

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

Subject:
2021 Annual Groundwater Monitoring Report

Dear Ms. Reams,

On behalf of Chevron Environmental Management Company (Chevron), Arcadis US, Inc. (Arcadis) has prepared the attached *2021 Annual Groundwater Monitoring Report* for the following facility:

Chevron Branded

<u>Station No.</u>	<u>ADEC File No.</u>	<u>Hazard ID:</u>	<u>Location</u>
211815	102.38.005	287	410 Driveway Street Fairbanks, Alaska

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

Sincerely,

Arcadis U.S., Inc.



Nicole Robinson, P. E.
Project Manager

Copies:
James Kiernan (*electronic copy*)

ENVIRONMENT

Date:
December 20, 2021

Contact:
Nicole Robinson

Phone:
503.785.9414

Email:
Nicole.Robinson@arcadis.com

Our ref:
30064222

Chevron Environmental Management Company

2021 ANNUAL GROUNDWATER MONITORING REPORT

Chevron Site No. 211815
410 Driveway Street
Fairbanks, Alaska
ADEC File No. 102.38.005

December 20, 2021



2021 ANNUAL GROUNDWATER MONITORING REPORT



Sydney Clark, EIT
Environmental Professional



Nicole Robinson, P.E.
Project Manager
EV-149409

Former Chevron Branded Service Station No. 211815

410 Driveway Street
Fairbanks, Alaska

ADEC File ID: 102.38.005
Hazard ID: 287

Prepared for:

Chevron Environmental Management
Company

Prepared by:

Arcadis U.S., Inc.
111 SW Columbia Street
Suite 670
Portland
Oregon 97201
Tel 503.220.8201
www.Arcadis-us.com

Our Ref.:
30064222

Date:
December 20, 2021

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2021 ANNUAL GROUNDWATER MONITORING REPORT
December 20, 2021

Facility No: <u>Former Texaco Bulk Plant</u> <u>211815</u>	Address: <u>410 Driveway Street Road, Fairbanks,</u> <u>Alaska</u>
Arcadis Contact Person / Phone No.:	Nicole Robinson / 503-785-9414
Arcadis Project No.:	30064222
Primary Agency/Regulatory ID No.:	Alaska Department of Environmental Conservation (ADEC) / Rebekah Reams / ADEC file ID: 102.38.005

WORK CONDUCTED THIS PERIOD [2021]:

1. Conducted annual groundwater gauging activities on July 15, 2021 with adjacent sites.
2. Conducted annual groundwater sampling activities on July 15, 2021.
3. Prepared the *2021 Annual Groundwater Monitoring Report*.
4. Prepare and submit the *Human Health Conceptual Site Model summary* to ADEC on September 24, 2021.

WORK PROPOSED NEXT PERIOD [2022]:

1. Conduct annual groundwater monitoring activities in 2022.
2. Prepare the *2022 Annual Groundwater Monitoring Report*.

Current Phase of Project:	Monitoring	
Frequency of Monitoring / Sampling:	Annual	
Is Liquid Non-Aqueous Phase Liquid (LNAPL) Present On-site:	No	
Cumulative LNAPL Recovered to Date:	0.0	(gallons)
Approximate Depth to Groundwater:	12.65 to 15.00	(feet below top of casing)
Approximate Groundwater Elevation:	428.36 to 428.92	(feet relative to NAVD88)
Groundwater Flow Direction	Southwest	

Groundwater Gradient	0.001	(feet per foot)
Current Remediation Techniques:	None	
Permits for Discharge:	None	
Summary of Unusual Activity:	Monitoring well AR 81 did not have enough water to sample and wells MW-5 and MW-8 could not be located	
Agency Directive Requirements:	None	

1 INTRODUCTION

On behalf of Chevron Environmental Management Company (CEMC), Arcadis US, Inc. (Arcadis), has prepared this report to document the annual groundwater sampling event of 2021 for former Texaco Bulk Plant no. 211815, located at 410 Driveway Street, Fairbanks, Alaska (the site). The site location and site plan are shown on Figure 1 and Figure 2, respectively.

This work was conducted under the direction of a Qualified Environmental Professional” (QEP) and “Qualified Sampler” (18 Alaska Administrative Code [AAC] 75.333). Site background and history summaries are attached as Appendix A.

2 GROUNDWATER MONITORING

2.1 Groundwater Gauging Methods

The 2021 annual groundwater gauging event was conducted on July 15, 2021. Due to travel restrictions caused by COVID-19, the site groundwater sampling event occurred on July 15. Site monitoring wells were gauged with an oil/water interface probe to determine depth-to-water and to ascertain if LNAPL was present. Site monitoring wells were gauged with an oil/water interface probe to determine LNAPL and groundwater depths.

In order to prevent the possibility of cross-contamination, wells were gauged in the order of lowest to highest historical petroleum hydrocarbon concentrations in groundwater. In addition, non-disposable groundwater gauging equipment was decontaminated prior to and after each use with a detergent solution and rinsed in potable water.

2.2 Groundwater Elevation and Flow Direction

During the 2021 annual event, monitoring wells AR-81, AR-85, MW-1, MW-3, MW-4, MW-5, MW-7, MW-8, and MW-9 were scheduled to be gauged for groundwater elevations and the presence of LNAPL.

Monitoring wells MW-5 and MW-8 could not be located during the annual gauging event on July 15, 2021. The groundwater monitoring event field notes are presented in Appendix B.

The inferred groundwater flow direction for the annual 2021 monitoring events is to the southwest and is consistent with historical flow direction. Current and historical groundwater depth-to-water and elevation data are included in Table 1 and Table 3, respectively. A groundwater contour map with a rose diagram of historical flow directions is presented as Figure 3.

2.3 Groundwater Sampling Methods

The annual groundwater monitoring event were conducted on July 15, 2021. Groundwater samples were collected from monitoring wells AR-85, MW-1, MW-3, MW-4, MW-7, and MW-9 using a low flow purge sampling method. Monitoring well AR-81 did not had enough water to sample. Monitoring wells MW-5 and MW-8 could not be located and sampled.

Sampling procedures were conducted in accordance with ADEC *Field Sampling Guidance* (ADEC, 2019). Monitoring well caps were removed to allow groundwater levels to stabilize and equilibrate before using an electronic interface probe (EIP) meter capable of 0.01-foot accuracy to measure the depth to groundwater and total well depth. A bladder pump with compressor & control unit with clean/disposable Teflon lined tubing and bladders was used to purge groundwater from the wells and collect samples to minimize the risk of volatile contaminant absorption by the sampling equipment. Water table drawdown was continuously monitored during purging with a water level meter and the flow rate of the pump was adjusted to limit drawdown to 0.1 meter. The intake of the pump was set as close as possible to the soil groundwater interface. 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. The flow rate was reduced to 100-150 ml/minute and samples were collected from the discharge line into laboratory sample bottles. Water quality parameters were considered stable when three successive readings were within the following ADEC limits:

- $\pm 3\%$ for temperature (minimum of $\pm 0.2\text{ C}^\circ$),
- ± 0.1 for pH,
- $\pm 3\%$ for conductivity,
- $\pm 10\text{ mv}$ for redox potential,
- $\pm 10\%$ for dissolved oxygen, and
- $\pm 10\%$ for turbidity.

Sample bottles were labeled, stored in a cooler packed with ice, and submitted to Pace Analytical (National Centre for Testing & Innovation), Mount Juliet, Tennessee, under proper chain-of-custody procedures.

Groundwater samples collected from monitoring wells AR-85, MW-1, MW-3, MW-4, MW-7, and MW-9 were submitted to the analytical laboratory for the following analyses:

- Full-Scan Volatile Organic Compounds (VOCs) including benzene, toluene, ethylbenzene and total xylenes (BTEX), 1,2-dibromoethane (EDB), 1,2-dichloroethane (EDC), tetrachloroethylene (PCE) and chloroform by United States Environmental Protection Agency (USEPA) method 8260D
- Total petroleum hydrocarbon as gasoline organics (TPH-g) by Alaska method AK101

- Total petroleum hydrocarbons as diesel organics (TPH-d), and total petroleum hydrocarbons as residual range organics (TPH-r) by Alaska method AK102/103.
- Total petroleum hydrocarbons as diesel organics with Silica gel (TPH-d w Si/Gel) by Alaska method AK102SGT.

A groundwater duplicate sample was collected from monitoring wells MW-4. The duplicate sample was analyzed for BTEX, EDB, EDC, PCE, chloroform, TPH-g, TPH-d, TPH-d w Si/Gel, and TPH-r. The duplicate sample was submitted blind with the sample set to Pace Analytical.

2.4 Groundwater Analytical Results

Routine analytical results for BTEX, EDB, EDC, PCE, chloroform, TPH-g, TPH-d, TPH-d w Si/Gel, and TPH-r obtained from the annual 2021 groundwater monitoring event are summarized in Table 1 and are shown on Figure 4. Current Groundwater Analytical Results – Additional VOCs are summarized in Table 2. Historical analytical groundwater data is summarized in Table 3. Historical Groundwater Analytical Results – Additional VOCs in Table 4. Historical groundwater elevation plotted against and analytical results for monitoring wells AR-85, MW-3, MW-4, MW-7, and MW-9 are depicted in Figures A as hydrographs.

3 LABORATORY DATA QUALITY ASSURANCE SUMMARY

As required by ADEC (Technical Memorandum, October 2019), Arcadis completed a laboratory data review checklist for each of the laboratory report generated for the 2021 annual event. The laboratory report is included as Appendix C and data review checklist is included as Appendix D. The following quality assurance (QA) summary describes six parameters, related to the quality and usability of the data presented in this report.

3.1 Precision

The relative percent difference (RPD) for the laboratory control sample and laboratory control sample duplicate (LCS/LCSD) and matrix spike and matrix spike duplicate (MS/MSD) were within the control limits.

The RPD between the field duplicates (FD) exceeded for compounds 1,2,3-Trimethylbenzene for method SW846 8260D in sample locations MW-7, MW-9, MW-4, MW-3, BD-1, and TRIP BLANK. Compound TPH-d for method AK102/103 in sample location MW-7, MW-9, MW-4, MW-3, MW-1, AR-85, BD-1, EQB-1, and TRIP BLANK. Both results are qualified as estimated.

The precision of the data, as measured by laboratory quality control (QC) indicators, suggest that the Data Quality Objectives (DQOs) were met.

3.2 Accuracy

The percent recoveries of LCS/LCSD were exceeded for compounds 1,2,3-Trimethylbenzene for method SW846 8260D in sample locations MW-7, MW-9, MW-4, MW-3, BD-1, TRIP BLANK, and EQB-1 was qualified as estimated. Compound TPH-d for method AK102 in sample locations MW-7, MW-9, MW-4, MW-3, MW-1, AR-85, BD-1, TRIP BLANK, and EQB-1. Both results are qualified as estimated.

The percent recoveries of MS/MSD were exceeded for compounds methyl tert-butyl ether, 1,2,3-trimethylbenzene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, xylenes, total, o-xylene, and m&p-

xylene for method SW846 8260D in sample location MW-9. Compounds methyl tert-butyl ether, 1,2,3-trimethylbenzene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, total xylenes, and m&p-xylenes were rejected due to recovery less than 10%. The associated compound o-xylene was qualified as estimated.

Surrogate recovery exceedances were observed in sample locations MW-7, MW-4, MW-3, MW-1, and BD-1 for method AK102/103 and AK102. Target compounds in the associated sample locations were qualified as estimated.

Continuing calibration for compounds 1,1,2-trichlorotrifluoroethane, 1,2,3-trimethylbenzene, 1,2,3-trichlorobenzene, acetone, acrolein, dichlorodifluoromethane, methyl tert-butyl ether, and trichlorofluoromethane exhibited a low bias recovery. The associated compounds in the sample locations MW-7, MW-9, MW-4, MW-3, BD-1, EQB-1, and TRIP BLANK were qualified as estimated.

The accuracy of the data, as measured by laboratory quality control (QC) indicators, suggest that the DQOs were met.

3.3 Representativeness

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

3.4 Comparability

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

TPH-g was detected below the reporting limit in the method blank, trip blank, and equipment blank for method AK101. Based on blank evaluation, the results for TPH-g at sample locations MW-9 and MW-3 was qualified as non-detect.

TPH-d was detected below the reporting limit in method blank and equipment blank for method AK102/103. Based on blank evaluation, the results for compound at sample locations MW-9, AR-85, and MW-1 was qualified as non-detect.

TPH-d was detected below the reporting limit in the method blank and equipment blank for method AK102. Based on blank evaluation, the results for TPH-d at sample locations MW-7, MW-9, MW-3, AR-85, and MW-1 was qualified as non-detect.

3.5 Completeness

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

3.6 Sensitivity

Total Petroleum Hydrocarbons TPH-d results exceeded the ADEC GCLs in sample locations MW-3, MW-4, and MW-7.

TPH-g results exceeded the ADEC GCLs in sample locations MW-4 and MW-7.

TPH-d-Si/Gel results exceeded the ADEC GCLs in sample location MW-4.

Benzene exceeded the ADEC GCLs in sample locations MW-3, MW-4 and MW-7.

Toluene and EDC exceeded the ADEC GCLs in sample location MW-4.

Ethylbenzene and total xylenes were exceeded the ADEC GCLs in sample locations MW-4 and MW-7.

1,2,4-trimethylbenzene exceeded the ADEC GCLs in sample locations MW-4 and MW-7.

The laboratory reported detection limit for compounds 1,1,2,2-tetrachloroethane, 1,1,2-trichloroethane, 1,2,3-trichlorobenzene, 1,2,4-trichlorobenzene, 1,2-dichloropropane, 1,3-dichlorobenzene, 1,4-dichlorobenzene, bromodichloromethane, bromomethane (methyl bromide), carbon tetrachloride, cis-1,3-dichloropropene, dibromochloromethane, trans-1,3-dichloropropene, trichloroethene (trichloroethylene), and vinyl chloride (chloroethene) exceeded the respective ADEC groundwater cleanup levels, however the laboratory method detection limit is below the ADEC groundwater cleanup levels. As all samples were not detected for the mentioned constituents.

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.

4 CONCLUSIONS AND RECOMMENDATIONS

The groundwater data collected during the annual 2021 event indicates groundwater flow direction (southwest) is generally consistent with historical data. During the annual 2021 groundwater monitoring event, groundwater samples were collected for analysis from monitoring wells AR-85, MW-1, MW-3, MW-4, MW-7, and MW-9. Analytical results from the monitoring wells are generally consistent with historical data.

Groundwater monitoring will continue in accordance with the current annual schedule. The next annual sampling event is scheduled for the fall of 2022.

5 REFERENCES

ADEC. *Field Sampling Guidance*. Division of Spill Prevention and Response Contaminated Sites Program. 2019.

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

TABLES



Table 1. Current Groundwater Gauging and Analytical Results
 Former Texaco Bulk Plant 211815
 410 Driveway Street
 Fairbanks, Alaska

Well ID	Sample Date	TOC (ft)	Datum (ft)	DTW (ft bTOC)	LNAPL Thickness (ft)	GW Elev (ft)	TPH-d (µg/L)	TPH-g (µg/L)	TPH-d w Si/Gel (µg/L)	TPH-r (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	EDB (µg/L)	EDC (µg/L)	PCE (µg/L)	Chloroform (µg/L)	Comments
							1,500	2,200	1,500	1,100	4.6	1,100	15	190	0.075	1.7	41	2.2	
AR-81	7/15/2021	442.27	NAVD88	13.52	0.00	428.75	--	--	--	--	--	--	--	--	--	--	--	--	Not enough water to sample
AR-85	7/15/2021	442.47	NAVD88	13.64	0.00	428.83	<800 B J	<100	<800 B	<800	0.276 J	<1.00	<1.00	<3.00	--	--	--	--	
MW-1	7/15/2021	441.57	NAVD88	12.65	0.00	428.92	<800 B	<100 J	<800 B J	<800	0.302 J	<1.00	<1.00	0.409 J	--	--	--	--	
MW-3	7/15/2021	442.89	NAVD88	14.18	0.00	428.71	2,550 J	<100 B	<800 B J	<800 J	12.9	0.384 J	3.76	8.44	<0.0500	<1.00	<1.00	<5.00	
MW-4	7/15/2021	442.56	NAVD88	13.82	0.00	428.74	13,900 J [19,900 J]	31,200 [33,700 J]	2,360 J [3,190 J]	750 J [466 J]	2,410 [2,220]	5,490 [5,100]	1,070 [1,010]	8,100 [7,600]	<5.00 [-5.00 J]	<10.0 [5.71]	<10.0 [-1.00]	<50.0 [-5.00]	
MW-5	7/15/2021	441.75	NAVD88	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Could not locate the well
MW-7	7/15/2021	443.36	NAVD88	15.00	0.00	428.36	3,850	2,990	<800 B J	<800	851	<25.0	83.4	341	<0.500	<25.0	<25.0	<125	Could not locate the well
MW-8	7/15/2021	441.61	NAVD88	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	7/15/2021	441.61	NAVD88	13.14	0.00	428.47	<800 B	<100 B	<800 B J	<800	<1.00	<1.00	<1.00	<3.00 R	<0.00500	<1.00	<1.00	<5.00	
QA (EQB)	7/15/2021	--	--	--	--	--	412 J	<100 J	412 J	<800	<1.00	<1.00	<1.00	<3.00	<0.00500	<1.00	<1.00	<5.00	
QA (TB)	7/15/2021	--	--	--	--	--	--	37.1 J	--	--	<1.00	<1.00	<1.00	<3.00	--	<1.00	<1.00	<5.00	

Notes:

ID = Identification
 MW = Groundwater monitoring well
 TOC = Top of casing
 DTW = Depth to groundwater
 ft bTOC = Feet below top of casing
 ft = Feet relative to NAVD88
 GW Elev = Groundwater elevation
 µg/L = Micrograms per liter
 <1.00 = Not detected at or above the Reported Detection Limit (RDL)
Bold = Value exceeds laboratory Method Detection Limit (MDL)
Bold and Shaded = Value exceeds ADEC Groundwater Cleanup Level
 Bold : Constituent considered non-detect, however Laboratory RDL is greater than the ADEC Groundwater Cleanup Level
 J = The compound was positively identified; however, the associated numerical value is an estimated concentration only.
 B = The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
 R = The sample results are rejected as unusable. The compound may or may not be present in the sample.

TPH-g = Total petroleum hydrocarbons, gasoline range by LUFT GC/MS according to Alaska Method AK101
 TPH-d = Total petroleum hydrocarbons, diesel range by LUFT GC/MS according to Alaska Method AK102/103
 TPH-d w/Si Gel = Total petroleum hydrocarbons, diesel range by LUFT GC/MS with Silica Gel according to Alaska Method AK102
 TPH-r = Total petroleum hydrocarbons, residual range organics LUFT GC/MS according to USEPA Method AK102/103
 Samples analyzed by USEPA Method 8260D:
 Benzene, toluene, ethylbenzene and total xylenes (collectively BTEX)
 EDC = 1,2-Dichloroethane
 EDB = 1,2-Dibromoethane
 PCE = Tetrachloroethylene
 LUFT = Leaking Underground Fuel Tank
 GC/MS = Gas chromatography/Mass Spectrometry
 QA (EQB) = Quality Assurance (Equipment Blank)
 QA (TB) = Quality Assurance (Trip Blank)
 ADEC = Alaska Department of Environmental Conservation
 NAVD88 = North American Vertical Datum of 1988
 -- = Not Available or Not Analyzed
 LNAPL = Light Non-Aqueous Phase Liquid
 [] = Blind Duplicate Result

Table 2. Current Groundwater Analytical Results – Additional VOCs
Former Texaco Bulk Plant 211815
410 Driveway Street
Fairbanks, Alaska

Constituents	ADEC Groundwater Cleanup Levels	Location ID	MW-3	MW-4	MW-7	MW-9	QA-TB	QA-EQB
		Sample Date	7/15/2021	7/15/2021	7/15/2021	7/15/2021	7/15/2021	7/15/2021
1,1,1-Trichloroethane	8000	µg/L	<1.00	<10.0 [<i><1.00</i>]	<25.0	<1.00	<1.00	<1.00
1,1,2,2-Tetrachloroethane	0.76	µg/L	<1.00	<10.0 [<i><1.00</i>]	<25.0	<1.00	<1.00	<1.00
1,1,2-Trichloroethane	0.41	µg/L	<1.00	<10.0 [<i><1.00</i>]	<25.0	<1.00	<1.00	<1.00
1,1,2-Trichlorotrifluoroethane (Freon 113)	10,000	µg/L	<1.00 J	<10.0 J [<i><1.00 J</i>]	<25.0 J	<1.00 J	<1.00 J	<1.00 J
1,1-Dichloroethane	28	µg/L	<1.00	<10.0 [<i><1.00</i>]	<25.0	<1.00	<1.00	<1.00
1,1 Dichloroethene	280	µg/L	<1.00	<10.0 [<i><1.00</i>]	<25.0	<1.00	<1.00	<1.00
1,2,3-Trichlorobenzene	7	µg/L	<1.00 J	<10.0 J [<i><1.00 J</i>]	<25.0 J	<1.00 J	<1.00 J	<1.00 J
1,2,4-Trichlorobenzene	4	µg/L	<1.00	<10.0 [<i><1.00</i>]	<25.0	<1.00	<1.00	<1.00
1,2,4-Trimethylbenzene	56	µg/L	14.1	985 [<i>1,110</i>]	116	<1.00 R	<1.00	<1.00
1,2-Dichlorobenzene (o-Dichlorobenzene)	300	µg/L	<1.00	<10.0 [<i><1.00</i>]	<25.0	<1.00	<1.00	<1.00
1,2-Dichloropropane	8.2	µg/L	<1.00	<10.0 [<i><1.00</i>]	<25.0	<1.00	<1.00	<1.00
1,3-Dichlorobenzene	4.7	µg/L	<1.00	<10.0 [<i><1.00</i>]	<25.0	<1.00	<1.00	<1.00
1,4-Dichlorobenzene	4.8	µg/L	<1.00	<10.0 [<i><1.00</i>]	<25.0	<1.00	<1.00	<1.00
2-Butanone (Methyl ethyl ketone)	--	µg/L	<10.0	<100 [<i><10.0</i>]	<250	<10.0	<10.0	<10.0
4-Methyl-2-pentanone	6300	µg/L	<10.0	<100 [<i><10.0</i>]	<250	<10.0	<10.0	<10.0
Acetone	14000	µg/L	<50.0 J	<500 J [<i><50.0 J</i>]	<1,250 J	<50.0 J	<50.0 J	<50.0 J
Bromochloromethane	--	µg/L	<1.00	<10.0 [<i><1.00</i>]	<25.0	<1.00	<1.00	<1.00
Bromodichloromethane	1.3	µg/L	<1.00	<10.0 [<i><1.00</i>]	<25.0	<1.00	<1.00	<1.00
Bromoform	33	µg/L	<1.00	<10.0 [<i><1.00</i>]	<25.0	<1.00	<1.00	<1.00
Bromomethane (Methyl bromide)	7.5	µg/L	<5.00	<50.0 [<i><5.00</i>]	<125	<5.00	<5.00	<5.00
Carbon disulfide	810	µg/L	<1.00	<10.0 [<i><1.00</i>]	<25.0	<1.00	<1.00	<1.00
Carbon Tetrachloride	4.6	µg/L	<1.00	<10.0 [<i><1.00</i>]	<25.0	<1.00	<1.00	<1.00
Chlorobenzene	78	µg/L	<1.00	<10.0 [<i><1.00</i>]	<25.0	<1.00	<1.00	<1.00
Chloroethane	--	µg/L	<5.00	<50.0 [<i><5.00</i>]	<125	<5.00	<5.00	<5.00
Chloromethane (Methyl chloride)	190	µg/L	<2.50	<25.0 [<i><2.50</i>]	<62.5	<2.50	<2.50	<2.50
cis-1,2-Dichloroethene	36	µg/L	<1.00	<10.0 [<i><1.00</i>]	<25.0	<1.00	<1.00	<1.00
cis-1,3-Dichloropropene	4.7	µg/L	<1.00	<10.0 [<i><1.00</i>]	<25.0	<1.00	<1.00	<1.00
Dibromochloromethane	8.7	µg/L	<1.00	<10.0 [<i><1.00</i>]	<25.0	<1.00	<1.00	<1.00
Dichlorodifluoromethane (Freon 12)	200	µg/L	<5.00 J	<50.0 J [<i><5.00 J</i>]	<125 J	<5.00 J	<5.00 J	<5.00 J
Isopropylbenzene	--	µg/L	0.951 J	48.9 [<i>59</i>]	19.5 J	<1.00	<1.00	<1.00
Methylene chloride (Dichloromethane)	100	µg/L	<5.00	<50.0 [<i><5.00</i>]	<125	<5.00	<5.00	<5.00
Methyl-t-butyl ether	140	µg/L	<1.00 J	5.84 J [<i>3.60 J</i>]	<25.0 J	<1.00 R	<1.00 J	<1.00 J
Styrene	1200	µg/L	<1.00	<10.0 [<i><1.00</i>]	<25.0	<1.00	<1.00	<1.00
trans-1,2-Dichloroethene	360	µg/L	<1.00	<10.0 [<i><1.00</i>]	<25.0	<1.00	<1.00	<1.00
trans-1,3-Dichloropropene	4.7	µg/L	<1.00	<10.0 [<i><1.00</i>]	<25.0	<1.00	<1.00	<1.00
Trichloroethene (Trichloroethylene)	2.8	µg/L	<1.00	<10.0 [<i><1.00</i>]	<25.0	<1.00	<1.00	<1.00
Trichlorofluoromethane (Freon 11)	5200	µg/L	1.45 J	<50.0 J [<i><5.00 J</i>]	<125 J	2.20 J	<5.00 J	<5.00 J
Vinyl chloride (Chloroethene)	0.19	µg/L	<1.00	<10.0 [<i><1.00</i>]	<25.0	<1.00	<1.00	<1.00

Notes:

- ID = Identification
- MW = Groundwater monitoring well
- µg/L = Micrograms per liter
- <1.00 = Not detected at or above the Reported Detection Limit (RDL)
- Bold and Shaded** = Value exceeds ADEC Groundwater Cleanup Level
- 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
- = Not Available or Not Analyzed
- [] = Blind Duplicate Sample Result
- QA (EQB) = Quality Assurance (Equipment Blank)
- QA (TB) = Quality Assurance (Trip Blank)
- ADEC = Alaska Department of Environmental Conservation
- J = Results are greater than the method detection limit and less than the reporting limit and considered estimated value
- R = The sample results are rejected as unusable. The compound may or may not be present in the sample.
- Constituents analyzed by United States Environmental Protection Agency Method 8260D

Table 3. Historical Groundwater Gauging and Analytical Results

Third Quarter 1999 to Current

Former Texaco Bulk Plant 211815

410 Driveway Street

Fairbanks, Alaska

Well ID	Sample Dates	TOC (ft)	DTW (ft bToc)	LNAPL Thickness (ft)	GWE ft msl	TPH-d (µg/L)	TPH-g (µg/L)	TPH-d w Si/Gel (µg/L)	TPH-r (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Comments
ADEC Groundwater Cleanup Levels						1,500	2,200	1,500	1,100	4.6	1,100	15	190	
AR-81	8/25/1999	--	NM	--	--	3,230	474	--	--	9.24	0.522	8.8	14.2	
AR-81	8/15/2000	--	NM	--	--	3,600	247	--	--	3.62	<0.500	3.83	8.95	
AR-81	6/25/2002	436.99	13.28	--	423.71	1,130	<50.0	--	--	0.920	<0.500	0.520	<1.00	
AR-81	9/24/2002	436.99	12.34	--	424.65	4,550	212	--	--	7.56	2.11	5.14	8.95	
AR-81	4/29/2003	436.99	14.82	--	422.17	2,300	150	--	1,000	2.5	<0.5	1	1.8	
AR-81	9/3/2003	436.99	11.83	--	425.16	2,000	140	--	2,400	3.1	<0.5	1.6	2.8	
AR-81	3/10/2004	436.99	NM	--	--	--	--	--	--	--	--	--	--	Well Frozen
AR-81	9/16/2004	436.99	13.12	--	423.87	2,200	69	--	3,200	1	<0.5	<0.5	<1.5	
AR-81	4/19/2005	436.99	15.00	--	421.99	2,000	110	--	3,700	0.8	<0.5	0.6	1.6	
AR-81	9/7/2005	436.99	16.10	--	420.89	1,400	68	--	1,200	0.5	<0.5	<0.5	<1.5	
AR-81	4/20/2006	436.99	15.13	--	421.86	3,100	95	--	160	0.6	<0.5	<0.5	<1.5	
AR-81	9/12/2006	436.99	15.18	--	421.81	900	100	--	310	0.7	<0.5	<0.5	<1.5	
AR-81	3/15/2007	436.99	15.73	--	421.26	1,800	100	--	250	<1	<1	<1	<2	
AR-81	9/10/2007	436.99	NM	--	--	1,100	100	--	110	<1	<1	<1	<2	
AR-81	4/4/2008	444.44	15.40	--	429.04	--	--	--	--	--	--	--	--	
AR-81	4/10/2008	444.44	15.40	--	429.04	4,290	121	--	<714	0.623	<0.500	<0.500	1.18	
AR-81	9/16/2008	444.44	14.97	--	429.47	2,270	91.8	--	<750	0.423	<0.500	<0.500	1.72	
AR-81	3/25/2009	444.44	15.80	--	428.64	--	--	--	--	--	--	--	--	
AR-81	4/20/2009	444.44	16.54	--	427.90	--	--	--	--	--	--	--	--	
AR-81	7/31/2009	444.44	16.54	--	427.90	1,630	126	--	496	<0.500	<1.00	<1.00	<3.00	
AR-81	5/26/2009	444.44	15.94	--	428.50	--	--	--	--	--	--	--	--	
AR-81	6/24/2009	444.44	14.32	--	430.12	--	--	--	--	--	--	--	--	
AR-81	7/27/2009	444.44	15.61	--	428.83	--	--	--	--	--	--	--	--	
AR-81	8/1/2009	444.44	16.54	--	427.90	--	--	--	--	--	--	--	--	
AR-81	9/17/2009	444.44	NM	--	--	--	--	--	--	--	--	--	--	
AR-81	10/22/2009	444.44	14.92	--	429.52	--	--	--	--	--	--	--	--	
AR-81	11/3/2009	444.44	15.84	--	428.60	--	--	--	--	--	--	--	--	
AR-81	12/14/2009	444.44	16.30	--	428.14	--	--	--	--	--	--	--	--	
AR-81	1/12/2010	444.44	13.97	--	430.47	--	--	--	--	--	--	--	--	
AR-81	2/9/2010	444.44	12.99	--	431.45	--	--	--	--	--	--	--	--	
AR-81	3/18/2010	444.44	14.79	--	429.65	--	--	--	--	--	--	--	--	
AR-81	4/21/2010	444.44	15.64	--	428.80	--	--	--	--	--	--	--	--	
AR-81	5/26/2010	444.44	14.76	--	429.68	--	--	--	--	--	--	--	--	
AR-81	6/15/2010	444.44	14.03	--	430.41	--	--	--	--	--	--	--	--	
AR-81	7/20/2010	444.44	16.12	--	428.32	1,700	67	--	760	<0.5	<0.5	<0.5	<1.5	
AR-81	8/16/2010	444.44	13.02	--	431.42	--	--	--	--	--	--	--	--	
AR-81	9/22/2010	444.44	15.55	--	428.89	--	--	--	--	--	--	--	--	
AR-81	10/27/2010	442.16	12.56	--	429.60	--	--	--	--	--	--	--	--	
AR-81	11/15/2010	442.16	15.85	--	426.31	--	--	--	--	--	--	--	--	
AR-81	12/13/2010	442.16	15.32	--	426.84	--	--	--	--	--	--	--	--	
AR-81	1/4/2011	442.16	16.20	--	425.96	--	--	--	--	--	--	--	--	
AR-81	2/7/2011	442.16	14.16	--	428.00	--	--	--	--	--	--	--	--	
AR-81	9/21/2011	442.16	16.25	--	425.91	--	--	--	--	--	--	--	--	
AR-81	9/22/2011	442.16	16.25	--	425.91	280	<10	--	330	<0.5	<0.5	<0.5	<1.5	
AR-81	7/23/2012	442.16	16.48	--	425.68	--	--	--	--	--	--	--	--	
AR-81	7/27/2012	442.16	16.48	--	425.68	1,300	50	86	250	<0.5	<0.5	<0.5	<1.5	
AR-81	7/30/2013	442.16	NM	--	--	--	--	--	--	--	--	--	--	

Table 3. Historical Groundwater Gauging and Analytical Results

Third Quarter 1999 to Current

Former Texaco Bulk Plant 211815

410 Driveway Street

Fairbanks, Alaska

Well ID	Sample Dates	TOC (ft)	DTW (ft bToc)	LNAPL Thickness (ft)	GWE ft msl	TPH-d (µg/L)	TPH-g (µg/L)	TPH-d w Si/Gel (µg/L)	TPH-r (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Comments
ADEC Groundwater Cleanup Levels						1,500	2,200	1,500	1,100	4.6	1,100	15	190	
AR-81	8/5/2013	442.16	NM	--	--	1,100	<100	<420	<1,000	<1.0	<1.0	<1.0	<3.0	
AR-81	7/11/2014	442.16	15.30	--	426.86	--	--	--	--	--	--	--	--	
AR-81	7/14/2014	442.16	15.30	--	426.86	1,100	<100	<400	1,300	<1.0	<1.0	<1.0	<3.0	
AR-81	9/15/2015	442.16	15.26	--	426.90	1,000	<100	<400	670	<1.0	<1.0	<1.0	<3.0	
AR-81	7/21/2016	442.16	NM	--	--	1,100	12 J	100 J	320	<0.5	<0.5	<0.5	<0.5	
AR-81	8/17/2017	442.16	14.75	--	427.41	2,700	28 J	77 J	3,200	<0.5	<0.5	<0.5	<0.5	
AR-81	8/23/2018	442.16	14.91	--	427.25	3,300	1,500	<57 BJ	670	<1.0	610	<2.0	<5.0	
AR-81	7/11/2019	442.27	15.45	0.00	426.82	--	--	--	--	--	--	--	--	
AR-81	6/26/2020	442.27	11.82	0.00	430.45	657 J	12.4 J	<888 J	967	<1.00	<1.00	<1.00	<3.00	
AR-81	7/15/2021	442.27	13.52	0.00	428.75	--	--	--	--	--	--	--	--	Not enough water to sample
AR-82	6/25/2002	437.47	13.64	--	423.83	72,800	219	--	--	0.200	<0.500	0.525	6.33	
AR-82	9/24/2002	437.47	12.69	--	424.78	1,620	90.3	--	--	0.269	<0.500	<0.500	1.25	
AR-82	4/29/2003	437.47	15.13	--	427.03	390,000	3,500	--	<20,000	<2.5	<2.5	2.5	<25	
AR-82	9/3/2003	437.47	12.17	--	429.99	24,000	83	--	1,800	<0.5	1.1	2.9	8.6	
AR-85	8/25/1999	--	NM	--	--	606	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	
AR-85	8/15/2000	--	NM	--	--	634	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	
AR-85	6/25/2002	437.23	13.45	--	428.71	964	<50.0	--	--	<0.200	<0.500	<0.500	<1.00	
AR-85	9/24/2002	437.23	12.49	--	429.67	958	<50.0	--	--	0.268	<0.500	<0.500	<1.00	
AR-85	4/29/2003	437.23	15.00	--	427.16	620	<10	--	530	1	<0.5	<0.5	<1.5	
AR-85	9/3/2003	437.23	12.00	--	430.16	640	<10	--	510	0.5	<0.5	<0.5	<1.5	
AR-85	09/03/03	437.23	NM	--	--	640	<10	--	570	<0.5	<0.5	<0.5	<1.5	Duplicate Sample Results
AR-85	3/10/2004	437.23	NM	--	--	--	--	--	--	--	--	--	--	Well Beneath Snow bank
AR-85	9/16/2004	437.23	14.68	--	427.48	880	12	--	1,300	2.2	<0.5	<0.5	<1.5	
AR-85	09/16/04	437.23	NM	--	--	900	13	--	1,300	2.2	<0.5	<0.5	<1.5	Duplicate Sample Results
AR-85	4/19/2005	437.23	NM	--	--	--	--	--	--	--	--	--	--	Well Beneath Snow bank
AR-85	9/7/2005	437.23	13.79	--	428.37	450	<10	--	350	<0.5	<0.5	<0.5	<1.5	
AR-85	09/07/05	437.23	13.79	--	428.37	630	<10	--	910	<0.5	<0.5	<0.5	<1.5	Duplicate Sample Results
AR-85	4/20/2006	437.23	15.61	--	426.55	850	<10	--	1,200	<0.5	<0.5	<0.5	<1.5	
AR-85	9/12/2006	437.23	13.45	--	428.71	480	<10	--	200	<0.5	<0.5	<0.5	<1.5	
AR-85	3/14/2007	437.23	NM	--	--	--	--	--	--	--	--	--	--	Well buried under snow bank
AR-85	9/10/2007	444.65	13.74	--	428.42	450	<10	--	220	<1	<1	<1	<2	
AR-85	4/4/2008	444.65	15.79	--	426.37	--	--	--	--	--	--	--	--	
AR-85	4/10/2008	444.65	NM	--	--	951	<50.0	--	<735	<0.500	<0.500	<0.500	<1.00	
AR-85	4/10/2008	444.65	NM	--	--	522	<50.0	--	<708	<0.500	<0.500	<0.500	<1.00	
AR-85	9/16/2008	444.65	12.89	--	429.27	636	<50.0	--	<750	0.275	<0.500	<0.500	<1.00	
AR-85	3/25/2009	444.65	NM	--	--	--	--	--	--	--	--	--	--	
AR-85	4/20/2009	444.65	NM	--	--	--	--	--	--	--	--	--	--	
AR-85	5/26/2009	444.65	NM	--	--	--	--	--	--	--	--	--	--	
AR-85	6/24/2009	444.65	NM	--	--	--	--	--	--	--	--	--	--	
AR-85	7/27/2009	444.65	14.58	--	427.58	--	--	--	--	--	--	--	--	
AR-85	7/31/2009	444.65	14.58	--	427.58	604	<50.0	--	<391	<0.500	<1.00	<1.00	<3.00	
AR-85	8/1/2009	444.65	NM	--	--	--	--	--	--	--	--	--	--	
AR-85	9/17/2009	444.65	NM	--	--	--	--	--	--	--	--	--	--	
AR-85	10/22/2009	444.65	NM	--	--	--	--	--	--	--	--	--	--	
AR-85	11/3/2009	444.65	NM	--	--	--	--	--	--	--	--	--	--	
AR-85	12/14/2009	444.65	NM	--	--	--	--	--	--	--	--	--	--	

