Ms. Rebekah Reams
Alaska Department of Environmental Conservation
Spill Prevention and Response, Contaminated Sites Program
P.O Box 1535
Haines, Alaska 99827

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Date: January 24, 2024
Our Ref: 30063669
Subject: Revised 2023 Annual Groundwater Monitoring Report
US Travel Systems, Former (Former Texaco- Service Station #211083)
230 Old Steese Highway Fairbanks, Alaska
ADEC File No.: 102.26.046
ADEC Hazard ID: 24310

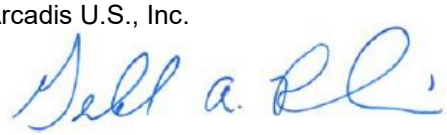
Dear Ms. Reams,

On behalf of Chevron Environmental Management Company (CEMC), Arcadis U.S., Inc. (Arcadis), has revised the *2023 Annual Groundwater Monitoring Report* to address the January 18, 2024, Alaska Department of Environmental Conservation (ADEC) comment letter (Attachment A). The report documents activities completed at the site in 2023, including the annual 2023 groundwater monitoring activities of for the US Travel Systems, Former (Former Texaco- Service Station #211083), located at 230 Old Steese Highway in Fairbanks, Alaska (site). This work was conducted under the direction of a "Qualified Environmental Professional" (QEP) by a "Qualified Sampler" (18 Alaska Administrative Code [AAC] 75.333).

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

Sincerely,

Arcadis U.S., Inc.



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Project Manager
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James Kiernan, CEMC *(electronic copy)*
David Mongold, Napa Dreams LLC

Ms. Rebekah Reams
Alaska Department of Environmental Conservation
Date January 24, 2024

REVISED 2023 ANNUAL GROUNDWATER MONITORING REPORT

January 24, 2024

Work Conducted This Period [Annual 2023]:

1. Conducted annual groundwater monitoring activities on July 26 and August 10, 2023.
2. Submitted a Revised Groundwater Sampling Work Plan on March 17, 2023.
3. Submitted a Site Investigation Work Plan on May 12, and a Revised Site Investigation Work Plan on June 23, 2023.
4. Completed site investigation and property survey activities.
5. Prepared the *2023 Annual Groundwater Status Report*.

Work Proposed Next Period [Semi-Annual 2024]:

1. Prepare *Site Investigation Report* for field activities completed on July 30, 2023.
2. Conduct a Semi-Annual 2024 groundwater monitoring activities.
3. Prepare a Semi-*Annual* 2024 *Groundwater Monitoring Report.*

Site Description

The site is located in Fairbanks Alaska and is situated in the south-central area of the state in the Tanana River Valley at an elevation of approximately 440 feet above mean sea level. Shallow streams and abandoned meander scars are found throughout the valley. Static groundwater depths historically range between 9.0 and 22.54 feet below top of casing. Groundwater flow has been primarily west.

Based on historical records, the site was operated as a Texaco service station from 1959 to 1983. The property's legal description is TRACK B BLOCK 9 GRAEHL. Former service station facilities consisted of one building, five 4,000-gallon gasoline USTs, and one 500-gallon waste oil UST. One 1,000-gallon heating oil UST remains at the site; however, is not active. Impacts were first discovered in August 1991, when the Alaska Department of Transportation and Public Facilities (ADOT) encountered petroleum hydrocarbon-impacted soil at the site during the Hazardous Material Investigation for the Old Steese Highway widening project. Information on the site between 1983, when the service station operations ceased, until the initial encounter of impact in 1991 has not been found. During the initial investigation in August 1991, soil and groundwater samples collected from the eastern corner of the property contained petroleum hydrocarbons exceeding the Alaska Department of Environmental Conservation (ADEC) soil cleanup levels (SCLs) and groundwater cleanup levels (GCLs). There is no documentation on the removal of the USTs, associated piping, or dispenser islands; however, it is believed that they were removed in 1983, apart from the 500-gallon used oil tank. The 500-gallon used oil tank was removed and replaced with clean gravel backfill in June 1994 as part of the site's initial corrective action activities.

On April 11, 2023, the ADEC approved a *Groundwater Sampling Analyte Reduction Request – Groundwater Sampling Work Plan Addendum* which included monitoring and sampling of monitoring wells MW-1 through MW-6 on an annual basis.

On June 27, 2023, the ADEC approved a Revised Site Investigation Work Plan and in July 2023, 13 soil borings were advanced with subsequent installation of five monitoring wells. Details of the site investigation activities will

be provided under separate cover. Monitoring wells MW-11 through MW-15 were installed to further delineate groundwater impacts along the property boundary and right-of-way. Table 1-1 (below) summarizes construction details for each monitoring well. Surrounding properties are primarily commercial; the site is bordered by businesses to the north, south, east, and west. A site location map and site plan are shown as Figure 1 and Figure 2, respectively.

