG2045178
(S) Toluene-d8	101			80.0-120		04/20/2023 05:02	WG2045178
(S) 4-Bromofluorobenzene	102			77.0-126		04/20/2023 05:02	WG2045178
(S) 1,2-Dichloroethane-d4	98.4			70.0-130		04/20/2023 05:02	WG2045178

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Sample Narrative:

L1606782-13 WG2044985: Non-target compounds too high to run at a lower dilution.

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	1250		28.7	100	1	04/24/2023 05:13	WG2045887
(S) a,a,a-Trifluorotoluene(FID)	91.6			50.0-150		04/24/2023 05:13	WG2045887

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U	<u>J3</u>	11.3	50.0	1	04/20/2023 03:15	WG2045178
1,2,3-Trichloropropane	U		0.200	0.500	100	04/20/2023 19:11	WG2044985
Acrolein	U	<u>C3</u>	2.54	50.0	1	04/20/2023 03:15	WG2045178
1,2-Dibromoethane	U		0.410	0.500	100	04/20/2023 19:11	WG2044985
Acrylonitrile	U		0.671	10.0	1	04/20/2023 03:15	WG2045178
Benzene	756		1.88	20.0	20	04/20/2023 22:18	WG2045833
Bromobenzene	U		0.118	1.00	1	04/20/2023 03:15	WG2045178
Bromochloromethane	U		0.128	1.00	1	04/20/2023 03:15	WG2045178
Bromodichloromethane	U		0.136	1.00	1	04/20/2023 03:15	WG2045178
Bromoform	U	<u>C3</u>	0.129	1.00	1	04/20/2023 03:15	WG2045178
Bromomethane	U	<u>C3</u>	0.605	5.00	1	04/20/2023 03:15	WG2045178
n-Butylbenzene	U	<u>C3</u>	0.157	1.00	1	04/20/2023 03:15	WG2045178
sec-Butylbenzene	U		0.125	1.00	1	04/20/2023 03:15	WG2045178
tert-Butylbenzene	U		0.127	1.00	1	04/20/2023 03:15	WG2045178
Carbon disulfide	U		0.0962	1.00	1	04/20/2023 03:15	WG2045178
Carbon tetrachloride	U		0.128	1.00	1	04/20/2023 03:15	WG2045178
Chlorobenzene	U		0.116	1.00	1	04/20/2023 03:15	WG2045178
Chlorodibromomethane	U		0.140	1.00	1	04/20/2023 03:15	WG2045178
Chloroethane	U		0.192	5.00	1	04/20/2023 03:15	WG2045178
Chloroform	U		0.111	5.00	1	04/20/2023 03:15	WG2045178
Chloromethane	U		0.960	2.50	1	04/20/2023 03:15	WG2045178
2-Chlorotoluene	U		0.106	1.00	1	04/20/2023 03:15	WG2045178
4-Chlorotoluene	U		0.114	1.00	1	04/20/2023 03:15	WG2045178
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	04/20/2023 03:15	WG2045178
Dibromomethane	U		0.122	1.00	1	04/20/2023 03:15	WG2045178
1,2-Dichlorobenzene	U		0.107	1.00	1	04/20/2023 03:15	WG2045178
1,3-Dichlorobenzene	U		0.110	1.00	1	04/20/2023 03:15	WG2045178
1,4-Dichlorobenzene	U		0.120	1.00	1	04/20/2023 03:15	WG2045178
Dichlorodifluoromethane	U		0.374	5.00	1	04/20/2023 03:15	WG2045178
1,1-Dichloroethane	U		0.100	1.00	1	04/20/2023 03:15	WG2045178
1,2-Dichloroethane	U		0.0819	1.00	1	04/20/2023 03:15	WG2045178
1,1-Dichloroethene	U		0.188	1.00	1	04/20/2023 03:15	WG2045178
cis-1,2-Dichloroethene	U		0.126	1.00	1	04/20/2023 03:15	WG2045178
trans-1,2-Dichloroethene	U		0.149	1.00	1	04/20/2023 03:15	WG2045178
1,2-Dichloropropane	U		0.149	1.00	1	04/20/2023 03:15	WG2045178
1,1-Dichloropropene	U		0.142	1.00	1	04/20/2023 03:15	WG2045178
1,3-Dichloropropane	U		0.110	1.00	1	04/20/2023 03:15	WG2045178
cis-1,3-Dichloropropene	U		0.111	1.00	1	04/20/2023 03:15	WG2045178
trans-1,3-Dichloropropene	U		0.118	1.00	1	04/20/2023 03:15	WG2045178
2,2-Dichloropropane	U		0.161	1.00	1	04/20/2023 03:15	WG2045178
Di-isopropyl ether	U		0.105	1.00	1	04/20/2023 03:15	WG2045178
Ethylbenzene	1.32		0.137	1.00	1	04/20/2023 03:15	WG2045178
Hexachloro-1,3-butadiene	U		0.337	1.00	1	04/20/2023 03:15	WG2045178
Isopropylbenzene	4.01		0.105	1.00	1	04/20/2023 03:15	WG2045178
p-Isopropyltoluene	U		0.120	1.00	1	04/20/2023 03:15	WG2045178
2-Butanone (MEK)	U		1.19	10.0	1	04/20/2023 03:15	WG2045178
Methylene Chloride	U		0.430	5.00	1	04/20/2023 03:15	WG2045178
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	04/20/2023 03:15	WG2045178
Methyl tert-butyl ether	699		2.02	20.0	20	04/20/2023 22:18	WG2045833

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
Naphthalene	U	<u>C3</u>	1.00	5.00	1	04/20/2023 03:15	WG2045178
n-Propylbenzene	0.600	<u>J</u>	0.0993	1.00	1	04/20/2023 03:15	WG2045178
Styrene	U		0.118	1.00	1	04/20/2023 03:15	WG2045178
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	04/20/2023 03:15	WG2045178
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	04/20/2023 03:15	WG2045178
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	04/20/2023 03:15	WG2045178
Tetrachloroethene	U		0.300	1.00	1	04/20/2023 03:15	WG2045178
Toluene	U		0.278	1.00	1	04/20/2023 03:15	WG2045178
1,2,3-Trichlorobenzene	U		0.230	1.00	1	04/20/2023 03:15	WG2045178
1,2,4-Trichlorobenzene	U	<u>C3 J3</u>	0.481	1.00	1	04/20/2023 03:15	WG2045178
1,1,1-Trichloroethane	U		0.149	1.00	1	04/20/2023 03:15	WG2045178
1,1,2-Trichloroethane	U		0.158	1.00	1	04/20/2023 03:15	WG2045178
Trichloroethene	U		0.190	1.00	1	04/20/2023 03:15	WG2045178
Trichlorofluoromethane	U	<u>C3</u>	0.160	5.00	1	04/20/2023 03:15	WG2045178
1,2,4-Trimethylbenzene	2.29	<u>C3</u>	0.322	1.00	1	04/20/2023 03:15	WG2045178
1,2,3-Trimethylbenzene	U		0.104	1.00	1	04/20/2023 03:15	WG2045178
1,3,5-Trimethylbenzene	U		0.104	1.00	1	04/20/2023 03:15	WG2045178
Vinyl chloride	U		0.234	1.00	1	04/20/2023 03:15	WG2045178
Xylenes, Total	2.97	<u>J</u>	0.174	3.00	1	04/20/2023 03:15	WG2045178
o-Xylene	0.836	<u>J</u>	0.174	1.00	1	04/20/2023 03:15	WG2045178
m&p-Xylene	2.13		0.430	2.00	1	04/20/2023 03:15	WG2045178
(S) Toluene-d8	102			80.0-120		04/20/2023 03:15	WG2045178
(S) Toluene-d8	102			80.0-120		04/20/2023 22:18	WG2045833
(S) 4-Bromofluorobenzene	104			77.0-126		04/20/2023 03:15	WG2045178
(S) 4-Bromofluorobenzene	93.9			77.0-126		04/20/2023 22:18	WG2045833
(S) 1,2-Dichloroethane-d4	87.4			70.0-130		04/20/2023 03:15	WG2045178
(S) 1,2-Dichloroethane-d4	117			70.0-130		04/20/2023 22:18	WG2045833

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

Sample Narrative:

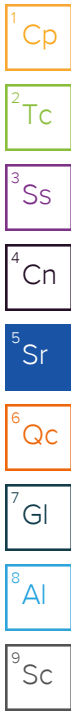
L1606782-14 WG2044985: Non-target compounds too high to run at a lower dilution.

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	04/24/2023 05:40	WG2045887
(S) a,a,a-Trifluorotoluene(FID)	77.6			50.0-150		04/24/2023 05:40	WG2045887

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	04/20/2023 21:35	WG2045833
1,2,3-Trichloropropane	U		0.00200	0.00500	1	04/20/2023 13:37	WG2044985
Acrolein	U		2.54	50.0	1	04/20/2023 21:35	WG2045833
1,2-Dibromoethane	U		0.00410	0.00500	1	04/20/2023 13:37	WG2044985
Acrylonitrile	U		0.671	10.0	1	04/20/2023 21:35	WG2045833
Benzene	U		0.0941	1.00	1	04/20/2023 21:35	WG2045833
Bromobenzene	U		0.118	1.00	1	04/20/2023 21:35	WG2045833
Bromochloromethane	U		0.128	1.00	1	04/20/2023 21:35	WG2045833
Bromodichloromethane	U		0.136	1.00	1	04/20/2023 21:35	WG2045833
Bromoform	U		0.129	1.00	1	04/20/2023 21:35	WG2045833
Bromomethane	U	C3	0.605	5.00	1	04/20/2023 21:35	WG2045833
n-Butylbenzene	U		0.157	1.00	1	04/20/2023 21:35	WG2045833
sec-Butylbenzene	U		0.125	1.00	1	04/20/2023 21:35	WG2045833
tert-Butylbenzene	U		0.127	1.00	1	04/20/2023 21:35	WG2045833
Carbon disulfide	U		0.0962	1.00	1	04/20/2023 21:35	WG2045833
Carbon tetrachloride	U		0.128	1.00	1	04/20/2023 21:35	WG2045833
Chlorobenzene	U		0.116	1.00	1	04/20/2023 21:35	WG2045833
Chlorodibromomethane	U		0.140	1.00	1	04/20/2023 21:35	WG2045833
Chloroethane	U		0.192	5.00	1	04/20/2023 21:35	WG2045833
Chloroform	0.428	J	0.111	5.00	1	04/20/2023 21:35	WG2045833
Chloromethane	U		0.960	2.50	1	04/20/2023 21:35	WG2045833
2-Chlorotoluene	U		0.106	1.00	1	04/20/2023 21:35	WG2045833
4-Chlorotoluene	U		0.114	1.00	1	04/20/2023 21:35	WG2045833
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	04/20/2023 21:35	WG2045833
Dibromomethane	U		0.122	1.00	1	04/20/2023 21:35	WG2045833
1,2-Dichlorobenzene	U		0.107	1.00	1	04/20/2023 21:35	WG2045833
1,3-Dichlorobenzene	U		0.110	1.00	1	04/20/2023 21:35	WG2045833
1,4-Dichlorobenzene	U		0.120	1.00	1	04/20/2023 21:35	WG2045833
Dichlorodifluoromethane	U	J3	0.374	5.00	1	04/20/2023 21:35	WG2045833
1,1-Dichloroethane	U		0.100	1.00	1	04/20/2023 21:35	WG2045833
1,2-Dichloroethane	U		0.0819	1.00	1	04/20/2023 21:35	WG2045833
1,1-Dichloroethene	U		0.188	1.00	1	04/20/2023 21:35	WG2045833
cis-1,2-Dichloroethene	U		0.126	1.00	1	04/20/2023 21:35	WG2045833
trans-1,2-Dichloroethene	U		0.149	1.00	1	04/20/2023 21:35	WG2045833
1,2-Dichloropropane	U		0.149	1.00	1	04/20/2023 21:35	WG2045833
1,1-Dichloropropene	U		0.142	1.00	1	04/20/2023 21:35	WG2045833
1,3-Dichloropropane	U		0.110	1.00	1	04/20/2023 21:35	WG2045833
cis-1,3-Dichloropropene	U		0.111	1.00	1	04/20/2023 21:35	WG2045833
trans-1,3-Dichloropropene	U		0.118	1.00	1	04/20/2023 21:35	WG2045833
2,2-Dichloropropane	U		0.161	1.00	1	04/20/2023 21:35	WG2045833
Di-isopropyl ether	U		0.105	1.00	1	04/20/2023 21:35	WG2045833
Ethylbenzene	U		0.137	1.00	1	04/20/2023 21:35	WG2045833
Hexachloro-1,3-butadiene	U	C3	0.337	1.00	1	04/20/2023 21:35	WG2045833
Isopropylbenzene	U		0.105	1.00	1	04/20/2023 21:35	WG2045833
p-Isopropyltoluene	U		0.120	1.00	1	04/20/2023 21:35	WG2045833
2-Butanone (MEK)	U		1.19	10.0	1	04/20/2023 21:35	WG2045833
Methylene Chloride	U		0.430	5.00	1	04/20/2023 21:35	WG2045833
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	04/20/2023 21:35	WG2045833
Methyl tert-butyl ether	U		0.101	1.00	1	04/20/2023 21:35	WG2045833