Table 3. Historical Groundwater Gauging and Analytical Results

Third Quarter 1999 to Current
 Former Texaco Bulk Plant 211815
 410 Driveway Street
 Fairbanks, Alaska

Well ID	Sample Dates	TOC (ft)	DTW (ft bToc)	LNAPL Thickness (ft)	GWE ft msl	TPH-d (µg/L)	TPH-g (µg/L)	TPH-d w Si/Gel (µg/L)	TPH-r (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Comments
ADEC Groundwater Cleanup Levels						1,500	2,200	1,500	1,100	4.6	1,100	15	190	
AR-85	1/12/2010	444.65	NM	--	--	--	--	--	--	--	--	--	--	
AR-85	2/9/2010	444.65	NM	--	--	--	--	--	--	--	--	--	--	
AR-85	3/18/2010	444.65	NM	--	--	--	--	--	--	--	--	--	--	
AR-85	4/21/2010	444.65	NM	--	--	--	--	--	--	--	--	--	--	
AR-85	5/26/2010	444.65	NM	--	--	--	--	--	--	--	--	--	--	
AR-85	6/15/2010	444.65	NM	--	--	--	--	--	--	--	--	--	--	
AR-85	7/20/2010	444.65	15.54	--	426.62	360	<10	--	170	<0.5	<0.5	<0.5	<1.5	
AR-85	8/16/2010	444.65	NM	--	--	--	--	--	--	--	--	--	--	
AR-85	9/22/2010	442.32	NM	--	--	--	--	--	--	--	--	--	--	
AR-85	10/27/2010	442.32	NM	--	--	--	--	--	--	--	--	--	--	
AR-85	11/15/2010	442.32	NM	--	--	--	--	--	--	--	--	--	--	
AR-85	12/13/2010	442.32	NM	--	--	--	--	--	--	--	--	--	--	
AR-85	1/4/2011	442.32	NM	--	--	--	--	--	--	--	--	--	--	
AR-85	2/7/2011	442.32	NM	--	--	--	--	--	--	--	--	--	--	
AR-85	9/21/2011	442.32	12.82	--	429.34	--	--	--	--	--	--	--	--	
AR-85	9/22/2011	442.32	NM	--	--	280	<10	--	260	<0.5	<0.5	<0.5	<1.5	
AR-85	7/23/2012	442.32	13.79	--	428.37	--	--	--	--	--	--	--	--	
AR-85	7/27/2012	442.32	NM	--	--	450	<10	<49	150	<0.5	<0.5	<0.5	<1.5	
AR-85	7/30/2013	442.32	14.50	--	427.66	--	--	--	--	--	--	--	--	
AR-85	8/5/2013	442.32	NM	--	--	710	<100	<490	<1,200	<1.0	<1.0	<1.0	<3.0	
AR-85	7/11/2014	442.32	10.14	--	432.02	<400	<100	--	<400	<1.0	<1.0	<1.0	<3.0	
AR-85	7/14/2014	442.32	10.14	--	432.02	<400	<100	--	<400	<1.0	<1.0	<1.0	<3.0	
AR-85	9/15/2015	442.32	12.34	--	429.82	<400	<100	--	<400	<1.0	<1.0	<1.0	<3.0	
AR-85	7/21/2016	442.32	12.05	--	430.11	250	<10	<48	390	<0.5	<0.5	<0.5	<0.5	
AR-85	8/17/2017	442.32	13.63	--	428.53	2,500	20 J	<47	2,000	<0.5	0.7 J	<0.5	<0.5	
AR-85	8/23/2018	442.32	12.57	--	429.59	--	--	--	--	--	--	--	--	
AR-85	8/24/2018	442.32	12.57	--	429.59	310	18 J	<54 J	2,000	<0.2	<0.2	<0.4	<1.0	
AR-85	8/24/2018	442.32	12.57	--	429.59	150 J	<14	<51 J	1,600	<0.2	<0.2	<0.4	<1.0	Duplicate Sample Results
AR-85	7/11/2019	442.47	14.52	0.00	427.95	480 J	< 100J	86 J	730 J	2.0 J	5.1	2.0 J	13.5	
AR-85	6/26/2020	442.47	11.97	0.00	430.50	575 J	13.0 J	<888 J	499 J	0.255 J	<1.00	<1.00	<3.00	
AR-85	7/15/2021	442.47	13.64	0.00	428.83	<800 B J	<100	<800 B	<800	0.276 J	<1.00	<1.00	<3.00	
MW-1	10/23/2003	436.36	12.28	--	429.88	8,200	97	--	--	<0.5	<0.5	<0.5	<1.5	
MW-1	3/10/2004	436.36	14.14	--	428.02	4,100	33	--	1,400	<0.5	<0.5	<0.5	<1.5	
MW-1	3/10/2004	436.36	NM	--	--	6,000	35	--	1,500	<0.5	<0.5	<0.5	<1.5	Duplicate Sample Results
MW-1	9/16/2004	436.36	13.72	--	428.44	5,100	29	--	1,600	<0.5	<0.5	<0.5	<1.5	
MW-1	4/19/2005	436.36	NM	--	--	--	--	--	--	--	--	--	--	Well Beneath Snow bank
MW-1	9/7/2005	436.36	12.77	--	429.39	870	32	--	410	<0.5	<0.5	<0.5	<1.5	
MW-1	4/20/2006	436.36	NM	--	--	--	--	--	--	--	--	--	--	Well buried and surrounded by equipment
MW-1	9/12/2006	436.36	12.47	--	429.69	470	23	--	210	<0.5	<0.5	<0.5	<1.5	
MW-1	3/15/2007	436.36	14.57	--	427.59	830	<10	--	360	<1	<1	<1	<2	
MW-1	9/10/2007	441.46	12.76	--	429.40	520	20	--	160	<1	<1	<1	<2	
MW-1	4/4/2008	441.46	NM	--	--	--	--	--	--	--	--	--	--	Well not sampled - monument underwater
MW-1	9/16/2008	441.46	11.91	--	430.25	--	--	--	--	--	--	--	--	
MW-1	9/17/2008	441.46	NM	--	--	938	<50.0	--	<750	0.369	<0.500	<0.500	1.46	
MW-1	3/25/2009	441.46	NM	--	--	--	--	--	--	--	--	--	--	
MW-1	4/20/2009	441.46	NM	--	--	--	--	--	--	--	--	--	--	
MW-1	5/26/2009	441.46	NM	--	--	--	--	--	--	--	--	--	--	

Table 3. Historical Groundwater Gauging and Analytical Results
Third Quarter 1999 to Current
Former Texaco Bulk Plant 211815
410 Driveway Street
Fairbanks, Alaska

Well ID	Sample Dates	TOC (ft)	DTW (ft bToc)	LNAPL Thickness (ft)	GWE ft msl	TPH-d (µg/L)	TPH-g (µg/L)	TPH-d w Si/Gel (µg/L)	TPH-r (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Comments
ADEC Groundwater Cleanup Levels						1,500	2,200	1,500	1,100	4.6	1,100	15	190	
MW-1	6/24/2009	441.46	NM	--	--	--	--	--	--	--	--	--	--	
MW-1	7/27/2009	441.46	NM	--	--	--	--	--	--	--	--	--	--	Well buried by gravel regrade
MW-1	8/1/2009	441.46	NM	--	--	--	--	--	--	--	--	--	--	
MW-1	9/17/2009	441.46	NM	--	--	--	--	--	--	--	--	--	--	Well buried by gravel regrade
MW-1	10/22/2009	441.46	NM	--	--	--	--	--	--	--	--	--	--	
MW-1	11/3/2009	441.46	NM	--	--	--	--	--	--	--	--	--	--	
MW-1	12/14/2009	441.46	NM	--	--	--	--	--	--	--	--	--	--	
MW-1	1/12/2010	441.46	NM	--	--	--	--	--	--	--	--	--	--	
MW-1	2/9/2010	441.46	NM	--	--	--	--	--	--	--	--	--	--	
MW-1	3/18/2010	441.46	NM	--	--	--	--	--	--	--	--	--	--	
MW-1	4/21/2010	441.46	NM	--	--	--	--	--	--	--	--	--	--	
MW-1	5/26/2010	441.46	NM	--	--	--	--	--	--	--	--	--	--	
MW-1	6/15/2010	441.46	NM	--	--	--	--	--	--	--	--	--	--	
MW-1	7/20/2010	441.46	NM	--	--	--	--	--	--	--	--	--	--	Unable to Locate
MW-1	8/16/2010	441.46	NM	--	--	--	--	--	--	--	--	--	--	
MW-1	9/22/2010	441.47	NM	--	--	--	--	--	--	--	--	--	--	
MW-1	10/27/2010	441.47	NM	--	--	--	--	--	--	--	--	--	--	
MW-1	11/15/2010	441.47	NM	--	--	--	--	--	--	--	--	--	--	
MW-1	12/13/2010	441.47	NM	--	--	--	--	--	--	--	--	--	--	
MW-1	1/4/2011	441.47	NM	--	--	--	--	--	--	--	--	--	--	
MW-1	2/7/2011	441.47	NM	--	--	--	--	--	--	--	--	--	--	
MW-1	9/21/2011	441.47	11.84	--	430.32	--	--	--	--	--	--	--	--	
MW-1	9/22/2011	441.47	11.84	--	430.32	460	55	--	420	<0.5	<0.5	<0.5	<1.5	
MW-1	7/23/2012	441.47	12.79	--	429.37	--	--	--	--	--	--	--	--	
MW-1	7/27/2012	441.47	NM	--	--	1,000	17	500	1,300	<0.5	<0.5	<0.5	<1.5	
MW-1	7/30/2013	441.47	13.57	--	428.59	--	--	--	--	--	--	--	--	
MW-1	8/5/2013	441.47	NM	--	--	390	<100	<380	<960	<1.0	<1.0	<1.0	<3.0	
MW-1	7/11/2014	441.47	9.17	--	432.99	--	--	--	--	--	--	--	--	
MW-1	7/14/2014	441.47	NM	--	--	2,200	<100	500	1,400	<1.0	<1.0	<1.0	<3.0	
MW-1	9/15/2015	441.47	11.36	--	430.80	670	<100	400	730	<1.0	<1.0	<1.0	<3.0	
MW-1	7/21/2016	441.47	NM	--	--	--	--	--	--	--	--	--	--	well not sampled- under large puddle
MW-1	8/17/2017	441.47	12.65	--	429.51	1,600	53 J	930	1,200	<0.5	<0.5	<0.5	<0.5	
MW-1	8/23/2018	441.47	11.61	--	430.55	490 J	42 J	<120 BJ	570 J	0.2 J	<0.2	<0.4	<1.0	
MW-1	7/11/2019	441.57	11.61	--	428.07	490 J	42 J	<120 BJ	570 J	0.2 J	<0.2	<0.4	<1.14 [<1.14]	
MW-1	6/26/2020	441.57	10.97	0.00	430.60	373 J	29.2 J	<800 J	<800	0.178 J	<1.00	<1.00	<3.00	
MW-1	7/15/2021	441.57	12.65	0.00	428.92	<800 B	<100 J	<800 B J	<800	0.302 J	<1.00	<1.00	0.409 J	
MW-2	10/23/2003	437.06	13.35	--	428.81	40,000	48,000	--	--	2,000	6,000	960	6,000	
MW-2	3/10/2004	437.06	14.89	0.04	427.30	--	--	--	--	--	--	--	--	
MW-2	9/16/2004	437.06	14.51	0.03	427.67	--	--	--	--	--	--	--	--	
MW-2	4/19/2005	437.06	15.47	0.1	426.77	--	--	--	--	--	--	--	--	
MW-2	9/7/2005	437.06	13.58	0.01	428.59	--	--	--	--	--	--	--	--	
MW-2	4/20/2006	437.06	NM	--	--	--	--	--	--	--	--	--	--	well not sampled - covered with snow and gravel
MW-2	8/11/2006	437.06	13.85	--	428.31	--	--	--	--	--	--	--	--	
MW-2	9/12/2006	437.06	13.26	--	428.90	22,000	8,000	--	<500	710	350	280	1,300	
MW-2	12/1/2006	437.06	14.56	--	427.60	--	--	--	--	--	--	--	--	
MW-2	12/22/2006	437.06	14.80	--	427.36	--	--	--	--	--	--	--	--	
MW-2	2/6/2007	437.06	15.08	--	427.08	--	--	--	--	--	--	--	--	

Table 3. Historical Groundwater Gauging and Analytical Results
Third Quarter 1999 to Current
Former Texaco Bulk Plant 211815
410 Driveway Street
Fairbanks, Alaska

Well ID	Sample Dates	TOC (ft)	DTW (ft bToc)	LNAPL Thickness (ft)	GWE ft msl	TPH-d (µg/L)	TPH-g (µg/L)	TPH-d w Si/Gel (µg/L)	TPH-r (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Comments
ADEC Groundwater Cleanup Levels						1,500	2,200	1,500	1,100	4.6	1,100	15	190	
MW-2	3/15/2007	437.06	NM	--	--	7,100	6,600	--	170	500	100	200	900	
MW-2	3/16/2007	437.06	15.31	--	426.85	--	--	--	--	--	--	--	--	
MW-2	4/30/2007	437.06	NM	--	--	--	--	--	--	--	--	--	--	Well not sampled due to ice in well
MW-2	5/18/2007	437.06	NM	--	--	--	--	--	--	--	--	--	--	Well not sampled due to ice in well
MW-2	9/10/2007	442.23	13.56	--	428.60	14,000	7,600	--	<200	700	600	200	1,400	
MW-2	10/15/2007	442.23	14.04	--	428.12	--	--	--	--	--	--	--	--	
MW-2	11/19/2007	442.23	14.10	--	428.06	--	--	--	--	--	--	--	--	
MW-2	1/29/2008	442.23	15.18	--	426.98	--	--	--	--	--	--	--	--	
MW-2	2/13/2008	442.23	15.24	--	426.92	--	--	--	--	--	--	--	--	
MW-2	4/4/2008	442.23	NM	--	--	--	--	--	--	--	--	--	--	Well not sampled - absorbent sock frozen
MW-2	5/23/2008	442.23	NM	--	--	--	--	--	--	--	--	--	--	Well not sampled - absorbent sock frozen
MW-2	6/25/2008	442.23	14.12	--	428.04	--	--	--	--	--	--	--	--	
MW-2	7/14/2008	442.23	14.63	--	427.53	--	--	--	--	--	--	--	--	
MW-2	8/6/2008	442.23	11.38	--	430.78	--	--	--	--	--	--	--	--	
MW-2	9/16/2008	442.23	12.68	--	429.48	29,300	21,900	--	<3,750	967	1,570	337	2,770	
MW-2	10/27/2008	442.23	13.97	--	428.19	--	--	--	--	--	--	--	--	
MW-2	11/24/2008	442.23	14.03	--	428.13	--	--	--	--	--	--	--	--	
MW-2	12/19/2008	442.23	14.45	--	427.71	--	--	--	--	--	--	--	--	
MW-2	1/30/2009	442.23	15.03	--	427.13	--	--	--	--	--	--	--	--	
MW-2	2/19/2009	442.23	15.27	--	426.89	--	--	--	--	--	--	--	--	
MW-2	3/25/2009	442.23	NM	--	--	--	--	--	--	--	--	--	--	Well recessed in vault by gravel regrade
MW-2	4/20/2009	442.23	NM	--	--	--	--	--	--	--	--	--	--	
MW-2	5/26/2009	442.23	NM	--	--	--	--	--	--	--	--	--	--	
MW-2	6/24/2009	442.23	NM	--	--	--	--	--	--	--	--	--	--	
MW-2	7/27/2009	442.23	NM	--	--	--	--	--	--	--	--	--	--	Well recessed and buried in vault by gravel regrade
MW-2	8/26/2009	442.23	NM	--	--	--	--	--	--	--	--	--	--	Well abandoned in place
MW-3	10/23/2003	437.49	13.60	--	428.56	11,000	36,000	--	--	1,600	2,500	570	6,300	
MW-3	3/10/2004	437.49	15.39	--	426.77	44,000	56,000	--	3,000	2,100	4,800	1,100	9,800	
MW-3	9/16/2004	437.49	14.99	--	427.17	59,000	38,000	--	<2,000	1,900	3,100	810	6,600	
MW-3	4/19/2005	437.49	15.88	--	426.28	40,000	13,000	--	<2,000	630	600	340	2,100	
MW-3	9/7/2005	437.49	14.10	--	428.06	24,000	17,000	--	2,900	1,400	1,200	330	2,400	
MW-3	4/20/2006	437.49	15.87	--	426.29	15,000	19,000	--	<500	1,100	960	500	3,100	
MW-3	9/12/2006	437.49	13.78	--	428.38	15,000	19,000	--	<490	1,400	1,000	520	3,200	
MW-3	3/16/2007	437.49	15.84	--	426.32	7,900	22,000	--	490	1,300	900	600	3,700	
MW-3	9/10/2007	442.67	14.07	--	428.09	17,000	11,000	--	<490	900	500	400	2,100	
MW-3	4/4/2008	442.67	16.06	--	426.10	--	--	--	--	--	--	--	--	
MW-3	4/10/2008	442.67	NM	--	--	11,000	33,300	--	942	1,540	2,080	923	6,000	
MW-3	9/16/2008	442.67	13.18	--	428.98	--	--	--	--	--	--	--	--	
MW-3	9/17/2008	442.67	NM	--	--	31,100	19,100	--	<7,500	1,360	791	411	2,390	
MW-3	09/17/08	442.67	NM	--	--	22,100	18,600	--	<3,750	1,370	777	406	2,350	Duplicate Sample Results
MW-3	3/25/2009	442.67	NM	--	--	--	--	--	--	--	--	--	--	
MW-3	4/20/2009	442.67	NM	--	--	--	--	--	--	--	--	--	--	
MW-3	5/26/2009	442.67	NM	--	--	--	--	--	--	--	--	--	--	
MW-3	6/24/2009	442.67	NM	--	--	--	--	--	--	--	--	--	--	
MW-3	7/27/2009	442.67	NM	--	--	--	--	--	--	--	--	--	--	Well buried by gravel regrade
MW-3	8/1/2009	442.67	NM	--	--	--	--	--	--	--	--	--	--	Well buried by gravel regrade
MW-3	9/17/2009	442.67	NM	--	--	--	--	--	--	--	--	--	--	Well buried by gravel regrade

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Third Quarter 1999 to Current
Former Texaco Bulk Plant 211815
410 Driveway Street
Fairbanks, Alaska

Well ID	Sample Dates	TOC (ft)	DTW (ft bToc)	LNAPL Thickness (ft)	GWE ft msl	TPH-d (µg/L)	TPH-g (µg/L)	TPH-d w Si/Gel (µg/L)	TPH-r (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Comments
ADEC Groundwater Cleanup Levels						1,500	2,200	1,500	1,100	4.6	1,100	15	190	
MW-3	10/22/2009	442.67	NM	--	--	--	--	--	--	--	--	--	--	Well buried by gravel regrade
MW-3	11/3/2009	442.67	NM	--	--	--	--	--	--	--	--	--	--	Well buried by gravel regrade
MW-3	12/14/2009	442.67	NM	--	--	--	--	--	--	--	--	--	--	Well buried by gravel regrade
MW-3	1/12/2010	442.67	NM	--	--	--	--	--	--	--	--	--	--	Well buried by gravel regrade
MW-3	2/9/2010	442.67	NM	--	--	--	--	--	--	--	--	--	--	Well buried by gravel regrade
MW-3	03/18/10	442.67	NM	--	--	--	--	--	--	--	--	--	--	Well buried by gravel regrade
MW-3	4/21/2010	442.67	NM	--	--	--	--	--	--	--	--	--	--	Well buried by gravel regrade
MW-3	5/26/2010	442.67	NM	--	--	--	--	--	--	--	--	--	--	Well buried by gravel regrade
MW-3	6/15/2010	442.67	NM	--	--	--	--	--	--	--	--	--	--	Well buried by gravel regrade
MW-3	7/20/2010	442.67	NM	--	--	--	--	--	--	--	--	--	--	Well buried by gravel regrade
MW-3	8/16/2010	442.67	NM	--	--	--	--	--	--	--	--	--	--	Well buried by gravel regrade
MW-3	9/22/2010	442.74	NM	--	--	--	--	--	--	--	--	--	--	Well buried by gravel regrade
MW-3	10/27/2010	442.74	NM	--	--	--	--	--	--	--	--	--	--	Well buried by gravel regrade
MW-3	11/15/2010	442.74	NM	--	--	--	--	--	--	--	--	--	--	Well buried by gravel regrade
MW-3	12/13/2010	442.74	NM	--	--	--	--	--	--	--	--	--	--	Well buried by gravel regrade
MW-3	1/4/2011	442.74	NM	--	--	--	--	--	--	--	--	--	--	Well buried by gravel regrade
MW-3	2/7/2011	442.74	NM	--	--	--	--	--	--	--	--	--	--	Well buried by gravel regrade
MW-3	9/21/2011	442.74	13.21	--	428.95	1,800	57	--	1,300	1.9	<0.5	<0.5	2.6	
MW-3	9/22/2011	442.74	13.21	--	428.95	--	--	--	--	--	--	--	--	
MW-3	7/23/2012	442.74	14.20	--	427.96	--	--	--	--	--	--	--	--	
MW-3	7/27/2012	442.74	NM	--	--	1,200	360	240	1,600	14	1.2	13	47	
MW-3	7/30/2013	442.74	14.98	--	427.18	--	--	--	--	--	--	--	--	
MW-3	8/5/2013	442.74	NM	--	--	2,500	734	570	<1,000	59.3	2.8	37.3	80.4	
MW-3	7/11/2014	442.74	10.48	--	431.68	--	--	--	--	--	--	--	--	
MW-3	7/14/2014	442.74	NM	--	--	950	574	<400	600	12.1	1.3	16	103	
MW-3	9/15/2015	442.74	12.65	--	429.51	3,200	624	750	1,300	6.9	1.5	37.4	108	
MW-3	7/21/2016	442.74	12.21	--	429.95	1,200	43	<49	510	0.9 J	<0.5	1	2	
MW-3	7/21/2016	442.74	NM	--	--	1,500	39	<48	350	0.8 J	<0.5	1	2	Duplicate Sample Results
MW-3	8/17/2017	442.74	14.13	--	428.03	1,300	34 J	91 J	1,400	<0.5	<0.5	<0.5	<0.5	
MW-3	8/23/2018	442.74	13.00	--	429.16	450	<14	<50 J	190 J	<0.2	<0.2	<0.4	<1.0	
MW-3	7/11/2019	442.89	15.00	0.00	427.89	400	< 100J	< 77	1,000	< 0.50B	< 0.39	0.70 J	<1.14	
MW-3	6/26/2020	442.89	12.40	0.00	430.49	3,260 J [1,250 J]	16.6 J [13.4 J]	784 J [339 J]	2,320 [770 J]	0.756 J [0.634 J]	<1.00 [<1.00]	<1.00 [<1.00]	0.533 J [0.477 J]	
MW-3	7/15/2021	442.89	14.18	0.00	428.71	2,550 J	<100 B	<800 B J	<800 J	12.9	0.384 J	3.76	8.44	
MW-4	10/22/2003	437.33	13.70	--	428.46	--	--	--	--	--	--	--	--	
MW-4	3/10/2004	437.33	15.25	0.23	422.26	--	--	--	--	--	--	--	--	
MW-4	9/16/2004	437.33	14.85	0.23	422.66	--	--	--	--	--	--	--	--	
MW-4	4/19/2005	437.33	NM	--	--	98,000	68,000	--	<2,000	3,200	7,700	1,300	10,000	
MW-4	9/7/2005	437.33	13.92	--	428.24	--	--	--	--	--	--	--	--	
MW-4	4/20/2006	437.33	15.74	0.32	421.85	--	--	--	--	--	--	--	--	
MW-4	8/11/2006	437.33	14.19	--	427.97	--	--	--	--	--	--	--	--	
MW-4	9/12/2006	437.33	13.63	--	428.53	26,000	64,000	--	<980	3,300	8,200	1,400	9,600	
MW-4	12/1/2006	437.33	14.93	--	427.23	--	--	--	--	--	--	--	--	
MW-4	12/22/2006	437.33	15.11	--	427.05	--	--	--	--	--	--	--	--	
MW-4	2/6/2007	437.33	15.43	--	426.73	--	--	--	--	--	--	--	--	
MW-4	3/16/2007	437.33	16.06	0.46	421.64	--	--	--	--	--	--	--	--	
MW-4	4/30/2007	437.33	15.15	--	427.01	--	--	--	--	--	--	--	--	
MW-4	5/18/2007	437.33	14.91	--	427.25	--	--	--	--	--	--	--	--	

Table 3. Historical Groundwater Gauging and Analytical Results
Third Quarter 1999 to Current
Former Texaco Bulk Plant 211815
410 Driveway Street
Fairbanks, Alaska

Well ID	Sample Dates	TOC (ft)	DTW (ft bToc)	LNAPL Thickness (ft)	GWE ft msl	TPH-d (µg/L)	TPH-g (µg/L)	TPH-d w Si/Gel (µg/L)	TPH-r (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Comments
ADEC Groundwater Cleanup Levels						1,500	2,200	1,500	1,100	4.6	1,100	15	190	
MW-4	9/10/2007	442.52	13.91	--	428.25	27,000	60,000	--	<490	3,000	7,900	1,400	9,800	
MW-4	10/15/2007	442.52	14.45	--	427.71	--	--	--	--	--	--	--	--	
MW-4	11/19/2007	442.52	NM	--	--	--	--	--	--	--	--	--	--	Well not gauged - inaccessible
MW-4	1/29/2008	442.52	NM	--	--	--	--	--	--	--	--	--	--	Well not gauged - inaccessible
MW-4	2/13/2008	442.52	NM	--	--	--	--	--	--	--	--	--	--	Well not gauged - unable to locate
MW-4	4/4/2008	442.52	15.81	0.01	421.53	--	--	--	--	--	--	--	--	
MW-4	5/23/2008	442.52	NM	--	--	--	--	--	--	--	--	--	--	Well not sampled - absorbent sock frozen
MW-4	6/25/2008	442.52	14.47	--	427.69	--	--	--	--	--	--	--	--	
MW-4	7/14/2008	442.52	14.56	--	427.60	--	--	--	--	--	--	--	--	
MW-4	8/6/2008	442.52	11.73	--	430.43	--	--	--	--	--	--	--	--	
MW-4	9/16/2008	442.52	13.01	0.01	424.33	--	--	--	--	--	--	--	--	
MW-4	10/27/2008	442.52	14.34	--	427.82	--	--	--	--	--	--	--	--	
MW-4	11/24/2008	442.52	14.39	--	427.77	--	--	--	--	--	--	--	--	
MW-4	12/19/2008	442.52	14.82	--	427.34	--	--	--	--	--	--	--	--	
MW-4	1/30/2009	442.52	15.41	--	426.75	--	--	--	--	--	--	--	--	
MW-4	2/19/2009	442.52	15.61	--	426.55	--	--	--	--	--	--	--	--	
MW-4	3/25/2009	442.52	15.80	0.09	421.60	--	--	--	--	--	--	--	--	
MW-4	4/20/2009	442.52	16.36	0.62	421.47	--	--	--	--	--	--	--	--	
MW-4	5/26/2009	442.52	NM	--	--	--	--	--	--	--	--	--	--	
MW-4	6/24/2009	442.52	NM	--	--	--	--	--	--	--	--	--	--	Well submerged under water
MW-4	7/27/2009	442.52	14.76	--	427.40	--	--	--	--	--	--	--	--	
MW-4	8/26/2009	442.52	14.60	--	427.56	--	--	--	--	--	--	--	--	
MW-4	9/17/2009	442.52	13.95	--	428.21	--	--	--	--	--	--	--	--	
MW-4	10/22/2009	442.52	14.72	--	427.44	--	--	--	--	--	--	--	--	
MW-4	11/3/2009	442.52	14.93	--	427.23	--	--	--	--	--	--	--	--	
MW-4	12/14/2009	442.52	15.19	--	426.97	--	--	--	--	--	--	--	--	
MW-4	1/12/2010	442.52	NM	--	--	--	--	--	--	--	--	--	--	
MW-4	2/9/2010	442.52	16.11	0.41	421.55	--	--	--	--	--	--	--	--	
MW-4	3/18/2010	442.52	16.90	0.01	420.44	--	--	--	--	--	--	--	--	
MW-4	4/21/2010	442.52	16.89	0.90	421.16	--	--	--	--	--	--	--	--	
MW-4	5/26/2010	442.52	15.09	--	427.07	--	--	--	--	--	--	--	--	
MW-4	6/15/2010	442.52	14.38	--	427.78	--	--	--	--	--	--	--	--	
MW-4	7/20/2010	442.52	14.68	--	427.48	80,000	40,000	--	<6,800	2,200	5,300	990	7,200	
MW-4	7/20/2010	442.52	14.68	--	427.48	42,000	33,000	--	<3,400	1,800	3,800	770	6,000	Duplicate Sample Results
MW-4	8/16/2010	442.52	14.80	--	427.36	--	--	--	--	--	--	--	--	
MW-4	9/22/2010	442.44	14.50	--	427.66	--	--	--	--	--	--	--	--	
MW-4	10/27/2010	442.44	15.40	--	426.76	--	--	--	--	--	--	--	--	
MW-4	11/15/2010	442.44	15.25	0.07	422.14	--	--	--	--	--	--	--	--	
MW-4	12/13/2010	442.44	NM	--	--	--	--	--	--	--	--	--	--	Unable to locate well
MW-4	1/4/2011	442.44	NM	--	--	--	--	--	--	--	--	--	--	Unable to locate well
MW-4	2/7/2011	442.44	NM	--	--	--	--	--	--	--	--	--	--	Unable to locate well
MW-4	3/22/2011	442.44	NM	--	--	--	--	--	--	--	--	--	--	Unable to locate well
MW-4	4/13/2011	442.44	NM	--	--	--	--	--	--	--	--	--	--	Unable to locate well
MW-4	9/21/2011	442.44	12.92	--	429.24	24,000	38,000	--	3,900	2,400	4,400	1,200	7,600	
MW-4	9/22/2011	442.44	NM	--	--	21,000	36,000	--	4,600	2,300	4,000	1,100	6,800	
MW-4	7/23/2012	442.44	13.90	--	428.26	--	--	--	--	--	--	--	--	
MW-4	7/27/2012	442.44	13.90	--	428.26	620,000	44,000	390,000	<33,000	2,100	4,900	1,200	8,400	
MW-4	07/27/12	442.44	NM	--	--	190,000	42,000	--	--	2,000	4,700	1,100	8,100	Duplicate Sample Results

Table 3. Historical Groundwater Gauging and Analytical Results

Third Quarter 1999 to Current
 Former Texaco Bulk Plant 211815
 410 Driveway Street
 Fairbanks, Alaska

Well ID	Sample Dates	TOC (ft)	DTW (ft bToc)	LNAPL Thickness (ft)	GWE ft msl	TPH-d (µg/L)	TPH-g (µg/L)	TPH-d w Si/Gel (µg/L)	TPH-r (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Comments
ADEC Groundwater Cleanup Levels						1,500	2,200	1,500	1,100	4.6	1,100	15	190	
MW-4	7/30/2013	442.44	14.65	--	427.51	--	--	--	--	--	--	--	--	
MW-4	8/5/2013	442.44	14.65	--	427.51	37,400	67,900	27,100	1,400	3,120	7,190	1,250	10,800	
MW-4	7/11/2014	442.44	10.20	0.01	427.14	--	--	--	--	--	--	--	--	
MW-4	7/14/2014	442.44	10.20	--	431.96	30,800	58,600	18,900	1,800	2,670	4,160	457	6,510	
MW-4	9/15/2015	442.44	12.37	--	429.79	--	--	--	--	--	--	--	--	
MW-4	9/15/2015	442.44	NM	--	--	69,000	46,500	--	2,800	3,570	5,120	224	7,210	Duplicate Sample Results
MW-4	7/21/2016	442.44	11.92	--	430.24	47,000	43,000	67,000	<3,400	2,200	4,100	1200	7,800	
MW-4	8/17/2017	442.44	13.80	--	428.36	100,000	49,000	27,000	<3,400	2,200	5,200	1,100	8,500	
MW-4	8/23/2018	442.44	12.69	--	429.47	66,000	37,000	120,000 J	<1,600	1,800	3,600	720	6,900	
MW-4	7/11/2019	442.56	12.69	--	427.87	19,000	43,000 J	8,700	2,000	2,000	5,300 D	1,400 D	10,800 D	
MW-4	6/26/2020	442.56	--	--	--	9,650 J	16,100	5,700 J	1,150	1,490	3,480	923	7,650	Well casing obstructed by ice at 6.80 ft BTOC
MW-4	7/15/2021	442.56	13.82	0.00	428.74	13,900 J [19,900 J]	31,200 [33,700 J]	2,360 J [3,190 J]	750 J [466 J]	2,410 [2,220]	5,490 [5,100]	1,070 [1,010]	8,100 [7,600]	
MW-5	10/23/2003	436.37	12.58	--	429.58	36,000	10,000	--	--	1,000	420	100	1,000	
MW-5	3/10/2004	436.37	14.34	--	427.82	9,800	22,000	--	2,000	1,200	1,800	320	3,000	
MW-5	9/16/2004	436.37	13.92	--	428.24	7,100	22,000	--	<200	970	2,000	370	3,500	
MW-5	4/19/2005	436.37	NM	--	--	--	--	--	--	--	--	--	--	well not sampled - covered with ice and ponded water
MW-5	9/7/2005	436.37	13.01	--	429.15	5,200	10,000	--	220	870	590	200	1,600	
MW-5	4/20/2006	436.37	NM	--	--	--	--	--	--	--	--	--	--	well not sampled - covered with ice and ponded water
MW-5	9/12/2006	436.37	12.70	--	429.46	2,900	9,700	--	<100	980	230	220	1,700	
MW-5	9/12/2006	436.37	NM	--	--	3,000	9,500	--	<200	980	220	210	1,600	Duplicate Sample Results
MW-5	3/15/2007	441.54	15.78	--	426.38	6,900	16,000	--	<510	800	900	300	2,700	
MW-5	3/15/2007	441.54	NM	--	--	7,900	16,000	--	<510	800	900	300	2,700	Duplicate Sample Results
MW-5	9/10/2007	441.54	13.00	--	429.16	5,200	6,500	--	<200	700	100	100	1,100	
MW-5	9/10/2007	441.54	NM	--	--	5,000	6,000	--	<200	700	100	100	1,100	Duplicate Sample Results
MW-5	4/4/2008	441.54	NM	--	--	--	--	--	--	--	--	--	--	Well not sampled - monument underwater
MW-5	9/16/2008	441.54	NM	--	--	--	--	--	--	--	--	--	--	Well not sampled - unable to locate
MW-5	3/25/2009	441.54	NM	--	--	--	--	--	--	--	--	--	--	
MW-5	4/20/2009	441.54	NM	--	--	--	--	--	--	--	--	--	--	
MW-5	5/26/2009	441.54	NM	--	--	--	--	--	--	--	--	--	--	
MW-5	6/24/2009	441.54	NM	--	--	--	--	--	--	--	--	--	--	
MW-5	7/27/2009	441.54	13.98	--	428.18	--	--	--	--	--	--	--	--	
MW-5	7/31/2009	441.54	NM	--	--	6,080	9,780 ¹	--	707	649	212	166	1,410	
MW-5	7/31/2009	441.54	NM	--	--	8,240	11,900 ¹	--	1,430	801 ¹	304 ¹	160 ¹	1,860 ¹	Duplicate Sample Results
MW-5	8/1/2009	441.54	NM	--	--	--	--	--	--	--	--	--	--	
MW-5	9/17/2009	441.54	NM	--	--	--	--	--	--	--	--	--	--	
MW-5	10/22/2009	441.54	NM	--	--	--	--	--	--	--	--	--	--	
MW-5	11/3/2009	441.54	NM	--	--	--	--	--	--	--	--	--	--	
MW-5	12/14/2009	441.54	NM	--	--	--	--	--	--	--	--	--	--	
MW-5	1/12/2010	441.54	NM	--	--	--	--	--	--	--	--	--	--	
MW-5	2/9/2010	441.54	NM	--	--	--	--	--	--	--	--	--	--	
MW-5	4/21/2010	441.54	NM	--	--	--	--	--	--	--	--	--	--	
MW-5	5/26/2010	441.54	NM	--	--	--	--	--	--	--	--	--	--	
MW-5	6/15/2010	441.54	NM	--	--	--	--	--	--	--	--	--	--	
MW-5	7/20/2010	441.54	13.78	--	428.38	6,500	4,100	--	530	570	6.7	81	300	
MW-5	8/16/2010	441.54	NM	--	--	--	--	--	--	--	--	--	--	
MW-5	9/22/2010	441.51	NM	--	--	--	--	--	--	--	--	--	--	
MW-5	10/27/2010	441.51	NM	--	--	--	--	--	--	--	--	--	--	

Table 3. Historical Groundwater Gauging and Analytical Results

Third Quarter 1999 to Current
 Former Texaco Bulk Plant 211815
 410 Driveway Street
 Fairbanks, Alaska