Table 1-1. Groundwater Monitoring Well Construction Information

Well ID	Soil Boring ID	Casing Diameter (inches)	Screened Interval (bgs)	Total Depth (bgs)
MW-11	SB-23-13	2	10-20	20
MW-12	SB-23-2	2	7-17	17
MW-13	SB-23-10	2	10-20	20
MW-14	SB-23-3	2	7-17	17
MW-15	SB-23-5	2	7-17	17

Notes:
bgs = below ground surface

Groundwater Monitoring Results this Reporting Period

Current phase of project:	Monitoring
Frequency of monitoring and sampling:	Annual
Monitoring wells containing light non-aqueous phase liquid (LNAPL):	None
Cumulative LNAPL recovered to date: (gallons)	0.00
Approximate depth to groundwater: (feet below top of casing)	10.74 (MW-14) to 13.71(MW-13)
Approximate groundwater elevation: (feet relative to NAVD88)	429.92 (MW-11) to 430.23 (MW-1)
Groundwater flow direction	Historically west
Groundwater gradient (feet per foot)	Not determined during this event
Current remediation techniques:	None
Summary of unusual activity:	Monitoring well sampling occurred during two dates.
Agency directive requirements:	None

Groundwater Gauging and Sampling Methods

On July 26, 2023, annual groundwater monitoring and sampling activities were initiated by sampling monitoring wells MW-1 through MW-4 and MW-6. Following installation of monitoring wells MW-11 through MW-15, the new monitoring wells were sampled on August 10, 2023. Groundwater monitoring wells scheduled to be gauged and/or sampled are summarized in Table 1. Monitoring wells were gauged with an oil/water interface probe in the order of lowest to highest historical petroleum hydrocarbon concentrations in groundwater for MW-1 through MW-4 and MW-6 to determine groundwater elevations and ascertain if LNAPL was present. New monitoring wells MW-11 through MW-15 proceeded in numerical order. Following gauging, groundwater was purged and sampled using low flow purge technology via bladder pump in accordance with the ADEC Field Sampling Guidance (ADEC 2022a) and Arcadis *Standard Groundwater Sampling and Monitoring Wells (Arcadis 2022a).* Non-disposable groundwater gauging equipment was decontaminated prior to and after each use with a detergent solution and rinsed in potable water. Water table drawdown was continuously monitored during purging with an oil/water interface probe and the flow rate of the pump was adjusted to limit drawdown to 0.3 feet. Water quality parameters were monitored during purging with a multi-parameter water quality meter equipped with a flow through cell and turbidity meter. Parameters were recorded every 3 to 5 minutes until a minimum of three (minimum of four if using temperature as an indicator) of the parameters listed below stabilized. Water quality parameters were considered stable when three successive readings were within the following ADEC limits:

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

Following well stabilization, the flow rate was reduced to 200 milliliters per minute and samples were collected into laboratory sample bottles. Groundwater samples were collected from the top foot of the water column in monitoring wells per the sampling schedule (Table 1). Groundwater elevations recorded during the two sampling events and a rose diagram of historical groundwater flow directions are illustrated on Figure 3.

In the letter dated April 11, 2023, ADEC approved a reduction of analytes for the site. Groundwater samples collected were analyzed for the constituents of concern summarized in Table 1 by Pace Analytical National Center for Testing & Innovation (Pace) of Mt. Juliet, Tennessee for the following constituents:

- Select volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) Method 8260D.
- Total petroleum hydrocarbons as gasoline range organics (GRO) by Alaska Method AK101
- Total petroleum hydrocarbons as diesel range organics (DRO) by Alaska Method AK102.
- 1,2-Dibromoethane (EDB) by USEPA 8011 or USEPA 8260D LL524.
- Arsenic and lead by USEPA 6010D.

Groundwater duplicate samples (BD-1-20230726 and BD-1-20230810) were collected from monitoring well MW-2 and MW-13, respectively, and submitted blind to Pace. Additionally, equipment blank samples (EQB-1-20230726 and EQB-1-20230810) were collected and trip blanks (Trip blank-1-20230726, Trip Blank-2-20230726, and TB-1-

20230810) were included in sample coolers for quality assurance purposes. Field notes collected during groundwater monitoring activities including monitoring well purge rates and drawdown are presented in Attachment B.