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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Naphthalene	U	<u>C3</u>	1.00	5.00	1	04/20/2023 21:35	WG2045833
n-Propylbenzene	U		0.0993	1.00	1	04/20/2023 21:35	WG2045833
Styrene	U		0.118	1.00	1	04/20/2023 21:35	WG2045833
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	04/20/2023 21:35	WG2045833
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	04/20/2023 21:35	WG2045833
1,1,2-Trichlorotrifluoroethane	U	<u>J3</u>	0.180	1.00	1	04/20/2023 21:35	WG2045833
Tetrachloroethene	U		0.300	1.00	1	04/20/2023 21:35	WG2045833
Toluene	U		0.278	1.00	1	04/20/2023 21:35	WG2045833
1,2,3-Trichlorobenzene	U	<u>C3</u>	0.230	1.00	1	04/20/2023 21:35	WG2045833
1,2,4-Trichlorobenzene	U	<u>C3</u>	0.481	1.00	1	04/20/2023 21:35	WG2045833
1,1,1-Trichloroethane	U		0.149	1.00	1	04/20/2023 21:35	WG2045833
1,1,2-Trichloroethane	U		0.158	1.00	1	04/20/2023 21:35	WG2045833
Trichloroethene	U		0.190	1.00	1	04/20/2023 21:35	WG2045833
Trichlorofluoromethane	U		0.160	5.00	1	04/20/2023 21:35	WG2045833
1,2,4-Trimethylbenzene	U		0.322	1.00	1	04/20/2023 21:35	WG2045833
1,2,3-Trimethylbenzene	U		0.104	1.00	1	04/20/2023 21:35	WG2045833
1,3,5-Trimethylbenzene	U		0.104	1.00	1	04/20/2023 21:35	WG2045833
Vinyl chloride	U	<u>J3</u>	0.234	1.00	1	04/20/2023 21:35	WG2045833
Xylenes, Total	U		0.174	3.00	1	04/20/2023 21:35	WG2045833
o-Xylene	U		0.174	1.00	1	04/20/2023 21:35	WG2045833
m&p-Xylene	U		0.430	2.00	1	04/20/2023 21:35	WG2045833
(S) Toluene-d8	102			80.0-120		04/20/2023 21:35	WG2045833
(S) 4-Bromofluorobenzene	93.0			77.0-126		04/20/2023 21:35	WG2045833
(S) 1,2-Dichloroethane-d4	116			70.0-130		04/20/2023 21:35	WG2045833

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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	04/23/2023 22:08	WG2045887
(S) a,a,a-Trifluorotoluene(FID)	86.8			50.0-150		04/23/2023 22:08	WG2045887

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	04/22/2023 10:28	WG2046881
1,2,3-Trichloropropane	U		0.00200	0.00500	1	04/20/2023 13:13	WG2044985
Acrolein	U		2.54	50.0	1	04/22/2023 10:28	WG2046881
1,2-Dibromoethane	U		0.00410	0.00500	1	04/20/2023 13:13	WG2044985
Acrylonitrile	U		0.671	10.0	1	04/22/2023 10:28	WG2046881
Benzene	U		0.0941	1.00	1	04/22/2023 10:28	WG2046881
Bromobenzene	U		0.118	1.00	1	04/22/2023 10:28	WG2046881
Bromochloromethane	U		0.128	1.00	1	04/22/2023 10:28	WG2046881
Bromodichloromethane	U		0.136	1.00	1	04/22/2023 10:28	WG2046881
Bromoform	U		0.129	1.00	1	04/22/2023 10:28	WG2046881
Bromomethane	U		0.605	5.00	1	04/22/2023 10:28	WG2046881
n-Butylbenzene	U		0.157	1.00	1	04/22/2023 10:28	WG2046881
sec-Butylbenzene	U		0.125	1.00	1	04/22/2023 10:28	WG2046881
tert-Butylbenzene	U		0.127	1.00	1	04/22/2023 10:28	WG2046881
Carbon disulfide	U		0.0962	1.00	1	04/22/2023 10:28	WG2046881
Carbon tetrachloride	U		0.128	1.00	1	04/22/2023 10:28	WG2046881
Chlorobenzene	U		0.116	1.00	1	04/22/2023 10:28	WG2046881
Chlorodibromomethane	U		0.140	1.00	1	04/22/2023 10:28	WG2046881
Chloroethane	U		0.192	5.00	1	04/22/2023 10:28	WG2046881
Chloroform	U		0.111	5.00	1	04/22/2023 10:28	WG2046881
Chloromethane	U		0.960	2.50	1	04/22/2023 10:28	WG2046881
2-Chlorotoluene	U		0.106	1.00	1	04/22/2023 10:28	WG2046881
4-Chlorotoluene	U		0.114	1.00	1	04/22/2023 10:28	WG2046881
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	04/22/2023 10:28	WG2046881
Dibromomethane	U		0.122	1.00	1	04/22/2023 10:28	WG2046881
1,2-Dichlorobenzene	U		0.107	1.00	1	04/22/2023 10:28	WG2046881
1,3-Dichlorobenzene	U		0.110	1.00	1	04/22/2023 10:28	WG2046881
1,4-Dichlorobenzene	U		0.120	1.00	1	04/22/2023 10:28	WG2046881
Dichlorodifluoromethane	U		0.374	5.00	1	04/22/2023 10:28	WG2046881
1,1-Dichloroethane	U		0.100	1.00	1	04/22/2023 10:28	WG2046881
1,2-Dichloroethane	U		0.0819	1.00	1	04/22/2023 10:28	WG2046881
1,1-Dichloroethene	U		0.188	1.00	1	04/22/2023 10:28	WG2046881
cis-1,2-Dichloroethene	U		0.126	1.00	1	04/22/2023 10:28	WG2046881
trans-1,2-Dichloroethene	U		0.149	1.00	1	04/22/2023 10:28	WG2046881
1,2-Dichloropropane	U		0.149	1.00	1	04/22/2023 10:28	WG2046881
1,1-Dichloropropene	U		0.142	1.00	1	04/22/2023 10:28	WG2046881
1,3-Dichloropropane	U		0.110	1.00	1	04/22/2023 10:28	WG2046881
cis-1,3-Dichloropropene	U		0.111	1.00	1	04/22/2023 10:28	WG2046881
trans-1,3-Dichloropropene	U		0.118	1.00	1	04/22/2023 10:28	WG2046881
2,2-Dichloropropane	U		0.161	1.00	1	04/22/2023 10:28	WG2046881
Di-isopropyl ether	U		0.105	1.00	1	04/22/2023 10:28	WG2046881
Ethylbenzene	U		0.137	1.00	1	04/22/2023 10:28	WG2046881
Hexachloro-1,3-butadiene	U		0.337	1.00	1	04/22/2023 10:28	WG2046881
Isopropylbenzene	U		0.105	1.00	1	04/22/2023 10:28	WG2046881
p-Isopropyltoluene	U		0.120	1.00	1	04/22/2023 10:28	WG2046881
2-Butanone (MEK)	U		1.19	10.0	1	04/22/2023 10:28	WG2046881
Methylene Chloride	U		0.430	5.00	1	04/22/2023 10:28	WG2046881
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	04/22/2023 10:28	WG2046881
Methyl tert-butyl ether	U		0.101	1.00	1	04/22/2023 10:28	WG2046881



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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Naphthalene	U	<u>C3</u>	1.00	5.00	1	04/22/2023 10:28	WG2046881
n-Propylbenzene	U		0.0993	1.00	1	04/22/2023 10:28	WG2046881
Styrene	U		0.118	1.00	1	04/22/2023 10:28	WG2046881
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	04/22/2023 10:28	WG2046881
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	04/22/2023 10:28	WG2046881
1,1,2-Trichlorotrifluoroethane	U	<u>J4</u>	0.180	1.00	1	04/22/2023 10:28	WG2046881
Tetrachloroethene	U		0.300	1.00	1	04/22/2023 10:28	WG2046881
Toluene	U		0.278	1.00	1	04/22/2023 10:28	WG2046881
1,2,3-Trichlorobenzene	U	<u>C3</u>	0.230	1.00	1	04/22/2023 10:28	WG2046881
1,2,4-Trichlorobenzene	U		0.481	1.00	1	04/22/2023 10:28	WG2046881
1,1,1-Trichloroethane	U		0.149	1.00	1	04/22/2023 10:28	WG2046881
1,1,2-Trichloroethane	U		0.158	1.00	1	04/22/2023 10:28	WG2046881
Trichloroethene	U		0.190	1.00	1	04/22/2023 10:28	WG2046881
Trichlorofluoromethane	U		0.160	5.00	1	04/22/2023 10:28	WG2046881
1,2,4-Trimethylbenzene	U	<u>C3</u>	0.322	1.00	1	04/22/2023 10:28	WG2046881
1,2,3-Trimethylbenzene	U		0.104	1.00	1	04/22/2023 10:28	WG2046881
1,3,5-Trimethylbenzene	U		0.104	1.00	1	04/22/2023 10:28	WG2046881
Vinyl chloride	U		0.234	1.00	1	04/22/2023 10:28	WG2046881
Xylenes, Total	U		0.174	3.00	1	04/22/2023 10:28	WG2046881
o-Xylene	U		0.174	1.00	1	04/22/2023 10:28	WG2046881
m&p-Xylene	U		0.430	2.00	1	04/22/2023 10:28	WG2046881
(S) Toluene-d8	100			80.0-120		04/22/2023 10:28	WG2046881
(S) 4-Bromofluorobenzene	87.2			77.0-126		04/22/2023 10:28	WG2046881
(S) 1,2-Dichloroethane-d4	84.2			70.0-130		04/22/2023 10:28	WG2046881

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Method Blank (MB)

(MB) R3916321-1 04/22/23 22:45

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Lead	U		2.99	6.00

¹Cp

²Tc

³Ss

Laboratory Control Sample (LCS)

(LCS) R3916321-2 04/22/23 22:48

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Lead	1000	933	93.3	80.0-120	

⁴Cn

⁵Sr

L1606782-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1606782-07 04/22/23 22:51 • (MS) R3916321-4 04/22/23 22:57 • (MSD) R3916321-5 04/22/23 23:00

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	1000	3.50	963	974	95.9	97.0	1	75.0-125			1.17	20

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3916856-3 04/23/23 21:28

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
TPHGAK C6 to C10	U		28.7	100
(S) a,a,a-Trifluorotoluene(FID)	89.2			60.0-120

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

(LCS) R3916856-1 04/23/23 19:24 • (LCSD) R3916856-2 04/23/23 19:50

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
TPHGAK C6 to C10	5000	3820	3780	76.4	75.6	60.0-120			1.05	20
(S) a,a,a-Trifluorotoluene(FID)				100	100	60.0-120				

L1605824-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1605824-05 04/23/23 22:35 • (MS) R3916856-4 04/24/23 14:47 • (MSD) R3916856-5 04/24/23 15:13

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
TPHGAK C6 to C10	5000	4680	8510	8550	76.6	77.4	1	70.0-130			0.469	20
(S) a,a,a-Trifluorotoluene(FID)					97.4	95.7		50.0-150				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3918047-2 04/25/23 19:33

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
TPHGAK C6 to C10	U		28.7	100
(S) a,a,a-Trifluorotoluene(FID)	83.8			60.0-120

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

(LCS) R3918047-1 04/25/23 18:40 • (LCSD) R3918047-7 04/26/23 14:33

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
TPHGAK C6 to C10	5000	4400	4170	88.0	83.4	60.0-120			5.37	20
(S) a,a,a-Trifluorotoluene(FID)				100	102	60.0-120				

L1606782-12 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1606782-12 04/25/23 22:06 • (MS) R3918047-3 04/26/23 10:06 • (MSD) R3918047-4 04/26/23 10:33

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
TPHGAK C6 to C10	5000	1570	5630	5750	81.2	83.6	1	70.0-130			2.11	20
(S) a,a,a-Trifluorotoluene(FID)					96.6	95.8		50.0-150				

L1607645-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1607645-05 04/26/23 00:51 • (MS) R3918047-5 04/26/23 11:36 • (MSD) R3918047-6 04/26/23 12:12

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
TPHGAK C6 to C10	5000	1690	5840	6360	83.0	93.4	1	70.0-130			8.52	20
(S) a,a,a-Trifluorotoluene(FID)					94.2	99.8		50.0-150				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3915675-2 04/20/23 11:16

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
1,2,3-Trichloropropane	U		0.00200	0.00500
1,2-Dibromoethane	U		0.00410	0.00500

Laboratory Control Sample (LCS)

(LCS) R3915675-1 04/20/23 10:53

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
1,2,3-Trichloropropane	0.0500	0.0560	112	70.0-130	
1,2-Dibromoethane	0.0500	0.0430	86.0	70.0-130	

L1606782-12 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1606782-12 04/20/23 18:24 • (MS) R3915675-3 04/20/23 19:35 • (MSD) R3915675-4 04/20/23 19:59

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	%	%		%			%	%
1,2,3-Trichloropropane	5.00	U	4.90	5.20	98.0	104	100	70.0-130			5.94	20
1,2-Dibromoethane	5.00	U	3.70	3.90	74.0	78.0	100	70.0-130			5.26	20

Sample Narrative:

OS: Non-target compounds too high to run at a lower dilution.