Well ID	Sample Dates	TOC (ft)	DTW (ft bToc)	LNAPL Thickness (ft)	GWE ft msl	TPH-d (µg/L)	TPH-g (µg/L)	TPH-d w Si/Gel (µg/L)	TPH-r (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Comments
ADEC Groundwater Cleanup Levels						1,500	2,200	1,500	1,100	4.6	1,100	15	190	
MW-5	11/15/2010	441.51	NM	--	--	--	--	--	--	--	--	--	--	
MW-5	12/13/2010	441.51	NM	--	--	--	--	--	--	--	--	--	--	
MW-5	1/4/2011	441.51	NM	--	--	--	--	--	--	--	--	--	--	
MW-5	2/7/2011	441.51	NM	--	--	--	--	--	--	--	--	--	--	
MW-5	9/21/2011	441.51	12.03	--	430.13	4,200	5,000	--	<670	530	35	150	660	
MW-5	7/23/2012	441.51	13.02	--	429.14	--	--	--	--	--	--	--	--	
MW-5	7/27/2012	441.51	NM	--	--	3,800	3,400	620	<660	410	49	54	420	
MW-5	7/30/2013	441.51	13.80	--	428.36	--	--	--	--	--	--	--	--	
MW-5	8/5/2013	441.51	NM	--	--	1,310	4,100	1,300	<1,100	202	9.3	25.5	186	
MW-5	7/11/2014	441.51	9.38	--	432.78	--	--	--	--	--	--	--	--	
MW-5	7/14/2014	441.51	NM	--	--	<100	<400	<400	770	<1.0	<1.0	<1.0	<3.0	
MW-5	9/15/2015	441.51	11.52	--	430.64	2,200	2,600	1,100	1,700	95.8	5	46.4	214	
MW-5	7/21/2016	441.51	NM	--	--	--	--	--	--	--	--	--	--	well not sampled- under large puddle
MW-5	8/17/2017	441.51	NM	--	--	--	--	--	--	--	--	--	--	well not sampled- under large puddle
MW-5	8/23/2018	441.51	11.92	--	430.24	8,500	6,300	830 J	2,800	760	65	370	1,900	
MW-5	7/11/2019	441.75	NM	--	--	--	--	--	--	--	--	--	--	Unable to locate
MW-5	6/9/2020	441.75	--	--	--	--	--	--	--	--	--	--	--	Well casing obstructed by ice at 6.87 ft BTOC
MW-5	7/15/2021	441.75	--	--	--	--	--	--	--	--	--	--	--	Could not locate the well
MW-7	10/3/2005	438.12	13.96	--	428.20	2,200	7,100	--	<97	1,700	<5.0	240	300	
MW-7	4/20/2006	438.12	16.84	--	425.32	2,300	4,600	--	200	450	6.9	170	480	
MW-7	9/11/2006	438.12	14.74	--	427.42	2,000	8,100	--	<98	1,800	9.4	280	450	
MW-7	3/16/2007	438.12	16.78	--	425.38	2,500	7,600	--	<100	1,400	9	200	300	
MW-7	9/9/2007	443.32	15.05	--	427.11	3,500	8,100	--	<200	1,800	10	300	700	
MW-7	4/4/2008	443.32	17.08	--	425.08	--	--	--	--	--	--	--	--	
MW-7	4/10/2008	443.32	NM	--	--	4,730	8,650	--	<750	1,700	3.08	234	452	
MW-7	9/16/2008	443.32	14.16	--	428.00	5,640	10,900	--	<750	1,830	<25.0	277	676	
MW-7	3/25/2009	443.32	NM	--	--	--	--	--	--	--	--	--	--	
MW-7	4/20/2009	443.32	NM	--	--	--	--	--	--	--	--	--	--	
MW-7	5/26/2009	443.32	NM	--	--	--	--	--	--	--	--	--	--	
MW-7	6/24/2009	443.32	NM	--	--	--	--	--	--	--	--	--	--	
MW-7	7/27/2009	443.32	15.97	--	426.19	--	--	--	--	--	--	--	--	
MW-7	7/31/2009	443.32	NM	--	--	3,960	8,570 ¹	--	606	1,760	<25.0	255	481	
MW-7	8/1/2009	443.32	NM	--	--	--	--	--	--	--	--	--	--	
MW-7	9/17/2009	443.32	NM	--	--	--	--	--	--	--	--	--	--	
MW-7	10/22/2009	443.32	NM	--	--	--	--	--	--	--	--	--	--	
MW-7	11/3/2009	443.32	NM	--	--	--	--	--	--	--	--	--	--	
MW-7	12/14/2009	443.32	NM	--	--	--	--	--	--	--	--	--	--	
MW-7	1/12/2010	443.32	NM	--	--	--	--	--	--	--	--	--	--	
MW-7	2/9/2010	443.32	NM	--	--	--	--	--	--	--	--	--	--	
MW-7	3/18/2010	443.32	NM	--	--	--	--	--	--	--	--	--	--	
MW-7	4/21/2010	443.32	NM	--	--	--	--	--	--	--	--	--	--	
MW-7	5/26/2010	443.32	NM	--	--	--	--	--	--	--	--	--	--	
MW-7	6/15/2010	443.32	NM	--	--	--	--	--	--	--	--	--	--	
MW-7	7/20/2010	443.32	15.64	--	426.52	--	--	--	--	--	--	--	--	
MW-7	7/22/2010	443.32	NM	--	--	4,000	6,400	--	290	1,400	3.4	270	460	
MW-7	8/16/2010	443.32	NM	--	--	--	--	--	--	--	--	--	--	
MW-7	9/22/2010	443.20	NM	--	--	--	--	--	--	--	--	--	--	

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Third Quarter 1999 to Current
 Former Texaco Bulk Plant 211815
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 Fairbanks, Alaska

Well ID	Sample Dates	TOC (ft)	DTW (ft bToc)	LNAPL Thickness (ft)	GWE ft msl	TPH-d (µg/L)	TPH-g (µg/L)	TPH-d w Si/Gel (µg/L)	TPH-r (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Comments
ADEC Groundwater Cleanup Levels						1,500	2,200	1,500	1,100	4.6	1,100	15	190	
MW-7	10/27/2010	443.20	NM	--	--	--	--	--	--	--	--	--	--	
MW-7	11/15/2010	443.20	NM	--	--	--	--	--	--	--	--	--	--	
MW-7	12/13/2010	443.20	NM	--	--	--	--	--	--	--	--	--	--	
MW-7	1/4/2011	443.20	NM	--	--	--	--	--	--	--	--	--	--	
MW-7	2/7/2011	443.20	NM	--	--	--	--	--	--	--	--	--	--	
MW-7	9/21/2011	443.20	13.99	--	428.17	--	--	--	--	--	--	--	--	
MW-7	9/22/2011	443.20	NM	--	--	4,300	5,100	--	<670	1,200	2.6	210	350	
MW-7	7/23/2012	443.20	14.99	--	427.17	--	--	--	--	--	--	--	--	
MW-7	7/27/2012	443.20	NM	--	--	2,500	4,800	410	<340	1,000	7.4	190	260	
MW-7	7/30/2013	443.20	15.93	--	426.23	--	--	--	--	--	--	--	--	
MW-7	7/11/2014	443.20	11.24	--	430.92	--	--	--	--	--	--	--	--	
MW-7	9/15/2015	443.20	13.35	--	428.81	650	773	<400	<400	114	<1.0	1.3	<3.0	
MW-7	7/21/2016	443.20	12.81	--	429.35	2400	3500	210 J	170	660	2.0 J	44	22	
MW-7	8/17/2017	443.20	14.89	--	427.27	4,400	4,500	400	<680	830	3	110	270	
MW-7	8/23/2018	443.20	13.77	--	428.39	4,300	6,200	380 J	<170	1,100	4 J	160	430	
MW-7	7/11/2019	443.36	15.91	0.00	427.45	3,800	2,500 J	1,300	590	800	10	65	239.9	
MW-7	6/27/2020	443.36	13.20	0.00	430.16	3,500 J [<888 J]	2,000 [1,960]	1,330 J [<888 J]	849 [<888]	881 [937]	1.41 [1.51]	86.9 [92.0]	302 [323]	
MW-7	7/15/2021	443.36	15.00	0.00	428.36	3,850	2,990	<800 B J	<800	851	<25.0	83.4	341	
MW-8	10/3/2005	436.51	12.32	--	429.84	1,500	2,900	--	720	390	39	96	290	
MW-8	4/20/2006	436.51	15.23	--	426.93	1,800	4,500	--	120	430	7.9	190	530	
MW-8	9/11/2006	436.51	13.12	--	429.04	1,400	3,300	--	300	410	16	120	330	
MW-8	3/16/2007	436.51	15.18	--	426.98	1,800	4,400	--	110	400	10	200	600	
MW-8	9/9/2007	441.69	13.41	--	428.75	2,000	2,200	--	210	300	20	100	300	
MW-8	4/4/2008	441.69	15.42	--	426.74	--	--	--	--	--	--	--	--	
MW-8	4/10/2008	441.69	15.42	--	426.74	2,950	5,700	--	<750	458	6.92	191	525	
MW-8	9/16/2008	441.69	12.49	--	429.67	1,930	3,020	--	<750	269	6.58	95.1	186	
MW-8	3/25/2009	441.69	NM	--	--	--	--	--	--	--	--	--	--	
MW-8	4/20/2009	441.69	NM	--	--	--	--	--	--	--	--	--	--	
MW-8	5/26/2009	441.69	NM	--	--	--	--	--	--	--	--	--	--	
MW-8	6/24/2009	441.69	NM	--	--	--	--	--	--	--	--	--	--	
MW-8	7/27/2009	441.69	14.40	--	427.76	--	--	--	--	--	--	--	--	
MW-8	7/30/2009	441.69	14.40	--	427.76	1,370	2,230 ¹	--	<391	180 ¹	<10.0 ¹	81.4 ¹	163 ¹	
MW-8	8/26/2009	441.69	NM	--	--	--	--	--	--	--	--	--	--	
MW-8	9/17/2009	441.69	NM	--	--	--	--	--	--	--	--	--	--	
MW-8	10/22/2009	441.69	NM	--	--	--	--	--	--	--	--	--	--	
MW-8	11/3/2009	441.69	NM	--	--	--	--	--	--	--	--	--	--	
MW-8	12/14/2009	441.69	NM	--	--	--	--	--	--	--	--	--	--	
MW-8	1/12/2010	441.69	NM	--	--	--	--	--	--	--	--	--	--	
MW-8	3/18/2010	441.69	NM	--	--	--	--	--	--	--	--	--	--	
MW-8	2/9/2010	441.69	NM	--	--	--	--	--	--	--	--	--	--	
MW-8	4/21/2010	441.69	NM	--	--	--	--	--	--	--	--	--	--	
MW-8	5/26/2010	441.69	NM	--	--	--	--	--	--	--	--	--	--	
MW-8	6/15/2010	441.69	NM	--	--	--	--	--	--	--	--	--	--	
MW-8	7/20/2010	441.69	14.05	--	428.11	--	--	--	--	--	--	--	--	
MW-8	7/21/2010	441.69	NM	--	--	2,300	4,400	--	250	290	7.3	140.0	340	
MW-8	8/16/2010	441.69	NM	--	--	--	--	--	--	--	--	--	--	
MW-8	9/22/2010	441.61	NM	--	--	--	--	--	--	--	--	--	--	

Table 3. Historical Groundwater Gauging and Analytical Results

Third Quarter 1999 to Current
 Former Texaco Bulk Plant 211815
 410 Driveway Street
 Fairbanks, Alaska

Well ID	Sample Dates	TOC (ft)	DTW (ft bToc)	LNAPL Thickness (ft)	GWE ft msl	TPH-d (µg/L)	TPH-g (µg/L)	TPH-d w Si/Gel (µg/L)	TPH-r (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Comments
ADEC Groundwater Cleanup Levels						1,500	2,200	1,500	1,100	4.6	1,100	15	190	
MW-8	10/27/2010	441.61	NM	--	--	--	--	--	--	--	--	--	--	
MW-8	11/15/2010	441.61	NM	--	--	--	--	--	--	--	--	--	--	
MW-8	12/13/2010	441.61	NM	--	--	--	--	--	--	--	--	--	--	
MW-8	1/4/2011	441.61	NM	--	--	--	--	--	--	--	--	--	--	
MW-8	2/7/2011	441.61	NM	--	--	--	--	--	--	--	--	--	--	
MW-8	9/21/2011	441.61	12.36	--	429.80	--	--	--	--	--	--	--	--	
MW-8	9/22/2011	441.61	12.36	--	429.80	1,900	620	--	270	5.1	<0.5	0.9	4.0	
MW-8	7/23/2012	441.61	13.21	--	428.95	--	--	--	--	--	--	--	--	
MW-8	7/27/2012	441.61	13.21	--	428.95	1,700	3,600	250	340	330	6.2	100	230	
MW-8	7/30/2013	441.61	14.19	--	427.97	--	--	--	--	--	--	--	--	
MW-8	8/5/2013	441.61	NM	--	--	2,200	2,410	720	<1,000	292	3.9	92.3	174	
MW-8	8/5/2013	441.61	NM	--	--	2,000	2,900	--	<980	273	4.2	106	174	Duplicate Sample Results
MW-8	7/11/2014	441.61	9.61	--	432.55	--	--	--	--	--	--	--	--	
MW-8	7/14/2014	441.61	NM	--	--	<400	269	--	<400	<1.0	<1.0	<1.0	<3.0	
MW-8	9/15/2015	441.61	NM	--	--	--	--	--	--	--	--	--	--	Could not locate, possibly buried
MW-8	7/21/2016	441.61	NM	--	--	--	--	--	--	--	--	--	--	Could not locate
MW-8	8/17/2017	441.61	13.20	--	428.96	770	900	<49	270	94	<0.5	3	3	
MW-8	8/23/2018	441.61	11.98	--	430.18	1,500	1,500	89 J	260 J	170	2.0 J	19	38	
MW-8	6/27/2020	441.61	11.56	0.00	430.05	2,880	1,260	1,280 J	874 J	224	15.3	53.9	305	Hydrasleeve in well, removed for gauging
MW-8	7/15/2021	441.61	--	--	--	--	--	--	--	--	--	--	--	Could not locate the well
MW-9	10/3/2005	436.39	12.18	--	429.98	240	26	--	390	0.7	<0.5	<0.5	<1.5	
MW-9	4/20/2006	436.39	15.06	--	427.10	500	91	--	310	2.5	<0.5	<0.5	<1.5	
MW-9	9/11/2006	436.39	12.90	--	429.26	63	31	--	40	<0.5	<0.5	<0.5	--	
MW-9	3/16/2007	436.39	14.99	--	427.17	580	700	--	340	2.0	<1	<1	<2	
MW-9	9/9/2007	441.56	13.21	--	428.95	110	<10	--	93	<1	<1	<1	<2	
MW-9	4/4/2008	441.56	15.28	--	426.88	--	--	--	--	--	--	--	--	
MW-9	4/10/2008	441.56	NM	--	--	538	92.7	--	<750	1.61	<0.500	<0.500	<1.00	
MW-9	9/16/2008	441.56	12.31	--	429.85	193	<50.0	--	<750	1.86	<0.500	<0.500	<1.00	
MW-9	3/25/2009	441.56	NM	--	--	--	--	--	--	--	--	--	--	
MW-9	4/20/2009	441.56	NM	--	--	--	--	--	--	--	--	--	--	
MW-9	5/26/2009	441.56	NM	--	--	--	--	--	--	--	--	--	--	
MW-9	6/24/2009	441.56	NM	--	--	--	--	--	--	--	--	--	--	
MW-9	7/27/2009	441.56	14.05	--	428.11	--	--	--	--	--	--	--	--	
MW-9	7/30/2009	441.56	NM	--	--	484	58.8	--	<394	3.02	<1.00	<1.00	<3.00	
MW-9	8/26/2009	441.56	NM	--	--	--	--	--	--	--	--	--	--	
MW-9	9/17/2009	441.56	NM	--	--	--	--	--	--	--	--	--	--	
MW-9	10/22/2009	441.56	NM	--	--	--	--	--	--	--	--	--	--	
MW-9	11/3/2009	441.56	NM	--	--	--	--	--	--	--	--	--	--	
MW-9	12/14/2009	441.56	NM	--	--	--	--	--	--	--	--	--	--	
MW-9	1/12/2010	441.56	NM	--	--	--	--	--	--	--	--	--	--	
MW-9	2/9/2010	441.56	NM	--	--	--	--	--	--	--	--	--	--	
MW-9	3/18/2010	441.56	NM	--	--	--	--	--	--	--	--	--	--	
MW-9	4/21/2010	441.56	NM	--	--	--	--	--	--	--	--	--	--	
MW-9	5/26/2010	441.56	NM	--	--	--	--	--	--	--	--	--	--	
MW-9	6/15/2010	441.56	NM	--	--	--	--	--	--	--	--	--	--	
MW-9	7/20/2010	441.56	13.91	--	428.25	--	--	--	--	--	--	--	--	
MW-9	7/21/2010	441.56	NM	--	--	840	110	--	220	5.6	<0.5	<0.5	<1.5	

Table 3. Historical Groundwater Gauging and Analytical Results

Third Quarter 1999 to Current
 Former Texaco Bulk Plant 211815
 410 Driveway Street
 Fairbanks, Alaska

Well ID	Sample Dates	TOC (ft)	DTW (ft bToc)	LNAPL Thickness (ft)	GWE ft msl	TPH-d (µg/L)	TPH-g (µg/L)	TPH-d w Si/Gel (µg/L)	TPH-r (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Comments
ADEC Groundwater Cleanup Levels						1,500	2,200	1,500	1,100	4.6	1,100	15	190	
MW-9	8/16/2010	441.56	NM	--	--	--	--	--	--	--	--	--	--	
MW-9	9/22/2010	441.56	NM	--	--	--	--	--	--	--	--	--	--	
MW-9	10/27/2010	441.45	NM	--	--	--	--	--	--	--	--	--	--	
MW-9	11/15/2010	441.45	NM	--	--	--	--	--	--	--	--	--	--	
MW-9	12/13/2010	441.45	NM	--	--	--	--	--	--	--	--	--	--	
MW-9	1/4/2011	441.45	NM	--	--	--	--	--	--	--	--	--	--	
MW-9	2/7/2011	441.45	NM	--	--	--	--	--	--	--	--	--	--	
MW-9	9/21/2011	441.45	12.19	--	429.97	--	--	--	--	--	--	--	--	
MW-9	9/22/2011	441.45	NM	--	--	780	440	--	220	43	0.7	<0.5	10	
MW-9	7/23/2012	441.45	13.39	--	428.77	--	--	--	--	--	--	--	--	
MW-9	7/27/2012	441.45	NM	--	--	100	<10	<47	120	<0.5	<0.5	<0.5	<1.5	
MW-9	7/30/2013	441.45	13.99	--	428.17	--	--	--	--	--	--	--	--	
MW-9	8/5/2013	441.45	NM	--	--	850	221	<430	1,100	37.9	<1.0	2.7	8.7	
MW-9	7/11/2014	441.45	9.45	--	432.71	--	--	--	--	--	--	--	--	
MW-9	7/14/2014	441.45	9.45	--	432.71	<420	<100	--	<420	<1.0	<1.0	<1.0	<3.0	
MW-9	9/15/2015	441.45	11.63	--	430.53	<400	<100	--	<400	<1.0	<1.0	<1.0	<3.0	
MW-9	7/21/2016	441.45	11.26	--	430.90	290	27 J	<52	78	3	<0.5	<0.5	<0.5	
MW-9	8/17/2017	441.45	13.05	--	429.11	230 J	50 J	<49	240 J	3.0	<0.5	<0.5	<0.5	
MW-9	08/17/17	441.45	NM	--	--	200 J	66 J	<49	160 J	6.0	<0.5	<0.5	<0.5	Duplicate Sample Results
MW-9	8/23/2018	441.45	12.14	--	430.02	850	<14	<51 J	680	<0.2	<0.2	<0.4	<1.0	
MW-9	7/11/2019	441.61	14.01	0.00	427.60	370	< 100J	< 75	360 J	< 0.50BJ	2.4 J	0.85 J	7.4 J	
MW-9	6/27/2020	441.61	11.40	0.00	430.21	4,360	23.5 J	1,660 J	1,270	<1.00	<1.00	<1.00	<3.00	Vehicle parked over, unable to sample
MW-9	7/15/2021	441.61	13.14	0.00	428.47	<800 B	<100 B	<800 B J	<800	<1.00	<1.00	<1.00	<3.00 R	
MW-10	10/3/2005	437.32	12.98	--	429.18	1,200	760	--	520	64	2	5	21	
MW-10	4/20/2006	437.32	15.82	--	426.34	1,400	450	--	390	25	<0.5	<0.5	1.7	
MW-10	4/20/2006	437.32	NM	--	--	1,500	470	--	330	25	<0.5	<0.5	1.8	Duplicate Sample Results
MW-10	9/11/2006	437.32	13.66	--	428.50	1,300	670	--	250	64	0.8	0.5	2.7	Well buried under snow bank
MW-10	9/11/2006	437.32	13.66	--	428.50	1,200	660	--	240	63	0.8	0.5	2.7	Duplicate Sample Results
MW-10	3/14/2007	437.32	NM	--	--	--	--	--	--	--	--	--	--	
MW-10	9/9/2007	442.52	13.98	--	428.18	1,500	700	--	240	70	<1	3	7	
MW-10	4/4/2008	442.52	16.00	--	426.16	--	--	--	--	--	--	--	--	
MW-10	4/10/2008	442.52	NM	--	--	1,150	498	--	<765	24.1	<0.500	<0.500	3.60	
MW-10	9/16/2008	442.52	13.07	--	429.09	2,220	706	--	<750	52.5	0.637	2.58	10.0	
MW-10	3/25/2009	442.52	NM	--	--	--	--	--	--	--	--	--	--	Well buried by recent construction
MW-10	4/20/2009	442.52	NM	--	--	--	--	--	--	--	--	--	--	Well buried by recent construction
MW-10	5/26/2009	442.52	NM	--	--	--	--	--	--	--	--	--	--	Well buried by recent construction
MW-10	6/24/2009	442.52	NM	--	--	--	--	--	--	--	--	--	--	Well buried by recent construction
MW-10	7/27/2009	442.52	NM	--	--	--	--	--	--	--	--	--	--	Well buried by recent construction
MW-10	8/26/2009	442.52	NM	--	--	--	--	--	--	--	--	--	--	Well buried
MW-10	9/17/2009	442.52	NM	--	--	--	--	--	--	--	--	--	--	Well buried
MW-10	10/22/2009	442.52	NM	--	--	--	--	--	--	--	--	--	--	Well buried
MW-10	11/3/2009	442.52	NM	--	--	--	--	--	--	--	--	--	--	Well buried
MW-10	12/14/2009	442.52	NM	--	--	--	--	--	--	--	--	--	--	Well buried
MW-10	1/12/2010	442.52	NM	--	--	--	--	--	--	--	--	--	--	Well buried
MW-10	2/9/2010	442.52	NM	--	--	--	--	--	--	--	--	--	--	Well buried
MW-10	3/18/2010	442.52	NM	--	--	--	--	--	--	--	--	--	--	Well buried
MW-10	4/21/2010	442.52	NM	--	--	--	--	--	--	--	--	--	--	Well buried

**Table 3. Historical Groundwater Gauging and Analytical Results
Third Quarter 1999 to Current**
Former Texaco Bulk Plant 211815
410 Driveway Street
Fairbanks, Alaska

Well ID	Sample Dates	TOC (ft)	DTW (ft bToc)	LNAPL Thickness (ft)	GWE ft msl	TPH-d (µg/L)	TPH-g (µg/L)	TPH-d w Si/Gel (µg/L)	TPH-r (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Comments
ADEC Groundwater Cleanup Levels						1,500	2,200	1,500	1,100	4.6	1,100	15	190	
MW-10	5/26/2010	442.52	NM	--	--	--	--	--	--	--	--	--	--	Well buried
MW-10	6/15/2010	442.52	NM	--	--	--	--	--	--	--	--	--	--	Well buried
MW-10	7/20/2010	442.52	NM	--	--	--	--	--	--	--	--	--	--	Well buried
MW-10	8/16/2010	442.52	NM	--	--	--	--	--	--	--	--	--	--	Well buried
MW-10	9/22/2010	442.52	NM	--	--	--	--	--	--	--	--	--	--	Well buried
MW-10	10/27/2010	442.52	NM	--	--	--	--	--	--	--	--	--	--	Well buried
MW-10	11/15/2010	442.52	NM	--	--	--	--	--	--	--	--	--	--	Well buried
MW-10	12/13/2010	442.52	NM	--	--	--	--	--	--	--	--	--	--	Well buried
MW-10	1/4/2011	442.52	NM	--	--	--	--	--	--	--	--	--	--	Well buried
MW-10	2/7/2011	442.52	NM	--	--	--	--	--	--	--	--	--	--	Well buried
MW-10	9/21/2011	442.52	NM	--	--	--	--	--	--	--	--	--	--	Well buried
MW-10	7/23/2012	442.52	NM	--	--	--	--	--	--	--	--	--	--	Well Destroyed
QA (EQB)	6/27/2020	--	--	--	--	<840	<100	<840	<840	<1.00	<1.00	<1.00	<3.00	
QA (EQB)	7/15/2021	--	--	--	--	412 J	<100 J	412 J	<800	<1.00	<1.00	<1.00	<3.00	
QA (TB)	6/27/2020	--	--	--	--	--	<100	--	--	<1.00	<1.00	<1.00	<3.00	
QA (TB)	7/15/2021	--	--	--	--	--	37.1 J	--	--	<1.00	<1.00	<1.00	<3.00	

Notes:

ID = Identification
 MW = Groundwater monitoring well
 TOC = Top of casing
 DTW = Depth to groundwater
 ft bTOC = Feet below top of casing
 ft = Feet relative to NAVD88
 GW Elev = Groundwater elevation
 µg/L = Micrograms per liter
 <1.00 = Not detected at or above the Reported Detection Limit (RDL)
Bold = Value exceeds laboratory Method Detection Limit (MDL)
Bold and Shaded = Value exceeds ADEC Groundwater Cleanup Level
Bold : Constituent considered non-detect, however Laboratory RDL is greater than the ADEC Groundwater Cleanup Level
 J = The compound was positively identified; however, the associated numerical value is an estimated concentration only.
 B = The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
 R = The sample results are rejected as unusable. The compound may or may not be present in the sample.
 D = The sample result reported from dilution

TPH-g = Total petroleum hydrocarbons, gasoline range by LUFT GC/MS according to Alaska Method AK101
 TPH-d = Total petroleum hydrocarbons, diesel range by LUFT GC/MS according to Alaska Method AK102/103
 TPH-d w/Si Gel = Total petroleum hydrocarbons, diesel range by LUFT GC/MS with Silica Gel according to Alaska Method AK102
 TPH-r = Total petroleum hydrocarbons, residual range organics LUFT GC/MS according to USEPA Method AK102/103
 Samples analyzed by USEPA Method 8260D:
 Benzene, toluene, ethylbenzene and total xylenes (collectively BTEX)
 LUFT = Leaking Underground Fuel Tank
 GC/MS = Gas chromatography/Mass Spectrometry
 QA (EQB) = Quality Assurance (Equipment Blank)
 QA (TB) = Quality Assurance (Trip Blank)
 ADEC = Alaska Department of Environmental Conservation
 NADV88 = North American Vertical Datum of 1988
 NA = Not available
 ND = Not Detected
 NM = Not Measured
 -- = Not Available or Not Analyzed
 LNAPL = Light Non-Aqueous Phase Liquid
 [] = Blind Duplicate Result

Table 4a. Historical Groundwater Analytical Results - Additional VOCs
Second Quarter 2020 to Current
 Former Texaco Bulk Plant 211815
 410 Driveway Street
 Fairbanks, Alaska

Well ID	Sample Date	1,2-Dibromoethane mg/L	1,2-Dichloroethane mg/L	1,2,4-Trimethylbenzene mg/L	Vinyl chloride (Chloroethene) mg/L	Isopropylbenzene mg/L	Methyl-t-butyl ether mg/L	Trichlorofluoromethane (Freon 11) mg/L	Chloroform mg/L	1,1,2,2-Tetrachloroethane mg/L	1,1,2-Trichloroethane mg/L	1,2,3-Trichlorobenzene mg/L	1,2,4-Trichlorobenzene mg/L	Comments
ADEC Groundwater Cleanup Levels		0.075	1.7	56	0.19	--	140	5200	2.2	0.76	0.41	7	4	
AR-81	6/26/2020	--	<1.00	--	--	--	--	--	--	--	--	--	--	Not enough water to sample
AR-81	7/15/2021	--	--	--	--	--	--	--	--	--	--	--	--	
AR-85	6/26/2020	--	<1.00	--	--	--	--	--	--	--	--	--	--	
AR-85	7/15/2021	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	6/26/2020	--	<1.00	--	--	--	--	--	--	--	--	--	--	
MW-1	7/15/2021	--	--	--	--	--	--	--	--	--	--	--	--	
MW-3	6/26/2020	<0.00500 [0.00500 J]	<1.00 [<1.00]	<1.00 [<1.00]	<1.00 [<1.00]	<1.00 [<1.00]	<1.00 [<1.00]	4.34 J [4.39 J]	<5.00 [<5.00]	<1.00 [<1.00]	<1.00 [<1.00]	<1.00 [<1.00]	<1.00 [<1.00]	<1.00 [<1.00]
MW-3	7/15/2021	<0.0500	1.00	14.1	<1.00	0.951 J	<1.00 J	1.45 J	<5.00	<1.00	<1.00	<1.00 J	<1.00	
MW-4	6/26/2020	<5.00	<10.0	1,010	<10.0	50.8	<10.0	<50.0	<50.0	<10.0	<10.0	<10.0	<10.0	
MW-4	7/15/2021	<5.00 [<5.00]	<10.0 [5.71]	985 [1,110]	<10.0 [<1.00]	48.9 [59]	5.84 J [3.60 J]	<50.0 J [<5.00 J]	<50.0 [<5.00]	<10.0 [<1.00]	<10.0 [<1.00]	<10.0 J [<1.00 J]	<10.0 [<1.00]	
MW-7	6/27/2020	<2.50 [0.500 J]	1.73 [<1.00]	149 [155]	<1.00 [<1.00]	19.6 [20.4]	1.04 [<1.00]	<5.00 [<5.00]	<5.00 [<5.00]	<1.00 [<1.00]	<1.00 [<1.00]	<1.00 [<1.00]	<1.00 [<1.00]	
MW-7	7/15/2021	<0.500	<25.0	116	<25.0	19.5 J	<25.0 J	<125 J	<125	<25.0	<25.0	<25.0 J	<25.0	
MW-8	6/27/2020	<0.500	<1.00	124	0.327 J	12.9	<1.00	0.621 J	<5.00	<1.00	<1.00	<1.00	<1.00	Could not locate the well
MW-8	7/15/2021	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	6/27/2020	<0.00500	<1.00	<1.00	<1.00	<1.00	<1.00	1.49 J	<5.00	<1.00	<1.00	<1.00	<1.00	
MW-9	7/15/2021	<0.00500	<1.00	<1.00 R	<1.00	<1.00	<1.00 R	2.20 J	<5.00	<1.00	<1.00	<1.00 J	<1.00	
QA-TB	6/27/2020	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	<5.00	<1.00	<1.00	<1.00	<1.00	
QA-TB	7/15/2021	--	<1.00	<1.00	<1.00	<1.00	<1.00 J	<5.00 J	<5.00	<1.00	<1.00	<1.00 J	<1.00	
QA-EQB	6/27/2020	<0.00500	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	<5.00	<1.00	<1.00	<1.00	<1.00	
QA-EQB	7/15/2021	<0.00500	<1.00	<1.00	<1.00	<1.00	<1.00 J	<5.00 J	<5.00	<1.00	<1.00	<1.00 J	<1.00	

Notes:

- ID = Identification
- MW = Groundwater monitoring well
- mg/L = Milligrams per liter
- <1.00 = Not detected at or above the Reported Detection Limit
- 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
- J = The compound was positively identified; however, the associated numerical value is an estimated concentration only.
- R = The sample results are rejected as unusable. The compound may or may not be present in the sample.
- [] = Blind Duplicate Sample Result
- ADEC = Alaska Department of Environmental Conservation
- Constituents analyzed by United States Environmental Protection Agency Method 8260D

Table 4b. Historical Groundwater Analytical Results - Additional VOCs
Second Quarter 2020 to Current
 Former Texaco Bulk Plant 211815
 410 Driveway Street
 Fairbanks, Alaska

Well ID	Sample Date	1,2-Dichloropropane mg/L	1,3-Dichlorobenzene mg/L	1,4-Dichlorobenzene mg/L	Bromodichloromethane mg/L	Bromomethane (Methyl bromide) mg/L	Carbon Tetrachloride mg/L	cis-1,3-Dichloropropene mg/L	Dibromochloromethane mg/L	trans-1,3-Dichloropropene mg/L	Trichloroethene (Trichloroethylene) mg/L	PCE mg/L	1,1,1-Trichloroethane mg/L	Comments
ADEC Groundwater Cleanup Levels		8.2	4.7	4.8	1.3	7.5	4.6	4.7	8.7	4.7	2.8	41	8000	
AR-81	6/26/2020	--	--	--	--	--	--	--	--	--	--	--	--	
AR-81	7/15/2021	--	--	--	--	--	--	--	--	--	--	--	--	Not enough water to sample
AR-85	6/26/2020	--	--	--	--	--	--	--	--	--	--	--	--	
AR-85	7/15/2021	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	6/26/2020	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	7/15/2021	--	--	--	--	--	--	--	--	--	--	--	--	
MW-3	6/26/2020	<1.00 [<1.00]	<1.00 [<1.00]	<1.00 [<1.00]	<1.00 [<1.00]	<5.00 [<5.00]	<1.00 [<1.00]	<1.00 [<1.00]	<1.00 [<1.00]	<1.00 [<1.00]	<1.00 [<1.00]	<1.00 [<1.00]	<1.00 [<1.00]	
MW-3	7/15/2021	<1.00	<1.00	<1.00	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	
MW-4	6/26/2020	<10.0	<10.0	<10.0	<10.0	<50.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	
MW-4	7/15/2021	<10.0 [<1.00]	<10.0 [<1.00]	<10.0 [<1.00]	<10.0 [<1.00]	<50.0 [<5.00]	<10.0 [<1.00]	<10.0 [<1.00]	<10.0 [<1.00]	<10.0 [<1.00]	<10.0 [<1.00]	<10.0 [<1.00]	<10.0 [<1.00]	
MW-7	6/27/2020	<1.00 [<1.00]	<1.00 [<1.00]	<1.00 [<1.00]	<1.00 [<1.00]	<5.00 [<5.00]	<1.00 [<1.00]	<1.00 [<1.00]	<1.00 [<1.00]	<1.00 [<1.00]	<1.00 [<1.00]	<1.00 [<1.00]	<1.00 [<1.00]	
MW-7	7/15/2021	<25.0	<25.0	<25.0	<25.0	<125	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	
MW-8	6/27/2020	<1.00	<1.00	<1.00	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	
MW-8	7/15/2021	--	--	--	--	--	--	--	--	--	--	--	--	Could not locate the well
MW-9	6/27/2020	<1.00	<1.00	<1.00	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	
MW-9	7/15/2021	<1.00	<1.00	<1.00	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	
QA-TB	6/27/2020	<1.00	<1.00	<1.00	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	
QA-TB	7/15/2021	<1.00	<1.00	<1.00	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	
QA-EQB	6/27/2020	<1.00	<1.00	<1.00	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	
QA-EQB	7/15/2021	<1.00	<1.00	<1.00	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	

Notes:

ID = Identification
 MW = Groundwater monitoring well
 mg/L = Milligrams per liter
 <1.00 = Not detected at or above the Reported Detection Limit
Bold and Italicized : Constituent considered non-detect, however Laboratory RDL is greater than the ADEC Groundwater Cleanup Level
 [] = Blind Duplicate Sample Result
 ADEC = Alaska Department of Environmental Conservation
 Constituents analyzed by United States Environmental Protection Agency Method 8260D

Table 4c. Historical Groundwater Analytical Results - Additional VOCs
Second Quarter 2020 to Current
 Former Texaco Bulk Plant 211815
 410 Driveway Street
 Fairbanks, Alaska

Well ID	Sample Date	1,1,2-Trichlorotrifluoroethane (Freon 113) mg/L	1,1-Dichloroethane mg/L	1,1 Dichloroethene mg/L	1,2-Dichlorobenzene (o-Dichlorobenzene) mg/L	2-Butanone (Methyl ethyl ketone) mg/L	4-Methyl-2-pentanone mg/L	Acetone mg/L	Bromochloromethane mg/L	Bromoform mg/L	Carbon disulfide mg/L	Chlorobenzene mg/L	Chloroethane mg/L	Comments
ADEC Groundwater Cleanup Levels		10000	28	280	300	--	6300	14000	--	33	810	78	--	
AR-81	6/26/2020	--	--	--	--	--	--	--	--	--	--	--	--	
AR-81	7/15/2021	--	--	--	--	--	--	--	--	--	--	--	--	Not enough water to sample
AR-85	6/26/2020	--	--	--	--	--	--	--	--	--	--	--	--	
AR-85	7/15/2021	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	6/26/2020	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	7/15/2021	--	--	--	--	--	--	--	--	--	--	--	--	
MW-3	6/26/2020	<1.00 [<1.00]	<1.00 [<1.00]	<1.00 [<1.00]	<1.00 [<1.00]	<10.0 [<10.0]	<10.0 [<10.0]	<50.0 [<50.0]	<1.00 [<1.00]	<1.00 [<1.00]	<1.00 [<1.00]	<1.00 [<1.00]	<5.00 [<5.00]	
MW-3	7/15/2021	<1.00 J	<1.00	<1.00	<1.00	<10.0	<10.0	<50.0 J	<1.00	<1.00	<1.00	<1.00	<5.00	
MW-4	6/26/2020	<10.0	<10.0	<10.0	<10.0	<100	<100	<500	<10.0	<10.0	<10.0	<10.0	<50.0	
MW-4	7/15/2021	<10.0 J [<1.00 J]	<10.0 [<1.00]	<10.0 [<1.00]	<10.0 [<1.00]	<100 [<10.0]	<100 [<10.0]	<500 J [<50.0 J]	<10.0 [<1.00]	<10.0 [<1.00]	<10.0 [<1.00]	<10.0 [<1.00]	<50.0 [<5.00]	
MW-7	6/27/2020	<1.00 [<1.00]	<1.00 [<1.00]	<1.00 [<1.00]	<1.00 [<1.00]	<10.0 [<10.0]	<10.0 [<10.0]	<50.0 [<50.0]	<1.00 [<1.00]	<1.00 [<1.00]	<1.00 [<1.00]	<1.00 [<1.00]	<5.00 [<5.00]	
MW-7	7/15/2021	<25.0 J	<25.0	<25.0	<25.0	<250	<250	<1,250 J	<25.0	<25.0	<25.0	<25.0	<125	
MW-8	6/27/2020	<1.00	<1.00	<1.00	<1.00	<10.0	<10.0	<50.0	<1.00	<1.00	<1.00	<1.00	<5.00	
MW-8	7/15/2021	--	--	--	--	--	--	--	--	--	--	--	--	Could not locate the well
MW-9	6/27/2020	<1.00	<1.00	<1.00	<1.00	<10.0	<10.0	<50.0	<1.00	<1.00	<1.00	<1.00	<5.00	
MW-9	7/15/2021	<1.00 J	<1.00	<1.00	<1.00	<10.0	<10.0	<50.0 J	<1.00	<1.00	<1.00	<1.00	<5.00	
QA-TB	6/27/2020	<1.00	<1.00	<1.00	<1.00	<10.0	<10.0	<50.0	<1.00	<1.00	<1.00	<1.00	<5.00	
QA-TB	7/15/2021	<1.00 J	<1.00	<1.00	<1.00	<10.0	<10.0	<50.0 J	<1.00	<1.00	<1.00	<1.00	<5.00	
QA-EQB	6/27/2020	<1.00	<1.00	<1.00	<1.00	<10.0	<10.0	<50.0	<1.00	<1.00	<1.00	<1.00	<5.00	
QA-EQB	7/15/2021	<1.00 J	<1.00	<1.00	<1.00	<10.0	<10.0	<50.0 J	<1.00	<1.00	<1.00	<1.00	<5.00	