Groundwater Sampling Results

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

- DRO was detected at concentrations above the ADEC GCL of 1,500 micrograms per liter (µg/L) in groundwater samples collected from MW-2 at a concentration of 4,320 µg/L and 4,400 µg/L in BD-1-20230726, in MW-4 at a concentration of 2,270 µg/L, in MW-11 at a concentration of 4,270 µg/L, in MW-12 at a concentration of 3,620 µg/L, in MW-14 at a concentration of 4,920 µg/L, and in MW-15 at a concentration of 7,740 µg/L.
- GRO was detected at concentrations above the ADEC GCL of 2,200 µg/L in groundwater samples collected from MW-2 at a concentration of 7,700 µg/L and 8,510 J µg/L (The associated numerical value is an estimated concentration only) in BD-1-20230726, in MW-4 at a concentration of 3,960 µg/L, in MW-11 at a concentration of 11,100 µg/L, in MW-12 at a concentration of 16,900 µg/L, in MW-13 at a concentration of 2,550 J µg/L and 1,870 J µg/L in BD-1-20230810, in MW-14 at a concentration of 26,500 µg/L, and in MW-15 at a concentration of 49,800 µg/L.
- Benzene was detected at concentrations above the ADEC GCL of 4.6 µg/L in groundwater samples collected from MW-4 at a concentration of 34.9 µg/L, in MW-11 at a concentration of 13.8 J µg/L, and in MW-15 at a concentration of 22.5 J µg/L.
- Toluene was detected at concentrations above the ADEC GCL of 1,100 µg/L in groundwater samples collected from MW-14 at a concentration of 1,810 µg/L, and in MW-15 at a concentration of 2,260 µg/L.
- Ethylbenzene was detected at concentrations above the ADEC GCL of 15 µg/L in groundwater samples collected from MW-2 at a concentration of 196 µg/L and 200 µg/L in BD-1-20230726, in MW-4 at a concentration of 78.7 µg/L, in MW-11 at a concentration of 359 µg/L, in MW-12 at a concentration of 779 µg/L, in MW-13 at a concentration of 38.6 µg/L and 35.8 µg/L in BD-1-20230810, in MW-14 at a concentration of 681 µg/L, and in MW-15 at a concentration of 2,230 µg/L.
- Total Xylenes were detected at concentrations above the ADEC GCL of 190 µg/L in groundwater samples collected from MW-2 at a concentration of 1,160 µg/L and 1,180 µg/L in BD-1-20230726, in MW-4 at a concentration of 867 µg/L, in MW-11 at a concentration of 1,880 µg/L, in MW-12 at a concentration of 2,470 µg/L, in MW-14 at a concentration of 7,370 D µg/L (The diluted results were reported and qualified as being reported at a dilution), and in MW-15 at a concentration of 16,800 D µg/L.
- Naphthalene was detected at concentrations above the ADEC GCL of 1.7 µg/L in groundwater samples collected from MW-1 at a concentration of 3.19 J µg/L, MW-2 at a concentration of 139 J µg/L and 136 J µg/L in BD-1-20230726, in MW-3 at a concentration of 11.8 J µg/L, in MW-4 at a concentration of 35.1 J, in MW-11 at a concentration of 119 J µg/L, in MW-12 at a concentration of 149 J µg/L, in MW-13 at a concentration of 14.1 J µg/L, in MW-14 at a concentration of 211 µg/L, and in MW-15 at a concentration of 380 µg/L.
- 1,2,4-Trimethylbenzene was detected at concentrations above the ADEC GCL of 56 µg/L in groundwater samples collected from MW-2 at a concentration of 2,160 µg/L and 2,460 µg/L in BD-1-20230726, in

MW-4 at a concentration of 167 µg/L, in MW-11 at a concentration of 1,850 µg/L, in MW-12 at a concentration of 1,710 µg/L, in MW-13 at a concentration of 103 µg/L and 96.9 µg/L in BD-1-20230810, in MW-14 at a concentration of 2,280 D µg/L, and in MW-15 at a concentration of 2,610 µg/L.

- 1,3,5-Trimethylbenzene was detected at concentrations above the ADEC GCL of 60 µg/L in groundwater samples collected from MW-2 at a concentration of 716 µg/L and 851 µg/L in BD-1-20230726, in MW-4 at a concentration of 63.7 µg/L, in MW-11 at a concentration of 545 µg/L, in MW-12 at a concentration of 543 µg/L, in MW-14 at a concentration of 629 µg/L, and in MW-15 at a concentration of 649 µg/L.
- Arsenic was detected at concentrations above the ADEC GCL of 0.52 µg/L in groundwater samples collected from MW-2 at a concentration of 53.4 µg/L and 48.9 µg/L in BD-1-20230726, in MW-4 at a concentration of 16.4 µg/L, in MW-12 at a concentration of 55.0 µg/L, in MW-14 at a concentration of 31.4 µg/L, and in MW-15 at a concentration of 45.7 µg/L.
- Lead detected at concentrations above the ADEC GCL of 15 µg/L in groundwater samples collected from MW-11 at a concentration of 19.2 µg/L, in MW-13 at a concentration of 20.7 µg/L and 19.5 µg/L in BD-1-20230810, in MW-14 at a concentration of 26.1 µg/L, and in MW-15 at a concentration of 51.7 µg/L.
- Remaining constituents analyzed were not detected above their respective ADEC GCLs.

Historical analytical results (pre-2023) are presented in Attachment D.

Laboratory Data Review

As required by the ADEC Guidelines for Data Reporting (ADEC 2022b), Arcadis completed a laboratory data review checklist for the laboratory report generated for this event. The data review checklist is included as Attachment E. Quality assurance and quality control parameters related to the precision, accuracy, representativeness, comparability, completeness, and sensitivity of the data presented in this report suggest that the data quality objectives have been met with the following exceptions:

- Accuracy:
  - Continuing calibration recovery were less than the control limit for naphthalene in sample locations MW-1, MW-2, MW-3, MW-4, MW-6, MW-11, MW-12, MW-13Blind duplicates (BD-1-20230726 and BD-1-20230810), Equipment blank (EQB-1-20230726), and Trip blank (Trip Blank 1-20230726 and Trip Blank 2-20230726) for USEPA Method 8260D. Analytical result in the associated sample locations were qualified as estimated.
  - The Matrix Spike (MS) recovery was less than ten percent of the control limit for toluene, and 1,2,4-trimethylbenzene, in sample location MW-6 for USEPA Method 8260D. Analytical result in the associated sample location were qualified as estimated.
  - The MS recovery was less than the control limit for the DRO in sample location MW-6 for Alaska Method AK 102. Analytical result in the associated sample location were qualified as estimated.
  - The Matrix Spike Duplicate (MSD) recovery was less than the control limit for the GRO in sample location MW-6 for Alaska Method AK 101. Analytical result in the associated sample location were qualified as estimated.
- Precision:
  - Relative Percent Difference (RPD) for MS/MSD was exceeded for GRO. The analytical result for Alaska Method AK101 in sample location MW-6 was qualified as estimated.