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3915476-4 04/19/23 19:16

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		11.3	50.0
Acrolein	U		2.54	50.0
Acrylonitrile	U		0.671	10.0
Benzene	U		0.0941	1.00
Bromobenzene	U		0.118	1.00
Bromochloromethane	U		0.128	1.00
Bromodichloromethane	U		0.136	1.00
Bromoform	U		0.129	1.00
Bromomethane	U		0.605	5.00
n-Butylbenzene	U		0.157	1.00
sec-Butylbenzene	U		0.125	1.00
tert-Butylbenzene	U		0.127	1.00
Carbon disulfide	U		0.0962	1.00
Carbon tetrachloride	U		0.128	1.00
Chlorobenzene	U		0.116	1.00
Chlorodibromomethane	U		0.140	1.00
Chloroethane	U		0.192	5.00
Chloroform	U		0.111	5.00
Chloromethane	U		0.960	2.50
2-Chlorotoluene	U		0.106	1.00
4-Chlorotoluene	U		0.114	1.00
1,2-Dibromo-3-Chloropropane	U		0.276	5.00
Dibromomethane	U		0.122	1.00
1,2-Dichlorobenzene	U		0.107	1.00
1,3-Dichlorobenzene	U		0.110	1.00
1,4-Dichlorobenzene	U		0.120	1.00
Dichlorodifluoromethane	U		0.374	5.00
1,1-Dichloroethane	U		0.100	1.00
1,2-Dichloroethane	U		0.0819	1.00
1,1-Dichloroethene	U		0.188	1.00
cis-1,2-Dichloroethene	U		0.126	1.00
trans-1,2-Dichloroethene	U		0.149	1.00
1,2-Dichloropropane	U		0.149	1.00
1,1-Dichloropropene	U		0.142	1.00
1,3-Dichloropropane	U		0.110	1.00
cis-1,3-Dichloropropene	U		0.111	1.00
trans-1,3-Dichloropropene	U		0.118	1.00
2,2-Dichloropropane	U		0.161	1.00
Di-isopropyl ether	U		0.105	1.00
Ethylbenzene	U		0.137	1.00

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3915476-4 04/19/23 19:16

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Hexachloro-1,3-butadiene	U		0.337	1.00
Isopropylbenzene	U		0.105	1.00
p-Isopropyltoluene	U		0.120	1.00
2-Butanone (MEK)	U		1.19	10.0
Methylene Chloride	U		0.430	5.00
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0
Methyl tert-butyl ether	U		0.101	1.00
Naphthalene	U		1.00	5.00
n-Propylbenzene	U		0.0993	1.00
Styrene	U		0.118	1.00
1,1,1,2-Tetrachloroethane	U		0.147	1.00
1,1,2,2-Tetrachloroethane	U		0.133	1.00
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00
Tetrachloroethene	U		0.300	1.00
Toluene	U		0.278	1.00
1,2,3-Trichlorobenzene	U		0.230	1.00
1,2,4-Trichlorobenzene	U		0.481	1.00
1,1,1-Trichloroethane	U		0.149	1.00
1,1,2-Trichloroethane	U		0.158	1.00
Trichloroethene	U		0.190	1.00
Trichlorofluoromethane	U		0.160	5.00
1,2,4-Trimethylbenzene	U		0.322	1.00
1,2,3-Trimethylbenzene	U		0.104	1.00
1,3,5-Trimethylbenzene	U		0.104	1.00
Vinyl chloride	U		0.234	1.00
Xylenes, Total	U		0.174	3.00
o-Xylene	U		0.174	1.00
m&p-Xylenes	U		0.430	2.00
(S) Toluene-d8	102			80.0-120
(S) 4-Bromofluorobenzene	94.3			77.0-126
(S) 1,2-Dichloroethane-d4	97.2			70.0-130

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

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

(LCS) R3915476-1 04/19/23 17:51 • (LCSD) R3915476-2 04/19/23 18:12

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	%	%	%			%	%
Acetone	25.0	25.6	35.0	102	140	19.0-160		J3	31.0	27
Acrolein	25.0	7.95	7.81	31.8	31.2	10.0-160			1.78	26

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

(LCS) R3915476-1 04/19/23 17:51 • (LCSD) R3915476-2 04/19/23 18:12

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 %
Acrylonitrile	25.0	29.2	30.5	117	122	55.0-149			4.36	20
Benzene	5.00	5.23	5.28	105	106	70.0-123			0.951	20
Bromobenzene	5.00	4.11	4.13	82.2	82.6	73.0-121			0.485	20
Bromochloromethane	5.00	5.13	5.29	103	106	76.0-122			3.07	20
Bromodichloromethane	5.00	4.72	4.85	94.4	97.0	75.0-120			2.72	20
Bromoform	5.00	3.92	4.05	78.4	81.0	68.0-132			3.26	20
Bromomethane	5.00	3.14	3.34	62.8	66.8	10.0-160			6.17	25
n-Butylbenzene	5.00	3.76	3.89	75.2	77.8	73.0-125			3.40	20
sec-Butylbenzene	5.00	4.20	4.11	84.0	82.2	75.0-125			2.17	20
tert-Butylbenzene	5.00	4.15	4.04	83.0	80.8	76.0-124			2.69	20
Carbon disulfide	5.00	4.68	4.88	93.6	97.6	61.0-128			4.18	20
Carbon tetrachloride	5.00	4.93	4.98	98.6	99.6	68.0-126			1.01	20
Chlorobenzene	5.00	4.83	4.97	96.6	99.4	80.0-121			2.86	20
Chlorodibromomethane	5.00	4.57	4.76	91.4	95.2	77.0-125			4.07	20
Chloroethane	5.00	4.36	4.22	87.2	84.4	47.0-150			3.26	20
Chloroform	5.00	4.93	5.15	98.6	103	73.0-120			4.37	20
Chloromethane	5.00	6.51	6.76	130	135	41.0-142			3.77	20
2-Chlorotoluene	5.00	4.26	4.23	85.2	84.6	76.0-123			0.707	20
4-Chlorotoluene	5.00	4.04	3.87	80.8	77.4	75.0-122			4.30	20
1,2-Dibromo-3-Chloropropane	5.00	4.36	4.30	87.2	86.0	58.0-134			1.39	20
Dibromomethane	5.00	5.07	4.95	101	99.0	80.0-120			2.40	20
1,2-Dichlorobenzene	5.00	4.39	4.60	87.8	92.0	79.0-121			4.67	20
1,3-Dichlorobenzene	5.00	4.20	4.37	84.0	87.4	79.0-120			3.97	20
1,4-Dichlorobenzene	5.00	4.48	4.32	89.6	86.4	79.0-120			3.64	20
Dichlorodifluoromethane	5.00	4.94	4.89	98.8	97.8	51.0-149			1.02	20
1,1-Dichloroethane	5.00	5.30	5.42	106	108	70.0-126			2.24	20
1,2-Dichloroethane	5.00	5.03	5.28	101	106	70.0-128			4.85	20
1,1-Dichloroethene	5.00	4.79	5.01	95.8	100	71.0-124			4.49	20
cis-1,2-Dichloroethene	5.00	4.85	4.87	97.0	97.4	73.0-120			0.412	20
trans-1,2-Dichloroethene	5.00	4.93	5.09	98.6	102	73.0-120			3.19	20
1,2-Dichloropropane	5.00	5.60	5.57	112	111	77.0-125			0.537	20
1,1-Dichloropropene	5.00	5.14	5.20	103	104	74.0-126			1.16	20
1,3-Dichloropropane	5.00	4.98	5.23	99.6	105	80.0-120			4.90	20
cis-1,3-Dichloropropene	5.00	5.03	5.28	101	106	80.0-123			4.85	20
trans-1,3-Dichloropropene	5.00	4.48	4.33	89.6	86.6	78.0-124			3.41	20
2,2-Dichloropropane	5.00	4.58	5.00	91.6	100	58.0-130			8.77	20
Di-isopropyl ether	5.00	5.27	5.33	105	107	58.0-138			1.13	20
Ethylbenzene	5.00	4.53	4.60	90.6	92.0	79.0-123			1.53	20
Hexachloro-1,3-butadiene	5.00	4.23	5.13	84.6	103	54.0-138			19.2	20
Isopropylbenzene	5.00	4.29	4.48	85.8	89.6	76.0-127			4.33	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

(LCS) R3915476-1 04/19/23 17:51 • (LCSD) R3915476-2 04/19/23 18:12

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 %
p-Isopropyltoluene	5.00	4.27	4.27	85.4	85.4	76.0-125			0.000	20
2-Butanone (MEK)	25.0	32.2	34.7	129	139	44.0-160			7.47	20
Methylene Chloride	5.00	4.85	5.06	97.0	101	67.0-120			4.24	20
4-Methyl-2-pentanone (MIBK)	25.0	26.2	26.3	105	105	68.0-142			0.381	20
Methyl tert-butyl ether	5.00	4.50	4.54	90.0	90.8	68.0-125			0.885	20
Naphthalene	5.00	2.71	3.13	54.2	62.6	54.0-135			14.4	20
n-Propylbenzene	5.00	4.17	4.04	83.4	80.8	77.0-124			3.17	20
Styrene	5.00	4.21	4.29	84.2	85.8	73.0-130			1.88	20
1,1,1,2-Tetrachloroethane	5.00	4.92	5.01	98.4	100	75.0-125			1.81	20
1,1,2,2-Tetrachloroethane	5.00	4.37	4.16	87.4	83.2	65.0-130			4.92	20
1,1,2-Trichlorotrifluoroethane	5.00	4.70	4.78	94.0	95.6	69.0-132			1.69	20
Tetrachloroethene	5.00	4.86	5.01	97.2	100	72.0-132			3.04	20
Toluene	5.00	4.68	4.83	93.6	96.6	79.0-120			3.15	20
1,2,3-Trichlorobenzene	5.00	4.44	4.93	88.8	98.6	50.0-138			10.5	20
1,2,4-Trichlorobenzene	5.00	3.19	3.93	63.8	78.6	57.0-137		J3	20.8	20
1,1,1-Trichloroethane	5.00	4.91	4.98	98.2	99.6	73.0-124			1.42	20
1,1,2-Trichloroethane	5.00	5.05	5.04	101	101	80.0-120			0.198	20
Trichloroethene	5.00	5.52	5.63	110	113	78.0-124			1.97	20
Trichlorofluoromethane	5.00	3.71	3.74	74.2	74.8	59.0-147			0.805	20
1,2,4-Trimethylbenzene	5.00	3.94	3.90	78.8	78.0	76.0-121			1.02	20
1,2,3-Trimethylbenzene	5.00	4.34	4.20	86.8	84.0	77.0-120			3.28	20
1,3,5-Trimethylbenzene	5.00	4.13	4.07	82.6	81.4	76.0-122			1.46	20
Vinyl chloride	5.00	4.72	4.89	94.4	97.8	67.0-131			3.54	20
Xylenes, Total	15.0	13.6	13.9	90.7	92.7	79.0-123			2.18	20
o-Xylene	5.00	4.22	4.35	84.4	87.0	80.0-122			3.03	20
m&p-Xylenes	10.0	9.36	9.59	93.6	95.9	80.0-122			2.43	20
(S) Toluene-d8				101	100	80.0-120				
(S) 4-Bromofluorobenzene				99.0	102	77.0-126				
(S) 1,2-Dichloroethane-d4				95.8	94.5	70.0-130				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1606782-12 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1606782-12 04/20/23 04:40 • (MS) R3915476-5 04/20/23 05:23 • (MSD) R3915476-6 04/20/23 05:44