Notes:

ID = Identification
 MW = Groundwater monitoring well
 mg/L = Milligrams per liter
 <1.00 = Not detected at or above the Reported Detection Limit
 J = The compound was positively identified; however, the associated numerical value is an estimated concentration only.
 [] = Blind Duplicate Sample Result
 ADEC = Alaska Department of Environmental Conservation
 Constituents analyzed by United States Environmental Protection Agency Method 8260D

Table 4d. Historical Groundwater Analytical Results - Additional VOCs
Second Quarter 2020 to Current
Former Texaco Bulk Plant 211815
410 Driveway Street
Fairbanks, Alaska

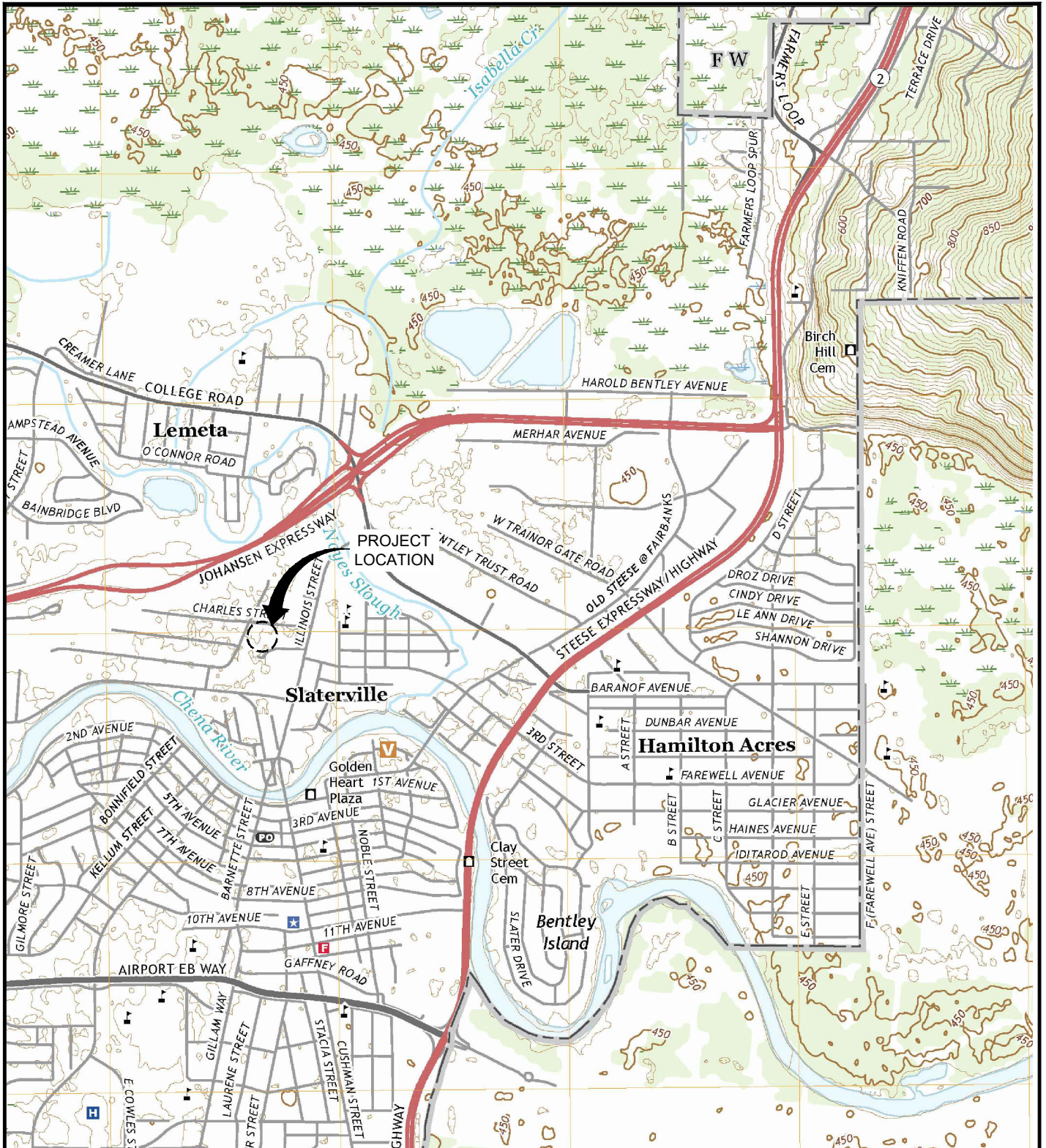
Well ID	Sample Date	Chloromethane (Methyl chloride) mg/L	cis-1,2-Dichloroethene mg/L	Dichlorodifluoromethane (Freon 12) mg/L	Methylene chloride (Dichloromethane)	Styrene	trans-1,2-Dichloroethene	Comments
ADEC Groundwater Cleanup Levels		190	36	200	100	1200	360	
AR-81	6/26/2020	--	--	--	--	--	--	
AR-81	7/15/2021	--	--	--	--	--	--	Not enough water to sample
AR-85	6/26/2020	--	--	--	--	--	--	
AR-85	7/15/2021	--	--	--	--	--	--	
MW-1	6/26/2020	--	--	--	--	--	--	
MW-1	7/15/2021	--	--	--	--	--	--	
MW-3	6/26/2020	<2.50 [<2.50]	<1.00 [<1.00]	<5.00 [<5.00]	<5.00 [<5.00]	<1.00 [<1.00]	<1.00 [<1.00]	
MW-3	7/15/2021	<2.50	<1.00	<5.00 J	<5.00	<1.00	<1.00	
MW-4	6/26/2020	<25.0	<10.0	<50.0	<50.0	<10.0	<10.0	
MW-4	7/15/2021	<25.0 [<2.50]	<10.0 [<1.00]	<50.0 J [<5.00 J]	<50.0 [<5.00]	<10.0 [<1.00]	<10.0 [<1.00]	
MW-7	6/27/2020	<2.50 [<2.50]	<1.00 [<1.00]	<5.00 [<5.00]	<5.00 [<5.00]	<1.00 [<1.00]	<1.00 [<1.00]	
MW-7	7/15/2021	<62.5	<25.0	<125 J	<125	<25.0	<25.0	
MW-8	6/27/2020	<2.50	<1.00	<5.00	<5.00	<1.00	<1.00	
MW-8	7/15/2021	--	--	--	--	--	--	Could not locate the well
MW-9	6/27/2020	<2.50	<1.00	<5.00	<5.00	<1.00	<1.00	
MW-9	7/15/2021	<2.50	<1.00	<5.00 J	<5.00	<1.00	<1.00	
QA-TB	6/27/2020	<2.50	<1.00	<5.00	<5.00	<1.00	<1.00	
QA-TB	7/15/2021	<2.50	<1.00	<5.00 J	<5.00	<1.00	<1.00	
QA-EQB	6/27/2020	<2.50	<1.00	<5.00	<5.00	<1.00	<1.00	
QA-EQB	7/15/2021	<2.50	<1.00	<5.00 J	<5.00	<1.00	<1.00	

Notes:

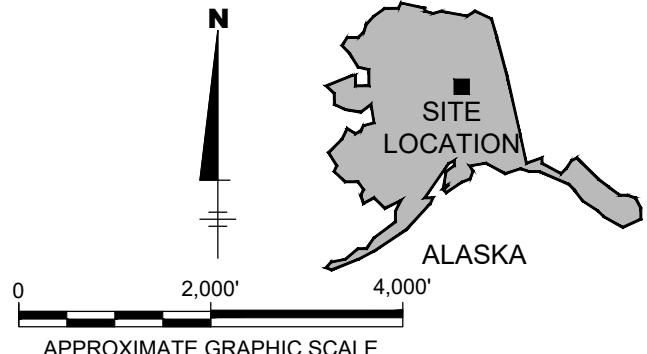
ID = Identification
MW = Groundwater monitoring well
mg/L = Milligrams per liter
<1.00 = Not detected at or above the Reported Detection Limit
J = The compound was positively identified; however, the associated numerical value is an estimated concentration only.
[] = Blind Duplicate Sample Result
ADEC = Alaska Department of Environmental Conservation
Constituents analyzed by United States Environmental Protection Agency Method 8260D

FIGURES





SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLE: FAIRBANKS (D-2) SE, AK., 1992, FAIRBANKS NORTH STAR BOROUGH, SECTION: 3, TOWNSHIP: 1S, RANGE: 1W



FORMER TEXACO BULK TERMINAL 211815 - 410 DRIVEWAY ST.
FAIRBANKS, AK 99707
ANNUAL 2021 GROUNDWATER MONITORING REPORT

SITE LOCATION MAP

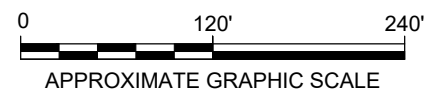


FIGURE
1

C:\Users\ymh2640\ACCDocs\Arcadis\AUS-CHEVRON-211815-FAIRBANKS Alaska\Project Files\20210111\Progress\01-DWG\GEN-F02-SITE PLAN.dwg LAYOUT: 2 SAVED: 8/13/2021 4:45 PM ACADVER: 24.05 (LMS TECH) PAGESETUP: ---- PLOTTED: 8/17/2021 12:14 PM BY: Y. M. BABU
 XREFS: IMAGES: PROJECTNAME: GEN-X-BASE: MW Well Image.jpg GEN-X-TITLE



- LEGEND:**
- PROPERTY BOUNDARY
 - TH-1 CHEVRON MONITORING WELL
ADEC FILE NO. 101.38.006
 - AR-81 TEXACO MONITORING WELL
ADEC FILE NO. 102.38.005
 - GEI-6 UNOCAL MONITORING WELL
ADEC FILE NO. 102.38.004
 - MW-2 ABANDONED GROUNDWATER MONITORING WELL
 - OHE OVERHEAD ELECTRIC LINE
 - RAILWAY TRACK
 - USTs UNDERGROUND STORAGE TANKS



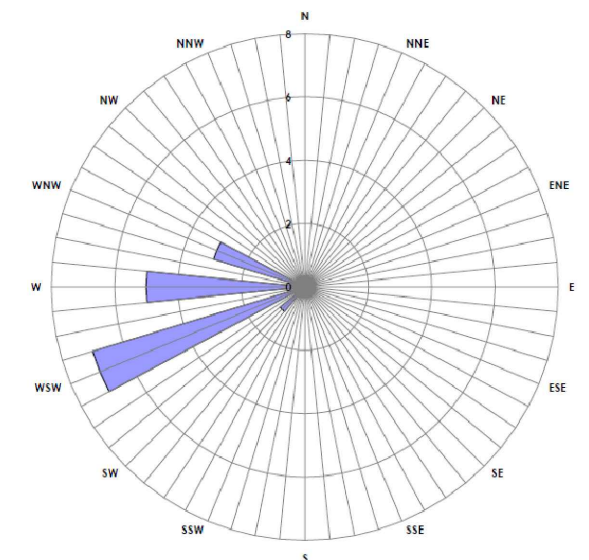
FORMER TEXACO BULK TERMINAL 211815 - 410 DRIVEWAY ST.
 FAIRBANKS, AK 99707
ANNUAL 2021 GROUNDWATER MONITORING REPORT

SITE PLAN





- LEGEND:**
- PROPERTY BOUNDARY
 - TH-1 CHEVRON MONITORING WELL
ADEC FILE NO. 101.38.006
 - AR-81 TEXACO MONITORING WELL
ADEC FILE NO. 102.38.005
 - GEI-6 UNOCAL MONITORING WELL
ADEC FILE NO. 102.38.004
 - MW-2 ABANDONED GROUNDWATER MONITORING WELL
 - USTs UNDERGROUND STORAGE TANKS
 - 429.00 --- GROUNDWATER ELEVATION CONTOUR
(DASHED WHERE INFERRED)
 - (429.09) GROUNDWATER ELEVATION IN FEET
RELATIVE TO NAVD88
 - ← APPARENT DIRECTION OF GROUNDWATER FLOW
 - 0.0006 FT/FT APPROXIMATE HYDRAULIC GRADIENT
(FEET / FOOT)
 - (NG) NOT GAUGED
 - NAVD88 NORTH AMERICAN VERTICAL DATUM OF 1988
 - * DATA NOT USED FOR CONTOURING
 - [0.12] LNAPL - LIGHT NON-AQUEOUS PHASE LIQUID



HISTORIC GROUNDWATER FLOW DIRECTION

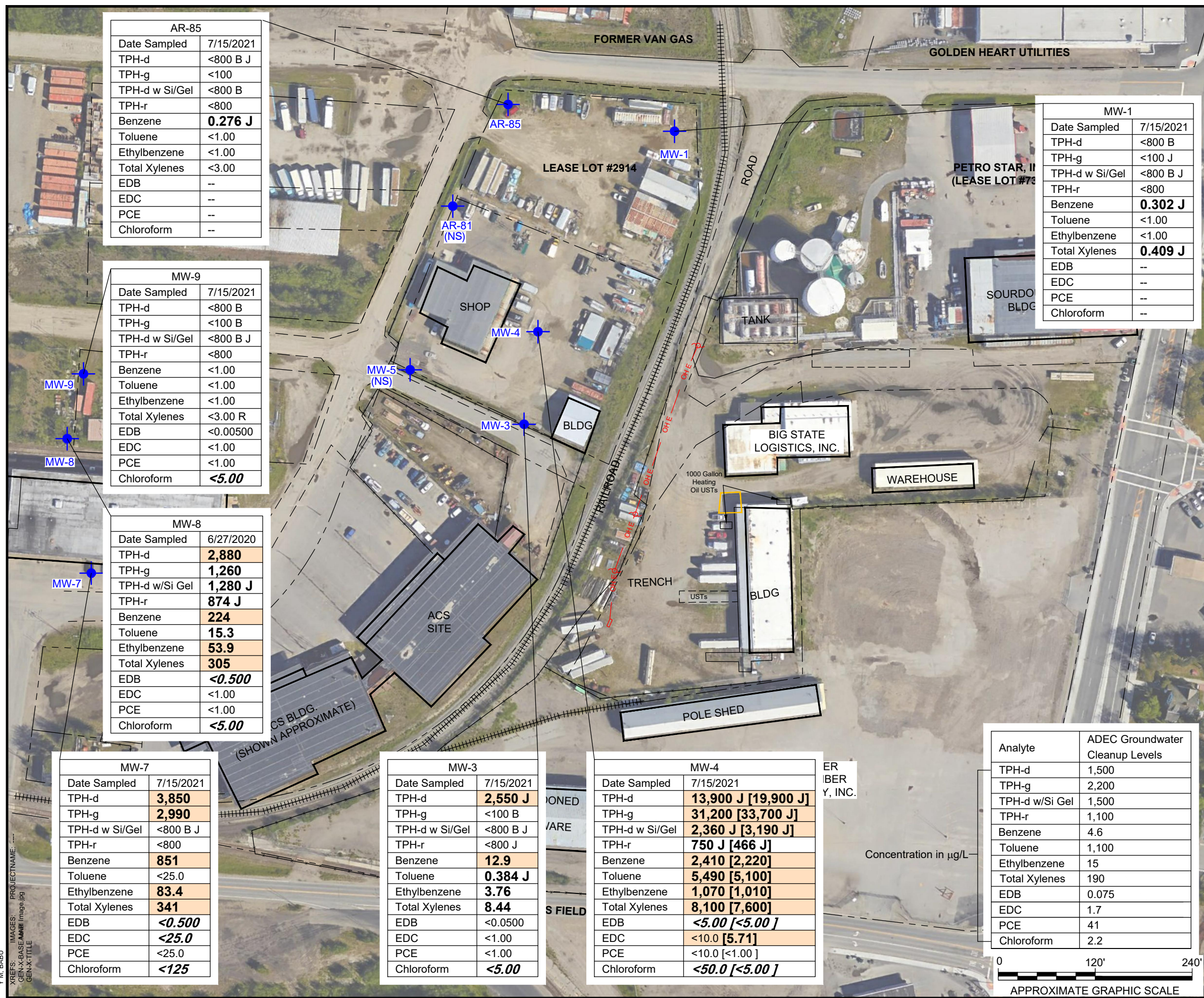
0 120' 240'

APPROXIMATE GRAPHIC SCALE

FORMER TEXACO BULK TERMINAL 211815 - 410 DRIVEWAY ST.
FAIRBANKS, AK 99707
ANNUAL 2021 GROUNDWATER MONITORING REPORT

**GROUNDWATER ELEVATION
CONTOUR MAP - JULY 15, 2021**





AR-85	
Date Sampled	7/15/2021
TPH-d	<800 B J
TPH-g	<100
TPH-d w Si/Gel	<800 B
TPH-r	<800
Benzene	0.276 J
Toluene	<1.00
Ethylbenzene	<1.00
Total Xylenes	<3.00
EDB	--
EDC	--
PCE	--
Chloroform	--

MW-9	
Date Sampled	7/15/2021
TPH-d	<800 B
TPH-g	<100 B
TPH-d w Si/Gel	<800 B J
TPH-r	<800
Benzene	<1.00
Toluene	<1.00
Ethylbenzene	<1.00
Total Xylenes	<3.00 R
EDB	<0.00500
EDC	<1.00
PCE	<1.00
Chloroform	<5.00

MW-8	
Date Sampled	6/27/2020
TPH-d	2,880
TPH-g	1,260
TPH-d w/Si Gel	1,280 J
TPH-r	874 J
Benzene	224
Toluene	15.3
Ethylbenzene	53.9
Total Xylenes	305
EDB	<0.500
EDC	<1.00
PCE	<1.00
Chloroform	<5.00

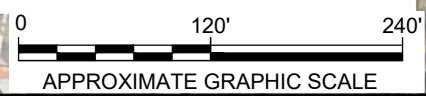
MW-7	
Date Sampled	7/15/2021
TPH-d	3,850
TPH-g	2,990
TPH-d w Si/Gel	<800 B J
TPH-r	<800
Benzene	851
Toluene	<25.0
Ethylbenzene	83.4
Total Xylenes	341
EDB	<0.500
EDC	<25.0
PCE	<25.0
Chloroform	<125

MW-3	
Date Sampled	7/15/2021
TPH-d	2,550 J
TPH-g	<100 B
TPH-d w Si/Gel	<800 B J
TPH-r	<800 J
Benzene	12.9
Toluene	0.384 J
Ethylbenzene	3.76
Total Xylenes	8.44
EDB	<0.0500
EDC	<1.00
PCE	<1.00
Chloroform	<5.00

MW-4	
Date Sampled	7/15/2021
TPH-d	13,900 J [19,900 J]
TPH-g	31,200 [33,700 J]
TPH-d w Si/Gel	2,360 J [3,190 J]
TPH-r	750 J [466 J]
Benzene	2,410 [2,220]
Toluene	5,490 [5,100]
Ethylbenzene	1,070 [1,010]
Total Xylenes	8,100 [7,600]
EDB	<5.00 [<5.00]
EDC	<10.0 [5.71]
PCE	<10.0 [<1.00]
Chloroform	<50.0 [<5.00]

MW-1	
Date Sampled	7/15/2021
TPH-d	<800 B
TPH-g	<100 J
TPH-d w Si/Gel	<800 B J
TPH-r	<800
Benzene	0.302 J
Toluene	<1.00
Ethylbenzene	<1.00
Total Xylenes	0.409 J
EDB	--
EDC	--
PCE	--
Chloroform	--

Analyte	ADEC Groundwater Cleanup Levels
TPH-d	1,500
TPH-g	2,200
TPH-d w/Si Gel	1,500
TPH-r	1,100
Benzene	4.6
Toluene	1,100
Ethylbenzene	15
Total Xylenes	190
EDB	0.075
EDC	1.7
PCE	41
Chloroform	2.2



LEGEND:

- PROPERTY BOUNDARY
- AR-81 TEXACO MONITORING WELL (AR)
- USTs UNDERGROUND STORAGE TANKS
- TPH-g TOTAL PETROLEUM HYDROCARBONS, GASOLINE RANGE
- TPH-d TOTAL PETROLEUM HYDROCARBONS, DIESEL RANGE
- TPH-d w/Si Gel TOTAL PETROLEUM HYDROCARBONS, DIESEL SILICA GEL RANGE
- TPH-r TOTAL PETROLEUM HYDROCARBONS, RESIDUAL RANGE
- EDB 1,2-DIBROMOETHANE
- EDC 1,2-DICHLOROETHANE
- PCE TETRACHLOROETHYLENE
- [] BLIND DUPLICATE RESULT
- <1.00 NOT DETECTED AT OR ABOVE THE REPORTED DETECTION LIMIT (RDL)
- BOLD** VALUE EXCEEDS METHOD DETECTION LIMIT (MDL)
- BOLD** VALUE EXCEEDS ADEC GROUNDWATER CLEANUP LEVEL
- BOLD** CONSTITUENT CONSIDERED NON-DETECT, HOWEVER RDL IS GREATER THAN THE ADEC GROUNDWATER CLEANUP LEVEL
- J THE COMPOUND WAS POSITIVELY IDENTIFIED; HOWEVER, THE ASSOCIATED NUMERICAL VALUE IS AN ESTIMATED CONCENTRATION ONLY
- B THE COMPOUND HAS BEEN FOUND IN THE SAMPLE AS WELL AS ITS ASSOCIATED BLANK, ITS PRESENCE IN THE SAMPLE MAY BE SUSPECT
- R THE SAMPLE RESULTS ARE REJECTED AS UNUSABLE. THE COMPOUND MAY OR MAY NOT BE PRESENT IN THE SAMPLE
- µg/L MICROGRAMS PER LITER
- NOT ANALYZED
- NS NOT SAMPLED
- ADEC ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION

NOTES:

- THE COORDINATE SYSTEM IS A LOCAL GRID. ELEVATIONS ARE STATE OF ALASKA TBM "X" NE BOLT OF FIRE HYDRANT ON THE SOUTH SIDE OF PHILLIPS FIELD ROAD BETWEEN ILLINOIS STREET AND DRIVEWAY STREET. ELEVATION IS 446.59'.
- PROPERTY BOUNDARY AND WELL LOCATIONS PROVIDED BY "MCLANE CONSULTING, Inc.", FIELD WORK DATE OCTOBER 9, 2014.

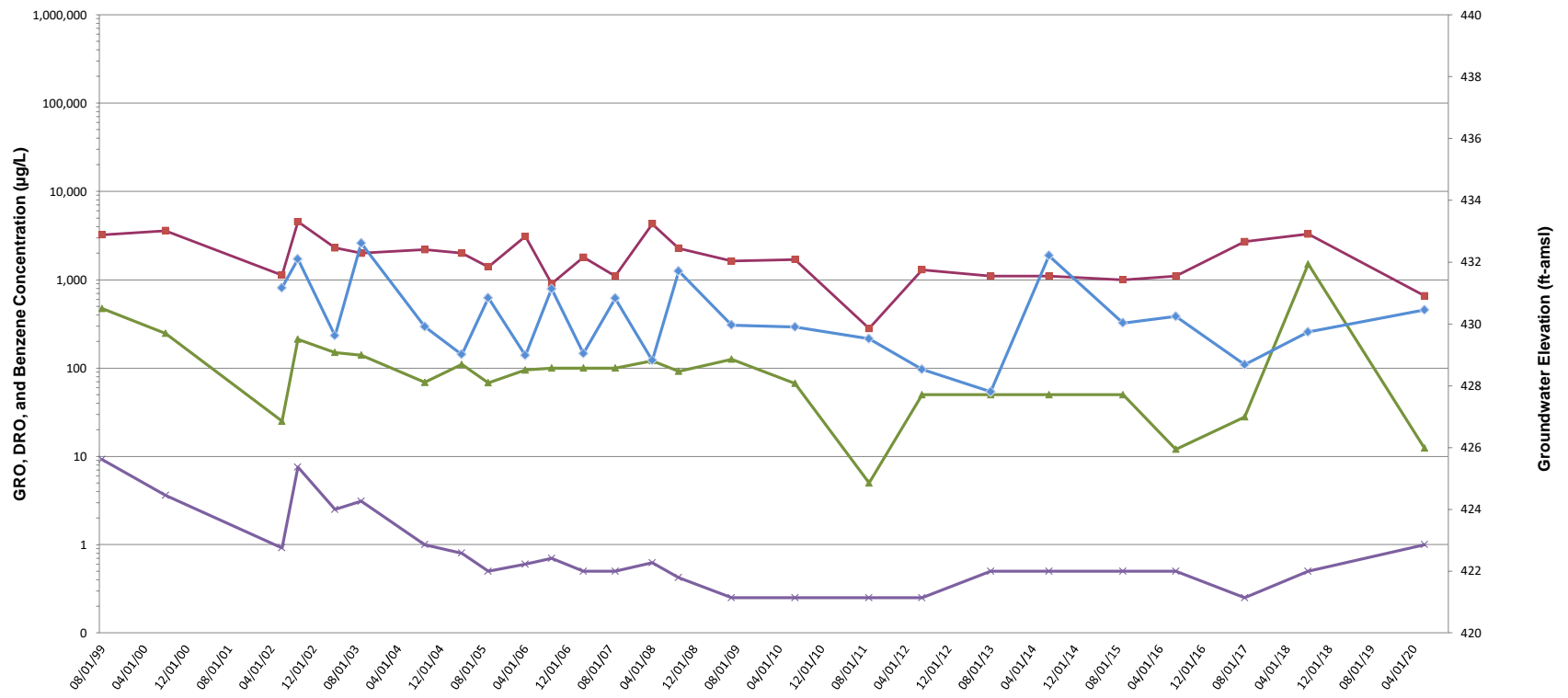
FORMER TEXACO BULK TERMINAL 211815 - 410 DRIVEWAY ST.
FAIRBANKS, AK 99707

ANNUAL 2021 GROUNDWATER MONITORING REPORT


GROUNDWATER ANALYTICAL CONCENTRATION MAP
JULY 15, 2021

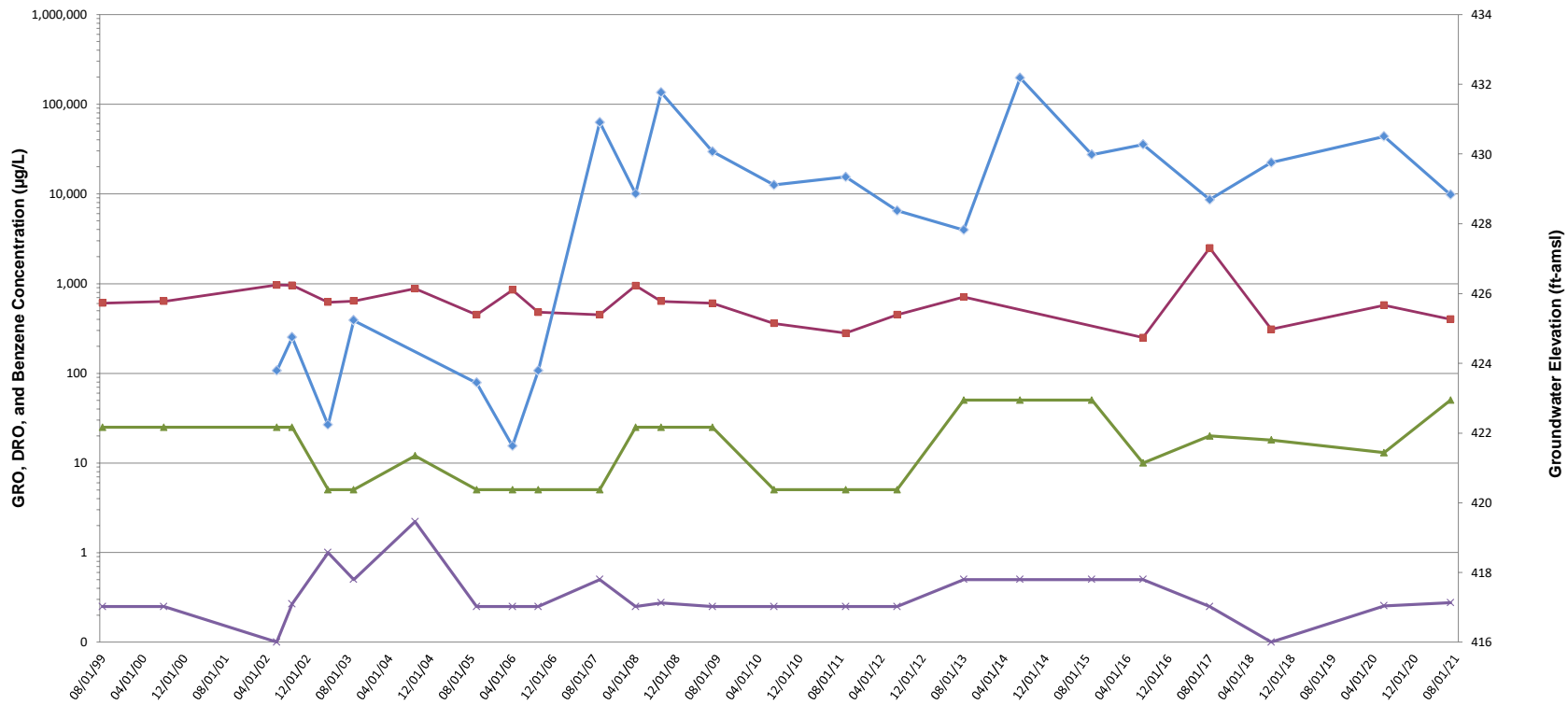
ARCADIS

FIGURE 4




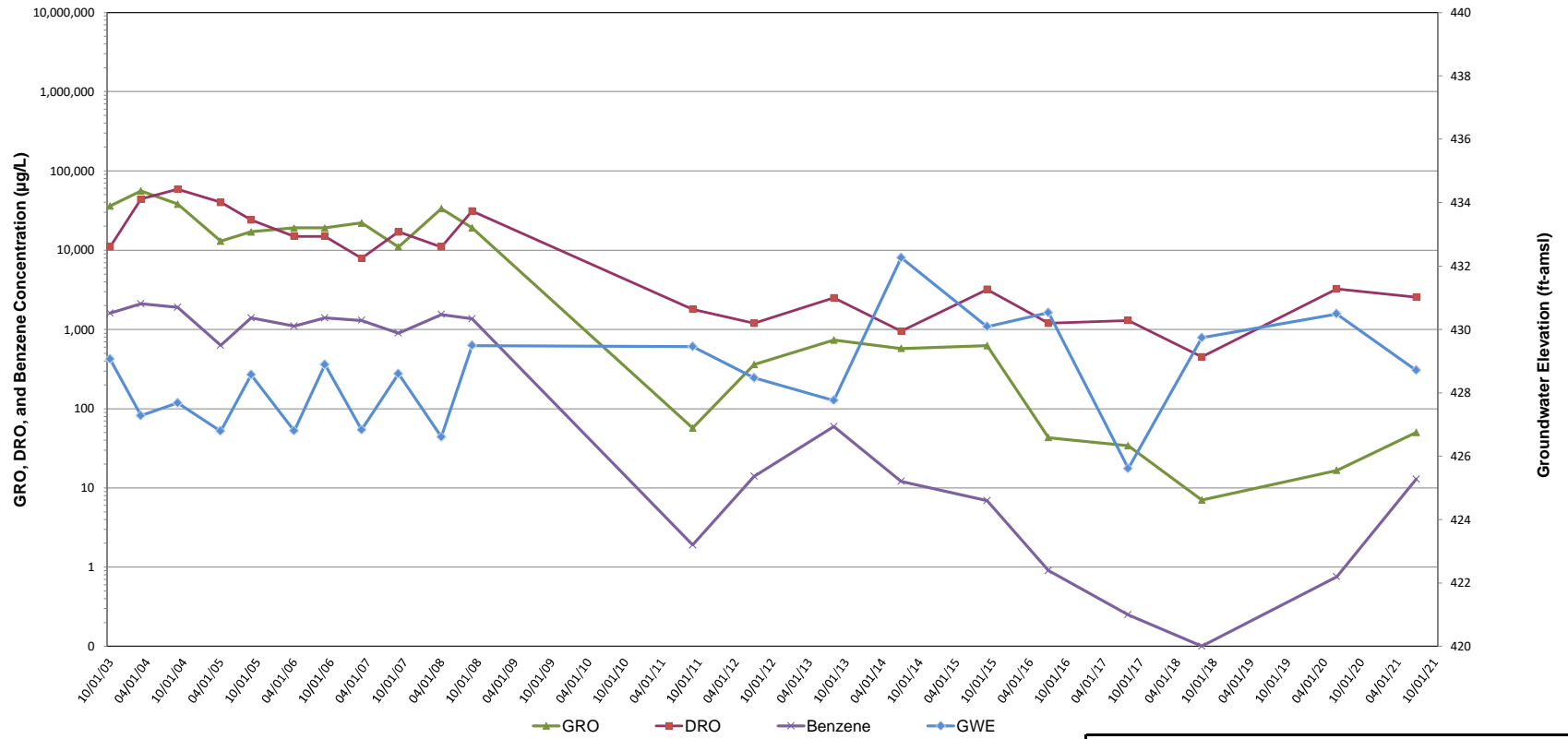
LEGEND:
 GRO = Gasoline range organics
 DRO = Diesel range organics
 GWE = Groundwater elevation
 µg/L = micrograms per liter
 ft-amsl = Feet above mean sea level
 Used half of detection limit value for non-detect results

FORMER TEXACO TERMINAL 211815 410 DRIVEWAY ST, FAIRBANKS, ALASKA	
Monitoring Well AR-81 Historical Groundwater Elevation and Analytical Data	
	<small>Design & Consultancy for natural and built assets</small>
FIGURE A-1	




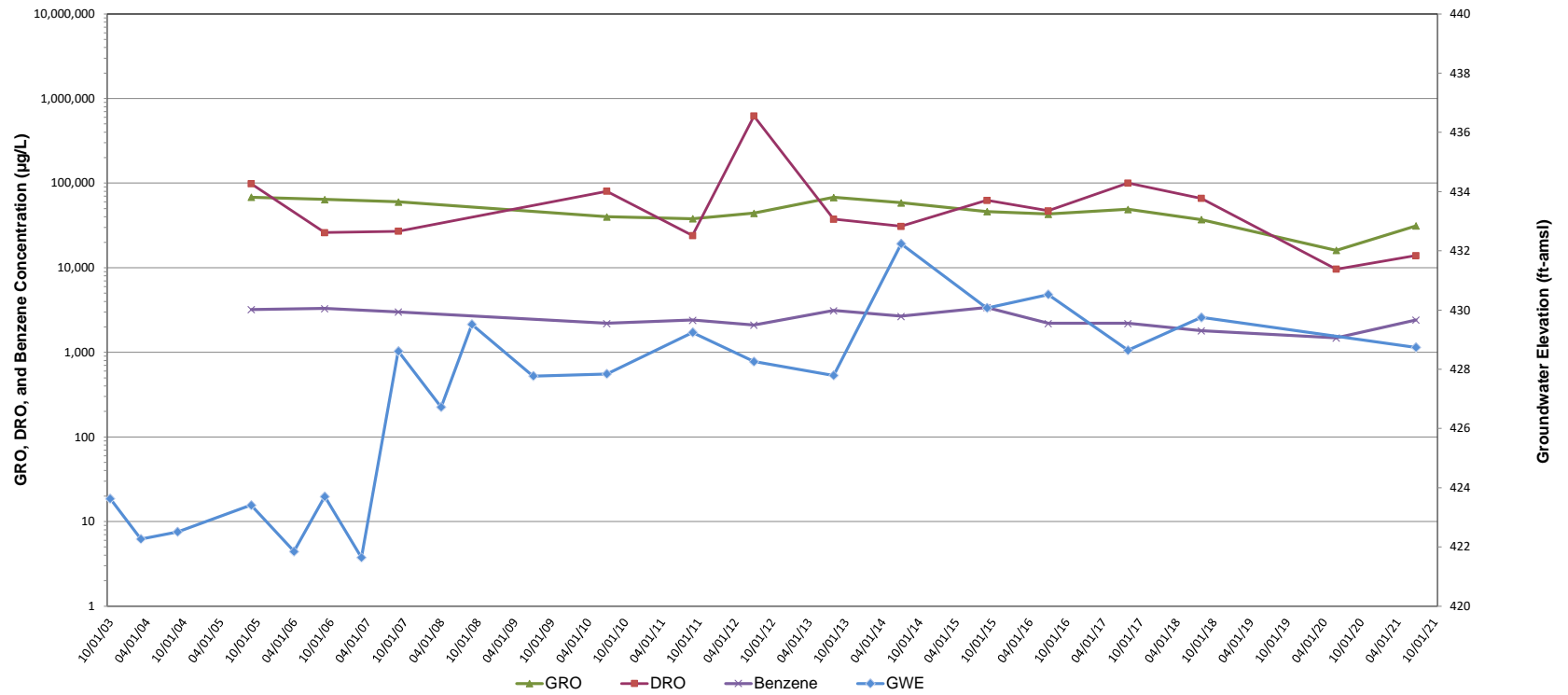
LEGEND:
 GRO = Gasoline range organics
 DRO = Diesel range organics
 GWE = Groundwater elevation
 µg/L = micrograms per liter
 ft-amsl = Feet above mean sea level
 Used half of detection limit value for non-detect results