  - RPD for MS/MSD was exceeded for benzene, 1,2-dichloroethane, ethylbenzene, isopropylbenzene, methylene chloride, 1,1,2-trichloroethane, 1,3,5-trimethylbenzene, and vinyl chloride. The analytical results for USEPA Method 8260D in sample location MW-6 was qualified as estimated.
  - RPD for BD was exceeded for the GRO. The analytical result for Alaska Method AK101 in sample locations MW-13 and BD-1-20230810 were qualified as estimated.
- Comparability:
  - DRO was detected below the reporting limit in the method blank and equipment blank for Alaska Method AK102. Based on blank evaluation, the results for DRO in sample locations MW-1, MW-3, and MW-6 were qualified as non-detect.
  - GRO was detected below the reporting limit in the method blank and trip blank for Alaska Method AK101. Based on blank evaluation, the result for GRO in MW-6 was qualified as non-detect.
  - Arsenic was detected below the reporting limit in the method blank for USEPA Method 6010D. Based on blank evaluation, the results for arsenic in sample locations MW-11, MW-13, and BD-1-20230810 were qualified as non-detect.
- Sensitivity:
  - The concentration of DRO, total xylenes, and 1,3,5-trimethylbenzene exceeded the ADEC GCLs in sample locations MW-2, BD-1-20230726, MW-4, MW-11, MW-12, MW-14, and MW-15.
  - The concentration of GRO, ethylbenzene and 1,2,4-trimethylbenzene exceeded the ADEC GCLs in sample locations MW-2, BD-1-20230726, MW-4, MW-11, MW-12, MW-13, BD-1-20230810, MW-14, and MW-15.
  - The concentration of benzene exceeded the ADEC GCL in sample locations MW-4, MW-11, and MW-15.
  - The concentration of toluene exceeded the ADEC GCL in sample locations MW-14 and MW-15.
  - The concentration of lead exceeded the ADEC GCL in sample locations MW-11, MW-13, BD-1-20230810, and MW-15.
  - The concentration of naphthalene exceeded the ADEC GCL in sample locations MW-1, MW-2, BD-1-20230726, MW-3, MW-4, MW-11, MW-12, MW-13, BD-1-20230810, and MW-15.
  - The concentration of arsenic exceeded the ADEC GCL in sample locations MW-2, BD-1-20230726, MW-4, MW-12, MW-14, and MW-15.
  - Benzene, EDB, EDC, methylene chloride, naphthalene, tetrachloroethene, 1,1,2 trichloroethane, vinyl chloride, arsenic, and lead were reported as non-detect by the laboratory; however, the laboratory reported detection limit exceeded the ADEC GCLs. The sensitivity of the analyses was adequate for the samples with above exceptions.
  - 1,2,4-Trimethylbenzene, and Total xylenes were qualified as “D” due to dilution in sample location MW-14 for USEPA Method 8260D.
  - Total xylenes were qualified as “D” due to dilution in sample location MW-15 for USEPA Method 8260D.
  - pH exceedance was observed in sample locations BD-1-20230726 and Trip blanks (Trip Blank 1-20230726 and Trip Blank 2-20230726) for Alaska Method AK 101, and these sample locations were analyzed past the seven day recommended holding time for unpreserved samples. Target compounds result in associated sample locations were qualified as estimated.

Investigation Derived Waste

Purge and decontamination water was collected and is currently stored in U.S. Department of Transportation-approved 55-gallon steel drums onsite. Approximately 73 gallons of water were generated during the monitoring event due to monitoring wells MW-11 through MW-15 being developed. The drum was labeled with the contents, generator, date generated, and generator contact information. Following waste characterization and ADEC approval, the investigation derived waste will be transported offsite for treatment and/or disposal.

Conclusion and Recommendations

Because the monitoring wells were sampled during two separate events, the groundwater potentiometric surface elevation, flow direction and hydraulic gradient could not be determined. Historical data indicate groundwater flow to the west. Analytical results from pre-existing wells are generally consistent with historical data. Analytical results from newly installed wells reported elevated constituent concentrations. Wells located proximal to the former UST equipment were reported at concentrations up to one order of magnitude higher in concentration than pre-existing wells.

To further evaluate groundwater, Arcadis recommends groundwater sampling be updated to a semi-annual schedule. The next proposed sampling events are planned for June and September 2024.

References

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

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

ADEC. 2023. 18-AAC-75 Oil and Other Hazardous Substances Pollution Control. ADEC. Amended October 18.