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 %
Acetone	1250	U	1190	1120	95.2	89.6	50	10.0-160			6.06	35
Acrolein	1250	U	306	292	24.5	23.4	50	10.0-160			4.68	39
Acrylonitrile	1250	U	1390	1400	111	112	50	21.0-160			0.717	32
Benzene	250	966	1190	1150	89.6	73.6	50	17.0-158			3.42	27

L1606782-12 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1606782-12 04/20/23 04:40 • (MS) R3915476-5 04/20/23 05:23 • (MSD) R3915476-6 04/20/23 05:44

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 %
Bromobenzene	250	U	169	181	67.6	72.4	50	30.0-149			6.86	28
Bromochloromethane	250	U	228	235	91.2	94.0	50	38.0-142			3.02	26
Bromodichloromethane	250	U	210	217	84.0	86.8	50	31.0-150			3.28	27
Bromoform	250	U	184	194	73.6	77.6	50	29.0-150			5.29	29
Bromomethane	250	U	121	126	48.4	50.4	50	10.0-160			4.05	38
n-Butylbenzene	250	U	151	151	60.4	60.4	50	31.0-150			0.000	30
sec-Butylbenzene	250	U	156	164	62.4	65.6	50	33.0-155			5.00	29
tert-Butylbenzene	250	U	155	162	62.0	64.8	50	34.0-153			4.42	28
Carbon disulfide	250	U	191	193	76.4	77.2	50	10.0-156			1.04	28
Carbon tetrachloride	250	U	202	204	80.8	81.6	50	23.0-159			0.985	28
Chlorobenzene	250	U	201	214	80.4	85.6	50	33.0-152			6.27	27
Chlorodibromomethane	250	U	205	222	82.0	88.8	50	37.0-149			7.96	27
Chloroethane	250	U	169	176	67.6	70.4	50	10.0-160			4.06	30
Chloroform	250	U	216	211	86.4	84.4	50	29.0-154			2.34	28
Chloromethane	250	U	261	274	104	110	50	10.0-160			4.86	29
2-Chlorotoluene	250	U	162	173	64.8	69.2	50	32.0-153			6.57	28
4-Chlorotoluene	250	U	155	166	62.0	66.4	50	32.0-150			6.85	28
1,2-Dibromo-3-Chloropropane	250	U	200	204	80.0	81.6	50	22.0-151			1.98	34
Dibromomethane	250	U	227	228	90.8	91.2	50	30.0-151			0.440	27
1,2-Dichlorobenzene	250	U	200	198	80.0	79.2	50	34.0-149			1.01	28
1,3-Dichlorobenzene	250	U	181	183	72.4	73.2	50	36.0-146			1.10	27
1,4-Dichlorobenzene	250	U	186	189	74.4	75.6	50	35.0-142			1.60	27
Dichlorodifluoromethane	250	U	194	180	77.6	72.0	50	10.0-160			7.49	29
1,1-Dichloroethane	250	U	232	233	92.8	93.2	50	25.0-158			0.430	27
1,2-Dichloroethane	250	U	235	233	94.0	93.2	50	29.0-151			0.855	27
1,1-Dichloroethene	250	U	196	191	78.4	76.4	50	11.0-160			2.58	29
cis-1,2-Dichloroethene	250	U	199	220	79.6	88.0	50	10.0-160			10.0	27
trans-1,2-Dichloroethene	250	U	207	200	82.8	80.0	50	17.0-153			3.44	27
1,2-Dichloropropane	250	U	242	247	96.8	98.8	50	30.0-156			2.04	27
1,1-Dichloropropene	250	U	207	205	82.8	82.0	50	25.0-158			0.971	27
1,3-Dichloropropane	250	U	215	226	86.0	90.4	50	38.0-147			4.99	27
cis-1,3-Dichloropropene	250	U	220	228	88.0	91.2	50	34.0-149			3.57	28
trans-1,3-Dichloropropene	250	U	185	199	74.0	79.6	50	32.0-149			7.29	28
2,2-Dichloropropane	250	U	182	184	72.8	73.6	50	24.0-152			1.09	29
Di-isopropyl ether	250	U	227	236	90.8	94.4	50	21.0-160			3.89	28
Ethylbenzene	250	U	181	198	72.4	79.2	50	30.0-155			8.97	27
Hexachloro-1,3-butadiene	250	U	240	207	96.0	82.8	50	20.0-154			14.8	34
Isopropylbenzene	250	U	176	181	70.4	72.4	50	28.0-157			2.80	27
p-Isopropyltoluene	250	U	161	164	64.4	65.6	50	30.0-154			1.85	29
2-Butanone (MEK)	1250	U	1490	1520	119	122	50	10.0-160			1.99	32

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1606782-12 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1606782-12 04/20/23 04:40 • (MS) R3915476-5 04/20/23 05:23 • (MSD) R3915476-6 04/20/23 05:44

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 %
Methylene Chloride	250	U	216	220	86.4	88.0	50	23.0-144			1.83	28
4-Methyl-2-pentanone (MIBK)	1250	U	1200	1230	96.0	98.4	50	29.0-160			2.47	29
Methyl tert-butyl ether	250	588	800	796	84.8	83.2	50	28.0-150			0.501	29
Naphthalene	250	U	139	136	55.6	54.4	50	12.0-156			2.18	35
n-Propylbenzene	250	U	156	162	62.4	64.8	50	31.0-154			3.77	28
Styrene	250	U	178	180	71.2	72.0	50	33.0-155			1.12	28
1,1,1,2-Tetrachloroethane	250	U	222	219	88.8	87.6	50	36.0-151			1.36	29
1,1,2,2-Tetrachloroethane	250	U	203	204	81.2	81.6	50	33.0-150			0.491	28
1,1,2-Trichlorotrifluoroethane	250	U	171	189	68.4	75.6	50	23.0-160			10.0	30
Tetrachloroethene	250	U	190	192	76.0	76.8	50	10.0-160			1.05	27
Toluene	250	U	193	205	77.2	82.0	50	26.0-154			6.03	28
1,2,3-Trichlorobenzene	250	U	253	227	101	90.8	50	17.0-150			10.8	36
1,2,4-Trichlorobenzene	250	U	187	171	74.8	68.4	50	24.0-150			8.94	33
1,1,1-Trichloroethane	250	U	202	208	80.8	83.2	50	23.0-160			2.93	28
1,1,2-Trichloroethane	250	U	230	227	92.0	90.8	50	35.0-147			1.31	27
Trichloroethene	250	U	227	224	90.8	89.6	50	10.0-160			1.33	25
Trichlorofluoromethane	250	U	144	147	57.6	58.8	50	17.0-160			2.06	31
1,2,4-Trimethylbenzene	250	U	152	159	60.8	63.6	50	26.0-154			4.50	27
1,2,3-Trimethylbenzene	250	U	179	176	71.6	70.4	50	32.0-149			1.69	28
1,3,5-Trimethylbenzene	250	U	159	161	63.6	64.4	50	28.0-153			1.25	27
Vinyl chloride	250	U	191	193	76.4	77.2	50	10.0-160			1.04	27
Xylenes, Total	750	U	554	572	73.9	76.3	50	29.0-154			3.20	28
o-Xylene	250	U	172	180	68.8	72.0	50	45.0-144			4.55	26
m&p-Xylenes	500	U	382	392	76.4	78.4	50	43.0-146			2.58	26
(S) Toluene-d8					99.3	101		80.0-120				
(S) 4-Bromofluorobenzene					99.1	101		77.0-126				
(S) 1,2-Dichloroethane-d4					97.0	94.5		70.0-130				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3915722-3 04/20/23 20:20

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		11.3	50.0
Acrolein	U		2.54	50.0
Acrylonitrile	U		0.671	10.0
Benzene	U		0.0941	1.00
Bromobenzene	U		0.118	1.00
Bromochloromethane	U		0.128	1.00
Bromodichloromethane	U		0.136	1.00
Bromoform	U		0.129	1.00
Bromomethane	U		0.605	5.00
n-Butylbenzene	U		0.157	1.00
sec-Butylbenzene	U		0.125	1.00
tert-Butylbenzene	U		0.127	1.00
Carbon disulfide	U		0.0962	1.00
Carbon tetrachloride	U		0.128	1.00
Chlorobenzene	U		0.116	1.00
Chlorodibromomethane	U		0.140	1.00
Chloroethane	U		0.192	5.00
Chloroform	U		0.111	5.00
Chloromethane	U		0.960	2.50
2-Chlorotoluene	U		0.106	1.00
4-Chlorotoluene	U		0.114	1.00
1,2-Dibromo-3-Chloropropane	U		0.276	5.00
Dibromomethane	U		0.122	1.00
1,2-Dichlorobenzene	U		0.107	1.00
1,3-Dichlorobenzene	U		0.110	1.00
1,4-Dichlorobenzene	U		0.120	1.00
Dichlorodifluoromethane	U		0.374	5.00
1,1-Dichloroethane	U		0.100	1.00
1,2-Dichloroethane	U		0.0819	1.00
1,1-Dichloroethene	U		0.188	1.00
cis-1,2-Dichloroethene	U		0.126	1.00
trans-1,2-Dichloroethene	U		0.149	1.00
1,2-Dichloropropane	U		0.149	1.00
1,1-Dichloropropene	U		0.142	1.00
1,3-Dichloropropane	U		0.110	1.00
cis-1,3-Dichloropropene	U		0.111	1.00
trans-1,3-Dichloropropene	U		0.118	1.00
2,2-Dichloropropane	U		0.161	1.00
Di-isopropyl ether	U		0.105	1.00
Ethylbenzene	U		0.137	1.00

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3915722-3 04/20/23 20:20

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Hexachloro-1,3-butadiene	U		0.337	1.00
Isopropylbenzene	U		0.105	1.00
p-Isopropyltoluene	U		0.120	1.00
2-Butanone (MEK)	U		1.19	10.0
Methylene Chloride	U		0.430	5.00
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0
Methyl tert-butyl ether	U		0.101	1.00
Naphthalene	U		1.00	5.00
n-Propylbenzene	U		0.0993	1.00
Styrene	U		0.118	1.00
1,1,1,2-Tetrachloroethane	U		0.147	1.00
1,1,2,2-Tetrachloroethane	U		0.133	1.00
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00
Tetrachloroethene	U		0.300	1.00
Toluene	U		0.278	1.00
1,2,3-Trichlorobenzene	U		0.230	1.00
1,2,4-Trichlorobenzene	U		0.481	1.00
1,1,1-Trichloroethane	U		0.149	1.00
1,1,2-Trichloroethane	U		0.158	1.00
Trichloroethene	U		0.190	1.00
Trichlorofluoromethane	U		0.160	5.00
1,2,4-Trimethylbenzene	U		0.322	1.00
1,2,3-Trimethylbenzene	U		0.104	1.00
1,3,5-Trimethylbenzene	U		0.104	1.00
Vinyl chloride	U		0.234	1.00
Xylenes, Total	U		0.174	3.00
o-Xylene	U		0.174	1.00
m&p-Xylenes	U		0.430	2.00
(S) Toluene-d8	103			80.0-120
(S) 4-Bromofluorobenzene	95.3			77.0-126
(S) 1,2-Dichloroethane-d4	118			70.0-130

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

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

(LCS) R3915722-1 04/20/23 19:15 • (LCSD) R3915722-2 04/20/23 19:38

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	29.2	27.2	117	109	19.0-160			7.09	27
Acrolein	25.0	33.3	33.0	133	132	10.0-160			0.905	26