FORMER TEXACO TERMINAL 211815 410 DRIVEWAY ST, FAIRBANKS, ALASKA	
Monitoring Well AR-85 Historical Groundwater Elevation and Analytical Data	
	Design & Consultancy for natural and built assets
FIGURE A-2	




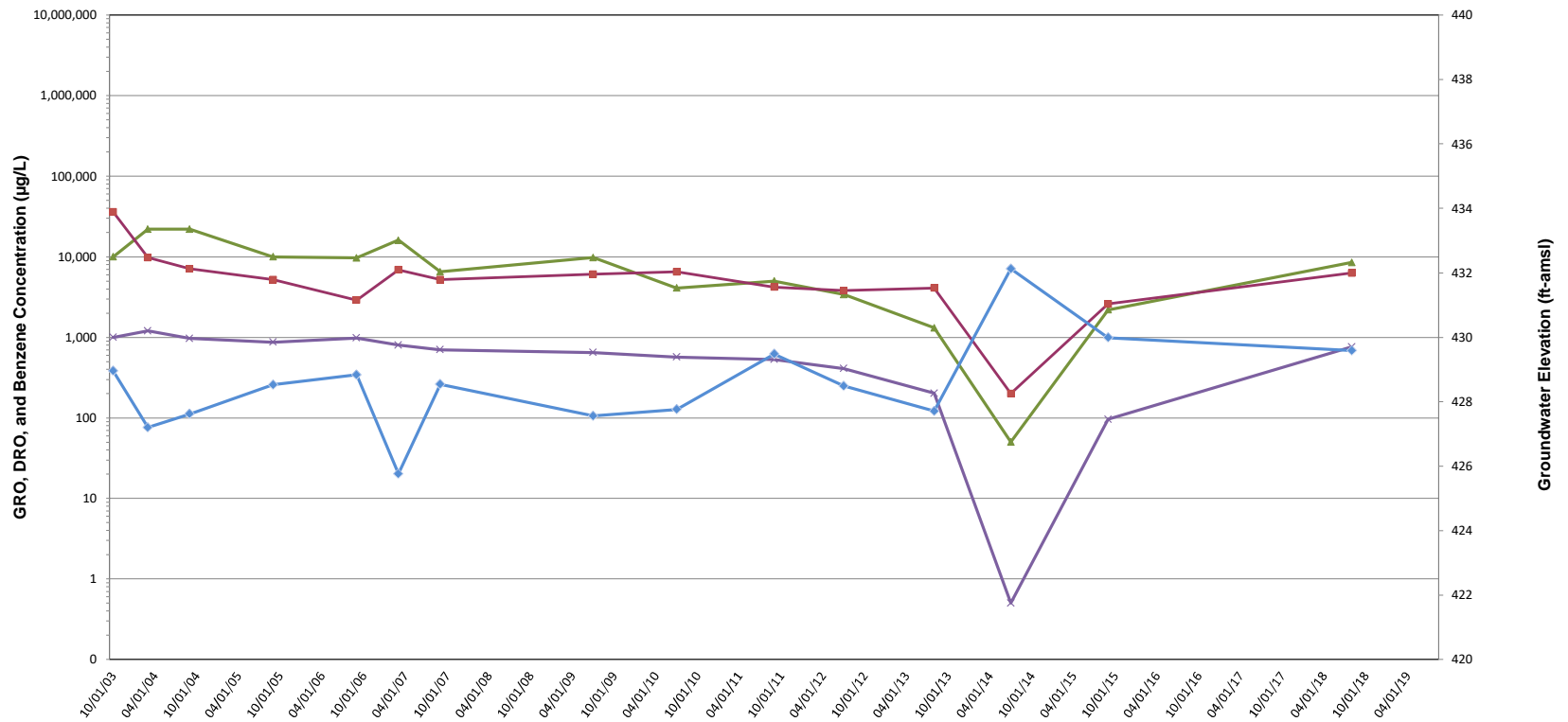
LEGEND:
 GRO = Gasoline range organics
 DRO = Diesel range organics
 GWE = Groundwater elevation
 µg/L = micrograms per liter
 ft-amsl = Feet above mean sea level
 Used half of detection limit value for non-detect results

FORMER TEXACO TERMINAL 211815 410 DRIVEWAY ST, FAIRBANKS, ALASKA	
Monitoring Well MW-3 Historical Groundwater Elevation and Analytical Data	
	Design & Consultancy for natural and built assets
FIGURE A-3	



LEGEND:
 GRO = Gasoline range organics
 DRO = Diesel range organics
 GWE = Groundwater elevation
 µg/L = micrograms per liter
 ft-amsl = Feet above mean sea level
 Used half of detection limit value for non-detect results

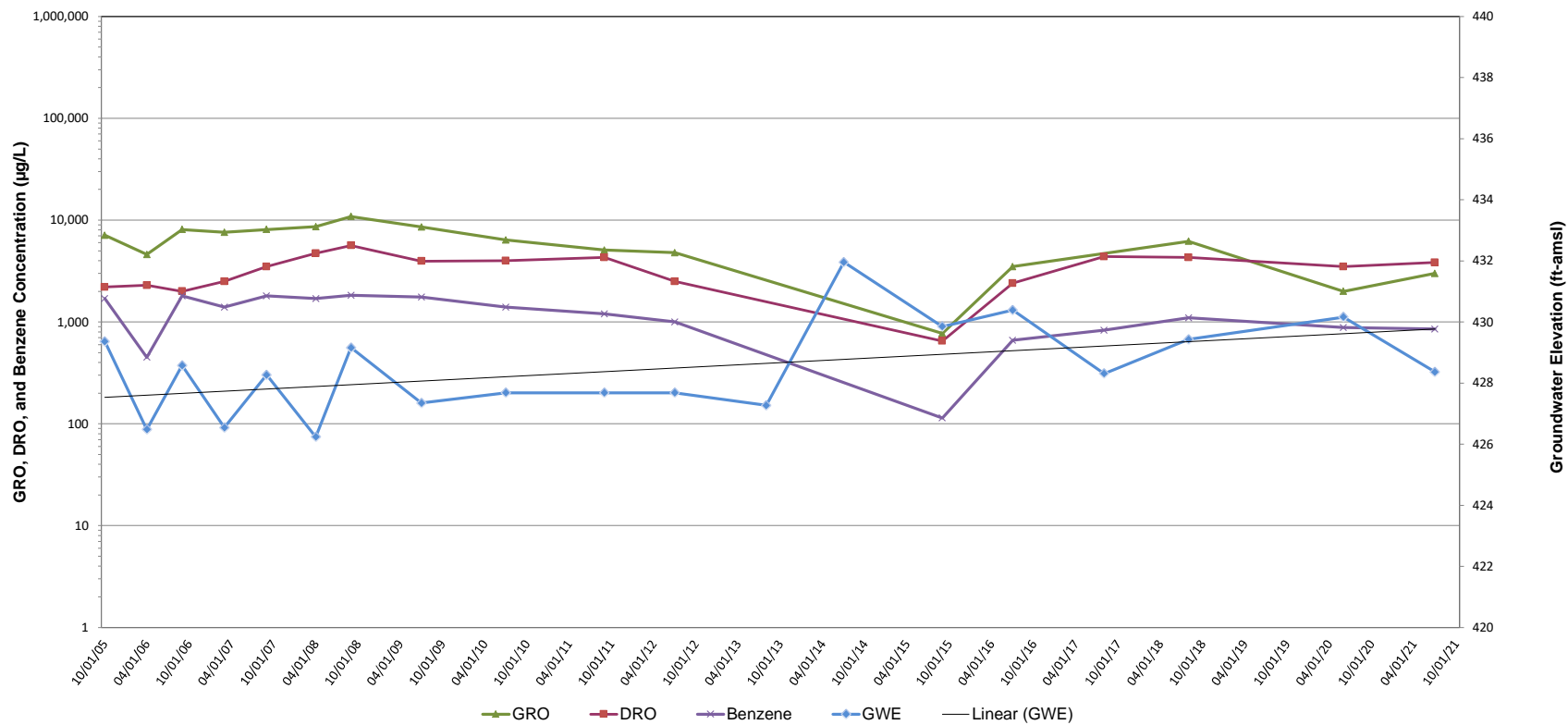
FORMER TEXACO TERMINAL 211815 410 DRIVEWAY ST, FAIRBANKS, ALASKA	
Monitoring Well MW-4 Historical Groundwater Elevation and Analytical Data	
	<small>Design & Consultancy for natural and built assets</small>
FIGURE	A-4




LEGEND:
 GRO = Gasoline range organics
 DRO = Diesel range organics
 GWE = Groundwater elevation
 µg/L = micrograms per liter
 ft-amsl = Feet above mean sea level
 Used half of detection limit value for non-detect results

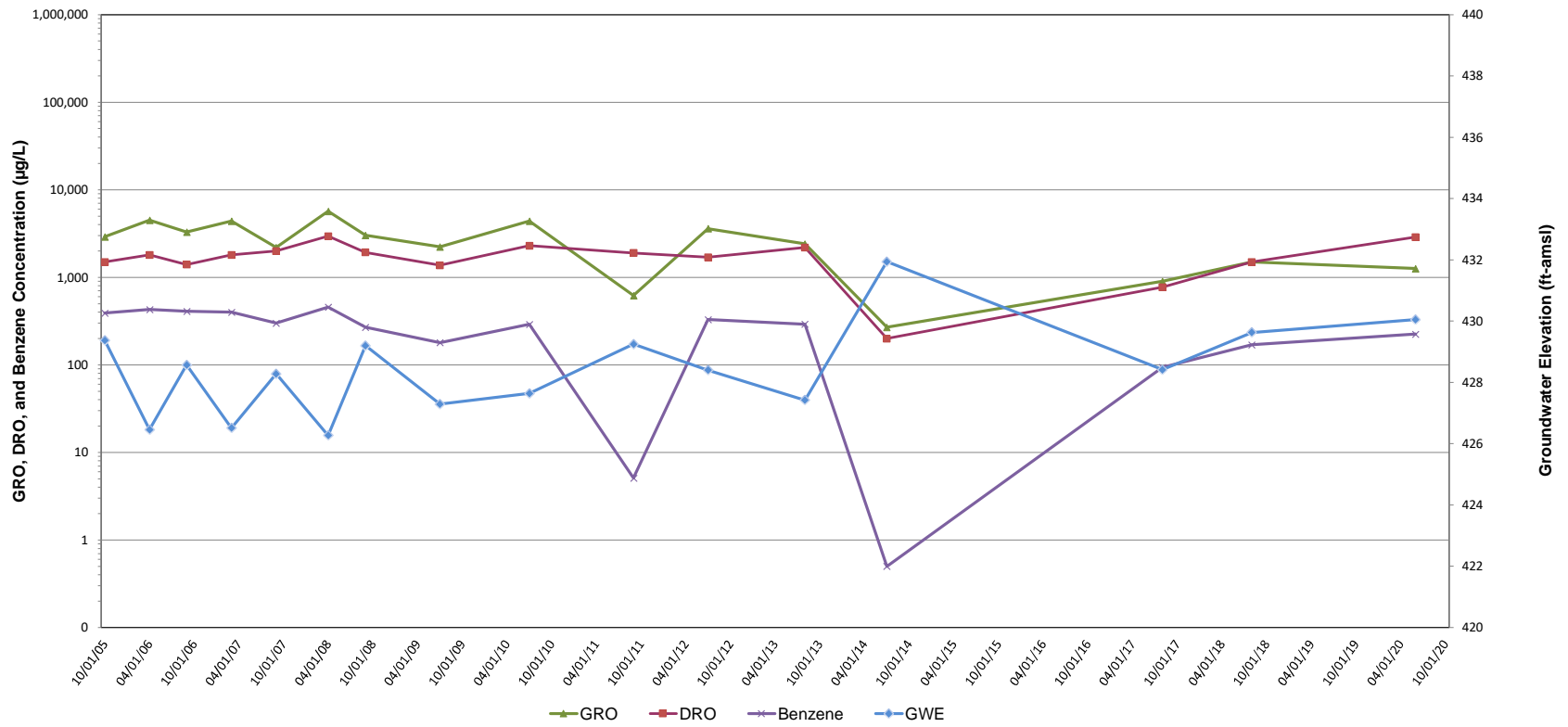
—▲ GRO
 —■ DRO
 —× Benzene
 —◆ GWE

FORMER TEXACO TERMINAL 211815 410 DRIVEWAY ST, FAIRBANKS, ALASKA	
Monitoring Well MW-5 Historical Groundwater Elevation and Analytical Data	
 Design & Consultancy for natural and built assets 	FIGURE A-5




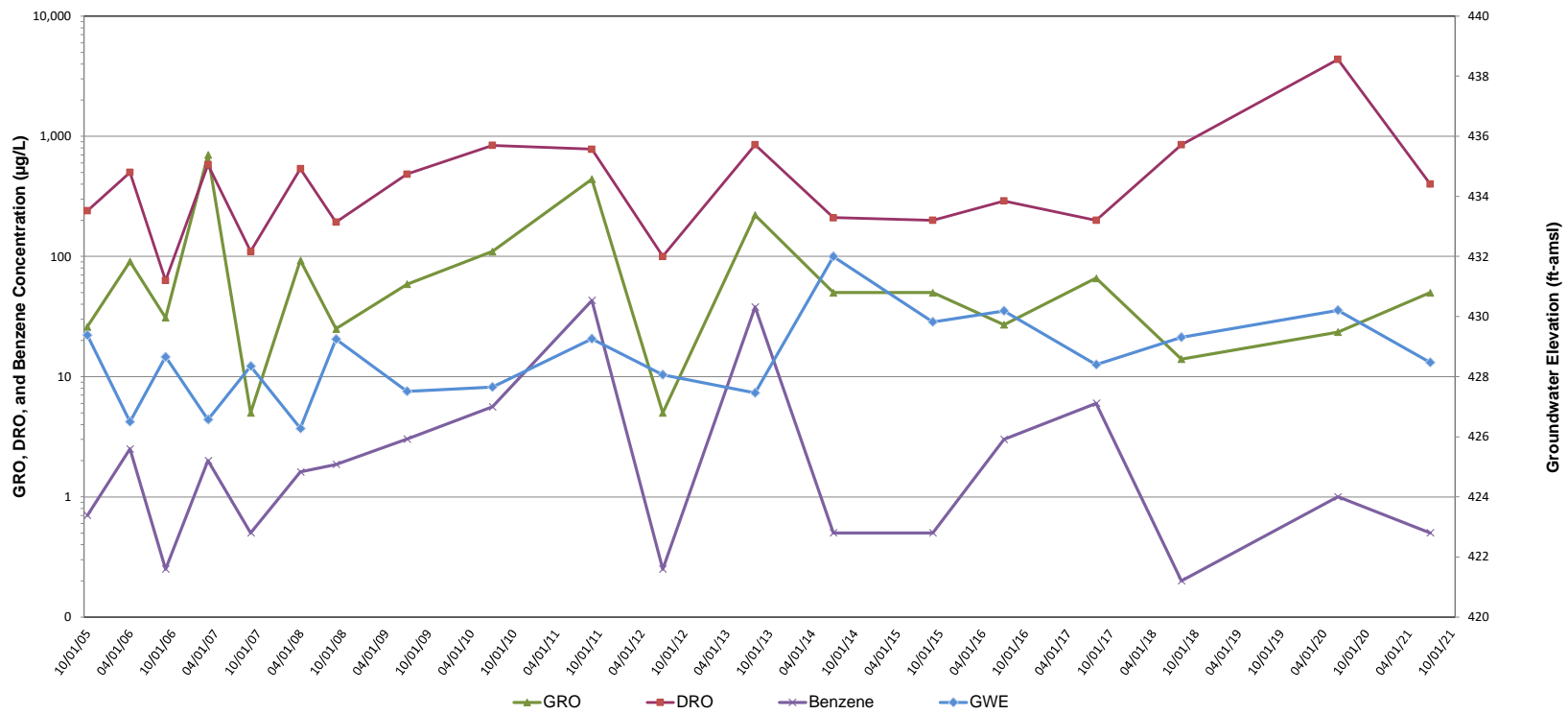
LEGEND:
 GRO = Gasoline range organics
 DRO = Diesel range organics
 GWE = Groundwater elevation
 µg/L = micrograms per liter
 ft-amsl = Feet above mean sea level
 Used half of detection limit value for non-detect results

FORMER TEXACO TERMINAL 211815 410 DRIVEWAY ST, FAIRBANKS, ALASKA	
Monitoring Well MW-7 Historical Groundwater Elevation and Analytical Data	
	Design & Consultancy for natural and built assets
FIGURE A-6	




LEGEND:
 GRO = Gasoline range organics
 DRO = Diesel range organics
 GWE = Groundwater elevation
 µg/L = micrograms per liter
 ft-amsl = Feet above mean sea level
 Used half of detection limit value for non-detect results

FORMER TEXACO TERMINAL 211815 410 DRIVEWAY ST, FAIRBANKS, ALASKA	
Monitoring Well MW-8 Historical Groundwater Elevation and Analytical Data	
	Design & Consultancy for natural and built assets
FIGURE A-7	



LEGEND:
 GRO = Gasoline range organics
 DRO = Diesel range organics
 GWE = Groundwater elevation
 µg/L = micrograms per liter
 ft-amsl = Feet above mean sea level
 Used half of detection limit value for non-detect results

FORMER TEXACO TERMINAL 211815 410 DRIVEWAY ST, FAIRBANKS, ALASKA	
Monitoring Well MW-9 Historical Groundwater Elevation and Analytical Data	
	Design & Consultancy for natural and built assets
FIGURE A-8	

APPENDIX A

Site Background and History



Chevron Environmental Management Company

Appendix A:

Site History and Background

Former Chevron Bulk Plant 1001430

418 Illinois Street Fairbanks, Alaska

ADEC File No: 102.38.158

HAZARD ID No: 25481

And

Former Texaco Bulk Plant 211815

410 Driveway Street

Fairbanks, Alaska

ADEC File No: 102.38.005

HAZARD ID No: 287

August 25, 2021

1001430 & 211815 SITE BACKGROUND AND HISTORIES

1001430 & 211815 Site Description and Vicinity

The former Chevron (1001430), Texaco (211815) and former Unocal (306456) bulk plants are located adjacent to one another. The Alaska Railroad Corporation (ARRC) has owned the properties since the early 1900's. The sites are located within the Fairbanks Area-Wide Industrial Reclamation (FAIR) Area which is bordered by Noyes Slough to the north and east and Chena River to the south. Land use in the area consists primarily of industrial activities including: railroad facilities, bulk fuel terminals, gasoline stations, miscellaneous light industrial and warehousing

1001430 Site History

The former Chevron site 1001430 is located at 418 Illinois Street in Fairbanks, Alaska. Chevron leased the property and operated a bulk plant at the site from 1926 to 1985. In 1985 Saupe Enterprises began operating a bulk plant at the site. The site is now operated as a bulk plant by Sourdough Fuels. Former facilities included several aboveground storage tanks (ASTs) of varying sizes, conveyance piping, pump house, loading racks, warehouse, and an office. The current facilities include conveyance piping, pump house, loading racks, warehouse, an office, and a new horizontal AST farm located west of the original ASTs. Several of the original ASTs are now reportedly used for drum storage. In 1986, a groundwater extraction well was installed in the southwest corner of the site. From 1986 to 1990, the extraction well removed approximately 10,000 gallons of light non-aqueous phase liquid (LNAPL) petroleum product. Since 1982, 23 groundwater monitoring wells have been installed on and off-site. There are currently 10 monitoring wells (MW-23, MW-25, TH-1, TH-2, TH-5, TH-7, TH-10, TH-13, TH-17, and TH-18) that are gauged and sampled as part of the groundwater monitoring program for the former Chevron 1001430 site.

1001430 Site Characterizations

In 2007, a Site Assessment was performed. The purpose of the soil investigation and soil delineation is to assist in the evaluation of potential receptors being exposed to petroleum constituents near the surface. Two borings were completed near the southwest corner of the former Chevron site 1001430 to evaluate potential surface releases from the ASTs. For assessing the potential for vapor intrusion at the site, Arcadis installed a permanent soil gas probe at the former Chevron site 1001430 (VP-2). The VP-2 sample exceeded the toluene screening level of 1,100 parts per billion by volume (ppbv) at a concentration of 6,000 ppbv at 5 feet bgs (Arcadis, 2008).

In 2008 additional vapor probes were installed, VP-4 was completed as a single probe at 3.5 feet bgs (Arcadis, 2009).

Additional soil vapor samples were collected in 2010, concentrations of oxygen in the samples collected from vapor probes VP-2 and VP-4 were assessed. In addition two ambient air samples were collected, one upwind and one downwind, of the site using evacuated 6-liter SUMMA canisters with laboratory supplied flow controllers set to approximately 200 mL/min and TO-17 tubes (sampled for 7 minutes at approximately

50 mL/min). These samples were collected to assess any potential background contributions present in ambient air (Arcadis, 2010).

211815 Site History

The former Texaco is located at 410 Driveway Street in Fairbanks, Alaska. Currently, the site is leased from the ARRC by Unique Alaska. Unique Alaska has sub-leased the property to ABC General Contracting. Texaco leased the property and operated a bulk plant at the site from 1958 to 1982. Willner's Fuel Distribution then leased the site and operated a bulk plant at the site from 1982 to 1993. A total of 12 aboveground storage tanks (ASTs), five 2,020-barrel capacity and seven 476-barrel capacity, were located on the southern portion of the site. The five larger AST's were removed from the site in 1994 and historically, contained No. 1 and No. 2 diesel, unleaded gasoline, and regular leaded gasoline. The smaller ASTs historically contained No. 10 oil. Information on their removal is unknown at this time. Two of the ASTs (one large and one small) were reportedly rented to a chemical company and contained silicone. The fuel holding and dispensing facilities were removed from the site sometime between 1994 and 2000. Eleven monitoring wells (AR-81, AR-85, MW-1 through MW-5, and MW-7 through MW-10) are currently available and part of the sampling program for the former Texaco site.

211815 Site Characterizations

In 2007, a site assessment was performed. The purpose of the soil investigation and soil delineation was to assist in the evaluation of potential receptors being exposed to petroleum constituents near the surface. Three borings were completed near the southeast corner of the Former Texaco in the vicinity of the former ASTs and ethanol tank to evaluate potential surface releases from the tanks. To assess the potential for vapor intrusion at the site, Arcadis installed a permanent soil gas probe at the former Texaco facility (VP-1). The VP-1 sample at 5 feet below ground surface (bgs) exceeded the ethylbenzene screening level of 5.1 parts per billion by volume (ppbv) at a concentration of 9.9 ppbv at 8.5 feet bgs (Arcadis, 2008).

A vapor assessment was performed in 2008, including installation of additional vapor probes. The sample collected from vapor probe VP-7 at 3.5 feet bgs, located on the former Texaco site, exceeded the benzene screening level of 1.61 ppbv at a concentration of 19 ppbv. Vapor probe VP-7 is located within 10 feet of the northeast side of an Alaska Communication Systems (ACS) warehouse. During vapor probe installation and sampling, ACS trucks were observed driving into the warehouse for truck storage. The sample collected from vapor probe VP-7 at 8.5 feet bgs, exceeded the benzene screening level of 1.61 ppbv at a concentration of 1,000 ppbv. There were no detections of the analyzed compounds above screening levels in vapor probes VP-1 at 8.5 feet bgs, VP-6 at 8.5 feet bgs (Arcadis, 2009).

Arcadis performed further vapor assessment in 2009. Concentrations of oxygen in the samples collected from vapor probes VP-1 and VP-6 demonstrate a consistent decrease with respect to depth with a corresponding increase in concentrations of carbon dioxide. These concentration profiles with respect to depth likely indicate biodegradation processes are active in the vicinities of these vapor probes (ARCADIS, 2010).

CURRENT SITE MONITORING ACTIVITIES (1001430 & 211815)

Ten monitoring wells, MW-23, MW-25, TH-1, TH-2, TH-5, TH-7, TH-10, TH-13, TH-17, and TH-18, are sampled for the former Chevron (1001430) site. Nine monitoring wells, AR-81, AR-85, MW-1, MW-3 through MW-5, and MW-7 through MW-9, are currently part of the sampling program for the Texaco (211815) site. Groundwater monitoring gauging and sampling activities are conducted annually for each site.

GEOLOGY AND HYDROGEOLOGY (1001430 & 211815)

Regional Geology

The Fairbanks region is typically underlain by 330 to approximately 600 feet of Quaternary fluvial and glaciofluvial sediment (sand and gravel covered by fine sediments and organic matter) based on seismic interpretations originating from the Alaska Range (Natural Resources Conservation Service and U.S. Department of Agriculture 2004).

Site Geology

Soils logged during site assessment activities ranged from well-graded sandy gravels to silt. Cross sections constructed from historical boring logs may indicate north-south trending channeling across the site. Subsurface channeling features are often characteristic of glacial and fluvial outwash geomorphology. The geology observed is consistent with regional geology. The geology of Fairbanks area is dominated by fluvial outwash and generally consists of sand and gravel overlain by finer sediments and organic matter. Lenses of both coarser gravels and finer-grained sediment are common in the subsurface.

Regional Hydrogeology

According to the U.S. Geological Survey conducted in 1995, the sites are located in the floodplain of the Tanana and Chena rivers. The Tanana Lowland consists of a wide, sediment-filled trough in which alluvial fans extending from the Alaska Range to the south have pushed northwest, forcing the Tanana River against the bedrock hills of the Yukon-Tanana Upland (Hawkins 1995). The Fairbanks area has not been subject to glaciations, although glaciers have advanced northward from the Alaska Range to within 80 kilometers of Fairbanks, which resulted in thick layers of silt, sand, and gravel deposited by the sediment-laden rivers (Hawkins 1995).

Site Hydrogeology

Historical groundwater elevations across the sites have historically ranged between approximately 420 and 430 feet above sea level. Based upon historical groundwater monitoring and gauging events, indications are that the hydraulic flow direction onsite is generally in a westerly to south-westerly direction.

REFERENCES

ARCADIS. 2008. 2007 Site Assessment Report. Former Chevron Bulk Plant 1001430, Former Texaco Bulk Plant 211815, and Former Unocal Bulk Plant 306456. January 18.

ARCADIS. 2009. 2008 Vapor Assessment Report. January 27.

ARCADIS. 2010. 2009 Vapor Assessment Report. March 1.

Natural Resources Conservation Service 2004.

Hawkins, D.B. 1995. Environmental overview and hydrogeological conditions at Federal Aviation Administration facilities near Fairbanks, Alaska: U.S. Geological Survey Open-File Report 95-172, 11 p.

APPENDIX B

Field Data Sheets



Daily Log

Project Name : 211815 **Weather(°F) :** Clear
Project Number : 30064222 **Prepared By:** Evan Wujcik
Purpose : Gw sampling
PPE : Level D
Equipment: Water Quality Meter (i.e. YSI), Water Level Meter (WLM), Bladder Pump, Photoionization Detector (PID)

Date	Time	Description of Activities
07/15/2021	06:00	Arrive on site Open permit to work Locate Wells
07/15/2021	07:00	Sample MW 7 Decon equipment See chain of custody for analytes
07/15/2021	08:00	Sample MW 9 Decon equipment See chain of custody for analytes MS/MSD samples collected at this location
07/15/2021	09:00	Sample MW 4 Decon equipment See chain of custody for analytes Blind duplicate samples collected at this location
07/15/2021	10:00	Sample MW 3 Decon equipment See chain of custody for analytes
07/15/2021	11:00	Sample MW 1 Decon equipment See chain of custody for analytes
07/15/2021	12:00	Sample AR 85 Decon equipment See chain of custody for analytes
07/15/2021	12:30	No Wells in need of repair AR 81 not enough water to sample Could not locate MW-5 and MW-8
07/15/2021	13:00	Load vehicle Mobilize offsite

Signature:



Waste Management:

Drums On Site										
Date	Are there any waste drums on site?	Number of Drums upon Arrival	Size of Drums	Type of Drums	Condition of Drums	Waste Drummed Today?	Number of drums Created	Size of drums	Condition of Drums	General Waste Comments
07/15/2021	no					no				

Daily Log

Equipment and Calibration Information:

Supplier: Pine

Model:

Rental Number:

Calibrated:

Bump
Checked:

Calibration
Passed:

Water Quality Meter SN:

Date	Time	Calibrated Fulid and Value	Lot #	Expiration Date	Initial Reading	Final Reading
07/15/2021						

Equipment and Calibration Information:

Supplier: Pine

Model:

Rental Number:

Calibrated:

Bump
Checked:

Calibration
Passed:

PIDSN:

Date	Time	Calibrated Fulid and Value	Lot #	Expiration Date	Initial Reading	Final Reading
07/15/2021	--					

Project Number		30064222					
Client:		Chevron					
Site ID:		211815					
Site Location:		Fairbanks, Alaska					
Measuring Point:		Top of Casing					
Date(s):		07/15/2021					
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)	Comments
AR-81	07/15/2021	06:02	13.52	ND	14.40	0	Not enough water to sample
AR-85	07/15/2021	06:07	13.64	ND	17.00	0	--
MW-1	07/15/2021	06:10	12.65	ND	20.70	0	--
MW-3	07/15/2021	06:15	14.18	ND	17.20	0	--
MW-4	07/15/2021	06:20	13.82	ND	20.10	4.2	--
MW-7	07/15/2021	06:00	15	ND	22.00	0	--
MW-9	07/15/2021	06:30	13.14	ND	21.70	0	--

ft-bmp = feet below measuring point

ND = Not Detected

PID = Photoionization Detector Reading

ppm = parts per million

-- = Not Recorded

Project Number	30064222	Well ID	AR-85	Date	7/15/2021	
Site Location	Fairbanks, Alaska	Site ID	211815	Weather (°F)	Clear	Sampled by Evan Wujcik
Measuring Point Description	Top of Casing	Screen Depth Interval (ft-bmp)	-- to --	Casing Diameter (in.)	6	Well Casing Material Stainless Steel
Static Water Level (ft-bmp)	13.64	Total Depth (ft-bmp)	17	Water Column (ft)	3.36	Gallons in Well 4.91
Water Quality Meter Make/Model	Horiba U-52	Purge Method	Low-Flow	Sample Method	Grab	
Sample Time	12:00	Well Volumes Purged	0.13	Sample ID	AR-85-W-20210715	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	13.64	6.88	0.609	0.0	0.00	9.50	4	--	--
11:36	200	13.64	6.89	0.605	0.0	0.00	8.51	0	--	--
11:39	200	13.64	6.91	0.598	0.0	0.00	8.61	-3	--	--
11:42	200	13.64	6.93	0.588	0.0	0.00	8.47	-6	--	--

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: AR-85-W-20210715 Sample Time: 12:00 Sample Depth (ft-bmp): 14
 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	30064222	Well ID	MW-1	Date	7/15/2021	
Site Location	Fairbanks, Alaska	Site ID	211815	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)	12.65	Total Depth (ft-bmp)	20.7	Water Column (ft)	8.05	Gallons in Well 1.31
Water Quality Meter Make/Model	Horiba U-52	Purge Method	Low-Flow	Sample Method	Grab	
Sample Time	11:00	Well Volumes Purged	0.48	Sample ID	MW-1-W-20210715	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	12.67	7.19	0.603	7.1	0.00	10.06	12	--	--
10:36	200	12.67	7.16	0.606	5.3	0.00	9.70	8	--	--
10:39	200	12.67	7.14	0.607	3.4	0.00	9.36	4	--	--
10:42	200	12.67	7.12	0.610	3.0	0.00	9.11	3	--	--

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-1-W-20210715 Sample Time: 11:00 Sample Depth (ft-bmp): 13

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	30064222	Well ID	MW-3	Date	7/15/2021	
Site Location	Fairbanks, Alaska	Site ID	211815	Weather (°F)	Clear	Sampled by Evan Wujcik
Measuring Point Description	Top of Casing	Screen Depth Interval (ft-bmp)	-- to --	Casing Diameter (in.)	6	Well Casing Material Stainless Steel
Static Water Level (ft-bmp)	14.18	Total Depth (ft-bmp)	17.2	Water Column (ft)	3.02	Gallons in Well 4.42
Water Quality Meter Make/Model	Horiba U-52	Purge Method	Low-Flow	Sample Method	Grab	
Sample Time	10:00	Well Volumes Purged	0.14	Sample ID	MW-3-W-20210715	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	14.20	6.99	0.981	12.1	0.00	9.28	2	--	--
09:36	200	14.20	7.02	0.980	9.8	0.00	9.16	-1	--	--
09:39	200	14.20	7.06	0.983	11.9	0.00	9.25	-4	--	--
09:42	200	14.20	7.10	0.983	13.2	0.00	9.13	-5	--	--

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-20210715 Sample Time: 10:00 Sample Depth (ft-bmp): 15

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	30064222	Well ID	MW-4	Date	7/15/2021	
Site Location	Fairbanks, Alaska	Site ID	211815	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)	13.82	Total Depth (ft-bmp)	20.1	Water Column (ft)	6.28	Gallons in Well 1.02
Water Quality Meter Make/Model	Horiba U-52	Purge Method	Low-Flow	Sample Method	Grab	
Sample Time	09:00	Well Volumes Purged	0.93	Sample ID	MW-4-W-20210715	Evacuation Equipment Bladder
Purge Start	08:30	Gallons Purged	0.95	Duplicate ID	BD-1-W-20210715	
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	13.85	5.75	0.934	0.0	0.61	7.67	83	--	--
08:36	200	13.85	6.07	0.935	0.0	0.25	7.21	60	--	--
08:39	200	13.85	6.22	0.936	0.0	0.19	7.00	50	--	--
08:42	200	13.85	6.30	0.930	0.0	0.12	6.90	33	--	--
08:45	200	13.85	6.48	0.936	0.0	0.07	6.79	29	--	--
08:48	200	13.85	6.52	0.932	0.0	0.10	6.81	26	--	--

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-4-W-20210715 Sample Time: 09:00 Sample Depth (ft-bmp): 14
 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	30064222	Well ID	MW-7	Date	7/15/2021	
Site Location	Fairbanks, Alaska	Site ID	211815	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	Total Depth (ft-bmp)	22	Water Column (ft)	7.00	Gallons in Well 1.14
Water Quality Meter Make/Model	Horiba U-52	Purge Method	Low-Flow	Sample Method	Grab	
Sample Time	07:00	Well Volumes Purged	0.97	Sample ID	MW-7-W-20210715	Evacuation Equipment Bladder
Purge Start	06:30	Gallons Purged	1.11	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	15.02	6.05	0.777	33.2	1.65	10.61	38	--	--
06:36	200	15.02	6.65	0.773	30.0	1.30	10.51	-6	--	--
06:39	200	15.02	6.85	0.779	27.0	1.14	10.13	-23	--	--
06:42	200	15.02	6.97	0.781	24.6	1.02	10.08	-34	--	--
06:45	200	15.02	6.98	0.777	20.1	0.70	10.10	-41	--	--
06:48	200	15.02	7.03	0.778	18.7	0.66	10.03	-45	--	--
06:51	200	15.02	7.08	0.778	16.7	0.97	10.05	-48	--	--

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-20210715 Sample Time: 07:00 Sample Depth (ft-bmp): 15.5
 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	30064222	Well ID	MW-9	Date	7/15/2021	
Site Location	Fairbanks, Alaska	Site ID	211815	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)	13.14	Total Depth (ft-bmp)	21.7	Water Column (ft)	8.56	Gallons in Well 1.39
Water Quality Meter Make/Model	Horiba U-52	Purge Method	Low-Flow	Sample Method	Grab	
Sample Time	08:00	Well Volumes Purged	0.80	Sample ID	MW-9-W-20210715	Evacuation Equipment Bladder
Purge Start	07:30	Gallons Purged	1.11	Duplicate ID	MS/MSD	
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	13.15	9.00	0.423	0.0	8.95	6.71	26	--	--
07:36	200	13.15	8.72	0.425	0.0	8.82	6.48	44	--	--
07:39	200	13.15	8.30	0.426	0.0	8.84	6.25	66	--	--
07:42	200	13.15	8.09	0.426	0.0	8.70	6.22	82	--	--
07:45	200	13.15	7.89	0.426	0.0	8.62	6.19	90	--	--
07:48	200	13.15	7.77	0.425	0.0	8.55	6.21	94	--	--
07:51	200	13.15	7.68	0.425	0.0	8.55	6.23	98	--	--

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-20210715 Sample Time: 08:00 Sample Depth (ft-bmp): 13.5
 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

APPENDIX C

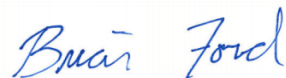
Laboratory Analytical Results



Arcadis - Chevron - AK

Sample Delivery Group: L1379853
Samples Received: 07/17/2021
Project Number: 30064222.19.21
Description: 211815
Site: 410 DRIVEWAY ST, FAIRBANKS, AK
Report To: Nicole Monroe/Sydney Clark
880 H St.
Anchorage, AK 99501

Entire Report Reviewed By:



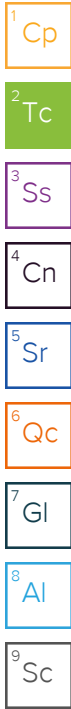
Brian Ford
Project Manager

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-7-W-20210715 L1379853-01 GW

Collected by E. Wujcik Collected date/time 07/15/21 07:00 Received date/time 07/17/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method AK101	WG1714233	1	07/29/21 18:08	07/29/21 18:08	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1707281	100	07/19/21 14:12	07/19/21 14:12	BRA	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1708050	25	07/20/21 02:13	07/20/21 02:13	JHH	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG1708955	1	07/21/21 08:20	07/22/21 16:45	SSH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102/103	WG1711615	1	07/28/21 07:15	07/30/21 20:27	DMG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102SGT	WG1711616	1	07/28/21 07:15	08/11/21 14:27	WCR	Mt. Juliet, TN



MW-9-W-20210715 L1379853-02 GW

Collected by E. Wujcik Collected date/time 07/15/21 08:00 Received date/time 07/17/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method AK101	WG1714233	1	07/29/21 18:30	07/29/21 18:30	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1707281	1	07/19/21 11:27	07/19/21 11:27	BRA	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1708050	1	07/19/21 22:06	07/19/21 22:06	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1712642	1	07/28/21 01:26	07/28/21 01:26	BMB	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG1708955	1	07/21/21 08:20	07/22/21 12:36	SSH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102/103	WG1711615	1	07/28/21 07:15	07/30/21 20:50	CLG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102SGT	WG1711616	1	07/28/21 07:15	07/30/21 20:50	JAS	Mt. Juliet, TN

MW-4-W-20210715 L1379853-03 GW

Collected by E. Wujcik Collected date/time 07/15/21 09:00 Received date/time 07/17/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method AK101	WG1714233	20	07/29/21 21:24	07/29/21 21:24	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1707281	1000	07/19/21 14:36	07/19/21 14:36	BRA	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1708050	10	07/20/21 02:32	07/20/21 02:32	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1712642	100	07/28/21 04:47	07/28/21 04:47	BMB	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG1708955	1	07/21/21 08:20	07/22/21 17:01	SSH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102/103	WG1711615	1	07/28/21 07:15	07/30/21 22:45	DMG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102SGT	WG1711616	1	07/28/21 07:15	08/11/21 14:47	WCR	Mt. Juliet, TN

MW-3-W-20210715 L1379853-04 GW

Collected by E. Wujcik Collected date/time 07/15/21 10:00 Received date/time 07/17/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method AK101	WG1714233	1	07/29/21 18:51	07/29/21 18:51	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1707281	10	07/19/21 15:47	07/19/21 15:47	BRA	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1708050	1	07/19/21 22:25	07/19/21 22:25	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1712642	1	07/28/21 01:46	07/28/21 01:46	BMB	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG1708955	1	07/21/21 08:20	07/22/21 17:14	SSH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102/103	WG1711615	1	07/28/21 07:15	07/30/21 23:08	DMG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102SGT	WG1711616	1	07/28/21 07:15	08/11/21 15:07	WCR	Mt. Juliet, TN

MW-1-W-20210715 L1379853-05 GW

Collected by E. Wujcik Collected date/time 07/15/21 11:00 Received date/time 07/17/21 09:30

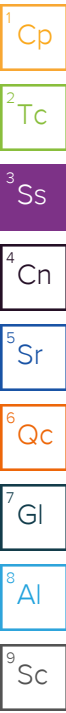
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method AK101	WG1715345	1	08/01/21 13:49	08/01/21 13:49	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1708291	1	07/20/21 17:12	07/20/21 17:12	JCP	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1711134	1	07/24/21 12:59	07/24/21 12:59	JCP	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102/103	WG1711615	1	07/28/21 07:15	07/30/21 23:31	DMG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102SGT	WG1711616	1	07/28/21 07:15	08/11/21 15:27	WCR	Mt. Juliet, TN

SAMPLE SUMMARY

AR-85-W-20210715 L1379853-06 GW

Collected by: E. Wujcik
 Collected date/time: 07/15/21 12:00
 Received date/time: 07/17/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method AK101	WG1714233	1	07/29/21 19:13	07/29/21 19:13	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1708291	1	07/20/21 17:32	07/20/21 17:32	JCP	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1711134	1	07/24/21 13:20	07/24/21 13:20	JCP	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102/103	WG1711615	1	07/28/21 07:15	07/30/21 23:54	DMG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102SGT	WG1711616	1	07/28/21 07:15	07/30/21 23:54	JAS	Mt. Juliet, TN



BD-1-W-20210715 L1379853-07 GW

Collected by: E. Wujcik
 Collected date/time: 07/15/21 00:00
 Received date/time: 07/17/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method AK101	WG1715345	50	08/01/21 14:10	08/01/21 14:10	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1707281	1000	07/19/21 15:00	07/19/21 15:00	BRA	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1708050	1	07/19/21 23:22	07/19/21 23:22	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1712642	50	07/28/21 05:07	07/28/21 05:07	BMB	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG1708955	1	07/21/21 08:20	07/22/21 17:26	SSH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102/103	WG1711615	1	07/28/21 07:15	07/31/21 00:17	DMG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102SGT	WG1711616	1	07/28/21 07:15	08/11/21 15:47	WCR	Mt. Juliet, TN

EQB-1-W-20210715 L1379853-08 GW

Collected by: E. Wujcik
 Collected date/time: 07/15/21 17:00
 Received date/time: 07/17/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method AK101	WG1715345	1	08/01/21 13:27	08/01/21 13:27	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1707281	1	07/19/21 12:14	07/19/21 12:14	BRA	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1708050	1	07/19/21 23:41	07/19/21 23:41	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1712642	1	07/28/21 02:06	07/28/21 02:06	BMB	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG1708955	1	07/21/21 08:20	07/22/21 17:39	SSH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102/103	WG1711615	1	07/28/21 07:15	07/31/21 00:40	DMG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102SGT	WG1711616	1	07/28/21 07:15	07/31/21 00:40	JAS	Mt. Juliet, TN


TRIP BLANK-20210715 L1379853-09 GW

Collected by: E. Wujcik
 Collected date/time: 07/15/21 00:00
 Received date/time: 07/17/21 09:30

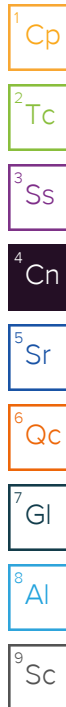
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method AK101	WG1714233	1	07/29/21 17:24	07/29/21 17:24	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1708050	1	07/19/21 20:50	07/19/21 20:50	JHH	Mt. Juliet, TN

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



Sample Delivery Group (SDG) Narrative

Sample was prepared and/or analyzed past recommended holding time. Concentrations should be considered minimum values.