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

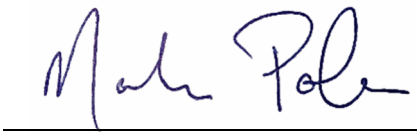
Arcadis. 2022b. Summary of Procedures for Investigation Derived Waste Treatment Utilizing Granular Activated Carbon. September.

Ms. Rebekah Reams
Alaska Department of Environmental Conservation
Date January 24, 2024

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

Sincerely,

Arcadis U.S., Inc.



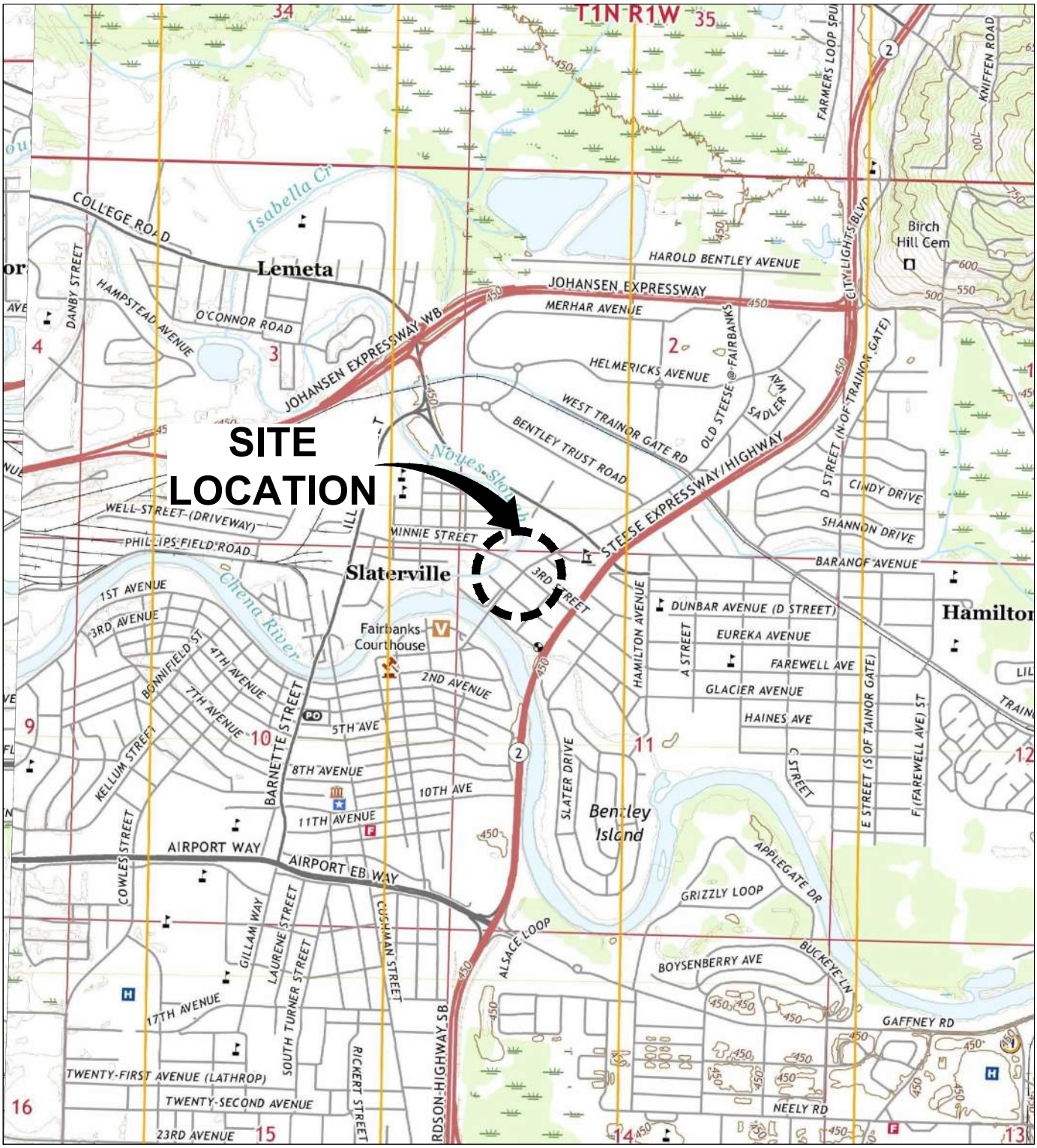
Nathan Polen
Project Task Manager

Gerald A. Robinson
Project Manager

Enclosures:

- Figure 1. Site Location Map
- Figure 2. Site Plan
- Figure 3. Groundwater Elevation Map
- Figure 4. Groundwater Analytical Results Map
- Table 1. Groundwater Monitoring Schedule
- Table 2. Current Groundwater Gauging and Analytical Results
- Attachment A. January 18, 2023, ADEC Comment Letter and responses
- Attachment B. Field Notes
- Attachment C. Laboratory Analytical Results
- Attachment D. Historical Groundwater Analytical Results
- Attachment E. ADEC Data Review Checklist

Figures



REFERENCE: BASE MAP USGS 7.5. MIN. TOPO. QUAD., FAIRBANKS D2 SE AND SW , ALASKA, 2021.