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

(LCS) R3915722-1 04/20/23 19:15 • (LCSD) R3915722-2 04/20/23 19:38

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Acrylonitrile	25.0	30.3	28.3	121	113	55.0-149			6.83	20
Benzene	5.00	5.04	4.83	101	96.6	70.0-123			4.26	20
Bromobenzene	5.00	5.11	4.85	102	97.0	73.0-121			5.22	20
Bromochloromethane	5.00	4.94	4.88	98.8	97.6	76.0-122			1.22	20
Bromodichloromethane	5.00	5.33	5.05	107	101	75.0-120			5.39	20
Bromoform	5.00	4.24	3.93	84.8	78.6	68.0-132			7.59	20
Bromomethane	5.00	3.87	3.77	77.4	75.4	10.0-160			2.62	25
n-Butylbenzene	5.00	4.47	4.19	89.4	83.8	73.0-125			6.47	20
sec-Butylbenzene	5.00	4.33	4.09	86.6	81.8	75.0-125			5.70	20
tert-Butylbenzene	5.00	4.31	4.03	86.2	80.6	76.0-124			6.71	20
Carbon disulfide	5.00	4.80	4.37	96.0	87.4	61.0-128			9.38	20
Carbon tetrachloride	5.00	4.65	4.10	93.0	82.0	68.0-126			12.6	20
Chlorobenzene	5.00	4.70	4.42	94.0	88.4	80.0-121			6.14	20
Chlorodibromomethane	5.00	4.61	4.36	92.2	87.2	77.0-125			5.57	20
Chloroethane	5.00	5.01	5.01	100	100	47.0-150			0.000	20
Chloroform	5.00	5.15	4.98	103	99.6	73.0-120			3.36	20
Chloromethane	5.00	4.88	4.33	97.6	86.6	41.0-142			11.9	20
2-Chlorotoluene	5.00	4.88	4.62	97.6	92.4	76.0-123			5.47	20
4-Chlorotoluene	5.00	4.93	4.86	98.6	97.2	75.0-122			1.43	20
1,2-Dibromo-3-Chloropropane	5.00	4.45	4.22	89.0	84.4	58.0-134			5.31	20
Dibromomethane	5.00	5.26	4.86	105	97.2	80.0-120			7.91	20
1,2-Dichlorobenzene	5.00	4.58	4.40	91.6	88.0	79.0-121			4.01	20
1,3-Dichlorobenzene	5.00	4.60	4.35	92.0	87.0	79.0-120			5.59	20
1,4-Dichlorobenzene	5.00	4.61	4.43	92.2	88.6	79.0-120			3.98	20
Dichlorodifluoromethane	5.00	5.29	4.11	106	82.2	51.0-149		J3	25.1	20
1,1-Dichloroethane	5.00	5.60	5.31	112	106	70.0-126			5.32	20
1,2-Dichloroethane	5.00	5.77	5.45	115	109	70.0-128			5.70	20
1,1-Dichloroethene	5.00	4.69	4.17	93.8	83.4	71.0-124			11.7	20
cis-1,2-Dichloroethene	5.00	4.96	4.77	99.2	95.4	73.0-120			3.91	20
trans-1,2-Dichloroethene	5.00	4.94	4.51	98.8	90.2	73.0-120			9.10	20
1,2-Dichloropropane	5.00	5.65	5.34	113	107	77.0-125			5.64	20
1,1-Dichloropropene	5.00	5.05	4.63	101	92.6	74.0-126			8.68	20
1,3-Dichloropropane	5.00	5.16	4.78	103	95.6	80.0-120			7.65	20
cis-1,3-Dichloropropene	5.00	5.26	4.98	105	99.6	80.0-123			5.47	20
trans-1,3-Dichloropropene	5.00	5.08	4.68	102	93.6	78.0-124			8.20	20
2,2-Dichloropropane	5.00	5.35	4.88	107	97.6	58.0-130			9.19	20
Di-isopropyl ether	5.00	5.72	5.52	114	110	58.0-138			3.56	20
Ethylbenzene	5.00	4.50	4.10	90.0	82.0	79.0-123			9.30	20
Hexachloro-1,3-butadiene	5.00	3.92	3.75	78.4	75.0	54.0-138			4.43	20
Isopropylbenzene	5.00	4.19	3.80	83.8	76.0	76.0-127			9.76	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

(LCS) R3915722-1 04/20/23 19:15 • (LCSD) R3915722-2 04/20/23 19:38

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 %
p-Isopropyltoluene	5.00	4.27	4.14	85.4	82.8	76.0-125			3.09	20
2-Butanone (MEK)	25.0	30.3	28.5	121	114	44.0-160			6.12	20
Methylene Chloride	5.00	5.60	5.19	112	104	67.0-120			7.60	20
4-Methyl-2-pentanone (MIBK)	25.0	28.4	26.1	114	104	68.0-142			8.44	20
Methyl tert-butyl ether	5.00	5.39	5.11	108	102	68.0-125			5.33	20
Naphthalene	5.00	3.71	3.66	74.2	73.2	54.0-135			1.36	20
n-Propylbenzene	5.00	4.79	4.53	95.8	90.6	77.0-124			5.58	20
Styrene	5.00	4.29	4.05	85.8	81.0	73.0-130			5.76	20
1,1,1,2-Tetrachloroethane	5.00	4.69	4.37	93.8	87.4	75.0-125			7.06	20
1,1,2,2-Tetrachloroethane	5.00	5.86	5.45	117	109	65.0-130			7.25	20
1,1,2-Trichlorotrifluoroethane	5.00	4.62	3.69	92.4	73.8	69.0-132		J3	22.4	20
Tetrachloroethene	5.00	4.36	3.80	87.2	76.0	72.0-132			13.7	20
Toluene	5.00	4.71	4.35	94.2	87.0	79.0-120			7.95	20
1,2,3-Trichlorobenzene	5.00	3.79	3.79	75.8	75.8	50.0-138			0.000	20
1,2,4-Trichlorobenzene	5.00	3.86	3.68	77.2	73.6	57.0-137			4.77	20
1,1,1-Trichloroethane	5.00	5.16	4.64	103	92.8	73.0-124			10.6	20
1,1,2-Trichloroethane	5.00	4.83	4.48	96.6	89.6	80.0-120			7.52	20
Trichloroethene	5.00	4.71	4.44	94.2	88.8	78.0-124			5.90	20
Trichlorofluoromethane	5.00	4.57	3.81	91.4	76.2	59.0-147			18.1	20
1,2,4-Trimethylbenzene	5.00	4.47	4.18	89.4	83.6	76.0-121			6.71	20
1,2,3-Trimethylbenzene	5.00	4.71	4.42	94.2	88.4	77.0-120			6.35	20
1,3,5-Trimethylbenzene	5.00	4.45	4.20	89.0	84.0	76.0-122			5.78	20
Vinyl chloride	5.00	5.56	4.54	111	90.8	67.0-131		J3	20.2	20
Xylenes, Total	15.0	13.2	12.5	88.0	83.3	79.0-123			5.45	20
o-Xylene	5.00	4.30	4.11	86.0	82.2	80.0-122			4.52	20
m&p-Xylenes	10.0	8.93	8.36	89.3	83.6	80.0-122			6.59	20
(S) Toluene-d8				99.9	96.9	80.0-120				
(S) 4-Bromofluorobenzene				92.9	92.7	77.0-126				
(S) 1,2-Dichloroethane-d4				117	117	70.0-130				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3916041-2 04/21/23 10:42

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
1,2,3-Trichloropropane	U		0.00200	0.00500
1,2-Dibromoethane	U		0.00410	0.00500

Laboratory Control Sample (LCS)

(LCS) R3916041-1 04/21/23 10:18

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
1,2,3-Trichloropropane	0.0500	0.0520	104	70.0-130	
1,2-Dibromoethane	0.0500	0.0400	80.0	70.0-130	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3916296-2 04/22/23 09:57

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		11.3	50.0
Acrolein	U		2.54	50.0
Acrylonitrile	U		0.671	10.0
Benzene	U		0.0941	1.00
Bromobenzene	U		0.118	1.00
Bromochloromethane	U		0.128	1.00
Bromodichloromethane	U		0.136	1.00
Bromoform	U		0.129	1.00
Bromomethane	U		0.605	5.00
n-Butylbenzene	U		0.157	1.00
sec-Butylbenzene	U		0.125	1.00
tert-Butylbenzene	U		0.127	1.00
Carbon disulfide	U		0.0962	1.00
Carbon tetrachloride	U		0.128	1.00
Chlorobenzene	U		0.116	1.00
Chlorodibromomethane	U		0.140	1.00
Chloroethane	U		0.192	5.00
Chloroform	U		0.111	5.00
Chloromethane	U		0.960	2.50
2-Chlorotoluene	U		0.106	1.00
4-Chlorotoluene	U		0.114	1.00
1,2-Dibromo-3-Chloropropane	U		0.276	5.00
Dibromomethane	U		0.122	1.00
1,2-Dichlorobenzene	U		0.107	1.00
1,3-Dichlorobenzene	U		0.110	1.00
1,4-Dichlorobenzene	U		0.120	1.00
Dichlorodifluoromethane	U		0.374	5.00
1,1-Dichloroethane	U		0.100	1.00
1,2-Dichloroethane	U		0.0819	1.00
1,1-Dichloroethene	U		0.188	1.00
cis-1,2-Dichloroethene	U		0.126	1.00
trans-1,2-Dichloroethene	U		0.149	1.00
1,2-Dichloropropane	U		0.149	1.00
1,1-Dichloropropene	U		0.142	1.00
1,3-Dichloropropane	U		0.110	1.00
cis-1,3-Dichloropropene	U		0.111	1.00
trans-1,3-Dichloropropene	U		0.118	1.00
2,2-Dichloropropane	U		0.161	1.00
Di-isopropyl ether	U		0.105	1.00
Ethylbenzene	U		0.137	1.00

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3916296-2 04/22/23 09:57

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Hexachloro-1,3-butadiene	U		0.337	1.00
Isopropylbenzene	U		0.105	1.00
p-Isopropyltoluene	U		0.120	1.00
2-Butanone (MEK)	U		1.19	10.0
Methylene Chloride	U		0.430	5.00
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0
Methyl tert-butyl ether	U		0.101	1.00
Naphthalene	U		1.00	5.00
n-Propylbenzene	U		0.0993	1.00
Styrene	U		0.118	1.00
1,1,1,2-Tetrachloroethane	U		0.147	1.00
1,1,2,2-Tetrachloroethane	U		0.133	1.00
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00
Tetrachloroethene	U		0.300	1.00
Toluene	U		0.278	1.00
1,2,3-Trichlorobenzene	U		0.230	1.00
1,2,4-Trichlorobenzene	U		0.481	1.00
1,1,1-Trichloroethane	U		0.149	1.00
1,1,2-Trichloroethane	U		0.158	1.00
Trichloroethene	U		0.190	1.00
Trichlorofluoromethane	U		0.160	5.00
1,2,4-Trimethylbenzene	U		0.322	1.00
1,2,3-Trimethylbenzene	U		0.104	1.00
1,3,5-Trimethylbenzene	U		0.104	1.00
Vinyl chloride	U		0.234	1.00
Xylenes, Total	U		0.174	3.00
o-Xylene	U		0.174	1.00
m&p-Xylenes	U		0.430	2.00
(S) Toluene-d8	96.1			80.0-120
(S) 4-Bromofluorobenzene	86.3			77.0-126
(S) 1,2-Dichloroethane-d4	105			70.0-130

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3916296-1 04/22/23 09:14

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	25.0	28.8	115	19.0-160	
Acrolein	25.0	24.6	98.4	10.0-160	

Laboratory Control Sample (LCS)