Batch	Method	Lab Sample ID
WG1715345	AK101	L1379853-05, 07, 08

Volatile Organic Compounds (GC) by Method AK101

The same analyte is found in the associated blank.

Batch	Analyte	Lab Sample ID
WG1714233	TPHGAK C6 to C10	L1379853-02, 04, 09

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
WG1708050	L1379853-01	1,1,2-Trichlorotrifluoroethane, 1,2,3-Trimethylbenzene, Acetone, Acrolein, Dichlorodifluoromethane, Methyl tert-butyl ether and Trichlorofluoromethane
WG1708050	L1379853-02	1,1,2-Trichlorotrifluoroethane, Acetone, Acrolein, Dichlorodifluoromethane, Methyl tert-butyl ether and Trichlorofluoromethane
WG1708050	L1379853-03	1,1,2-Trichlorotrifluoroethane, 1,2,3-Trimethylbenzene, Acetone, Acrolein, Dichlorodifluoromethane, Methyl tert-butyl ether and Trichlorofluoromethane
WG1708050	L1379853-04	1,1,2-Trichlorotrifluoroethane, Acetone, Acrolein, Dichlorodifluoromethane, Methyl tert-butyl ether and Trichlorofluoromethane
WG1708050	L1379853-07	1,1,2-Trichlorotrifluoroethane, Acetone, Acrolein, Dichlorodifluoromethane, Methyl tert-butyl ether and Trichlorofluoromethane
WG1708050	L1379853-08	1,1,2-Trichlorotrifluoroethane, Acetone, Acrolein, Dichlorodifluoromethane, Methyl tert-butyl ether and Trichlorofluoromethane
WG1708050	L1379853-09	1,1,2-Trichlorotrifluoroethane, 1,2,3-Trimethylbenzene, Acetone, Acrolein, Dichlorodifluoromethane, Methyl tert-butyl ether and Trichlorofluoromethane

CASE NARRATIVE

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

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

Batch	Lab Sample ID	Analytes
WG1708050	L1379853-01	1,2,3-Trichlorobenzene
WG1708050	L1379853-02	1,2,3-Trichlorobenzene
WG1708050	L1379853-03	1,2,3-Trichlorobenzene
WG1708050	L1379853-04	1,2,3-Trichlorobenzene
WG1708050	L1379853-07	1,2,3-Trichlorobenzene
WG1708050	L1379853-08	1,2,3-Trichlorobenzene
WG1708050	L1379853-09	1,2,3-Trichlorobenzene

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

Batch	Lab Sample ID	Analytes
WG1708050	L1379853-01	m&p-Xylene

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

Batch	Lab Sample ID	Analytes
WG1708050	(LCS) R3684467-1, L1379853-01, 03, 09	1,2,3-Trimethylbenzene

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

Batch	Lab Sample ID	Analytes
WG1708050	(MS) R3684467-3, (MSD) R3684467-4, L1379853-02	1,2,3-Trimethylbenzene, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, m&p-Xylenes, Methyl tert-butyl ether, o-Xylene and Xylenes, Total

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

Batch	Lab Sample ID	Analytes
WG1708050	(MSD) R3684467-4, L1379853-02	Methyl tert-butyl ether

EDB / DBCP by Method 8011

RPD between the primary and confirmatory analysis exceeded 40%

Batch	Lab Sample ID	Analytes
WG1708955	L1379853-03	Ethylene Dibromide

Semi-Volatile Organic Compounds (GC) by Method AK102/103

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

Batch	Analyte	Lab Sample ID
WG1711615	n-Triacontane d62	L1379853-03, 04

The same analyte is found in the associated blank.

Batch	Analyte	Lab Sample ID
WG1711615	AK102 DRO C10-C25	L1379853-02, 04, 05, 06, 08

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

Batch	Lab Sample ID	Analytes
WG1711615	(MS) R3686652-10	AK102 DRO C10-C25

Semi-Volatile Organic Compounds (GC) by Method AK102SGT

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

Batch	Analyte	Lab Sample ID
WG1711616	o-Terphenyl	(BLANK) R3691093-1, (LCS) R3691093-2, (LCSD) R3691093-3, (MS) R3691093-4, (MSD) R3691093-5, L1379853-01, 03, 04, 05, 07

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

CASE NARRATIVE

Semi-Volatile Organic Compounds (GC) by Method AK102SGT

The same analyte is found in the associated blank.

Batch	Analyte	Lab Sample ID
WG1711616	AK102 DRO C10-C25	L1379853-01, 02, 03, 04, 05, 06, 08

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

Batch	Lab Sample ID	Analytes
WG1711616	(LCS) R3691093-2, (LCSD) R3691093-3, L1379853-01, 03, 04, 05, 07	AK102 DRO C10-C25

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

Batch	Lab Sample ID	Analytes
WG1711616	(MS) R3691093-4, (MSD) R3691093-5	AK102 DRO C10-C25

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	2990		28.7	100	1	07/29/2021 18:08	WG1714233
(S) a,a,a-Trifluorotoluene(FID)	98.1			50.0-150		07/29/2021 18:08	WG1714233

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,2,3-Trichloropropane	U		0.200	0.500	100	07/19/2021 14:12	WG1707281
Acetone	U	C3	282	1250	25	07/20/2021 02:13	WG1708050
1,2-Dibromoethane	U		0.410	0.500	100	07/19/2021 14:12	WG1707281
Acrolein	U	C3	63.5	1250	25	07/20/2021 02:13	WG1708050
Acrylonitrile	U		16.8	250	25	07/20/2021 02:13	WG1708050
Benzene	851		2.35	25.0	25	07/20/2021 02:13	WG1708050
Bromobenzene	U		2.95	25.0	25	07/20/2021 02:13	WG1708050
Bromochloromethane	U		3.20	25.0	25	07/20/2021 02:13	WG1708050
Bromodichloromethane	U		3.40	25.0	25	07/20/2021 02:13	WG1708050
Bromoform	U		3.22	25.0	25	07/20/2021 02:13	WG1708050
Bromomethane	U		15.1	125	25	07/20/2021 02:13	WG1708050
n-Butylbenzene	U		3.93	25.0	25	07/20/2021 02:13	WG1708050
sec-Butylbenzene	4.25	U	3.13	25.0	25	07/20/2021 02:13	WG1708050
tert-Butylbenzene	U		3.18	25.0	25	07/20/2021 02:13	WG1708050
Carbon disulfide	U		2.41	25.0	25	07/20/2021 02:13	WG1708050
Carbon tetrachloride	U		3.20	25.0	25	07/20/2021 02:13	WG1708050
Chlorobenzene	U		2.90	25.0	25	07/20/2021 02:13	WG1708050
Chlorodibromomethane	U		3.50	25.0	25	07/20/2021 02:13	WG1708050
Chloroethane	U		4.80	125	25	07/20/2021 02:13	WG1708050
Chloroform	U		2.78	125	25	07/20/2021 02:13	WG1708050
Chloromethane	U		24.0	62.5	25	07/20/2021 02:13	WG1708050
2-Chlorotoluene	U		2.65	25.0	25	07/20/2021 02:13	WG1708050
4-Chlorotoluene	U		2.85	25.0	25	07/20/2021 02:13	WG1708050
1,2-Dibromo-3-Chloropropane	U		6.90	125	25	07/20/2021 02:13	WG1708050
Dibromomethane	U		3.05	25.0	25	07/20/2021 02:13	WG1708050
1,2-Dichlorobenzene	U		2.68	25.0	25	07/20/2021 02:13	WG1708050
1,3-Dichlorobenzene	U		2.75	25.0	25	07/20/2021 02:13	WG1708050
1,4-Dichlorobenzene	U		3.00	25.0	25	07/20/2021 02:13	WG1708050
Dichlorodifluoromethane	U	C3	9.35	125	25	07/20/2021 02:13	WG1708050
1,1-Dichloroethane	U		2.50	25.0	25	07/20/2021 02:13	WG1708050
1,2-Dichloroethane	U		2.05	25.0	25	07/20/2021 02:13	WG1708050
1,1-Dichloroethene	U		4.70	25.0	25	07/20/2021 02:13	WG1708050
cis-1,2-Dichloroethene	U		3.15	25.0	25	07/20/2021 02:13	WG1708050
trans-1,2-Dichloroethene	U		3.73	25.0	25	07/20/2021 02:13	WG1708050
1,2-Dichloropropane	U		3.73	25.0	25	07/20/2021 02:13	WG1708050
1,1-Dichloropropene	U		3.55	25.0	25	07/20/2021 02:13	WG1708050
1,3-Dichloropropane	U		2.75	25.0	25	07/20/2021 02:13	WG1708050
cis-1,3-Dichloropropene	U		2.78	25.0	25	07/20/2021 02:13	WG1708050
trans-1,3-Dichloropropene	U		2.95	25.0	25	07/20/2021 02:13	WG1708050
2,2-Dichloropropane	U		4.03	25.0	25	07/20/2021 02:13	WG1708050
Di-isopropyl ether	U		2.63	25.0	25	07/20/2021 02:13	WG1708050
Ethylbenzene	83.4		3.43	25.0	25	07/20/2021 02:13	WG1708050
Hexachloro-1,3-butadiene	U		8.43	25.0	25	07/20/2021 02:13	WG1708050
Isopropylbenzene	19.5	U	2.63	25.0	25	07/20/2021 02:13	WG1708050
p-Isopropyltoluene	U		3.00	25.0	25	07/20/2021 02:13	WG1708050
2-Butanone (MEK)	U		29.8	250	25	07/20/2021 02:13	WG1708050
Methylene Chloride	U		10.7	125	25	07/20/2021 02:13	WG1708050
4-Methyl-2-pentanone (MIBK)	U		12.0	250	25	07/20/2021 02:13	WG1708050
Methyl tert-butyl ether	U	C3	2.53	25.0	25	07/20/2021 02:13	WG1708050

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	30.8	J	25.0	125	25	07/20/2021 02:13	WG1708050
n-Propylbenzene	30.9		2.48	25.0	25	07/20/2021 02:13	WG1708050
Styrene	U		2.95	25.0	25	07/20/2021 02:13	WG1708050
1,1,1,2-Tetrachloroethane	U		3.68	25.0	25	07/20/2021 02:13	WG1708050
1,1,2,2-Tetrachloroethane	U		3.33	25.0	25	07/20/2021 02:13	WG1708050
1,1,2-Trichlorotrifluoroethane	U	C3	4.50	25.0	25	07/20/2021 02:13	WG1708050
Tetrachloroethene	U		7.50	25.0	25	07/20/2021 02:13	WG1708050
Toluene	U		6.95	25.0	25	07/20/2021 02:13	WG1708050
1,2,3-Trichlorobenzene	U	C4	5.75	25.0	25	07/20/2021 02:13	WG1708050
1,2,4-Trichlorobenzene	U		12.0	25.0	25	07/20/2021 02:13	WG1708050
1,1,1-Trichloroethane	U		3.73	25.0	25	07/20/2021 02:13	WG1708050
1,1,2-Trichloroethane	U		3.95	25.0	25	07/20/2021 02:13	WG1708050
Trichloroethene	U		4.75	25.0	25	07/20/2021 02:13	WG1708050
Trichlorofluoromethane	U	C3	4.00	125	25	07/20/2021 02:13	WG1708050
1,2,4-Trimethylbenzene	116		8.05	25.0	25	07/20/2021 02:13	WG1708050
1,2,3-Trimethylbenzene	20.1	C3 J J4	2.60	25.0	25	07/20/2021 02:13	WG1708050
1,3,5-Trimethylbenzene	17.6	J	2.60	25.0	25	07/20/2021 02:13	WG1708050
Vinyl chloride	U		5.85	25.0	25	07/20/2021 02:13	WG1708050
Xylenes, Total	341		4.35	75.0	25	07/20/2021 02:13	WG1708050
o-Xylene	5.95	J	4.35	25.0	25	07/20/2021 02:13	WG1708050
m&p-Xylene	335	C5	10.7	50.0	25	07/20/2021 02:13	WG1708050
(S) Toluene-d8	109			80.0-120		07/20/2021 02:13	WG1708050
(S) 4-Bromofluorobenzene	100			77.0-126		07/20/2021 02:13	WG1708050
(S) 1,2-Dichloroethane-d4	78.8			70.0-130		07/20/2021 02:13	WG1708050

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

Sample Narrative:

L1379853-01 WG1707281: Non-target compounds too high to run at a lower dilution.

EDB / DBCP by Method 8011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Ethylene Dibromide	U		0.00536	0.0200	1	07/22/2021 16:45	WG1708955

Semi-Volatile Organic Compounds (GC) by Method AK102/103

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
AK102 DRO C10-C25	3850		229	800	1	07/30/2021 20:27	WG1711615
AK103 RRO C25-C36	U		403	800	1	07/30/2021 20:27	WG1711615
(S) o-Terphenyl	83.5			50.0-150		07/30/2021 20:27	WG1711615
(S) n-Triacontane d62	63.2			50.0-150		07/30/2021 20:27	WG1711615

Semi-Volatile Organic Compounds (GC) by Method AK102SGT

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
AK102 DRO C10-C25	453	B J J4	229	800	1	08/11/2021 14:27	WG1711616
(S) o-Terphenyl	32.6	J2		50.0-150		08/11/2021 14:27	WG1711616

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	44.5	<u>B J</u>	28.7	100	1	07/29/2021 18:30	WG1714233
(S) a,a,a-Trifluorotoluene(FID)	96.6			50.0-150		07/29/2021 18:30	WG1714233

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,2,3-Trichloropropane	U		0.00200	0.00500	1	07/19/2021 11:27	WG1707281
Acetone	U	<u>C3</u>	11.3	50.0	1	07/19/2021 22:06	WG1708050
1,2-Dibromoethane	U		0.00410	0.00500	1	07/19/2021 11:27	WG1707281
Acrolein	U	<u>C3</u>	2.54	50.0	1	07/19/2021 22:06	WG1708050
Acrylonitrile	U		0.671	10.0	1	07/19/2021 22:06	WG1708050
Benzene	U		0.0941	1.00	1	07/28/2021 01:26	WG1712642
Bromobenzene	U		0.118	1.00	1	07/19/2021 22:06	WG1708050
Bromochloromethane	U		0.128	1.00	1	07/19/2021 22:06	WG1708050
Bromodichloromethane	U		0.136	1.00	1	07/19/2021 22:06	WG1708050
Bromoform	U		0.129	1.00	1	07/19/2021 22:06	WG1708050
Bromomethane	U		0.605	5.00	1	07/19/2021 22:06	WG1708050
n-Butylbenzene	U		0.157	1.00	1	07/28/2021 01:26	WG1712642
sec-Butylbenzene	U		0.125	1.00	1	07/28/2021 01:26	WG1712642
tert-Butylbenzene	U		0.127	1.00	1	07/19/2021 22:06	WG1708050
Carbon disulfide	U		0.0962	1.00	1	07/19/2021 22:06	WG1708050
Carbon tetrachloride	U		0.128	1.00	1	07/19/2021 22:06	WG1708050
Chlorobenzene	U		0.116	1.00	1	07/19/2021 22:06	WG1708050
Chlorodibromomethane	U		0.140	1.00	1	07/19/2021 22:06	WG1708050
Chloroethane	U		0.192	5.00	1	07/19/2021 22:06	WG1708050
Chloroform	U		0.111	5.00	1	07/19/2021 22:06	WG1708050
Chloromethane	U		0.960	2.50	1	07/19/2021 22:06	WG1708050
2-Chlorotoluene	U		0.106	1.00	1	07/19/2021 22:06	WG1708050
4-Chlorotoluene	U		0.114	1.00	1	07/19/2021 22:06	WG1708050
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	07/19/2021 22:06	WG1708050
Dibromomethane	U		0.122	1.00	1	07/19/2021 22:06	WG1708050
1,2-Dichlorobenzene	U		0.107	1.00	1	07/19/2021 22:06	WG1708050
1,3-Dichlorobenzene	U		0.110	1.00	1	07/19/2021 22:06	WG1708050
1,4-Dichlorobenzene	U		0.120	1.00	1	07/19/2021 22:06	WG1708050
Dichlorodifluoromethane	U	<u>C3</u>	0.374	5.00	1	07/19/2021 22:06	WG1708050
1,1-Dichloroethane	U		0.100	1.00	1	07/19/2021 22:06	WG1708050
1,2-Dichloroethane	U		0.0819	1.00	1	07/19/2021 22:06	WG1708050
1,1-Dichloroethene	U		0.188	1.00	1	07/19/2021 22:06	WG1708050
cis-1,2-Dichloroethene	U		0.126	1.00	1	07/19/2021 22:06	WG1708050
trans-1,2-Dichloroethene	U		0.149	1.00	1	07/19/2021 22:06	WG1708050
1,2-Dichloropropane	U		0.149	1.00	1	07/19/2021 22:06	WG1708050
1,1-Dichloropropene	U		0.142	1.00	1	07/19/2021 22:06	WG1708050
1,3-Dichloropropane	U		0.110	1.00	1	07/19/2021 22:06	WG1708050
cis-1,3-Dichloropropene	U		0.111	1.00	1	07/19/2021 22:06	WG1708050
trans-1,3-Dichloropropene	U		0.118	1.00	1	07/19/2021 22:06	WG1708050
2,2-Dichloropropane	U		0.161	1.00	1	07/19/2021 22:06	WG1708050
Di-isopropyl ether	U		0.105	1.00	1	07/19/2021 22:06	WG1708050
Ethylbenzene	U		0.137	1.00	1	07/28/2021 01:26	WG1712642
Hexachloro-1,3-butadiene	U		0.337	1.00	1	07/19/2021 22:06	WG1708050
Isopropylbenzene	U		0.105	1.00	1	07/28/2021 01:26	WG1712642
p-Isopropyltoluene	U		0.120	1.00	1	07/28/2021 01:26	WG1712642
2-Butanone (MEK)	U		1.19	10.0	1	07/19/2021 22:06	WG1708050
Methylene Chloride	U		0.430	5.00	1	07/19/2021 22:06	WG1708050
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	07/19/2021 22:06	WG1708050
Methyl tert-butyl ether	U	<u>C3 J3 J6</u>	0.101	1.00	1	07/19/2021 22:06	WG1708050

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		1.00	5.00	1	07/28/2021 01:26	WG1712642
n-Propylbenzene	U		0.0993	1.00	1	07/28/2021 01:26	WG1712642
Styrene	U		0.118	1.00	1	07/19/2021 22:06	WG1708050
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	07/19/2021 22:06	WG1708050
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	07/19/2021 22:06	WG1708050
1,1,2-Trichlorotrifluoroethane	U	C3	0.180	1.00	1	07/19/2021 22:06	WG1708050
Tetrachloroethene	U		0.300	1.00	1	07/19/2021 22:06	WG1708050
Toluene	U		0.278	1.00	1	07/28/2021 01:26	WG1712642
1,2,3-Trichlorobenzene	U	C4	0.230	1.00	1	07/19/2021 22:06	WG1708050
1,2,4-Trichlorobenzene	U		0.481	1.00	1	07/19/2021 22:06	WG1708050
1,1,1-Trichloroethane	U		0.149	1.00	1	07/19/2021 22:06	WG1708050
1,1,2-Trichloroethane	U		0.158	1.00	1	07/19/2021 22:06	WG1708050
Trichloroethene	U		0.190	1.00	1	07/19/2021 22:06	WG1708050
Trichlorofluoromethane	2.20	C3 J	0.160	5.00	1	07/19/2021 22:06	WG1708050
1,2,4-Trimethylbenzene	U		0.322	1.00	1	07/28/2021 01:26	WG1712642
1,2,3-Trimethylbenzene	U		0.104	1.00	1	07/28/2021 01:26	WG1712642
1,3,5-Trimethylbenzene	U		0.104	1.00	1	07/28/2021 01:26	WG1712642
Vinyl chloride	U		0.234	1.00	1	07/19/2021 22:06	WG1708050
Xylenes, Total	U		0.174	3.00	1	07/28/2021 01:26	WG1712642
o-Xylene	U		0.174	1.00	1	07/28/2021 01:26	WG1712642
m&p-Xylene	U		0.430	2.00	1	07/28/2021 01:26	WG1712642
(S) Toluene-d8	110			80.0-120		07/19/2021 22:06	WG1708050
(S) Toluene-d8	98.9			80.0-120		07/28/2021 01:26	WG1712642
(S) 4-Bromofluorobenzene	98.1			77.0-126		07/19/2021 22:06	WG1708050
(S) 4-Bromofluorobenzene	94.6			77.0-126		07/28/2021 01:26	WG1712642
(S) 1,2-Dichloroethane-d4	80.1			70.0-130		07/19/2021 22:06	WG1708050
(S) 1,2-Dichloroethane-d4	99.2			70.0-130		07/28/2021 01:26	WG1712642

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

EDB / DBCP by Method 8011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Ethylene Dibromide	U		0.00536	0.0200	1	07/22/2021 12:36	WG1708955

Semi-Volatile Organic Compounds (GC) by Method AK102/103

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	458	B J	229	800	1	07/30/2021 20:50	WG1711615
AK103 RRO C25-C36	U		403	800	1	07/30/2021 20:50	WG1711615
(S) o-Terphenyl	102			50.0-150		07/30/2021 20:50	WG1711615
(S) n-Triacontane d62	91.2			50.0-150		07/30/2021 20:50	WG1711615

Semi-Volatile Organic Compounds (GC) by Method AK102SGT

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	458	B J	229	800	1	07/30/2021 20:50	WG1711616
(S) o-Terphenyl	102			50.0-150		07/30/2021 20:50	WG1711616

Sample Narrative:

L1379853-02 WG1711616: Reporting from non-silica gel data due to non-detect to the RDL.

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	31200		574	2000	20	07/29/2021 21:24	WG1714233
(S) a,a,a-Trifluorotoluene(FID)	96.7			50.0-150		07/29/2021 21:24	WG1714233

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,2,3-Trichloropropane	U		2.00	5.00	1000	07/19/2021 14:36	WG1707281
Acetone	U	C3	113	500	10	07/20/2021 02:32	WG1708050
1,2-Dibromoethane	U		4.10	5.00	1000	07/19/2021 14:36	WG1707281
Acrolein	U	C3	25.4	500	10	07/20/2021 02:32	WG1708050
Acrylonitrile	U		6.71	100	10	07/20/2021 02:32	WG1708050
Benzene	2410		9.41	100	100	07/28/2021 04:47	WG1712642
Bromobenzene	U		1.18	10.0	10	07/20/2021 02:32	WG1708050
Bromochloromethane	U		1.28	10.0	10	07/20/2021 02:32	WG1708050
Bromodichloromethane	U		1.36	10.0	10	07/20/2021 02:32	WG1708050
Bromoform	U		1.29	10.0	10	07/20/2021 02:32	WG1708050
Bromomethane	U		6.05	50.0	10	07/20/2021 02:32	WG1708050
n-Butylbenzene	5.35	J	1.57	10.0	10	07/20/2021 02:32	WG1708050
sec-Butylbenzene	5.28	J	1.25	10.0	10	07/20/2021 02:32	WG1708050
tert-Butylbenzene	U		1.27	10.0	10	07/20/2021 02:32	WG1708050
Carbon disulfide	U		0.962	10.0	10	07/20/2021 02:32	WG1708050
Carbon tetrachloride	U		1.28	10.0	10	07/20/2021 02:32	WG1708050
Chlorobenzene	U		1.16	10.0	10	07/20/2021 02:32	WG1708050
Chlorodibromomethane	U		1.40	10.0	10	07/20/2021 02:32	WG1708050
Chloroethane	U		1.92	50.0	10	07/20/2021 02:32	WG1708050
Chloroform	U		1.11	50.0	10	07/20/2021 02:32	WG1708050
Chloromethane	U		9.60	25.0	10	07/20/2021 02:32	WG1708050
2-Chlorotoluene	U		1.06	10.0	10	07/20/2021 02:32	WG1708050
4-Chlorotoluene	U		1.14	10.0	10	07/20/2021 02:32	WG1708050
1,2-Dibromo-3-Chloropropane	U		2.76	50.0	10	07/20/2021 02:32	WG1708050
Dibromomethane	U		1.22	10.0	10	07/20/2021 02:32	WG1708050
1,2-Dichlorobenzene	U		1.07	10.0	10	07/20/2021 02:32	WG1708050
1,3-Dichlorobenzene	U		1.10	10.0	10	07/20/2021 02:32	WG1708050
1,4-Dichlorobenzene	U		1.20	10.0	10	07/20/2021 02:32	WG1708050
Dichlorodifluoromethane	U	C3	3.74	50.0	10	07/20/2021 02:32	WG1708050
1,1-Dichloroethane	U		1.00	10.0	10	07/20/2021 02:32	WG1708050
1,2-Dichloroethane	U		0.819	10.0	10	07/20/2021 02:32	WG1708050
1,1-Dichloroethene	U		1.88	10.0	10	07/20/2021 02:32	WG1708050
cis-1,2-Dichloroethene	U		1.26	10.0	10	07/20/2021 02:32	WG1708050
trans-1,2-Dichloroethene	U		1.49	10.0	10	07/20/2021 02:32	WG1708050
1,2-Dichloropropane	U		1.49	10.0	10	07/20/2021 02:32	WG1708050
1,1-Dichloropropene	U		1.42	10.0	10	07/20/2021 02:32	WG1708050
1,3-Dichloropropane	U		1.10	10.0	10	07/20/2021 02:32	WG1708050
cis-1,3-Dichloropropene	U		1.11	10.0	10	07/20/2021 02:32	WG1708050
trans-1,3-Dichloropropene	U		1.18	10.0	10	07/20/2021 02:32	WG1708050
2,2-Dichloropropane	U		1.61	10.0	10	07/20/2021 02:32	WG1708050
Di-isopropyl ether	U		1.05	10.0	10	07/20/2021 02:32	WG1708050
Ethylbenzene	1070		13.7	100	100	07/28/2021 04:47	WG1712642
Hexachloro-1,3-butadiene	U		3.37	10.0	10	07/20/2021 02:32	WG1708050
Isopropylbenzene	48.9		1.05	10.0	10	07/20/2021 02:32	WG1708050
p-Isopropyltoluene	5.97	J	1.20	10.0	10	07/20/2021 02:32	WG1708050
2-Butanone (MEK)	U		11.9	100	10	07/20/2021 02:32	WG1708050
Methylene Chloride	U		4.30	50.0	10	07/20/2021 02:32	WG1708050
4-Methyl-2-pentanone (MIBK)	U		4.78	100	10	07/20/2021 02:32	WG1708050
Methyl tert-butyl ether	5.84	C3 J	1.01	10.0	10	07/20/2021 02:32	WG1708050

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	151	<u>J</u>	100	500	100	07/28/2021 04:47	WG1712642
n-Propylbenzene	109		0.993	10.0	10	07/20/2021 02:32	WG1708050
Styrene	U		1.18	10.0	10	07/20/2021 02:32	WG1708050
1,1,1,2-Tetrachloroethane	U		1.47	10.0	10	07/20/2021 02:32	WG1708050
1,1,2,2-Tetrachloroethane	U		1.33	10.0	10	07/20/2021 02:32	WG1708050
1,1,2-Trichlorotrifluoroethane	U	<u>C3</u>	1.80	10.0	10	07/20/2021 02:32	WG1708050
Tetrachloroethene	U		3.00	10.0	10	07/20/2021 02:32	WG1708050
Toluene	5490		27.8	100	100	07/28/2021 04:47	WG1712642
1,2,3-Trichlorobenzene	U	<u>C4</u>	2.30	10.0	10	07/20/2021 02:32	WG1708050
1,2,4-Trichlorobenzene	U		4.81	10.0	10	07/20/2021 02:32	WG1708050
1,1,1-Trichloroethane	U		1.49	10.0	10	07/20/2021 02:32	WG1708050
1,1,2-Trichloroethane	U		1.58	10.0	10	07/20/2021 02:32	WG1708050
Trichloroethene	U		1.90	10.0	10	07/20/2021 02:32	WG1708050
Trichlorofluoromethane	U	<u>C3</u>	1.60	50.0	10	07/20/2021 02:32	WG1708050
1,2,4-Trimethylbenzene	985		3.22	10.0	10	07/20/2021 02:32	WG1708050
1,2,3-Trimethylbenzene	393	<u>C3 J4</u>	1.04	10.0	10	07/20/2021 02:32	WG1708050
1,3,5-Trimethylbenzene	331		1.04	10.0	10	07/20/2021 02:32	WG1708050
Vinyl chloride	U		2.34	10.0	10	07/20/2021 02:32	WG1708050
Xylenes, Total	8100		17.4	300	100	07/28/2021 04:47	WG1712642
o-Xylene	2530		17.4	100	100	07/28/2021 04:47	WG1712642
m&p-Xylene	5570		43.0	200	100	07/28/2021 04:47	WG1712642
(S) Toluene-d8	108			80.0-120		07/20/2021 02:32	WG1708050
(S) Toluene-d8	97.7			80.0-120		07/28/2021 04:47	WG1712642
(S) 4-Bromofluorobenzene	99.6			77.0-126		07/20/2021 02:32	WG1708050
(S) 4-Bromofluorobenzene	93.0			77.0-126		07/28/2021 04:47	WG1712642
(S) 1,2-Dichloroethane-d4	79.8			70.0-130		07/20/2021 02:32	WG1708050
(S) 1,2-Dichloroethane-d4	97.8			70.0-130		07/28/2021 04:47	WG1712642

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

Sample Narrative:

L1379853-03 WG1707281: Non-target compounds too high to run at a lower dilution.