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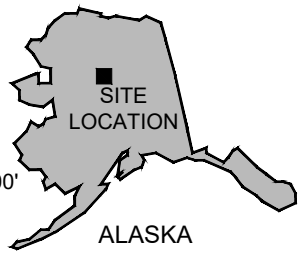
0 2,000' 4,000'

APPROXIMATE SCALE : 1 in. = 2,000 ft.



FORMER TEXACO SERVICE STATION # 211083
230 OLD STEESE HIGHWAY
FAIRBANKS, ALASKA

SITE LOCATION MAP

ARCADIS

FIGURE 1

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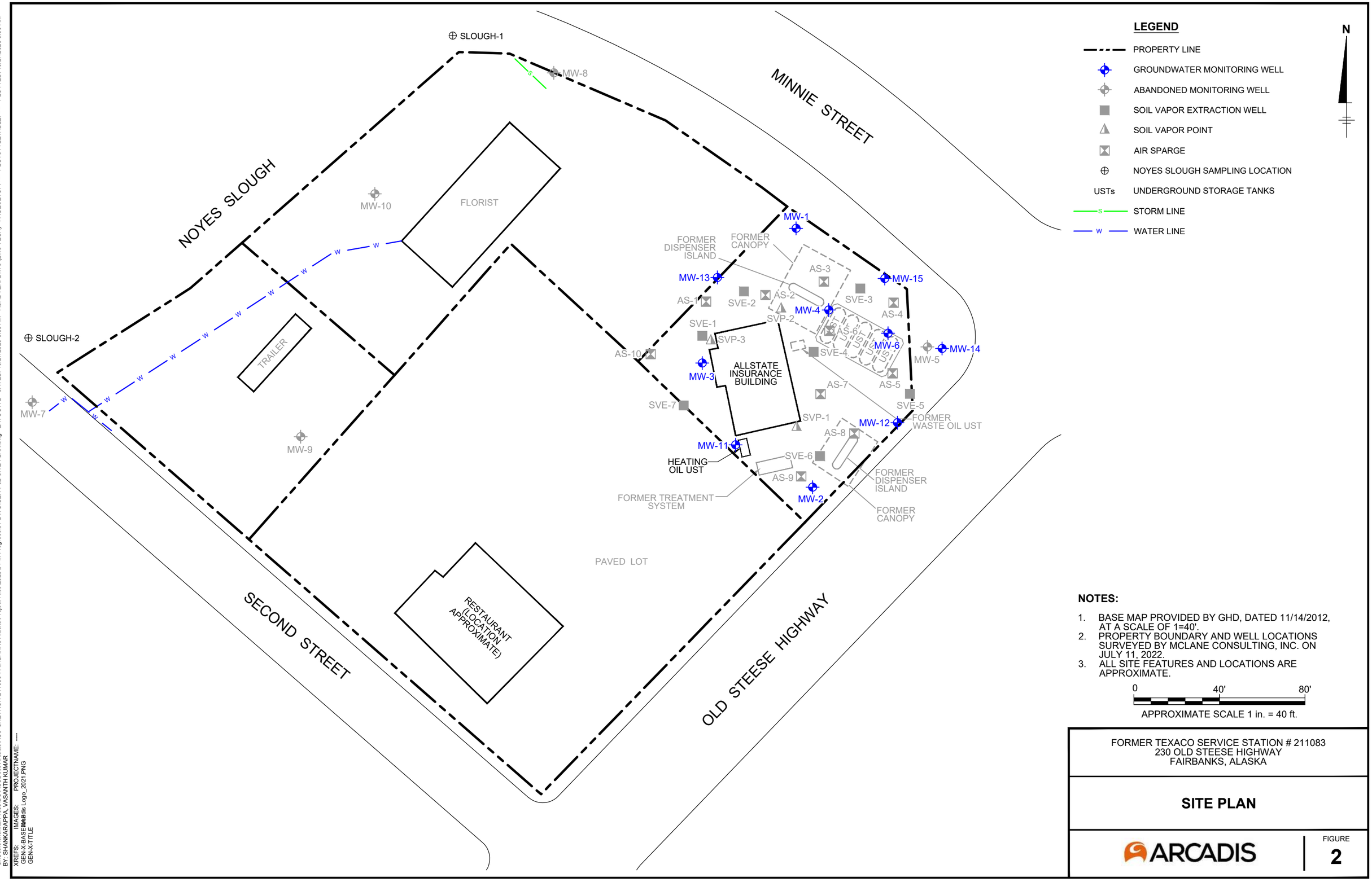
AK_Fairbanks_D-2_NE_20210722.jpg
AK_Fairbanks_D-2_NW_20210716.jpg
AK_Fairbanks_D-2_SE_20210730.jpg
AK_Fairbanks_D-2_SW_20210722.jpg
Arcadis Logo_2021.PNG

C:\Users\shankarv4688\DC\ACCDocs\Arcadis\AUS-CHEVRON-211083-FAIRBANKS Alaska\Project Files\2023\01-In Progress\01-DWG\GEN-F01-SITE LOCATION.dwg LAYOUT: 1 SAVED: 10/10/2023 4:33 PM ACADVER: 24.1S (LMS TECH) PAGESETUP: --- PLOTSTYLETABLE: ARCADIS.CTB PLOTTED: 10/10/2023 4:37 PM BY: SHANKARAPPA, VASANTH KUMAR



NOTES:

1. BASE MAP PROVIDED BY GHD, DATED 11/14/2012, AT A SCALE OF 1=40'.
2. PROPERTY BOUNDARY AND WELL LOCATIONS SURVEYED BY MCLANE CONSULTING, INC. ON JULY 11, 2022.
3. ALL SITE FEATURES AND LOCATIONS ARE APPROXIMATE.