(LCS) R3916296-1 04/22/23 09:14

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Acrylonitrile	25.0	28.8	115	55.0-149	
Benzene	5.00	4.62	92.4	70.0-123	
Bromobenzene	5.00	4.23	84.6	73.0-121	
Bromochloromethane	5.00	4.72	94.4	76.0-122	
Bromodichloromethane	5.00	5.09	102	75.0-120	
Bromoform	5.00	5.13	103	68.0-132	
Bromomethane	5.00	5.87	117	10.0-160	
n-Butylbenzene	5.00	4.19	83.8	73.0-125	
sec-Butylbenzene	5.00	4.12	82.4	75.0-125	
tert-Butylbenzene	5.00	4.46	89.2	76.0-124	
Carbon disulfide	5.00	3.44	68.8	61.0-128	
Carbon tetrachloride	5.00	4.05	81.0	68.0-126	
Chlorobenzene	5.00	4.74	94.8	80.0-121	
Chlorodibromomethane	5.00	4.95	99.0	77.0-125	
Chloroethane	5.00	5.56	111	47.0-150	
Chloroform	5.00	4.52	90.4	73.0-120	
Chloromethane	5.00	4.60	92.0	41.0-142	
2-Chlorotoluene	5.00	4.56	91.2	76.0-123	
4-Chlorotoluene	5.00	4.58	91.6	75.0-122	
1,2-Dibromo-3-Chloropropane	5.00	4.23	84.6	58.0-134	
Dibromomethane	5.00	4.88	97.6	80.0-120	
1,2-Dichlorobenzene	5.00	4.57	91.4	79.0-121	
1,3-Dichlorobenzene	5.00	4.58	91.6	79.0-120	
1,4-Dichlorobenzene	5.00	4.58	91.6	79.0-120	
Dichlorodifluoromethane	5.00	2.78	55.6	51.0-149	
1,1-Dichloroethane	5.00	4.67	93.4	70.0-126	
1,2-Dichloroethane	5.00	5.48	110	70.0-128	
1,1-Dichloroethene	5.00	3.71	74.2	71.0-124	
cis-1,2-Dichloroethene	5.00	4.29	85.8	73.0-120	
trans-1,2-Dichloroethene	5.00	4.03	80.6	73.0-120	
1,2-Dichloropropane	5.00	4.92	98.4	77.0-125	
1,1-Dichloropropene	5.00	4.18	83.6	74.0-126	
1,3-Dichloropropane	5.00	4.72	94.4	80.0-120	
cis-1,3-Dichloropropene	5.00	5.22	104	80.0-123	
trans-1,3-Dichloropropene	5.00	4.93	98.6	78.0-124	
2,2-Dichloropropane	5.00	4.27	85.4	58.0-130	
Di-isopropyl ether	5.00	4.67	93.4	58.0-138	
Ethylbenzene	5.00	4.40	88.0	79.0-123	
Hexachloro-1,3-butadiene	5.00	4.90	98.0	54.0-138	
Isopropylbenzene	5.00	3.98	79.6	76.0-127	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3916296-1 04/22/23 09:14

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
p-Isopropyltoluene	5.00	4.26	85.2	76.0-125	
2-Butanone (MEK)	25.0	29.5	118	44.0-160	
Methylene Chloride	5.00	4.12	82.4	67.0-120	
4-Methyl-2-pentanone (MIBK)	25.0	25.2	101	68.0-142	
Methyl tert-butyl ether	5.00	4.38	87.6	68.0-125	
Naphthalene	5.00	3.89	77.8	54.0-135	
n-Propylbenzene	5.00	4.43	88.6	77.0-124	
Styrene	5.00	4.32	86.4	73.0-130	
1,1,1,2-Tetrachloroethane	5.00	4.68	93.6	75.0-125	
1,1,2,2-Tetrachloroethane	5.00	5.29	106	65.0-130	
1,1,2-Trichlorotrifluoroethane	5.00	3.25	65.0	69.0-132	J4
Tetrachloroethene	5.00	4.27	85.4	72.0-132	
Toluene	5.00	4.42	88.4	79.0-120	
1,2,3-Trichlorobenzene	5.00	4.18	83.6	50.0-138	
1,2,4-Trichlorobenzene	5.00	4.14	82.8	57.0-137	
1,1,1-Trichloroethane	5.00	4.42	88.4	73.0-124	
1,1,2-Trichloroethane	5.00	4.81	96.2	80.0-120	
Trichloroethene	5.00	4.64	92.8	78.0-124	
Trichlorofluoromethane	5.00	3.98	79.6	59.0-147	
1,2,4-Trimethylbenzene	5.00	4.20	84.0	76.0-121	
1,2,3-Trimethylbenzene	5.00	4.20	84.0	77.0-120	
1,3,5-Trimethylbenzene	5.00	4.42	88.4	76.0-122	
Vinyl chloride	5.00	5.03	101	67.0-131	
Xylenes, Total	15.0	12.7	84.7	79.0-123	
o-Xylene	5.00	4.03	80.6	80.0-122	
m&p-Xylenes	10.0	8.65	86.5	80.0-122	
(S) Toluene-d8			99.2	80.0-120	
(S) 4-Bromofluorobenzene			95.1	77.0-126	
(S) 1,2-Dichloroethane-d4			106	70.0-130	

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

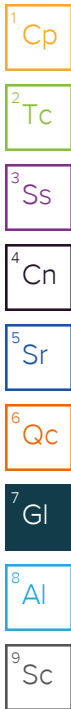
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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.
J	The identification of the analyte is acceptable; the reported value is an estimate.
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	LA000356
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: Accounts Payable
 630 Plaza Dr Ste 600
 Highlands Ranch, CO 80129

Analysis / Container / Preservative

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/hubs/pas-standard-terms.pdf>

Report to: **Nick Wood/Sydney Clark/Erika Midkiff**

Email To: **Sydney.Clark@arcadis.com;erika.midkiff@arcad**

Project Description: **90430** City/State Collected: **Anchorage, AK** Please Circle: **PT MT CT ET**

Phone: **907-276-8095** Client Project #: **30064208.19.45** Lab Project #: **CHEVARCAK-90430**

Collected by (print): **E. Wojcik** Site/Facility ID #: **6470 DEBARR RD.** P.O. #

Collected by (signature): *[Signature]* **Rush? (Lab MUST Be Notified)** Quote #

Immediately Packed on Ice **N** **Y**

Same Day Five Day
 Next Day 5 Day (Rad Only)
 Two Day 10 Day (Rad Only)
 Three Day

Date Results Needed No. of Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	AK101 40mlAmb HCl	EDB/123TCP 524LL 40mlAmb-HCl	Total Lead 6010 250mlHDPE-HNO3	VOCS 8260 40mlAmb-HCl									
MW-17-W-20230417	Grab	GW	-	4.17.23	0700	9	X	X		X									-01
MW-15-W-20230417		GW	-		0800	9	X	X		X									-02
MW-8-W-20230417		GW	-		0700	9	X	X		X									-03
MW-10-W-20230417		GW	-		1000	9	X	X		X									-04
MW-11-W-20230417		GW	-		1100	9	X	X		X									-05
MW-16-W-20230417		GW	-		1200	9	X	X		X									-06
MW-4R-W-20230417		GW	-		1300	10	X	X	X	X									-07
MW-3-W-20230417		GW	-		1400	9	X	X		X									-08
BP-1-W-20230417		GW	-	4.17.23	-	10	X	X	X	X									-09
MW-9-W-20230418		GW	-	4.18.23	0700	9	X	X		X									-10

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

Remarks:

Samples returned via: UPS FedEx Courier

Tracking # **6357 9918 3807**

pH _____ Temp _____
 Flow _____ Other _____

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) <i>[Signature]</i>	Date: 4.18.23	Time: 1300	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeOH TBR
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: ASLU°C 5.1 to = 5.1
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 4.19.23 Time: 9:05

Condition: **NCF / OK**

Company Name/Address:
Arcadis - Chevron - AK
 880 H St.
 Anchorage, AK 99501

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

Analysis / Container / Preservative	
AK101 40mlAmb HCl	EDB/123TCP 524LL 40mlAmb-HCl
Total Lead 6010 250mlHDPE-HNO3	VOCs 8260 40mlAmb-HCl

Chain of Custody Page 2 of 2

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>

Report to:
Nick Wood/Sydney Clark/Erika Midkiff

Email To:
 Sydney.Clark@arcadis.com;erika.midkiff@arcad

Project Description:
 90430

City/State Collected: *Anchorage, AK*
 Please Circle: PT MT CT ET
 (AK) ST

Phone: **907-276-8095**

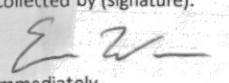
Client Project #
30064208.19.45

Lab Project #
CHEVARCAK-90430

Collected by (print):
E. Wojcik

Site/Facility ID #
6470 DEBARR RD.

P.O. #

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 X 10 Day (Rad Only)
 ___ Three Day

Quote #
 Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	AK101 40mlAmb HCl	EDB/123TCP 524LL 40mlAmb-HCl	Total Lead 6010 250mlHDPE-HNO3	VOCs 8260 40mlAmb-HCl
<i>MW-14-W-20230418</i>	<i>Grab</i>	<i>GW</i>	<i>-</i>	<i>4.18.23</i>	<i>0800</i>	<i>9</i>	<i>X</i>	<i>X</i>		<i>X</i>
<i>MW-SR-W-20230418</i>	<i> </i>	<i>GW</i>	<i>-</i>	<i> </i>	<i>0900</i>	<i>27</i>	<i>X</i>	<i>X</i>		<i>X</i>
<i>MW-7-W-20230418</i>	<i> </i>	<i>GW</i>	<i>-</i>	<i> </i>	<i>1000</i>	<i>9</i>	<i>X</i>	<i>X</i>		<i>X</i>
<i>BD-2-W-20230418</i>	<i> </i>	<i>GW</i>	<i>-</i>	<i> </i>	<i>-</i>	<i>9</i>	<i>X</i>	<i>X</i>		<i>X</i>
<i>EQB-1-W-20230418</i>	<i> </i>	<i>GW</i>	<i>-</i>	<i> </i>	<i>1100</i>	<i>9</i>	<i>X</i>	<i>X</i>		<i>X</i>
<i>Trip Blank 1</i>	<i>-</i>	<i>GW</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>4</i>	<i>X</i>	<i>X</i>		<i>X</i>

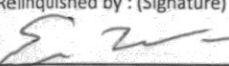
SDG # *U1000782*
 Table #
 Acctnum: **CHEVARCAK**
 Template: **T227642**
 Prelogin: **P991079**
 PM: **110 - Brian Ford**
 PB: *NG 413123*

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


Remarks:
 Samples returned via:
 UPS X FedEx ___ Courier ___
 Tracking #

Sample Receipt Checklist

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

Relinquished by: (Signature)


Date: *4.18.23*
 Time: *1300*

Received by: (Signature)


Trip Blank Received: Yes / No
 HCL / MeOH
 TBR
 Temp: °C Bottles Received:

If preservation required by Login: Date/Time
 Hold:
 Condition: NCF / OK

Attachment C

**Historical Groundwater Analytical Results – Third Quarter 1992
through 2022**

**Table 1. Historical Groundwater Gauging and Analytical Results
Third Quarter 1992 to Current**
Former Chevron-Branded Service Station 90430
6470 Debarr Road, Anchorage, Alaska

Well ID	Sample Date	TOC (ft)	DTW (ft btoc)	LNAPL		TPH mg/L	GRO mg/L	Benzene mg/L	Toluene mg/L	Ethylbenzene mg/L	Total Xylenes mg/L	MTBE mg/L	EDB mg/L	EDC mg/L	Lead mg/L	Naphthalene mg/L	Comments
				Thickness ft	GW Elev ft												
ADEC Groundwater Cleanup Levels						1.50	2.2	0.0046	1.1	0.015	0.19	0.14	0.000075	0.0017	0.015	0.0017	
MW-6	8/20/1992	98.33	12.96	--	85.37	<1.0	<100	<1.0	<1.0	<1.0	<1.0	--	--	--	--	--	
MW-6	5/21/1993	98.33	12.44	--	85.89	<1.0	0.09000	0.01000	0.00200	<0.0005	<0.0005	--	--	--	--	--	
MW-6	8/24/1993	98.33	13.18	--	85.15	<5.000	<0.050	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--	--	--	
MW-6	11/08/1993	98.33	12.64	--	85.69	<5.0	<0.050	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--	--	--	
MW-6	11/14/1995	99.02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	2/13/1996	99.02	14.51	--	84.51	--	--	--	--	--	--	--	--	--	--	--	
MW-6	5/30/1996	99.02	13.66	--	85.36	--	--	--	--	--	--	--	--	--	--	--	
MW-6	8/23/1996	99.02	14.41	--	84.61	--	--	--	--	--	--	--	--	--	--	--	
MW-6	10/22/1996	99.02	14.86	--	84.16	--	--	--	--	--	--	--	--	--	--	--	
MW-6	4/27/1997	99.02	13.95	--	85.07	--	--	--	--	--	--	--	--	--	--	--	
MW-6	9/8/1997	99.02	12.38	--	86.64	--	--	--	--	--	--	--	--	--	--	--	
MW-6	4/16/1998	99.02	13.45	--	85.57	--	--	--	--	--	--	--	--	--	--	--	
MW-6	9/17/1998	99.02	13.65	--	85.37	--	--	--	--	--	--	--	--	--	--	--	
MW-6	4/26/1999	99.02	14.19	--	84.83	--	--	--	--	--	--	--	--	--	--	--	
MW-6	10/4/1999	223.38	11.72	--	211.66	--	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.01	--	--	--	--	
MW-6	5/24/2000	223.38	12.85	--	210.53	--	--	--	--	--	--	--	--	--	--	--	
MW-6	9/28/2000	223.38	12.31	--	211.07	--	--	--	--	--	--	--	--	--	--	--	
MW-6	5/9/2001	223.38	13.84	--	209.54	--	--	--	--	--	--	--	--	--	--	--	
MW-6	9/30/2001	223.38	14.01	--	209.37	--	--	--	--	--	--	--	--	--	--	--	
MW-6	5/3/2002	223.38	11.55	--	211.83	--	--	--	--	--	--	--	--	--	--	--	
MW-6	10/1/2002	223.38	10.76	--	212.62	--	--	--	--	--	--	--	--	--	--	--	
MW-6	6/3/2003	223.42	13.45	--	209.97	--	--	--	--	--	--	--	--	--	--	--	
MW-6	10/05/2003	223.42	10.93	--	212.49	--	--	--	--	--	--	--	--	--	--	--	
MW-6	6/9/2004	223.42	12.98	--	210.44	--	--	--	--	--	--	--	--	--	--	--	
MW-6	9/27/2004	223.42	10.81	--	212.61	--	--	--	--	--	--	--	--	--	--	--	
MW-6	5/15/2005	223.42	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Unable to locate
MW-6	9/26/2005	223.42	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Unable to locate
MW-6	5/12/2006	223.42	16.65	--	206.77	--	--	--	--	--	--	--	--	--	--	--	Well Abandoned