EDB / DBCP by Method 8011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Ethylene Dibromide	0.0272	<u>P</u>	0.00536	0.0200	1	07/22/2021 17:01	WG1708955

Semi-Volatile Organic Compounds (GC) by Method AK102/103

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	13900		229	800	1	07/30/2021 22:45	WG1711615
AK103 RRO C25-C36	750	<u>J</u>	403	800	1	07/30/2021 22:45	WG1711615
(S) o-Terphenyl	53.6			50.0-150		07/30/2021 22:45	WG1711615
(S) n-Triacontane d62	28.8	<u>J2</u>		50.0-150		07/30/2021 22:45	WG1711615

Semi-Volatile Organic Compounds (GC) by Method AK102SGT

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	2360	<u>B J4</u>	229	800	1	08/11/2021 14:47	WG1711616
(S) o-Terphenyl	28.6	<u>J2</u>		50.0-150		08/11/2021 14:47	WG1711616

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	<u>B</u>	28.7	100	1	07/29/2021 18:51	WG1714233
(S) a,a,a-Trifluorotoluene(FID)	97.8			50.0-150		07/29/2021 18:51	WG1714233

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,2,3-Trichloropropane	U		0.0200	0.0500	10	07/19/2021 15:47	WG1707281
Acetone	U	<u>C3</u>	11.3	50.0	1	07/19/2021 22:25	WG1708050
1,2-Dibromoethane	U		0.0410	0.0500	10	07/19/2021 15:47	WG1707281
Acrolein	U	<u>C3</u>	2.54	50.0	1	07/19/2021 22:25	WG1708050
Acrylonitrile	U		0.671	10.0	1	07/19/2021 22:25	WG1708050
Benzene	12.9		0.0941	1.00	1	07/19/2021 22:25	WG1708050
Bromobenzene	U		0.118	1.00	1	07/19/2021 22:25	WG1708050
Bromochloromethane	U		0.128	1.00	1	07/19/2021 22:25	WG1708050
Bromodichloromethane	U		0.136	1.00	1	07/19/2021 22:25	WG1708050
Bromoform	U		0.129	1.00	1	07/19/2021 22:25	WG1708050
Bromomethane	U		0.605	5.00	1	07/19/2021 22:25	WG1708050
n-Butylbenzene	U		0.157	1.00	1	07/28/2021 01:46	WG1712642
sec-Butylbenzene	U		0.125	1.00	1	07/28/2021 01:46	WG1712642
tert-Butylbenzene	U		0.127	1.00	1	07/19/2021 22:25	WG1708050
Carbon disulfide	U		0.0962	1.00	1	07/19/2021 22:25	WG1708050
Carbon tetrachloride	U		0.128	1.00	1	07/19/2021 22:25	WG1708050
Chlorobenzene	U		0.116	1.00	1	07/19/2021 22:25	WG1708050
Chlorodibromomethane	U		0.140	1.00	1	07/19/2021 22:25	WG1708050
Chloroethane	U		0.192	5.00	1	07/19/2021 22:25	WG1708050
Chloroform	U		0.111	5.00	1	07/19/2021 22:25	WG1708050
Chloromethane	U		0.960	2.50	1	07/19/2021 22:25	WG1708050
2-Chlorotoluene	U		0.106	1.00	1	07/19/2021 22:25	WG1708050
4-Chlorotoluene	U		0.114	1.00	1	07/19/2021 22:25	WG1708050
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	07/19/2021 22:25	WG1708050
Dibromomethane	U		0.122	1.00	1	07/19/2021 22:25	WG1708050
1,2-Dichlorobenzene	U		0.107	1.00	1	07/19/2021 22:25	WG1708050
1,3-Dichlorobenzene	U		0.110	1.00	1	07/19/2021 22:25	WG1708050
1,4-Dichlorobenzene	U		0.120	1.00	1	07/19/2021 22:25	WG1708050
Dichlorodifluoromethane	U	<u>C3</u>	0.374	5.00	1	07/19/2021 22:25	WG1708050
1,1-Dichloroethane	U		0.100	1.00	1	07/19/2021 22:25	WG1708050
1,2-Dichloroethane	U		0.0819	1.00	1	07/19/2021 22:25	WG1708050
1,1-Dichloroethene	U		0.188	1.00	1	07/19/2021 22:25	WG1708050
cis-1,2-Dichloroethene	U		0.126	1.00	1	07/19/2021 22:25	WG1708050
trans-1,2-Dichloroethene	U		0.149	1.00	1	07/19/2021 22:25	WG1708050
1,2-Dichloropropane	U		0.149	1.00	1	07/19/2021 22:25	WG1708050
1,1-Dichloropropene	U		0.142	1.00	1	07/19/2021 22:25	WG1708050
1,3-Dichloropropane	U		0.110	1.00	1	07/19/2021 22:25	WG1708050
cis-1,3-Dichloropropene	U		0.111	1.00	1	07/19/2021 22:25	WG1708050
trans-1,3-Dichloropropene	U		0.118	1.00	1	07/19/2021 22:25	WG1708050
2,2-Dichloropropane	U		0.161	1.00	1	07/19/2021 22:25	WG1708050
Di-isopropyl ether	U		0.105	1.00	1	07/19/2021 22:25	WG1708050
Ethylbenzene	3.76		0.137	1.00	1	07/28/2021 01:46	WG1712642
Hexachloro-1,3-butadiene	U		0.337	1.00	1	07/19/2021 22:25	WG1708050
Isopropylbenzene	0.951	<u>J</u>	0.105	1.00	1	07/28/2021 01:46	WG1712642
p-Isopropyltoluene	U		0.120	1.00	1	07/19/2021 22:25	WG1708050
2-Butanone (MEK)	U		1.19	10.0	1	07/19/2021 22:25	WG1708050
Methylene Chloride	U		0.430	5.00	1	07/19/2021 22:25	WG1708050
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	07/19/2021 22:25	WG1708050
Methyl tert-butyl ether	U	<u>C3</u>	0.101	1.00	1	07/19/2021 22:25	WG1708050

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	1.20	<u>J</u>	1.00	5.00	1	07/28/2021 01:46	WG1712642
n-Propylbenzene	1.81		0.0993	1.00	1	07/28/2021 01:46	WG1712642
Styrene	U		0.118	1.00	1	07/19/2021 22:25	WG1708050
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	07/19/2021 22:25	WG1708050
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	07/19/2021 22:25	WG1708050
1,1,2-Trichlorotrifluoroethane	U	<u>C3</u>	0.180	1.00	1	07/19/2021 22:25	WG1708050
Tetrachloroethene	U		0.300	1.00	1	07/19/2021 22:25	WG1708050
Toluene	0.384	<u>J</u>	0.278	1.00	1	07/28/2021 01:46	WG1712642
1,2,3-Trichlorobenzene	U	<u>C4</u>	0.230	1.00	1	07/19/2021 22:25	WG1708050
1,2,4-Trichlorobenzene	U		0.481	1.00	1	07/19/2021 22:25	WG1708050
1,1,1-Trichloroethane	U		0.149	1.00	1	07/19/2021 22:25	WG1708050
1,1,2-Trichloroethane	U		0.158	1.00	1	07/19/2021 22:25	WG1708050
Trichloroethene	U		0.190	1.00	1	07/19/2021 22:25	WG1708050
Trichlorofluoromethane	1.45	<u>C3 J</u>	0.160	5.00	1	07/19/2021 22:25	WG1708050
1,2,4-Trimethylbenzene	14.1		0.322	1.00	1	07/28/2021 01:46	WG1712642
1,2,3-Trimethylbenzene	1.70		0.104	1.00	1	07/28/2021 01:46	WG1712642
1,3,5-Trimethylbenzene	2.62		0.104	1.00	1	07/28/2021 01:46	WG1712642
Vinyl chloride	U		0.234	1.00	1	07/19/2021 22:25	WG1708050
Xylenes, Total	8.44		0.174	3.00	1	07/28/2021 01:46	WG1712642
o-Xylene	0.903	<u>J</u>	0.174	1.00	1	07/28/2021 01:46	WG1712642
m&p-Xylene	7.54		0.430	2.00	1	07/28/2021 01:46	WG1712642
(S) Toluene-d8	107			80.0-120		07/19/2021 22:25	WG1708050
(S) Toluene-d8	100			80.0-120		07/28/2021 01:46	WG1712642
(S) 4-Bromofluorobenzene	97.7			77.0-126		07/19/2021 22:25	WG1708050
(S) 4-Bromofluorobenzene	95.8			77.0-126		07/28/2021 01:46	WG1712642
(S) 1,2-Dichloroethane-d4	77.3			70.0-130		07/19/2021 22:25	WG1708050
(S) 1,2-Dichloroethane-d4	99.1			70.0-130		07/28/2021 01:46	WG1712642

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

Sample Narrative:

L1379853-04 WG1707281: Non-target compounds too high to run at a lower dilution.

EDB / DBCP by Method 8011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Ethylene Dibromide	U		0.00536	0.0200	1	07/22/2021 17:14	WG1708955

Semi-Volatile Organic Compounds (GC) by Method AK102/103

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	2550	<u>B</u>	229	800	1	07/30/2021 23:08	WG1711615
AK103 RRO C25-C36	U		403	800	1	07/30/2021 23:08	WG1711615
(S) o-Terphenyl	61.4			50.0-150		07/30/2021 23:08	WG1711615
(S) n-Triacontane d62	49.4	<u>J2</u>		50.0-150		07/30/2021 23:08	WG1711615

Semi-Volatile Organic Compounds (GC) by Method AK102SGT

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	273	<u>B J J4</u>	229	800	1	08/11/2021 15:07	WG1711616
(S) o-Terphenyl	31.0	<u>J2</u>		50.0-150		08/11/2021 15:07	WG1711616

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
TPHGAK C6 to C10	U	<u>Q</u>	28.7	100	1	08/01/2021 13:49	WG1715345
(S) a,a,a-Trifluorotoluene(FID)	98.5			50.0-150		08/01/2021 13:49	WG1715345

- 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
Benzene	0.302	<u>J</u>	0.0941	1.00	1	07/24/2021 12:59	WG1711134
Toluene	U		0.278	1.00	1	07/20/2021 17:12	WG1708291
Ethylbenzene	U		0.137	1.00	1	07/20/2021 17:12	WG1708291
Total Xylenes	0.409	<u>J</u>	0.174	3.00	1	07/24/2021 12:59	WG1711134
(S) Toluene-d8	97.4			80.0-120		07/20/2021 17:12	WG1708291
(S) Toluene-d8	98.3			80.0-120		07/24/2021 12:59	WG1711134
(S) 4-Bromofluorobenzene	97.5			77.0-126		07/20/2021 17:12	WG1708291
(S) 4-Bromofluorobenzene	92.6			77.0-126		07/24/2021 12:59	WG1711134
(S) 1,2-Dichloroethane-d4	90.6			70.0-130		07/20/2021 17:12	WG1708291
(S) 1,2-Dichloroethane-d4	110			70.0-130		07/24/2021 12:59	WG1711134

Semi-Volatile Organic Compounds (GC) by Method AK102/103

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	962	<u>B</u>	229	800	1	07/30/2021 23:31	WG1711615
AK103 RRO C25-C36	U		403	800	1	07/30/2021 23:31	WG1711615
(S) o-Terphenyl	91.5			50.0-150		07/30/2021 23:31	WG1711615
(S) n-Triacontane d62	85.2			50.0-150		07/30/2021 23:31	WG1711615

Semi-Volatile Organic Compounds (GC) by Method AK102SGT

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	337	<u>B J J4</u>	229	800	1	08/11/2021 15:27	WG1711616
(S) o-Terphenyl	32.5	<u>J2</u>		50.0-150		08/11/2021 15:27	WG1711616

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	07/29/2021 19:13	WG1714233
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	96.4			50.0-150		07/29/2021 19:13	WG1714233

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Benzene	0.276	J	0.0941	1.00	1	07/24/2021 13:20	WG1711134
Toluene	U		0.278	1.00	1	07/20/2021 17:32	WG1708291
Ethylbenzene	U		0.137	1.00	1	07/20/2021 17:32	WG1708291
Total Xylenes	U		0.174	3.00	1	07/20/2021 17:32	WG1708291
(S) Toluene-d8	99.4			80.0-120		07/20/2021 17:32	WG1708291
(S) Toluene-d8	99.9			80.0-120		07/24/2021 13:20	WG1711134
(S) 4-Bromofluorobenzene	104			77.0-126		07/20/2021 17:32	WG1708291
(S) 4-Bromofluorobenzene	85.6			77.0-126		07/24/2021 13:20	WG1711134
(S) 1,2-Dichloroethane-d4	92.1			70.0-130		07/20/2021 17:32	WG1708291
(S) 1,2-Dichloroethane-d4	108			70.0-130		07/24/2021 13:20	WG1711134

Semi-Volatile Organic Compounds (GC) by Method AK102/103

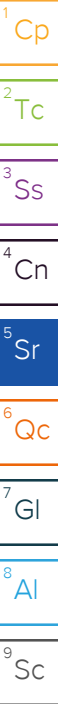
Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
AK102 DRO C10-C25	573	B J	229	800	1	07/30/2021 23:54	WG1711615
AK103 RRO C25-C36	U		403	800	1	07/30/2021 23:54	WG1711615
(S) <i>o</i> -Terphenyl	96.7			50.0-150		07/30/2021 23:54	WG1711615
(S) <i>n</i> -Triacontane d62	66.4			50.0-150		07/30/2021 23:54	WG1711615

Semi-Volatile Organic Compounds (GC) by Method AK102SGT

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
AK102 DRO C10-C25	573	B J	229	800	1	07/30/2021 23:54	WG1711616
(S) <i>o</i> -Terphenyl	96.7			50.0-150		07/30/2021 23:54	WG1711616

Sample Narrative:

L1379853-06 WG1711616: Reporting from non-silica gel data due to non-detect to the RDL.



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	33700	<u>Q</u>	1440	5000	50	08/01/2021 14:10	WG1715345
(S) a,a,a-Trifluorotoluene(FID)	99.0			50.0-150		08/01/2021 14:10	WG1715345

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,2,3-Trichloropropane	U		2.00	5.00	1000	07/19/2021 15:00	WG1707281
Acetone	U	<u>C3</u>	11.3	50.0	1	07/19/2021 23:22	WG1708050
1,2-Dibromoethane	U		4.10	5.00	1000	07/19/2021 15:00	WG1707281
Acrolein	U	<u>C3</u>	2.54	50.0	1	07/19/2021 23:22	WG1708050
Acrylonitrile	U		0.671	10.0	1	07/19/2021 23:22	WG1708050
Benzene	2220		4.71	50.0	50	07/28/2021 05:07	WG1712642
Bromobenzene	U		0.118	1.00	1	07/19/2021 23:22	WG1708050
Bromochloromethane	U		0.128	1.00	1	07/19/2021 23:22	WG1708050
Bromodichloromethane	U		0.136	1.00	1	07/19/2021 23:22	WG1708050
Bromoform	U		0.129	1.00	1	07/19/2021 23:22	WG1708050
Bromomethane	U		0.605	5.00	1	07/19/2021 23:22	WG1708050
n-Butylbenzene	5.86		0.157	1.00	1	07/19/2021 23:22	WG1708050
sec-Butylbenzene	5.83		0.125	1.00	1	07/19/2021 23:22	WG1708050
tert-Butylbenzene	0.764	<u>J</u>	0.127	1.00	1	07/19/2021 23:22	WG1708050
Carbon disulfide	U		0.0962	1.00	1	07/19/2021 23:22	WG1708050
Carbon tetrachloride	U		0.128	1.00	1	07/19/2021 23:22	WG1708050
Chlorobenzene	U		0.116	1.00	1	07/19/2021 23:22	WG1708050
Chlorodibromomethane	U		0.140	1.00	1	07/19/2021 23:22	WG1708050
Chloroethane	U		0.192	5.00	1	07/19/2021 23:22	WG1708050
Chloroform	U		0.111	5.00	1	07/19/2021 23:22	WG1708050
Chloromethane	U		0.960	2.50	1	07/19/2021 23:22	WG1708050
2-Chlorotoluene	U		0.106	1.00	1	07/19/2021 23:22	WG1708050
4-Chlorotoluene	U		0.114	1.00	1	07/19/2021 23:22	WG1708050
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	07/19/2021 23:22	WG1708050
Dibromomethane	U		0.122	1.00	1	07/19/2021 23:22	WG1708050
1,2-Dichlorobenzene	U		0.107	1.00	1	07/19/2021 23:22	WG1708050
1,3-Dichlorobenzene	U		0.110	1.00	1	07/19/2021 23:22	WG1708050
1,4-Dichlorobenzene	U		0.120	1.00	1	07/19/2021 23:22	WG1708050
Dichlorodifluoromethane	U	<u>C3</u>	0.374	5.00	1	07/19/2021 23:22	WG1708050
1,1-Dichloroethane	U		0.100	1.00	1	07/19/2021 23:22	WG1708050
1,2-Dichloroethane	5.71		0.0819	1.00	1	07/19/2021 23:22	WG1708050
1,1-Dichloroethene	U		0.188	1.00	1	07/19/2021 23:22	WG1708050
cis-1,2-Dichloroethene	U		0.126	1.00	1	07/19/2021 23:22	WG1708050
trans-1,2-Dichloroethene	U		0.149	1.00	1	07/19/2021 23:22	WG1708050
1,2-Dichloropropane	U		0.149	1.00	1	07/19/2021 23:22	WG1708050
1,1-Dichloropropene	U		0.142	1.00	1	07/19/2021 23:22	WG1708050
1,3-Dichloropropane	U		0.110	1.00	1	07/19/2021 23:22	WG1708050
cis-1,3-Dichloropropene	U		0.111	1.00	1	07/19/2021 23:22	WG1708050
trans-1,3-Dichloropropene	U		0.118	1.00	1	07/19/2021 23:22	WG1708050
2,2-Dichloropropane	U		0.161	1.00	1	07/19/2021 23:22	WG1708050
Di-isopropyl ether	U		0.105	1.00	1	07/19/2021 23:22	WG1708050
Ethylbenzene	1010		6.85	50.0	50	07/28/2021 05:07	WG1712642
Hexachloro-1,3-butadiene	U		0.337	1.00	1	07/19/2021 23:22	WG1708050
Isopropylbenzene	59.0		0.105	1.00	1	07/19/2021 23:22	WG1708050
p-Isopropyltoluene	7.14		0.120	1.00	1	07/19/2021 23:22	WG1708050
2-Butanone (MEK)	U		1.19	10.0	1	07/19/2021 23:22	WG1708050
Methylene Chloride	U		0.430	5.00	1	07/19/2021 23:22	WG1708050
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	07/19/2021 23:22	WG1708050
Methyl tert-butyl ether	3.60	<u>C3</u>	0.101	1.00	1	07/19/2021 23:22	WG1708050

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	192	<u>J</u>	50.0	250	50	07/28/2021 05:07	WG1712642
n-Propylbenzene	107		4.97	50.0	50	07/28/2021 05:07	WG1712642
Styrene	U		0.118	1.00	1	07/19/2021 23:22	WG1708050
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	07/19/2021 23:22	WG1708050
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	07/19/2021 23:22	WG1708050
1,1,2-Trichlorotrifluoroethane	U	<u>C3</u>	0.180	1.00	1	07/19/2021 23:22	WG1708050
Tetrachloroethene	U		0.300	1.00	1	07/19/2021 23:22	WG1708050
Toluene	5100		13.9	50.0	50	07/28/2021 05:07	WG1712642
1,2,3-Trichlorobenzene	U	<u>C4</u>	0.230	1.00	1	07/19/2021 23:22	WG1708050
1,2,4-Trichlorobenzene	U		0.481	1.00	1	07/19/2021 23:22	WG1708050
1,1,1-Trichloroethane	U		0.149	1.00	1	07/19/2021 23:22	WG1708050
1,1,2-Trichloroethane	U		0.158	1.00	1	07/19/2021 23:22	WG1708050
Trichloroethene	U		0.190	1.00	1	07/19/2021 23:22	WG1708050
Trichlorofluoromethane	U	<u>C3</u>	0.160	5.00	1	07/19/2021 23:22	WG1708050
1,2,4-Trimethylbenzene	1110		16.1	50.0	50	07/28/2021 05:07	WG1712642
1,2,3-Trimethylbenzene	558		5.20	50.0	50	07/28/2021 05:07	WG1712642
1,3,5-Trimethylbenzene	358		5.20	50.0	50	07/28/2021 05:07	WG1712642
Vinyl chloride	U		0.234	1.00	1	07/19/2021 23:22	WG1708050
Xylenes, Total	7600		8.70	150	50	07/28/2021 05:07	WG1712642
o-Xylene	2400		8.70	50.0	50	07/28/2021 05:07	WG1712642
m&p-Xylene	5200		21.5	100	50	07/28/2021 05:07	WG1712642
(S) Toluene-d8	103			80.0-120		07/19/2021 23:22	WG1708050
(S) Toluene-d8	98.6			80.0-120		07/28/2021 05:07	WG1712642
(S) 4-Bromofluorobenzene	109			77.0-126		07/19/2021 23:22	WG1708050
(S) 4-Bromofluorobenzene	96.3			77.0-126		07/28/2021 05:07	WG1712642
(S) 1,2-Dichloroethane-d4	79.4			70.0-130		07/19/2021 23:22	WG1708050
(S) 1,2-Dichloroethane-d4	96.5			70.0-130		07/28/2021 05:07	WG1712642

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Sample Narrative:

L1379853-07 WG1707281: Non-target compounds too high to run at a lower dilution.

EDB / DBCP by Method 8011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Ethylene Dibromide	0.0271		0.00536	0.0200	1	07/22/2021 17:26	WG1708955

Semi-Volatile Organic Compounds (GC) by Method AK102/103

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	19900		229	800	1	07/31/2021 00:17	WG1711615
AK103 RRO C25-C36	466	<u>J</u>	403	800	1	07/31/2021 00:17	WG1711615
(S) o-Terphenyl	104			50.0-150		07/31/2021 00:17	WG1711615
(S) n-Triacontane d62	84.6			50.0-150		07/31/2021 00:17	WG1711615

Semi-Volatile Organic Compounds (GC) by Method AK102SGT

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	3190	<u>J4</u>	229	800	1	08/11/2021 15:47	WG1711616
(S) o-Terphenyl	41.1	<u>J2</u>		50.0-150		08/11/2021 15:47	WG1711616

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	<u>Q</u>	28.7	100	1	08/01/2021 13:27	WG1715345
(S) a,a,a-Trifluorotoluene(FID)	98.8			50.0-150		08/01/2021 13:27	WG1715345

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,2,3-Trichloropropane	U		0.00200	0.00500	1	07/19/2021 12:14	WG1707281
Acetone	U	<u>C3</u>	11.3	50.0	1	07/19/2021 23:41	WG1708050
1,2-Dibromoethane	U		0.00410	0.00500	1	07/19/2021 12:14	WG1707281
Acrolein	U	<u>C3</u>	2.54	50.0	1	07/19/2021 23:41	WG1708050
Acrylonitrile	U		0.671	10.0	1	07/19/2021 23:41	WG1708050
Benzene	U		0.0941	1.00	1	07/28/2021 02:06	WG1712642
Bromobenzene	U		0.118	1.00	1	07/19/2021 23:41	WG1708050
Bromochloromethane	U		0.128	1.00	1	07/19/2021 23:41	WG1708050
Bromodichloromethane	U		0.136	1.00	1	07/19/2021 23:41	WG1708050
Bromoform	U		0.129	1.00	1	07/19/2021 23:41	WG1708050
Bromomethane	U		0.605	5.00	1	07/19/2021 23:41	WG1708050
n-Butylbenzene	U		0.157	1.00	1	07/28/2021 02:06	WG1712642
sec-Butylbenzene	U		0.125	1.00	1	07/28/2021 02:06	WG1712642
tert-Butylbenzene	U		0.127	1.00	1	07/19/2021 23:41	WG1708050
Carbon disulfide	U		0.0962	1.00	1	07/19/2021 23:41	WG1708050
Carbon tetrachloride	U		0.128	1.00	1	07/19/2021 23:41	WG1708050
Chlorobenzene	U		0.116	1.00	1	07/19/2021 23:41	WG1708050
Chlorodibromomethane	U		0.140	1.00	1	07/19/2021 23:41	WG1708050
Chloroethane	U		0.192	5.00	1	07/19/2021 23:41	WG1708050
Chloroform	U		0.111	5.00	1	07/19/2021 23:41	WG1708050
Chloromethane	U		0.960	2.50	1	07/19/2021 23:41	WG1708050
2-Chlorotoluene	U		0.106	1.00	1	07/19/2021 23:41	WG1708050
4-Chlorotoluene	U		0.114	1.00	1	07/19/2021 23:41	WG1708050
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	07/19/2021 23:41	WG1708050
Dibromomethane	U		0.122	1.00	1	07/19/2021 23:41	WG1708050
1,2-Dichlorobenzene	U		0.107	1.00	1	07/19/2021 23:41	WG1708050
1,3-Dichlorobenzene	U		0.110	1.00	1	07/19/2021 23:41	WG1708050
1,4-Dichlorobenzene	U		0.120	1.00	1	07/19/2021 23:41	WG1708050
Dichlorodifluoromethane	U	<u>C3</u>	0.374	5.00	1	07/19/2021 23:41	WG1708050
1,1-Dichloroethane	U		0.100	1.00	1	07/19/2021 23:41	WG1708050
1,2-Dichloroethane	U		0.0819	1.00	1	07/19/2021 23:41	WG1708050
1,1-Dichloroethene	U		0.188	1.00	1	07/19/2021 23:41	WG1708050
cis-1,2-Dichloroethene	U		0.126	1.00	1	07/19/2021 23:41	WG1708050
trans-1,2-Dichloroethene	U		0.149	1.00	1	07/19/2021 23:41	WG1708050
1,2-Dichloropropane	U		0.149	1.00	1	07/19/2021 23:41	WG1708050
1,1-Dichloropropene	U		0.142	1.00	1	07/19/2021 23:41	WG1708050
1,3-Dichloropropane	U		0.110	1.00	1	07/19/2021 23:41	WG1708050
cis-1,3-Dichloropropene	U		0.111	1.00	1	07/19/2021 23:41	WG1708050
trans-1,3-Dichloropropene	U		0.118	1.00	1	07/19/2021 23:41	WG1708050
2,2-Dichloropropane	U		0.161	1.00	1	07/19/2021 23:41	WG1708050
Di-isopropyl ether	U		0.105	1.00	1	07/19/2021 23:41	WG1708050
Ethylbenzene	U		0.137	1.00	1	07/28/2021 02:06	WG1712642
Hexachloro-1,3-butadiene	U		0.337	1.00	1	07/19/2021 23:41	WG1708050
Isopropylbenzene	U		0.105	1.00	1	07/28/2021 02:06	WG1712642
p-Isopropyltoluene	U		0.120	1.00	1	07/28/2021 02:06	WG1712642
2-Butanone (MEK)	U		1.19	10.0	1	07/19/2021 23:41	WG1708050
Methylene Chloride	U		0.430	5.00	1	07/19/2021 23:41	WG1708050
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	07/19/2021 23:41	WG1708050
Methyl tert-butyl ether	U	<u>C3</u>	0.101	1.00	1	07/19/2021 23:41	WG1708050

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		1.00	5.00	1	07/28/2021 02:06	WG1712642
n-Propylbenzene	U		0.0993	1.00	1	07/28/2021 02:06	WG1712642
Styrene	U		0.118	1.00	1	07/19/2021 23:41	WG1708050
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	07/19/2021 23:41	WG1708050
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	07/19/2021 23:41	WG1708050
1,1,2-Trichlorotrifluoroethane	U	C3	0.180	1.00	1	07/19/2021 23:41	WG1708050
Tetrachloroethene	U		0.300	1.00	1	07/19/2021 23:41	WG1708050
Toluene	U		0.278	1.00	1	07/28/2021 02:06	WG1712642
1,2,3-Trichlorobenzene	U	C4	0.230	1.00	1	07/19/2021 23:41	WG1708050
1,2,4-Trichlorobenzene	U		0.481	1.00	1	07/19/2021 23:41	WG1708050
1,1,1-Trichloroethane	U		0.149	1.00	1	07/19/2021 23:41	WG1708050
1,1,2-Trichloroethane	U		0.158	1.00	1	07/19/2021 23:41	WG1708050
Trichloroethene	U		0.190	1.00	1	07/19/2021 23:41	WG1708050
Trichlorofluoromethane	U	C3	0.160	5.00	1	07/19/2021 23:41	WG1708050
1,2,4-Trimethylbenzene	U		0.322	1.00	1	07/28/2021 02:06	WG1712642
1,2,3-Trimethylbenzene	U		0.104	1.00	1	07/28/2021 02:06	WG1712642
1,3,5-Trimethylbenzene	U		0.104	1.00	1	07/28/2021 02:06	WG1712642
Vinyl chloride	U		0.234	1.00	1	07/19/2021 23:41	WG1708050
Xylenes, Total	U		0.174	3.00	1	07/28/2021 02:06	WG1712642
o-Xylene	U		0.174	1.00	1	07/28/2021 02:06	WG1712642
m&p-Xylene	U		0.430	2.00	1	07/28/2021 02:06	WG1712642
(S) Toluene-d8	108			80.0-120		07/19/2021 23:41	WG1708050
(S) Toluene-d8	99.9			80.0-120		07/28/2021 02:06	WG1712642
(S) 4-Bromofluorobenzene	99.1			77.0-126		07/19/2021 23:41	WG1708050
(S) 4-Bromofluorobenzene	95.6			77.0-126		07/28/2021 02:06	WG1712642
(S) 1,2-Dichloroethane-d4	77.5			70.0-130		07/19/2021 23:41	WG1708050
(S) 1,2-Dichloroethane-d4	101			70.0-130		07/28/2021 02:06	WG1712642

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

EDB / DBCP by Method 8011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Ethylene Dibromide	U		0.00536	0.0200	1	07/22/2021 17:39	WG1708955

Semi-Volatile Organic Compounds (GC) by Method AK102/103

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	412	B J	229	800	1	07/31/2021 00:40	WG1711615
AK103 RRO C25-C36	U		403	800	1	07/31/2021 00:40	WG1711615
(S) o-Terphenyl	103			50.0-150		07/31/2021 00:40	WG1711615
(S) n-Triacontane d62	72.0			50.0-150		07/31/2021 00:40	WG1711615

Semi-Volatile Organic Compounds (GC) by Method AK102SGT

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	412	B J	229	800	1	07/31/2021 00:40	WG1711616
(S) o-Terphenyl	103			50.0-150		07/31/2021 00:40	WG1711616

Sample Narrative:

L1379853-08 WG1711616: Reporting from non-silica gel data due to non-detect to the RDL.

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	37.1	<u>B</u> <u>J</u>	28.7	100	1	07/29/2021 17:24	WG1714233
(S) a,a,a-Trifluorotoluene(FID)	97.1			50.0-150		07/29/2021 17:24	WG1714233

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>C3</u>	11.3	50.0	1	07/19/2021 20:50	WG1708050
Acrolein	U	<u>C3</u>	2.54	50.0	1	07/19/2021 20:50	WG1708050
Acrylonitrile	U		0.671	10.0	1	07/19/2021 20:50	WG1708050
Benzene	U		0.0941	1.00	1	07/19/2021 20:50	WG1708050
Bromobenzene	U		0.118	1.00	1	07/19/2021 20:50	WG1708050
Bromochloromethane	U		0.128	1.00	1	07/19/2021 20:50	WG1708050
Bromodichloromethane	U		0.136	1.00	1	07/19/2021 20:50	WG1708050
Bromoform	U		0.129	1.00	1	07/19/2021 20:50	WG1708050
Bromomethane	U		0.605	5.00	1	07/19/2021 20:50	WG1708050
n-Butylbenzene	U		0.157	1.00	1	07/19/2021 20:50	WG1708050
sec-Butylbenzene	U		0.125	1.00	1	07/19/2021 20:50	WG1708050
tert-Butylbenzene	U		0.127	1.00	1	07/19/2021 20:50	WG1708050
Carbon disulfide	U		0.0962	1.00	1	07/19/2021 20:50	WG1708050
Carbon tetrachloride	U		0.128	1.00	1	07/19/2021 20:50	WG1708050
Chlorobenzene	U		0.116	1.00	1	07/19/2021 20:50	WG1708050
Chlorodibromomethane	U		0.140	1.00	1	07/19/2021 20:50	WG1708050
Chloroethane	U		0.192	5.00	1	07/19/2021 20:50	WG1708050
Chloroform	U		0.111	5.00	1	07/19/2021 20:50	WG1708050
Chloromethane	U		0.960	2.50	1	07/19/2021 20:50	WG1708050
2-Chlorotoluene	U		0.106	1.00	1	07/19/2021 20:50	WG1708050
4-Chlorotoluene	U		0.114	1.00	1	07/19/2021 20:50	WG1708050
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	07/19/2021 20:50	WG1708050
Dibromomethane	U		0.122	1.00	1	07/19/2021 20:50	WG1708050
1,2-Dichlorobenzene	U		0.107	1.00	1	07/19/2021 20:50	WG1708050
1,3-Dichlorobenzene	U		0.110	1.00	1	07/19/2021 20:50	WG1708050
1,4-Dichlorobenzene	U		0.120	1.00	1	07/19/2021 20:50	WG1708050
Dichlorodifluoromethane	U	<u>C3</u>	0.374	5.00	1	07/19/2021 20:50	WG1708050
1,1-Dichloroethane	U		0.100	1.00	1	07/19/2021 20:50	WG1708050
1,2-Dichloroethane	U		0.0819	1.00	1	07/19/2021 20:50	WG1708050
1,1-Dichloroethene	U		0.188	1.00	1	07/19/2021 20:50	WG1708050
cis-1,2-Dichloroethene	U		0.126	1.00	1	07/19/2021 20:50	WG1708050
trans-1,2-Dichloroethene	U		0.149	1.00	1	07/19/2021 20:50	WG1708050
1,2-Dichloropropane	U		0.149	1.00	1	07/19/2021 20:50	WG1708050
1,1-Dichloropropene	U		0.142	1.00	1	07/19/2021 20:50	WG1708050
1,3-Dichloropropane	U		0.110	1.00	1	07/19/2021 20:50	WG1708050
cis-1,3-Dichloropropene	U		0.111	1.00	1	07/19/2021 20:50	WG1708050
trans-1,3-Dichloropropene	U		0.118	1.00	1	07/19/2021 20:50	WG1708050
2,2-Dichloropropane	U		0.161	1.00	1	07/19/2021 20:50	WG1708050
Di-isopropyl ether	U		0.105	1.00	1	07/19/2021 20:50	WG1708050
Ethylbenzene	U		0.137	1.00	1	07/19/2021 20:50	WG1708050
Hexachloro-1,3-butadiene	U		0.337	1.00	1	07/19/2021 20:50	WG1708050
Isopropylbenzene	U		0.105	1.00	1	07/19/2021 20:50	WG1708050
p-Isopropyltoluene	U		0.120	1.00	1	07/19/2021 20:50	WG1708050
2-Butanone (MEK)	U		1.19	10.0	1	07/19/2021 20:50	WG1708050
Methylene Chloride	U		0.430	5.00	1	07/19/2021 20:50	WG1708050
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	07/19/2021 20:50	WG1708050
Methyl tert-butyl ether	U	<u>C3</u>	0.101	1.00	1	07/19/2021 20:50	WG1708050
Naphthalene	U		1.00	5.00	1	07/19/2021 20:50	WG1708050
n-Propylbenzene	U		0.0993	1.00	1	07/19/2021 20:50	WG1708050

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
Styrene	U		0.118	1.00	1	07/19/2021 20:50	WG1708050
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	07/19/2021 20:50	WG1708050
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	07/19/2021 20:50	WG1708050
1,1,2-Trichlorotrifluoroethane	U	<u>C3</u>	0.180	1.00	1	07/19/2021 20:50	WG1708050
Tetrachloroethene	U		0.300	1.00	1	07/19/2021 20:50	WG1708050
Toluene	U		0.278	1.00	1	07/19/2021 20:50	WG1708050
1,2,3-Trichlorobenzene	U	<u>C4</u>	0.230	1.00	1	07/19/2021 20:50	WG1708050
1,2,4-Trichlorobenzene	U		0.481	1.00	1	07/19/2021 20:50	WG1708050
1,1,1-Trichloroethane	U		0.149	1.00	1	07/19/2021 20:50	WG1708050
1,1,2-Trichloroethane	U		0.158	1.00	1	07/19/2021 20:50	WG1708050
Trichloroethene	U		0.190	1.00	1	07/19/2021 20:50	WG1708050
Trichlorofluoromethane	U	<u>C3</u>	0.160	5.00	1	07/19/2021 20:50	WG1708050
1,2,4-Trimethylbenzene	U		0.322	1.00	1	07/19/2021 20:50	WG1708050
1,2,3-Trimethylbenzene	U	<u>C3 J4</u>	0.104	1.00	1	07/19/2021 20:50	WG1708050
1,3,5-Trimethylbenzene	U		0.104	1.00	1	07/19/2021 20:50	WG1708050
Vinyl chloride	U		0.234	1.00	1	07/19/2021 20:50	WG1708050
Xylenes, Total	U		0.174	3.00	1	07/19/2021 20:50	WG1708050
o-Xylene	U		0.174	1.00	1	07/19/2021 20:50	WG1708050
m&p-Xylene	U		0.430	2.00	1	07/19/2021 20:50	WG1708050
(S) Toluene-d8	108			80.0-120		07/19/2021 20:50	WG1708050
(S) 4-Bromofluorobenzene	96.7			77.0-126		07/19/2021 20:50	WG1708050
(S) 1,2-Dichloroethane-d4	80.3			70.0-130		07/19/2021 20:50	WG1708050

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3686275-2 07/29/21 16:47

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
TPHGAK C6 to C10	32.8	↓	28.7	100
(S) a,a,a-Trifluorotoluene(FID)	97.8			60.0-120

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R3686275-1 07/29/21 15:41

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
TPHGAK C6 to C10	5000	4950	99.0	60.0-120	
(S) a,a,a-Trifluorotoluene(FID)			99.6	60.0-120	

L1379853-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1379853-02 07/29/21 18:30 • (MS) R3686275-3 07/29/21 22:51 • (MSD) R3686275-4 07/29/21 23:12

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	44.5	5370	5600	107	111	1	70.0-130			4.19	20
(S) a,a,a-Trifluorotoluene(FID)					105	104		50.0-150				

L1379865-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1379865-01 07/29/21 20:19 • (MS) R3686275-5 07/29/21 23:34 • (MSD) R3686275-6 07/29/21 23:56

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	370	5260	5300	97.8	98.6	1	70.0-130			0.758	20
(S) a,a,a-Trifluorotoluene(FID)					100	103		50.0-150				

Method Blank (MB)

(MB) R3687342-3 08/01/21 05:27

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
TPHGAK C6 to C10	34.7	↓	28.7	100
(S) a,a,a-Trifluorotoluene(FID)	94.8			60.0-120

Laboratory Control Sample (LCS)

(LCS) R3687342-1 08/01/21 03:55

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPHGAK C6 to C10	5000	4320	86.4	60.0-120	
(S) a,a,a-Trifluorotoluene(FID)			105	60.0-120	

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

Method Blank (MB)

(MB) R3681446-2 07/19/21 10:27

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) R3681446-1 07/19/21 10:04

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
1,2,3-Trichloropropane	0.0500	0.0510	102	70.0-130	
1,2-Dibromoethane	0.0500	0.0470	94.0	70.0-130	

L1379853-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1379853-02 07/19/21 11:27 • (MS) R3681446-3 07/19/21 16:10 • (MSD) R3681446-4 07/19/21 16:34

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	0.0500	U	0.0570	0.0550	114	110	1	70.0-130			3.57	20
1,2-Dibromoethane	0.0500	U	0.0500	0.0510	100	102	1	70.0-130			1.98	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3684467-2 07/19/21 20:12

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
Bromodichloromethane	U		0.136	1.00
Bromochloromethane	U		0.128	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) R3684467-2 07/19/21 20:12

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
Tetrachloroethene	U		0.300	1.00
Toluene	U		0.278	1.00
1,1,2-Trichlorotrifluoroethane	U		0.180	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
1,2,3-Trimethylbenzene	U		0.104	1.00
1,2,4-Trimethylbenzene	U		0.322	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	105			80.0-120
(S) 4-Bromofluorobenzene	101			77.0-126
(S) 1,2-Dichloroethane-d4	82.7			70.0-130

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3684467-1 07/19/21 19:34

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	25.0	16.2	64.8	19.0-160	
Acrolein	25.0	6.70	26.8	10.0-160	

Laboratory Control Sample (LCS)