0 40' 80'

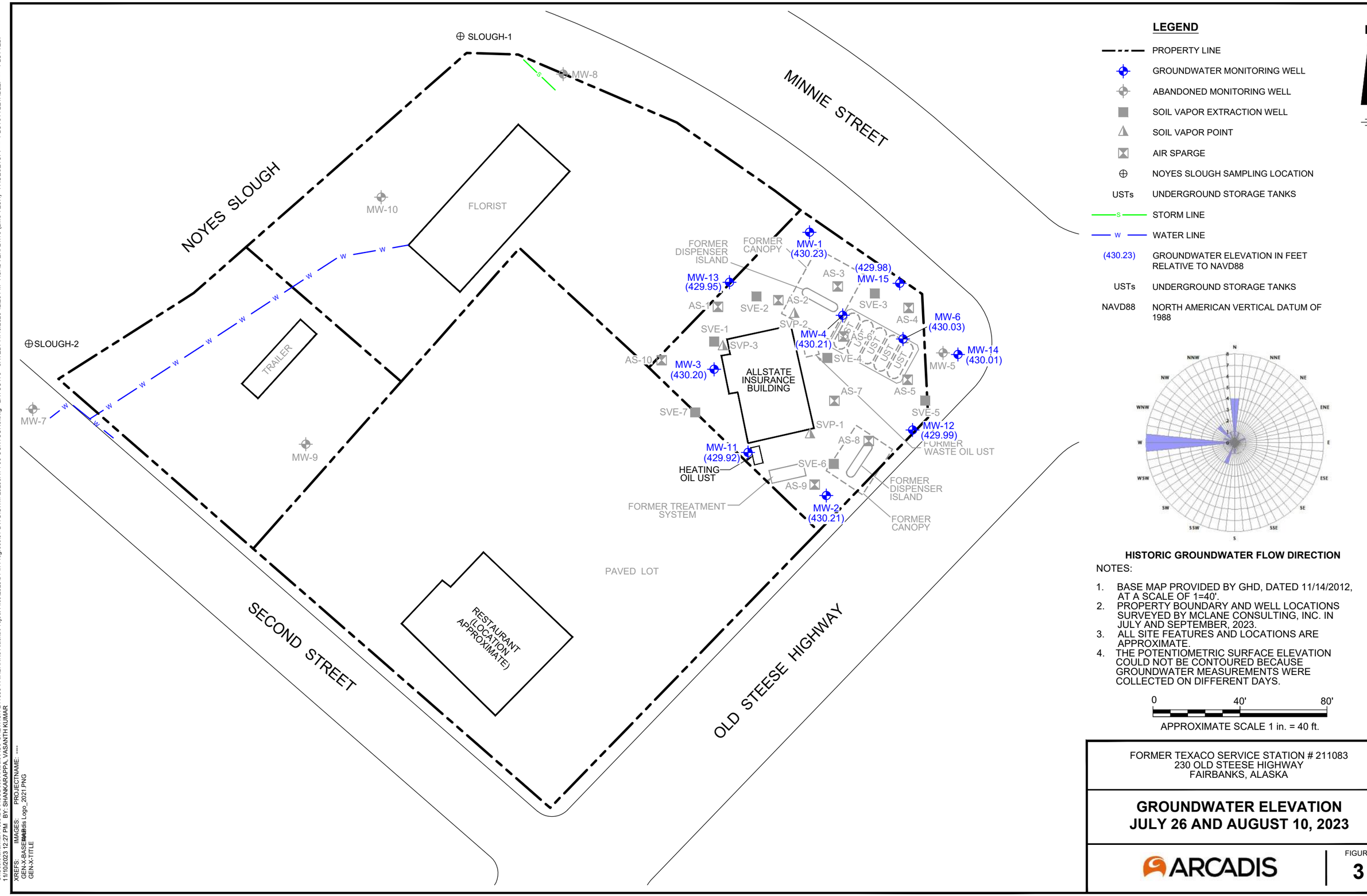
APPROXIMATE SCALE 1 in. = 40 ft.