**Table 1. Historical Groundwater Gauging and Analytical Results
Third Quarter 1992 to Current**
Former Chevron-Branded Service Station 90430
6470 Debarr Road, Anchorage, Alaska

Well ID	Sample Date	TOC (ft)	DTW (ft btoc)	LNAPL		TPH mg/L	GRO mg/L	Benzene mg/L	Toluene mg/L	Ethylbenzene mg/L	Total Xylenes mg/L	MTBE mg/L	EDB mg/L	EDC mg/L	Lead mg/L	Naphthalene mg/L	Comments	
				Thickness ft	GW Elev ft													
ADEC Groundwater Cleanup Levels							1.50	2.2	0.0046	1.1	0.015	0.19	0.14	0.000075	0.0017	0.015	0.0017	
MW-9	10/04/1999	222.20	10.79	--	211.41	--	12.6	<0.012	2.49	0.20400	3.14	<0.25 [<0.01]	--	--	--	--	--	
MW-9	5/24/2000	222.20	9.32	--	212.88	--	7.58	0.08060	2.38	<0.05	1.81	<0.1 [<0.002]	--	--	--	--	--	
MW-9	9/28/2000	222.20	10.43	--	211.77	--	5.27 [6.11]	0.0206 [0.0246]	1.11 [1.37]	0.177 [0.216]	1.5 [1.79]	<0.025 [<0.02]	--	--	--	--	--	
MW-9	5/9/2001	222.20	11.70	--	210.50	--	2.60	0.00934	0.48200	0.11400	0.60400	0.00531 [<0.005]	--	--	--	--	--	
MW-9	9/30/2001	222.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Unable to locate	
MW-9	5/3/2002	222.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Unable to locate	
MW-9	10/1/2002	222.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Unable to locate	
MW-9	12/05/2002	222.24	9.99	--	212.25	--	2.10	0.00600	0.36000	0.06200	0.40000	<0.0005	--	--	--	--	--	
MW-9	6/3/2003	222.24	10.67	--	211.57	--	0.86000	0.00200	0.13000	0.02000	0.17000	<0.002	--	--	--	--	--	
MW-9	10/05/2003	222.24	9.87	--	212.37	--	0.42000	0.00100	0.07900	0.01800	0.06400	<0.002	--	--	--	--	--	
MW-9	6/9/2004	222.24	9.59	--	212.65	--	3.60	0.00700	0.73000	0.11000	0.53000	<0.002	--	--	--	--	--	
MW-9	9/27/2004	222.24	9.16	--	213.08	--	3.60	0.01100	1.10	0.17000	0.87000	<0.002	--	--	--	--	--	
MW-9	5/15/2005	222.24	8.28	--	213.96	--	8.40	0.01200	1.50	0.22000	1.20	<0.002	--	--	--	--	--	
MW-9	9/26/2005	222.24	8.48	--	213.76	--	<0.01	<0.0005	0.00200	<0.0005	0.00400	<0.002	--	--	--	--	--	
MW-9	5/12/2006	222.24	9.27	--	212.97	--	2.60	0.00300	0.30000	0.09100	0.46000	<0.002	<0.002	<0.002	--	--	--	
MW-9	9/27/2006	222.19	8.56	--	213.63	--	1.50	0.00200	0.19000	0.05600	0.32000	<0.002	<0.000097	<0.002	--	--	--	
MW-9	5/23/2007	222.19	8.87	--	213.32	--	0.20000	<0.0005	0.01400	0.00500	0.04600	<0.0005	<0.000098	<0.0005	--	--	--	
MW-9	9/20/2007	222.19	9.49	--	212.70	--	0.07000	<0.0005	0.00300	0.00400	0.01700	<0.0005	<0.000098	<0.0005	--	--	--	
MW-9	5/20/2008	222.19	8.02	--	214.17	--	0.10000	<0.0005	0.00200	0.00900	0.02600	<0.0005	<0.000092	<0.0005	--	--	--	
MW-9	9/13/2008	222.19	10.56	--	211.63	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.000097	<0.0005	--	--	--	
MW-9	5/21/2009	222.19	9.14	--	213.05	--	0.23000	<0.0005	0.00340	0.02900	0.07000	<0.0025	<0.000098	<0.0005	--	--	--	
MW-9	9/15/2009	222.19	10.71	--	211.48	--	0.039 J	<0.0020	<0.0020	0.00700	0.01000	--	<0.000029	--	<0.0150	--	--	
MW-9	6/22/2010	222.19	10.44	--	211.75	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	10/03/2010	222.19	10.05	--	212.14	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	4/18/2011	222.19	9.05	--	213.14	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	10/05/2011	222.19	11.00	--	211.19	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	5/24/2012	222.19	9.02	--	213.17	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	8/2/2012	222.19	12.65	--	209.54	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	5/14/2013	222.19	7.35	--	214.84	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	9/17/2013	222.19	7.27	--	214.92	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	4/29/2014	222.19	7.52	--	214.67	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	10/03/2014	222.19	8.42	--	213.77	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	5/5/2015	222.19	10.34	--	211.85	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	11/05/2015	222.19	8.41	--	213.78	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	4/18/2016	222.19	9.91	--	212.28	--	--	--	--	--	--	--	--	--	--	--	Gauge only	
MW-9	9/26/2016	222.19	8.75	--	213.44	--	--	--	--	--	--	--	--	--	--	--	Gauge only	
MW-9	4/25/2017	222.19	7.54	--	214.65	--	--	--	--	--	--	--	--	--	--	--	Gauge only	
MW-9	10/4/2017	222.19	8.71	--	213.48	--	--	--	--	--	--	--	--	--	--	--	Gauge only	
MW-9	4/23/2018	222.19	7.62	--	214.57	--	--	--	--	--	--	--	--	--	--	--	Gauge only	
MW-9	8/29/2018	222.19	9.18	--	213.01	--	--	--	--	--	--	--	--	--	--	--	Gauge only	
MW-9	9/19/2019	222.19	9.43	0.00	212.76	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	4/14/2020	222.19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Unable to locate well	
MW-9	10/15/2020	222.19	9.55	0.00	212.64	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	4/15/2021	222.19	10.15	0.00	212.04	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	9/2/2021	222.19	8.81	0.00	213.38	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	4/13/2022	222.19	6.74	0.00	215.45	--	--	--	--	--	--	--	--	--	--	--	Not sampled	
MW-9	9/5/2022	222.19	7.48	0.00	214.71	--	--	--	--	--	--	--	--	--	--	--	Not Sampled	

**Table 1. Historical Groundwater Gauging and Analytical Results
Third Quarter 1992 to Current**
Former Chevron-Branded Service Station 90430
6470 Debarr Road, Anchorage, Alaska

Well ID	Sample Date	TOC (ft)	DTW (ft btoc)	LNAPL		TPH (mg/L)	GRO (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)	EDB (mg/L)	EDC (mg/L)	Lead (mg/L)	Naphthalene (mg/L)	Comments
				Thickness (ft)	GW Elev (ft)												
ADEC Groundwater Cleanup Levels						1.50	2.2	0.0046	1.1	0.015	0.19	0.14	0.000075	0.0017	0.015	0.0017	

Notes:
ADEC = Alaska Department of Environmental Conservation
B = The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
^a = MDL and RDL values are not mentioned in the lab report, only ND is mentioned for the Not Detected values.
Bold = Value exceeds method detection limit (MDL)
Bold and Italicized = Constituent considered non-detect, however Laboratory RDL is greater than the ADEC Groundwater Cleanup Level
Bold and Shaded = Value exceeds ADEC Groundwater Cleanup Level
DTW = Depth to groundwater
EB = Equipment Blank
ft = Feet relative to NAVD88
ft bTOC = Feet below top of casing
GC/MS = Gas chromatography/Mass Spectrometry
GRO = Total petroleum hydrocarbons, gasoline range (C6-C10) 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
mg/L = Milligrams per liter
MW = Groundwater monitoring well
NAVD88 = North American Vertical Datum of 1988
R = Rejected result
RDL = Reported detection limit
TB = Trip Blank
TOC = Top of casing
[] = Blind duplicate result
<0.00100 = Not detected at or above the reported detection limit (RDL)
-- = Not sampled
Samples analyzed by USEPA Method 8260D:
Benzene, Toluene, Ethylbenzene and Total xylenes (collectively BTEX)
EDB = 1,2-Dibromoethane
EDC = 1,2-Dichloroethane
MTBE = Methyl-t-butyl ether
Naphthalene
Lead by USEPA Method 6010C

Table 2. Historical Groundwater Analytical Results - Additional VOCs
 Second Quarter 2020 to Current
 Former Chevron-Branded Services Station 90430
 6470 Debarr Road, Anchorage, Alaska

1,3,5-Trimethylbenzene mg/L	Vinyl chloride (Chloroethene) mg/L	Comments
0.08	0.0079	
<0.00100 [<i><0.00100</i>]	<0.00100 [<i><0.00100</i>]	
0.134 J	<0.00100	
0.00348 J	<0.00500	
<0.00500	<0.00500	
0.01660	<0.00500	
0.00136	<0.00100	
0.12500	<0.0100	
0.0689 [0.0609]	<0.0200 [<i><0.00100</i>]	
0.389 [0.356]	<0.0200 [<i><0.0100</i>]	
<0.0200 [<i><0.00100</i>]	<0.0200 [<i><0.00100</i>]	
0.00316 J [0.0364 J]	<0.00500 [<i><0.0100</i>]	
0.00685 [0.00131]	<0.00100 [<i><0.00100</i>]	
<0.00100	<0.00100	
<0.00100	<0.00100	
<0.00500	<0.00500	
<0.00500	<0.00500	
<0.00500	<0.00500	
<0.00100	<0.00100	
<0.00100	<0.00100	
0.01820	<0.00100	
<0.00500	<0.00500	
0.15200	<0.0500	
0.80000	<0.0500	
0.00396	<0.00100	
--	--	Unable to gauge or sample well due to ice.
0.000318 J	<0.00100	
<0.00100	<0.00100	
<0.00100	<0.00100	
--	--	Could not sample due to ice
0.000118 J	<0.00100	
<0.00100	<0.00100	
<0.00100	<0.00100	
<0.00100	<0.00100	
<0.00100 J	<0.00100 J	
<0.00100	<0.00100	
<0.00100	<0.00100	
--	--	
0.01278	<0.00100	
<0.00100	<0.00100	
<0.00100	<0.00100	
0.00874	<0.00100	
0.02260	<0.00100	
<0.00100	<0.00100	
<0.00100	<0.00100	
<0.00100	<0.00100	
<0.00100	<0.00100	
<0.00100	<0.00100	
<0.00100	<0.00100	
--	--	Unable to locate well
<0.00100 [<i><0.00100</i>]	<0.00100 [<i><0.00100</i>]	
<0.00100	<0.00100	
<0.00100 [<i><0.00100</i>]	<0.00100 [<i><0.00100</i>]	
<0.00100	<0.00100	
<0.00100	<0.00100	
<0.00100	<0.00100	
<0.00100	<0.00100	
<0.00100	<0.00100	
<0.00100	<0.00100	
<0.00100	<0.00100	
<0.00100	<0.00100	
<0.00100	<0.00100	
<0.00100	<0.00100	
<0.00100	<0.00100	
<0.00100	<0.00100	
<0.00100	<0.00100	
<0.00100	<0.00100	
<0.00100	<0.00100	
<0.00100	<0.00100	
<0.00100	<0.00100	
<0.00100	<0.00100	
<0.00100	<0.00100	
<0.00100	<0.00100	

Notes:
 ADEC = Alaska Department of Environmental Conservation
 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
 EB = Equipment Blank
 ID = Identification
 J = The associated numerical value is an estimated concentration only
 MW = Groundwater monitoring well
 mg/L = Milligrams per liter
 RDL = Reported detection limit
 TB = Trip Blank
 VOCs = Volatile organic compounds
 [] = Blind Duplicate Sample Result
 x / y = Sample result / Blind duplicate result
 <0.00100 = Not detected at or above the reported detection limit
 -- = Not sampled
 Constituents analyzed by United States Environmental Protection Agency Method 8260D

Attachment D

ADEC Data Review Checklist

Laboratory Data Review Checklist

Completed By:

Bhagyashree A Fulzele

Title:

Project Chemist

Date:

May 09, 2023

Consultant Firm:

ARCADIS U.S., Inc

Laboratory Name:

Pace Analytical

Laboratory Report Number:

L1606782

Laboratory Report Date:

04/27/2023

CS Site Name:

First Semi Annual 2023 Groundwater Monitoring Report

ADEC File Number:

2100.26.010

Hazard Identification Number:

23615

Note: Any N/A or No box checked must have an explanation in the comments box.