(LCS) R3684467-1 07/19/21 19:34

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Acrylonitrile	25.0	22.1	88.4	55.0-149	
Benzene	5.00	5.26	105	70.0-123	
Bromobenzene	5.00	5.65	113	73.0-121	
Bromodichloromethane	5.00	4.18	83.6	75.0-120	
Bromochloromethane	5.00	4.68	93.6	76.0-122	
Bromoform	5.00	4.68	93.6	68.0-132	
Bromomethane	5.00	4.52	90.4	10.0-160	
n-Butylbenzene	5.00	4.48	89.6	73.0-125	
sec-Butylbenzene	5.00	4.95	99.0	75.0-125	
tert-Butylbenzene	5.00	5.16	103	76.0-124	
Carbon disulfide	5.00	4.57	91.4	61.0-128	
Carbon tetrachloride	5.00	4.25	85.0	68.0-126	
Chlorobenzene	5.00	5.40	108	80.0-121	
Chlorodibromomethane	5.00	4.71	94.2	77.0-125	
Chloroethane	5.00	4.59	91.8	47.0-150	
Chloroform	5.00	4.53	90.6	73.0-120	
Chloromethane	5.00	4.65	93.0	41.0-142	
2-Chlorotoluene	5.00	5.13	103	76.0-123	
4-Chlorotoluene	5.00	5.42	108	75.0-122	
1,2-Dibromo-3-Chloropropane	5.00	4.53	90.6	58.0-134	
Dibromomethane	5.00	4.40	88.0	80.0-120	
1,2-Dichlorobenzene	5.00	5.13	103	79.0-121	
1,3-Dichlorobenzene	5.00	5.11	102	79.0-120	
1,4-Dichlorobenzene	5.00	5.02	100	79.0-120	
Dichlorodifluoromethane	5.00	3.02	60.4	51.0-149	
1,1-Dichloroethane	5.00	4.44	88.8	70.0-126	
1,2-Dichloroethane	5.00	4.03	80.6	70.0-128	
1,1-Dichloroethene	5.00	3.93	78.6	71.0-124	
cis-1,2-Dichloroethene	5.00	4.59	91.8	73.0-120	
trans-1,2-Dichloroethene	5.00	4.66	93.2	73.0-120	
1,2-Dichloropropane	5.00	4.77	95.4	77.0-125	
1,1-Dichloropropene	5.00	5.00	100	74.0-126	
1,3-Dichloropropane	5.00	5.42	108	80.0-120	
cis-1,3-Dichloropropene	5.00	4.62	92.4	80.0-123	
trans-1,3-Dichloropropene	5.00	4.75	95.0	78.0-124	
2,2-Dichloropropane	5.00	4.47	89.4	58.0-130	
Di-isopropyl ether	5.00	4.57	91.4	58.0-138	
Ethylbenzene	5.00	5.40	108	79.0-123	
Hexachloro-1,3-butadiene	5.00	4.56	91.2	54.0-138	
Isopropylbenzene	5.00	4.94	98.8	76.0-127	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R3684467-1 07/19/21 19:34

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
p-Isopropyltoluene	5.00	4.86	97.2	76.0-125	
2-Butanone (MEK)	25.0	21.6	86.4	44.0-160	
Methylene Chloride	5.00	4.51	90.2	67.0-120	
4-Methyl-2-pentanone (MIBK)	25.0	22.8	91.2	68.0-142	
Methyl tert-butyl ether	5.00	4.13	82.6	68.0-125	
Naphthalene	5.00	5.20	104	54.0-135	
n-Propylbenzene	5.00	5.31	106	77.0-124	
Styrene	5.00	4.96	99.2	73.0-130	
1,1,1,2-Tetrachloroethane	5.00	4.73	94.6	75.0-125	
1,1,2,2-Tetrachloroethane	5.00	5.01	100	65.0-130	
Tetrachloroethene	5.00	5.70	114	72.0-132	
Toluene	5.00	5.51	110	79.0-120	
1,1,2-Trichlorotrifluoroethane	5.00	3.64	72.8	69.0-132	
1,2,3-Trichlorobenzene	5.00	5.35	107	50.0-138	
1,2,4-Trichlorobenzene	5.00	4.69	93.8	57.0-137	
1,1,1-Trichloroethane	5.00	4.20	84.0	73.0-124	
1,1,2-Trichloroethane	5.00	4.98	99.6	80.0-120	
Trichloroethene	5.00	5.06	101	78.0-124	
Trichlorofluoromethane	5.00	3.28	65.6	59.0-147	
1,2,3-Trimethylbenzene	5.00	3.81	76.2	77.0-120	J4
1,2,4-Trimethylbenzene	5.00	4.75	95.0	76.0-121	
1,3,5-Trimethylbenzene	5.00	5.02	100	76.0-122	
Vinyl chloride	5.00	4.51	90.2	67.0-131	
Xylenes, Total	15.0	16.3	109	79.0-123	
o-Xylene	5.00	5.12	102	80.0-122	
m&p-Xylenes	10.0	11.2	112	80.0-122	
(S) Toluene-d8			108	80.0-120	
(S) 4-Bromofluorobenzene			95.0	77.0-126	
(S) 1,2-Dichloroethane-d4			80.4	70.0-130	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1379853-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1379853-02 07/19/21 22:06 • (MS) R3684467-3 07/20/21 02:51 • (MSD) R3684467-4 07/20/21 03:10

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	25.0	U	20.9	20.5	83.6	82.0	1	10.0-160			1.93	35
Acrolein	25.0	U	9.60	11.9	38.4	47.6	1	10.0-160			21.4	39
Acrylonitrile	25.0	U	24.8	22.5	99.2	90.0	1	21.0-160			9.73	32
Benzene	5.00	0.288	5.08	5.83	95.8	111	1	17.0-158			13.7	27

L1379853-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1379853-02 07/19/21 22:06 • (MS) R3684467-3 07/20/21 02:51 • (MSD) R3684467-4 07/20/21 03:10

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	5.00	U	5.62	6.06	112	121	1	30.0-149			7.53	28
Bromodichloromethane	5.00	U	4.24	4.49	84.8	89.8	1	31.0-150			5.73	27
Bromochloromethane	5.00	U	4.86	5.26	97.2	105	1	38.0-142			7.91	26
Bromoform	5.00	U	4.74	4.65	94.8	93.0	1	29.0-150			1.92	29
Bromomethane	5.00	U	4.10	4.51	82.0	90.2	1	10.0-160			9.52	38
n-Butylbenzene	5.00	0.159	4.14	5.06	79.6	98.0	1	31.0-150			20.0	30
sec-Butylbenzene	5.00	0.134	4.84	5.72	94.1	112	1	33.0-155			16.7	29
tert-Butylbenzene	5.00	U	4.87	5.86	97.4	117	1	34.0-153			18.5	28
Carbon disulfide	5.00	U	3.93	4.69	78.6	93.8	1	10.0-156			17.6	28
Carbon tetrachloride	5.00	U	4.31	5.18	86.2	104	1	23.0-159			18.3	28
Chlorobenzene	5.00	U	5.28	5.91	106	118	1	33.0-152			11.3	27
Chlorodibromomethane	5.00	U	4.60	4.79	92.0	95.8	1	37.0-149			4.05	27
Chloroethane	5.00	U	4.39	5.04	87.8	101	1	10.0-160			13.8	30
Chloroform	5.00	U	4.44	5.02	88.8	100	1	29.0-154			12.3	28
Chloromethane	5.00	U	4.26	5.00	85.2	100	1	10.0-160			16.0	29
2-Chlorotoluene	5.00	U	5.09	5.77	102	115	1	32.0-153			12.5	28
4-Chlorotoluene	5.00	U	5.27	5.92	105	118	1	32.0-150			11.6	28
1,2-Dibromo-3-Chloropropane	5.00	U	5.02	4.73	100	94.6	1	22.0-151			5.95	34
Dibromomethane	5.00	U	4.42	4.73	88.4	94.6	1	30.0-151			6.78	27
1,2-Dichlorobenzene	5.00	U	5.01	5.53	100	111	1	34.0-149			9.87	28
1,3-Dichlorobenzene	5.00	U	5.07	5.59	101	112	1	36.0-146			9.76	27
1,4-Dichlorobenzene	5.00	U	4.90	5.36	98.0	107	1	35.0-142			8.97	27
Dichlorodifluoromethane	5.00	U	3.74	4.97	74.8	99.4	1	10.0-160			28.2	29
1,1-Dichloroethane	5.00	U	4.17	4.87	83.4	97.4	1	25.0-158			15.5	27
1,2-Dichloroethane	5.00	U	4.07	4.41	81.4	88.2	1	29.0-151			8.02	27
1,1-Dichloroethene	5.00	U	4.15	4.88	83.0	97.6	1	11.0-160			16.2	29
cis-1,2-Dichloroethene	5.00	U	4.53	5.09	90.6	102	1	10.0-160			11.6	27
trans-1,2-Dichloroethene	5.00	U	4.34	5.01	86.8	100	1	17.0-153			14.3	27
1,2-Dichloropropane	5.00	U	4.67	5.22	93.4	104	1	30.0-156			11.1	27
1,1-Dichloropropene	5.00	U	4.75	5.81	95.0	116	1	25.0-158			20.1	27
1,3-Dichloropropane	5.00	U	5.48	5.85	110	117	1	38.0-147			6.53	27
cis-1,3-Dichloropropene	5.00	U	4.60	4.83	92.0	96.6	1	34.0-149			4.88	28
trans-1,3-Dichloropropene	5.00	U	4.81	5.13	96.2	103	1	32.0-149			6.44	28
2,2-Dichloropropane	5.00	U	4.37	5.12	87.4	102	1	24.0-152			15.8	29
Di-isopropyl ether	5.00	U	4.77	4.99	95.4	99.8	1	21.0-160			4.51	28
Ethylbenzene	5.00	3.82	5.50	6.22	33.6	48.0	1	30.0-155			12.3	27
Hexachloro-1,3-butadiene	5.00	U	4.01	5.12	80.2	102	1	20.0-154			24.3	34
Isopropylbenzene	5.00	0.528	4.85	5.82	86.4	106	1	28.0-157			18.2	27
p-Isopropyltoluene	5.00	0.125	4.69	5.49	91.3	107	1	30.0-154			15.7	29
2-Butanone (MEK)	25.0	U	23.2	23.5	92.8	94.0	1	10.0-160			1.28	32

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1379853-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1379853-02 07/19/21 22:06 • (MS) R3684467-3 07/20/21 02:51 • (MSD) R3684467-4 07/20/21 03:10

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	5.00	U	4.20	4.83	84.0	96.6	1	23.0-144			14.0	28
4-Methyl-2-pentanone (MIBK)	25.0	U	25.5	24.4	102	97.6	1	29.0-160			4.41	29
Methyl tert-butyl ether	5.00	U	U	4.95	0.000	99.0	1	28.0-150	J6	J3	200	29
Naphthalene	5.00	2.04	5.84	5.51	76.0	69.4	1	12.0-156			5.81	35
n-Propylbenzene	5.00	2.20	5.22	6.03	60.4	76.6	1	31.0-154			14.4	28
Styrene	5.00	U	4.96	5.69	99.2	114	1	33.0-155			13.7	28
1,1,1,2-Tetrachloroethane	5.00	U	4.71	5.40	94.2	108	1	36.0-151			13.6	29
1,1,2,2-Tetrachloroethane	5.00	U	5.87	5.73	117	115	1	33.0-150			2.41	28
Tetrachloroethene	5.00	U	5.70	6.47	114	129	1	10.0-160			12.7	27
Toluene	5.00	0.311	6.01	6.49	114	124	1	26.0-154			7.68	28
1,1,2-Trichlorotrifluoroethane	5.00	U	4.15	5.31	83.0	106	1	23.0-160			24.5	30
1,2,3-Trichlorobenzene	5.00	U	4.62	5.57	92.4	111	1	17.0-150			18.6	36
1,2,4-Trichlorobenzene	5.00	U	4.19	5.05	83.8	101	1	24.0-150			18.6	33
1,1,1-Trichloroethane	5.00	U	4.09	4.98	81.8	99.6	1	23.0-160			19.6	28
1,1,2-Trichloroethane	5.00	U	5.21	5.40	104	108	1	35.0-147			3.58	27
Trichloroethene	5.00	U	4.60	5.42	92.0	108	1	10.0-160			16.4	25
Trichlorofluoromethane	5.00	2.20	5.87	6.60	73.4	88.0	1	17.0-160			11.7	31
1,2,3-Trimethylbenzene	5.00	3.95	3.96	4.19	0.200	4.80	1	32.0-149	J6	J6	5.64	28
1,2,4-Trimethylbenzene	5.00	19.2	5.41	5.41	0.000	0.000	1	26.0-154	J6	J6	0.000	27
1,3,5-Trimethylbenzene	5.00	6.10	4.98	5.51	0.000	0.000	1	28.0-153	J6	J6	10.1	27
Vinyl chloride	5.00	U	4.29	5.08	85.8	102	1	10.0-160			16.9	27
Xylenes, Total	15.0	21.8	17.1	19.1	0.000	0.000	1	29.0-154	J6	J6	11.0	28
o-Xylene	5.00	4.85	5.49	5.93	12.8	21.6	1	45.0-144	J6	J6	7.71	26
m&p-Xylenes	10.0	16.9	11.6	13.2	0.000	0.000	1	43.0-146	J6	J6	12.9	26
(S) Toluene-d8					107	109		80.0-120				
(S) 4-Bromofluorobenzene					97.1	97.2		77.0-126				
(S) 1,2-Dichloroethane-d4					81.1	80.9		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) R3681660-3 07/20/21 10:04

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Ethylbenzene	U		0.137	1.00
Toluene	U		0.278	1.00
Xylenes, Total	U		0.174	3.00
(S) Toluene-d8	99.4			80.0-120
(S) 4-Bromofluorobenzene	104			77.0-126
(S) 1,2-Dichloroethane-d4	92.4			70.0-130

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

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

(LCS) R3681660-1 07/20/21 09:04 • (LCSD) R3681660-2 07/20/21 09:24

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	%	%	%			%	%
Ethylbenzene	5.00	5.00	5.05	100	101	79.0-123			0.995	20
Toluene	5.00	4.67	4.72	93.4	94.4	79.0-120			1.06	20
Xylenes, Total	15.0	14.2	14.3	94.7	95.3	79.0-123			0.702	20
(S) Toluene-d8				99.2	102	80.0-120				
(S) 4-Bromofluorobenzene				102	104	77.0-126				
(S) 1,2-Dichloroethane-d4				93.3	91.4	70.0-130				

6 Qc

7 Gl

8 Al

9 Sc

L1379690-21 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1379690-21 07/20/21 14:32 • (MS) R3681660-4 07/20/21 19:51 • (MSD) R3681660-5 07/20/21 20:11

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	%	%		%			%	%
Ethylbenzene	5.00	U	4.66	5.02	93.2	100	1	30.0-155			7.44	27
Toluene	5.00	U	4.56	4.62	91.2	92.4	1	26.0-154			1.31	28
Xylenes, Total	15.0	U	14.3	14.1	95.3	94.0	1	29.0-154			1.41	28
(S) Toluene-d8					91.1	93.7		80.0-120				
(S) 4-Bromofluorobenzene					95.5	98.3		77.0-126				
(S) 1,2-Dichloroethane-d4					92.3	90.4		70.0-130				

L1379865-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1379865-01 07/20/21 17:52 • (MS) R3681660-6 07/20/21 20:31 • (MSD) R3681660-7 07/20/21 20:51

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	%	%		%			%	%
Ethylbenzene	5.00	7.19	13.3	13.0	122	116	1	30.0-155			2.28	27
Toluene	5.00	U	5.30	5.25	106	105	1	26.0-154			0.948	28
Xylenes, Total	15.0	17.6	35.4	33.9	119	109	1	29.0-154			4.33	28

L1379865-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1379865-01 07/20/21 17:52 • (MS) R3681660-6 07/20/21 20:31 • (MSD) R3681660-7 07/20/21 20:51

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 %
(S) Toluene-d8					89.9	92.0		80.0-120				
(S) 4-Bromofluorobenzene					95.4	94.9		77.0-126				
(S) 1,2-Dichloroethane-d4					92.7	91.9		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) R3685355-3 07/24/21 10:21

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Benzene	U		0.0941	1.00
Xylenes, Total	U		0.174	3.00
<i>(S) Toluene-d8</i>	102			80.0-120
<i>(S) 4-Bromofluorobenzene</i>	89.2			77.0-126
<i>(S) 1,2-Dichloroethane-d4</i>	109			70.0-130

Laboratory Control Sample (LCS)

(LCS) R3685355-1 07/24/21 09:00

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Benzene	5.00	4.69	93.8	70.0-123	
Xylenes, Total	15.0	13.9	92.7	79.0-123	
<i>(S) Toluene-d8</i>			98.6	80.0-120	
<i>(S) 4-Bromofluorobenzene</i>			90.4	77.0-126	
<i>(S) 1,2-Dichloroethane-d4</i>			109	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) R3685055-3 07/28/21 01:05

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.0941	1.00
n-Butylbenzene	U		0.157	1.00
sec-Butylbenzene	U		0.125	1.00
Ethylbenzene	U		0.137	1.00
Isopropylbenzene	U		0.105	1.00
p-Isopropyltoluene	U		0.120	1.00
Naphthalene	U		1.00	5.00
n-Propylbenzene	U		0.0993	1.00
Toluene	U		0.278	1.00
1,2,3-Trimethylbenzene	U		0.104	1.00
1,2,4-Trimethylbenzene	U		0.322	1.00
1,3,5-Trimethylbenzene	U		0.104	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	97.5			80.0-120
(S) 4-Bromofluorobenzene	92.1			77.0-126
(S) 1,2-Dichloroethane-d4	98.0			70.0-130

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) R3685055-1 07/27/21 23:45 • (LCSD) R3685055-2 07/28/21 00:05

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 %
Benzene	5.00	5.41	5.37	108	107	70.0-123			0.742	20
n-Butylbenzene	5.00	5.11	5.12	102	102	73.0-125			0.196	20
sec-Butylbenzene	5.00	5.31	5.29	106	106	75.0-125			0.377	20
Ethylbenzene	5.00	5.47	5.35	109	107	79.0-123			2.22	20
Isopropylbenzene	5.00	5.24	5.05	105	101	76.0-127			3.69	20
p-Isopropyltoluene	5.00	5.22	5.18	104	104	76.0-125			0.769	20
Naphthalene	5.00	5.19	5.99	104	120	54.0-135			14.3	20
n-Propylbenzene	5.00	5.45	5.30	109	106	77.0-124			2.79	20
Toluene	5.00	5.69	5.43	114	109	79.0-120			4.68	20
1,2,3-Trimethylbenzene	5.00	5.53	5.57	111	111	77.0-120			0.721	20
1,2,4-Trimethylbenzene	5.00	5.46	5.29	109	106	76.0-121			3.16	20
1,3,5-Trimethylbenzene	5.00	5.41	5.32	108	106	76.0-122			1.68	20
Xylenes, Total	15.0	15.9	15.6	106	104	79.0-123			1.90	20
o-Xylene	5.00	5.31	5.17	106	103	80.0-122			2.67	20
m&p-Xylenes	10.0	10.6	10.4	106	104	80.0-122			1.90	20

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

(LCS) R3685055-1 07/27/21 23:45 • (LCSD) R3685055-2 07/28/21 00:05

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 %
(S) Toluene-d8				99.9	95.7	80.0-120				
(S) 4-Bromofluorobenzene				95.9	91.9	77.0-126				
(S) 1,2-Dichloroethane-d4				100	101	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) R3682981-1 07/22/21 12:10

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Ethylene Dibromide	U		0.00536	0.0200

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1379664-13 Original Sample (OS) • Duplicate (DUP)

(OS) L1379664-13 07/22/21 13:02 • (DUP) R3682981-3 07/22/21 12:50

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ethylene Dibromide	U	U	1	0.000		20

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

(LCS) R3682981-4 07/22/21 15:14 • (LCSD) R3682981-5 07/22/21 18:05

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Ethylene Dibromide	0.250	0.292	0.271	117	108	60.0-140			7.46	20

L1379853-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1379853-02 07/22/21 12:36 • (MS) R3682981-2 07/22/21 12:23

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Ethylene Dibromide	0.100	U	0.101	101	1	64.0-159	

Method Blank (MB)

(MB) R3686652-1 07/30/21 18:08

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
AK102 DRO C10-C25	280	U	229	800
AK103 RRO C25-C36	U		403	800
(S) n-Triacontane d62	79.8			60.0-120
(S) o-Terphenyl	98.3			60.0-120

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

(LCS) R3686652-2 07/30/21 18:32 • (LCSD) R3686652-3 07/30/21 18:55

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
AK102 DRO C10-C25	6000	6590	6590	110	110	75.0-125			0.000	20
(S) n-Triacontane d62				68.8	72.4	60.0-120				
(S) o-Terphenyl				75.9	70.7	60.0-120				

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

(LCS) R3686652-4 07/30/21 19:18 • (LCSD) R3686652-5 07/30/21 19:41

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
AK103 RRO C25-C36	6000	5220	5400	87.0	90.0	60.0-120			3.39	20
(S) n-Triacontane d62				68.4	96.6	60.0-120				
(S) o-Terphenyl				100	104	60.0-120				

L1379853-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1379853-02 07/30/21 20:50 • (MS) R3686652-6 07/30/21 21:13 • (MSD) R3686652-7 07/30/21 21:36

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
AK102 DRO C10-C25	6000	458	5760	6470	88.4	100	1	75.0-125			11.6	20
(S) n-Triacontane d62					68.6	89.8		50.0-150				
(S) o-Terphenyl					65.9	71.0		50.0-150				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1379853-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1379853-02 07/30/21 20:50 • (MS) R3686652-8 07/30/21 21:59 • (MSD) R3686652-9 07/30/21 22:22

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 %
AK103 RRO C25-C36	6000	U	4910	5040	81.8	84.0	1	60.0-120			2.61	20
(S) n-Triacontane d62					72.2	74.4		50.0-150				
(S) o-Terphenyl					79.7	83.1		50.0-150				

L1379865-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1379865-01 07/31/21 01:03 • (MS) R3686652-10 07/31/21 01:25 • (MSD) R3686652-11 07/31/21 01:48

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 %
AK102 DRO C10-C25	6000	8140	17600	14400	158	104	1	75.0-125	J5		20.0	20
(S) n-Triacontane d62					76.4	46.6		50.0-150				
(S) o-Terphenyl					94.4	57.8		50.0-150				

L1379865-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1379865-01 07/31/21 01:03 • (MS) R3686652-12 07/31/21 02:11 • (MSD) R3686652-13 07/31/21 02:34

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 %
AK103 RRO C25-C36	6000	U	6140	6570	102	110	1	60.0-120			6.77	20
(S) n-Triacontane d62					80.4	89.0		50.0-150				
(S) o-Terphenyl					99.3	112		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) R3691093-1 08/11/21 13:26

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
AK102 DRO C10-C25	252	<u>J</u>	229	800
(S) o-Terphenyl	38.3	<u>J2</u>		60.0-120

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

(LCS) R3691093-2 08/11/21 13:46 • (LCSD) R3691093-3 08/11/21 14:06

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
AK102 DRO C10-C25	6000	3980	3580	66.3	59.7	75.0-125	<u>J4</u>	<u>J4</u>	10.6	20
(S) o-Terphenyl				50.4	45.4	60.0-120	<u>J2</u>	<u>J2</u>		

L1379865-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1379865-01 08/11/21 16:08 • (MS) R3691093-4 08/11/21 16:28 • (MSD) R3691093-5 08/11/21 16:48

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
AK102 DRO C10-C25	6000	802	3950	3390	52.5	43.1	1	75.0-125	<u>J6</u>	<u>J6</u>	15.3	20
(S) o-Terphenyl					40.6	31.7		50.0-150	<u>J2</u>	<u>J2</u>		

L1379853-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1379853-02 07/30/21 20:50 • (MS) R3691334-1 07/30/21 21:13 • (MSD) R3691334-2 07/30/21 21:36

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
AK102 DRO C10-C25	6000	458	5760	6470	88.4	100	1	75.0-125			11.6	20
(S) o-Terphenyl					65.9	71.0		50.0-150				

Sample Narrative:

OS: Reporting from non-silica gel data due to non-detect to the RDL.

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
B	The same analyte is found in the associated blank.
C3	The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Method sensitivity check is acceptable.
C4	The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Data is likely to show a low bias concerning the result.
C5	The reported concentration is an estimate. The continuing calibration standard associated with this data responded high. Data is likely to show a high bias concerning the result.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.



GLOSSARY OF TERMS

Qualifier	Description
P	RPD between the primary and confirmatory analysis exceeded 40%.
Q	Sample was prepared and/or analyzed past holding time as defined in the method. Concentrations should be considered minimum values.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

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.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

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

Pres
Chk

Analysis / Container / Preservative

Chain of Custody Page 1 of 1



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:
Nicole Monroe/Sydney Clark

Email To:
Nicole.Monroe@arcadis.com;environmentDM-

Project Description:
211815

City/State
Collected: Fairbanks, AK

Please Circle:
PT MT CT ET

Phone: 907-276-8095

Client Project #
30064222.19.21

Lab Project #
CHEVARCAK-211815

Collected by (print):
E. Wycik

Site/Facility ID #
410 DRIVEWAY ST,

P.O. #

Collected by (signature):
[Signature]

Rush? (Lab MUST Be Notified)

Quote #

Immediately
Packed on Ice N Y X

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

Date Results Needed

No.
of
Cnts

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cnts	AK101 40mlAmb HCl	AK102 w/ silica 100ml Amb HCl	AK102/103 no silica 100ml Amb HCl	BTEX 8260D 40mlAmb-HCl	[DB 8011 40ml]Cr-NaThio	EDB/123TCP V524LL 40mlAmb-HCl	VOCs 8260D 40mlAmb-HCl	Remarks	Sample # (lab only)
MW-7-W-20210715	Grab	GW	-	7.15.21	0700	16	X	X	X	X	X	X	X		-01
MW-9-W-20210715	Grab	GW	-	7.15.21	0800	48	X	X	X	X	X	X	X	MS/MSD	-02
MW-4-W-20210715	Grab	GW	-	7.15.21	0900	16	X	X	X	X	X	X	X		-03
MW-3-W-20210715	Grab	GW	-	7.15.21	1000	16	X	X	X	X	X	X	X		-04
MW-1-W-20210715	Grab	GW	-	7.15.21	1100	10	X	X	X	X					-05
AR-85-W-20210715	Grab	GW	-	7.15.21	1200	10	X	X	X	X					-06
BD-1-W-20210715	Grab	GW	-	7.15.21	-	16	X	X	X	X	X	X	X		-07
EGB-1-W-20210715	Grab	GW	-	7.15.21	1700	16	X	X	X	X	X	X	X		-08
Trip Blank	-	GW	-	7.15.21	-	18	X	X		X			X		-09
		GW													

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

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
UPS X FedEx _____ Courier _____

Temp: 2.0 5.6 0.2
Tracking # 5117 4433 4716/4749/44365211

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: 7.16.21	Time: 0800	Received by: (Signature) <i>[Signature]</i>	Trip Blank Received: (Yes/No) No	Temp: _____ °C	Bottles Received: 1842=20 148+18 TB 6x NaThio 12x HCl	If preservation required by Login: Date/Time
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date: 7/17/21	Time: 0930	Hold:	Condition: NCF / <u>OK</u>

APPENDIX D

ADEC Data Review Checklist



Laboratory Data Review Checklist

Completed By:

Bhagyashree A Fulzele

Title:

Project Chemist

Date:

August 25,2020

Consultant Firm:

ARCADIS U.S., Inc

Laboratory Name:

Pace Analytical

Laboratory Report Number:

L1379853

Laboratory Report Date:

08/17/2021

CS Site Name:

Annual 2021 Groundwater Monitoring Report

ADEC File Number:

102.38.005

Hazard Identification Number:

287

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

1. Laboratory

a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?

Yes No N/A Comments:

Yes.

b. If the samples were transferred to another “network” laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?

Yes No N/A Comments:

Not applicable.

2. Chain of Custody (CoC)

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

Yes No N/A Comments:

Yes.

b. Correct analyses requested?

Yes No N/A Comments:

Yes.

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt (0° to 6° C)?

Yes No N/A Comments:

Yes.

b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

Yes No N/A Comments:

Yes.

c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?

Yes No N/A Comments:

Yes.

d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?

Yes No N/A Comments:

Yes, no discrepancies.

e. Data quality or usability affected?

Comments:

Data quality/usability was not affected.

4. Case Narrative

a. Present and understandable?

Yes No N/A Comments:

Yes.

b. Discrepancies, errors, or QC failures identified by the lab?

Yes No N/A Comments:

Yes.

c. Were all corrective actions documented?

Yes No N/A Comments:

Yes.

d. What is the effect on data quality/usability according to the case narrative?

Comments:

Data quality/usability was not affected.

5. Samples Results

a. Correct analyses performed/reported as requested on COC?

Yes No N/A Comments:

Yes.

b. All applicable holding times met?

Yes No N/A Comments:

Method AK101: Due to laboratory instrument issues the compound TPHGAK C6 to C10 analyzed past holding time of 14 days in sample IDs MW-1-W-20210715, BD-1-W-20210715 and EQB-1-W-20210715. Compound result in the associated samples were qualified as estimated (UJ).

c. All soils reported on a dry weight basis?

Yes No N/A Comments:

No soil samples were submitted for analysis.

d. Are the reported LOQs less than the Cleanup Level or the minimum required detection level for the project?

Yes No N/A Comments:

Yes.

e. Data quality or usability affected?

Data quality/usability was not affected.

6. QC Samples

a. Method Blank

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

Yes No N/A Comments:

Yes.

ii. All method blank results less than limit of quantitation (LOQ) or project specified objectives?

Yes No N/A Comments:

No.

iii. If above LOQ or project specified objectives, what samples are affected?

Comments:

Method AK101: Compound TPHGAK C6 to C10 (32.8 and 34.7 J ug/L) was detected below the reporting limit in method blank batches WG1714233 and WG1715345. A blank action level was established at five times of the reported blank concentration.
Compound from batch WG1714233 result in sample ID MW-9-W-20210715 was qualified as non-detect (UB) at reporting limit and in sample ID MW-3-W-20210715 was qualified as non-detect (UB) at sample detection.

Compound from batch WG1715345 was non-detect in associated samples, hence no other qualification of the data was required.

Method AK102/103: Compound AK102 DRO C10-C25 (280 J ug/L) was detected below the reporting limit in method blank batch WG1711615. A blank action level was established at five times of the reported blank concentration.

Compound result in sample IDs MW-9-W-20210715 and AR-85-W-20210715 was qualified as non-detect (UB) at reporting limit and in sample ID MW-1-W-20210715 was qualified as non-detect (UB) at sample detection.

Method AK102: Compound AK102 DRO C10-C25 (252 J ug/L) was detected below the reporting limit in method blank batch WG1711616. A blank action level was established at five times of the reported blank concentration.

Compound result in sample IDs MW-7-W-20210715, MW-9-W-20210715, MW-3-W-20210715, MW-1-W-20210715 and AR-85-W-20210715 was qualified as non-detect (UB) at reporting limit.

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

Yes No N/A Comments:

Yes.

v. Data quality or usability affected?

Comments:

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

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

- i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)

Yes No N/A Comments:

Yes.

- ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

Yes No N/A Comments:

Metals/Inorganics analysis was not requested for project samples.

- iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

Yes No N/A Comments:

Method SW846 8260D: LCS recovery for compound 1,2,3-trimethylbenzene was less than the control limit in preparation batch WG1708050. Compound result in sample IDs MW-7-W-20210715, MW-9-W-20210715, MW-4-W-20210715, MW-3-W-20210715, BD-1-W-20210715, EQB-1-W-20210715 and TRIP BLANK-20210715 was qualified as estimated (J/UJ).

Method AK102: LCS/LCSD recovery for compound AK102 DRO C10-C25 was less than the control limit in preparation batch WG1711616. Compound result in sample IDs MW-7-W-20210715, MW-9-W-20210715, MW-4-W-20210715, MW-3-W-20210715, MW-1-W-20210715, AR-85-W-20210715, BD-1-W-20210715, EQB-1-W-20210715 and TRIP BLANK-20210715 was qualified as estimated (J/UJ).

- iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? RPD reported from LCS/LCSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

Yes No N/A Comments:

Yes.

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

Comments:

Method SW846 8260D: Compound 1,2,3-trimethylbenzene result in sample IDs MW-7-W-20210715, MW-9-W-20210715, MW-4-W-20210715, MW-3-W-20210715, BD-1-W-20210715, EQB-1-W-20210715 and TRIP BLANK-20210715 was qualified as estimated (J/UJ).

Method AK102: Compound AK102 DRO C10-C25 result in sample IDs MW-7-W-20210715, MW-9-W-20210715, MW-4-W-20210715, MW-3-W-20210715, MW-1-W-20210715, AR-85-W-20210715, BD-1-W-20210715, EQB-1-W-20210715 and TRIP BLANK-20210715 was 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. Data quality or usability affected? (Use comment box to explain.)

Comments:

The LCS/LCSD recoveries exceedances is considered minor and would result in the estimation of the associated data. The reported data should still consider as usable.

c. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Note: Leave blank if not required for project

i. Organics – One MS/MSD reported per matrix, analysis and 20 samples?

Yes No N/A Comments:

The MS/MSD analysis was performed on sample ID MW-9-W-20210715 for method AK101, SW846 8260D, AK102/103 and AK102.

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

Yes No N/A Comments:

Not applicable.

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

Yes No N/A Comments:

Method 846 8260D: MS/MSD recovery was less than the 10% for compounds methyl tert-butyl ether, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, xylenes, total 1,2,3-trimethylbenzene and m&p-xylenes in sample ID MW-9-W-20210715. Compounds were non-detected in the associated sample and hence qualified as reject (R).

MS/MSD recovery was less than the control limit for compounds o-xylene in sample ID MW-9-W-20210715. Compounds result in associated sample was qualified as estimated (UJ).

- iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? RPD reported from MS/MSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

Yes No N/A Comments:

Method SW846 8260D: MS/MSD RPD exceedances were observed for compound methyl tert-butyl ether in sample ID MW-9-W-20210715. Compound was rejected (R) due to MS/MSD less than 10% recovery.

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

Comments:

The MS/MSD recoveries exceedances were observed in sample MW-9-W-20210715 and qualified as estimated (J/UJ) or rejected (R) based on the present recovery.

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

Yes No N/A Comments:

Yes.

- vii. Data quality or usability affected? (Use comment box to explain.)

Comments:

The MS/MSD recoveries and RPD exceedances is considered minor and would result in the estimation of associated data. With the exception of exceedances that were observed for compound methyl tert-butyl ether in sample ID MW-9-W-20210715. This compound was rejected (R) due to MS/MSD present recovery. All other data reported data should still consider as usable.

- d. Surrogates – Organics Only or Isotope Dilution Analytes (IDA) – Isotope Dilution Methods Only

- i. Are surrogate/IDA recoveries reported for organic analyses – field, QC and laboratory samples?

Yes No N/A Comments:

Yes.

- ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)

Yes No N/A Comments:

Method AK102: Surrogate recovery for o-terphenyl was less than the control limit in sample IDs MW-7-W-20210715, MW-4-W-20210715, MW-3-W-20210715, MW-1-W-20210715 and BD-1-W-20210715. The associated target compounds results were qualified as estimated (J/UJ).

Method AK102/103: Surrogate recovery for n-triacontane d62 was less than the control limit in sample IDs MW-4-W-20210715 and MW-3-W-20210715. The associated target compounds results were qualified as estimated (J/UJ).

- 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:

Yes.

iv. Data quality or usability affected?

Comments:

Surrogate recovery exceedances are considered as minor and would result in the estimation of associated data. The reported data should still consider as usable.

e. Trip Blanks

- i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? (If not, enter explanation below.)

Yes No N/A Comments:

Trip blank sample was collected as TRIP BLANK-20210715.

- ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC? (If not, a comment explaining why must be entered below)

Yes No N/A Comments:

Yes.

- iii. All results less than LOQ and project specified objectives?

Yes No N/A Comments:

No.

- iv. If above LOQ or project specified objectives, what samples are affected?

Comments:

Method AK101: Compound TPHGAK C6 to C10 (37.1 J ug/L) was detected below the reporting limit in TRIP BLANK-20210715. A blank action level was established at five times of the reported blank concentration.

Compound result in sample ID MW-9-W-20210715 was qualified as non-detect (UB) at reporting limit and in sample ID MW-3-W-20210715 was qualified as non-detect (UB) at sample detection.

v. Data quality or usability affected?

Comments:

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

f. Field Duplicate

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

Yes No N/A Comments:

Yes.

- ii. Submitted blind to lab?

Yes No N/A Comments:

Field duplicate BD-1-W-20210715 was collected from parent sample MW-4-W-20210715.

- 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:

Method AK102/103: The RPDs between the parent MW-4-W-20210715 and duplicate BD-1-W-20210715 samples for compound AK102 DRO C10-C25 was greater than the control limit. The compounds result in the associated parent and duplicate samples were qualified as estimated (J).

Method SW846 8260D: The RPDs between the parent MW-4-W-20210715 and duplicate BD-1-W-20210715 samples for compound 1,2,3-trimethylbenzene was greater than the control limit. The compounds result in the associated parent and duplicate samples were qualified as estimated (J).

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

Comments:

The field duplicate RPD exceedances considered as minor. The reported data should still consider as usable.

- g. Decontamination or Equipment Blank (If not applicable, a comment stating why must be entered below)?

Yes No N/A Comments:

Equipment blank sample was collected as EQB-1-W-20210715.

- i. All results less than LOQ and project specified objectives?

Yes No N/A Comments:

No.

- ii. If above LOQ or project specified objectives, what samples are affected?

Comments:

Method AK102/103: Compound AK102 DRO C10-C25 (412 J ug/L) was detected below the reporting limit in EQB-1-W-20210715. A blank action level was established at five times of the reported blank concentration.

Compound result in sample IDs MW-9-W-20210715 and AR-85-W-20210715 was qualified as non-detect (UB) at reporting limit and in sample ID MW-1-W-20210715 was qualified as non-detect (UB) at sample detection.

Method AK102: Compound AK102 DRO C10-C25 (412 J ug/L) was detected below the reporting limit in EQB-1-W-20210715. A blank action level was established at five times of the reported blank concentration.

Compound result in sample IDs MW-7-W-20210715, MW-9-W-20210715, MW-3-W-20210715, MW-1-W-20210715 and AR-85-W-20210715 was qualified as non-detect (UB) at reporting limit.

iii. Data quality or usability affected?

Comments:

The equipment blank contamination considered as 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. Defined and appropriate?

Yes No N/A Comments:

Method SW846 8260D: Continuing calibration for compounds 1,1,2-trichlorotrifluoroethane, 1,2,3-trimethylbenzene, 1,2,3-trichlorobenzene, acetone, acrolein, dichlorodifluoromethane, methyl tert-butyl ether and trichlorofluoromethane were low bias. Compounds in the sample IDs MW-7-W-20210715, MW-9-W-20210715, MW-4-W-20210715, MW-3-W-20210715, BD-1-W-20210715, EQB-1-W-20210715 and TRIP BLANK-20210715 was qualified as estimated (J/UJ).

Continuing calibration for compound m&p-xylene was high bias. Compound result in associated sample was non-detect, hence no other qualification of the data was required.