1. Laboratory

- a. Did an ADEC Contaminated Sites Laboratory Approval Program (CS-LAP) 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-LAP approved?

Yes No N/A Comments:

Not applicable.

2. Chain of Custody (CoC)

- a. Is the CoC information completed, signed, and dated (including released/received by)?

Yes No N/A Comments:

Yes.

- b. Were the correct analyses requested?

Yes No N/A Comments:

Yes.

3. Laboratory Sample Receipt Documentation

- a. Is the sample/cooler temperature documented and within range at receipt (0° to 6° C)?

Yes No N/A Comments:

Yes.

- b. Is the sample preservation acceptable – acidified waters, methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

Yes No N/A Comments:

Yes.

- c. Is the sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials); canister vacuum/pressure checked and no open valves etc?

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, canister not holding a vacuum, etc.?

Yes No N/A Comments:

Yes, no discrepancies.

e. Is the data quality or usability affected?

Comments:

Data quality or usability was not affected.

4. Case Narrative

a. Is the case narrative present and understandable?

Yes No N/A Comments:

Yes.

b. Are there 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. Are the correct analyses performed/reported as requested on COC?

Yes No N/A Comments:

Yes.

b. Are all applicable holding times met?

Yes No N/A Comments:

Yes.

c. Are all soils reported on a dry weight basis?

Yes No N/A Comments:

No soil samples were submitted for analysis.

d. Are the reported limit of quantitation (LOQs) or limits of detection (LOD), or reporting limits (RL) less than the Cleanup Level for the project?

Yes No N/A Comments:

Yes.

e. Is the data quality or usability affected?

Data quality/usability was not affected.

6. QC Samples

a. Method Blank

i. Was one method blank reported per matrix, analysis and 20 samples?

Yes No N/A Comments:

Yes.

ii. Are all method blank results less than limit of quantitation LOQ (or RL)?

Yes No N/A Comments:

Yes.

iii. If above LOQ or RL, 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 – Are 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 – Are one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

Yes No N/A Comments:

Yes.

iii. Accuracy – Are 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:

No.

Sample locations associated with LCS/LCSD analysis exhibiting recoveries outside of the control limits presented in the following table.

Sample Locations	Compound	LCS Recovery	LCSD Recovery
TRIP BLANK-20230418	1,1,2-Trichlorotrifluoroethane	<LL but >10%	NA

The criteria used to evaluate the LCS/LCSD recoveries are presented in the following table. In the case of an LCS/LCSD deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> the upper control limit (UL)	Non-detect	No Action
	Detect	J
< the lower control limit (LL) but > 10%	Non-detect	UJ
	Detect	J
< 10%	Non-detect	R
	Detect	J

- iv. Precision –Are all relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? Was the 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:

Sample locations associated with LCS/LCSD recoveries exhibiting an RPD greater than of the control limit presented in the following table.

Sample Locations	Compounds
MW-17-W-20230417	Acetone
MW-10-W-20230417	
MW-11-W-20230417	
MW-16-W-20230417	
MW-4R-W-20230417	
MW-3-W-20230417	1,2,4-Trichlorobenzene
MW-5R-W-20230418	
BD-1-W-20230417	
MW-7-W-20230418	
BD-2-W-20230418	

Sample Locations	Compounds
MW-14-W-20230418	Dichlorodifluoromethane
EQB-1-W-20230418	1,1,2-Trichlorotrifluoroethane
BD-1-W-20230417	
BD-2-W-20230418	Vinyl chloride

The criteria used to evaluate the RPD between the LCS/LCSD recoveries are presented in the following table. In the case of an RPD deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> UL	Non-detect	UJ
	Detect	J

v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

Accuracy:
Method SW846 8260D: Compound 1,1,2-Trichlorotrifluoroethane result in sample ID TRIP BLANK-20230418 was qualified as estimated (UJ).

RPD:
Method SW846 8260D: Compounds acetone and 1,2,4-trichlorobenzene result in sample IDs MW-17-W-20230417, MW-10-W-20230417, MW-11-W-20230417, MW-16-W-20230417, MW-4R-W-20230417, MW-3-W-20230417, MW-5R-W-20230418, BD-1-W-20230417, MW-7-W-20230418 and BD-2-W-20230418 were qualified as estimated (J/UJ).

Compounds dichlorodifluoromethane, 1,1,2-trichlorotrifluoroethane and vinyl chloride result in sample IDs MW-14-W-20230418, EQB-1-W-20230418, BD-1-W-20230417 and BD-2-W-20230418 were qualified as estimated (J/UJ).

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes No N/A Comments:

Yes.

vii. Is the data quality or usability affected? (Use comment box to explain.)

Comments:

The LCS/LCSD recovery and RPD exceedances are considered minor and would result in the estimation of 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 – Are one MS/MSD reported per matrix, analysis and 20 samples?

Yes No N/A Comments:

The MS/MSD analysis was performed on sample ID MW-5R-W-20230418.

- ii. Metals/Inorganics – Are one MS/MSD reported per matrix, analysis and 20 samples?

Yes No N/A Comments:

The MS/MSD analysis was performed on sample ID MW-4R-W-20230417.

- iii. Accuracy – Are 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:

Yes.

- iv. Precision – Are 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:

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:

Not applicable.

- vii. Is the 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 – Are all percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK Petroleum methods 50-150 %R for field samples 60-120% R for QC samples ; 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. Is the data quality or usability affected?

Comments:

Data quality or usability was not affected.

e. Trip Blanks

- i. Is 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 samples were collected as TRIP BLANK-20230418

- ii. Are all results less than LOQ or RL?

Yes No N/A Comments:

Yes.

- iii. If above LOQ or RL, what samples are affected?

Comments:

None of the samples were affected.

- iv. Is data quality or usability affected?

Comments:

Data quality or usability was not affected.

f. Field Duplicate

- i. Are one field duplicate submitted per matrix, analysis and 10 project samples?

Yes No N/A Comments:

Yes.

- ii. Was the duplicate submitted blind to lab?

Yes No N/A Comments:

Yes.

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:

Results for duplicate samples are summarized in the following table.

Sample ID / Duplicate ID	Method	Compounds / Analytes	Sample Result	Duplicate Result	RPD
MW-4R-W-20230417 / BD-1-W-20230417	6010D	Lead	3.5	3.21	AC
	AK101	TPHGAK C6 to C10	5810	6310	8%
	8260D	Acrolein	500 U	49.5	AC
		Benzene	36.5	44.3	AC
		sec-Butylbenzene	10 U	1.42	AC
		Ethylbenzene	872	1000	14%
		Isopropylbenzene	37.4	49.3	AC
		p-Isopropyltoluene	4.7	5.91	AC
		Naphthalene	15.9	16.8	AC
		n-Propylbenzene	66.9	93.2	33%
		Toluene	28.8	40.8	AC
		1,2,4-Trimethylbenzene	790	1060	29%
		1,2,3-Trimethylbenzene	105	133	24%
		1,3,5-Trimethylbenzene	72	103	35%
		Xylenes, Total	2450	2890	16%
		o-Xylene	714	850	17%
m&p-Xylene	1740	2040	16%		
MW-5R-W-20230418 / BD-2-W-20230418	AK101	TPHGAK C6 to C10	1570	1250	23%
	8260D	Benzene	966	756	24%

Sample ID / Duplicate ID	Method	Compounds / Analytes	Sample Result	Duplicate Result	RPD
		Methyl tert-butyl ether	888	699	24%
		Ethylbenzene	50 U	1.32	AC
		Isopropylbenzene	50 U	4.01	AC
		n-Propylbenzene	50 U	0.6	AC
		1,2,4-Trimethylbenzene	50 U	2.29	AC
		Xylenes, Total	150 U	2.97	AC
		o-Xylene	50 U	0.836	AC
		m&p-Xylene	100 U	2.13	AC

Notes:

AC Acceptable

The calculated RPDs between the parent sample and field duplicate were acceptable except for n-propylbenzene and 1,3,5-trimethylbenzene associated with sample locations MW-4R-W-20230417 / BD-1-W-20230417.

iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

Comments:

Method SW846 8260D: The compounds n-propylbenzene and 1,3,5-trimethylbenzene associated with sample locations MW-4R-W-20230417 / BD-1-W-20230417 exhibited a field duplicate RPD greater than the control limit. The associated sample results from sample locations for the listed analyte were qualified as estimated

g. Decontamination or Equipment Blank

i. Were decontamination or equipment blanks collected?

Yes No N/A Comments:

Equipment blank sample was collected as EQB-1-W-20230418.

ii. Are all results less than LOQ or RL?

Yes No N/A Comments:

No.

iii. If above LOQ or RL, specify what samples are affected?

Comments:

Sample Locations	Method	Compound	Sample Result	Qualification
MW-10-W-20230417	8260D	Chloroform	Detected sample results >RL and >BAL	“UB” at RL

Note:

RL Reporting limit

iv. Are data quality or usability affected?

Comments:

The equipment blank contamination is considered minor and would result in the non-detect of the associated data. The reported data should still consider as usable.

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Are they defined and appropriate?

Yes No N/A Comments:

Yes.

All compounds associated with the calibrations were within the specified control limits, with the exception of the compounds presented in the following table.

Sample Locations	Initial/Continuing	Compounds	Recovery
MW-17-W-20230417	CCV %D	1,2,4-Trichlorobenzene	Low
MW-10-W-20230417		1,2,4-Trimethylbenzene	Low
MW-11-W-20230417		Acrolein	Low
MW-16-W-20230417		Bromoform	Low
MW-4R-W-20230417		Bromomethane	Low
MW-3-W-20230417		Naphthalene	Low
MW-5R-W-20230418		n-Butylbenzene	Low
MW-7-W-20230418		Trichlorofluoromethane	Low
BD-2-W-20230418		1,2,4-Trichlorobenzene	Low
BD-1-W-20230417		Acrolein	Low
		Bromoform	Low
		Bromomethane	Low
		Naphthalene	Low
		n-Butylbenzene	Low
MW-14-W-20230418 EQB-1-W-20230418	Trichlorofluoromethane	Low	
	1,2,3-Trichlorobenzene	Low	
	1,2,4-Trichlorobenzene	Low	
	Bromomethane	Low	
		Hexachloro-1,3-butadiene	Low

Sample Locations	Initial/Continuing	Compounds	Recovery
		Naphthalene	Low
TRIP BLANK-20230418		1,2,3-Trichlorobenzene	Low
		1,2,4-Trimethylbenzene	Low
		Naphthalene	Low

Results associated with calibrations outside of the recovery limits are qualified as estimated (UJ/J).

Compounds analyzed at a dilution for sample results that were greater than the calibration. The diluted results were reported and qualified as being reported at a dilution (D).

Sample ID	Compound	Original Analysis	Diluted Analysis	Reported Analysis
BD-1-W-20230417	Ethylbenzene	--	1000	1000 D
	1,2,4-Trimethylbenzene	--	1060	1060 D
	Xylenes, Total	--	2890	2890 D
	o-Xylene	--	850	850 D
	m&p-Xylene	--	2040	2040 D
BD-2-W-20230418	Benzene	--	756	756 D
	Methyl tert-butyl ether	--	699	699 D