FORMER TEXACO SERVICE STATION # 211083
230 OLD STEESE HIGHWAY
FAIRBANKS, ALASKA

SITE PLAN

ARCADIS

FIGURE
2



LEGEND

- PROPERTY LINE
- GROUNDWATER MONITORING WELL
- ABANDONED MONITORING WELL
- SOIL VAPOR EXTRACTION WELL
- SOIL VAPOR POINT
- AIR SPARGE
- NOYES SLOUGH SAMPLING LOCATION
- USTs — UNDERGROUND STORAGE TANKS
- S — STORM LINE
- W — WATER LINE
- (430.23) — GROUNDWATER ELEVATION IN FEET RELATIVE TO NAVD88
- USTs — UNDERGROUND STORAGE TANKS
- NAVD88 — NORTH AMERICAN VERTICAL DATUM OF 1988

N

HISTORIC GROUNDWATER FLOW DIRECTION

NOTES:

1. BASE MAP PROVIDED BY GHD, DATED 11/14/2012, AT A SCALE OF 1=40'.
2. PROPERTY BOUNDARY AND WELL LOCATIONS SURVEYED BY MCLANE CONSULTING, INC. IN JULY AND SEPTEMBER, 2023.
3. ALL SITE FEATURES AND LOCATIONS ARE APPROXIMATE.
4. THE POTENTIOMETRIC SURFACE ELEVATION COULD NOT BE CONTOURED BECAUSE GROUNDWATER MEASUREMENTS WERE COLLECTED ON DIFFERENT DAYS.

0 40' 80'

APPROXIMATE SCALE 1 in. = 40 ft.

FORMER TEXACO SERVICE STATION # 211083
230 OLD STEESE HIGHWAY
FAIRBANKS, ALASKA

GROUNDWATER ELEVATION JULY 26 AND AUGUST 10, 2023

ARCADIS

FIGURE 3

MW-4	
Sample Date	07/26/2023
DRO	**2,270**
GRO	**3,960**
Benzene	**34.9**
Toluene	**393**
Ethylbenzene	**78.7**
Total Xylenes	**867**
Lead	**7.69**
Naphthalene	**35.1 J**
Arsenic	**16.4**
1,2,,4-Trimethylbenzene	**167**
1,3,5-Trimethylbenzene	**63.7**

MW-1	
Sample Date	07/26/2023
DRO	<800 B
GRO	**1,040**
Benzene	**1.65**
Toluene	**0.810 J**
Ethylbenzene	**9.61**
Total Xylenes	**7.52**
Lead	<6.00
Naphthalene	**3.19 J**
Arsenic	***<10.0***
1,2,,4-Trimethylbenzene	**1.87**
1,3,5-Trimethylbenzene	<1.00

MW-15	
Sample Date	08/10/2023
DRO	**7,740**
GRO	**49,800**
Benzene	**22.5 J**
Toluene	**2,260**
Ethylbenzene	**2,230**
Total Xylenes	**16,800 D**
Lead	**51.7**
Naphthalene	**380**
Arsenic	**45.7**
1,2,,4-Trimethylbenzene	**2,610**
1,3,5-Trimethylbenzene	**649**

MW-6	
Sample Date	07/26/2023
DRO	<800 B J
GRO	<139 B J
Benzene	**0.655 J**
Toluene	**6.30 J**
Ethylbenzene	**4.67 J**
Total Xylenes	**70.0**
Lead	<6.00
Naphthalene	***<5.00 J***
Arsenic	***<10.0***
1,2,,4-Trimethylbenzene	**8.92 J**
1,3,5-Trimethylbenzene	**3.04 J**

MW-13	
Sample Date	08/10/2023
DRO	**1,040 [1,020]**
GRO	**2,550 J [1,870 J]**
Benzene	**4.13 J [3.65 J]**
Toluene	<10.0 [<10.0]
Ethylbenzene	**38.6 [35.8]**
Total Xylenes	**39.7 [35.4]**
Lead	**20.7 [19.5]**
Naphthalene	**14.1 J *[<50.0 J]***
Arsenic	***<26.1 B [21.0 B]***
1,2,,4-Trimethylbenzene	**103 [96.9]**
1,3,5-Trimethylbenzene	**21.0 [18.8]**

MW-14	
Sample Date	08/10/2023
DRO	**4,920**
GRO	**26,500**
Benzene	***<10.0***
Toluene	**1,810**
Ethylbenzene	**681**
Total Xylenes	**7,370 D**
Lead	**26.1**
Naphthalene	**211**
Arsenic	**31.4**
1,2,,4-Trimethylbenzene	**2,280 D**
1,3,5-Trimethylbenzene	**629**

MW-3	
Sample Date	07/26/2023
DRO	<800 B
GRO	**744**
Benzene	**1.11**
Toluene	**5.52**
Ethylbenzene	**13.1**
Total Xylenes	**91.5**
Lead	<6.00
Naphthalene	**11.8 J**
Arsenic	***<10.0***
1,2,,4-Trimethylbenzene	**34.3**
1,3,5-Trimethylbenzene	**7.85**

MW-11	
Sample Date	08/10/2023
DRO	**4,270**
GRO	**11,100**
Benzene	**13.8 J**
Toluene	**65.8**
Ethylbenzene	**359**
Total Xylenes	**1,880**
Lead	**19.2**
Naphthalene	**119 J**
Arsenic	***<25.6 B***
1,2,,4-Trimethylbenzene	**1,850**
1,3,5-Trimethylbenzene	**545**

MW-2	
Sample Date	07/26/2023
DRO	**4,320 [4,400]**
GRO	**7,700 [8,510 J]**
Benzene	**0.984 J [1.21]**
Toluene	**8.52 [9.08]**
Ethylbenzene	**196 [200]**
Total Xylenes	**1,160 [1,180]**
Lead	**4.19 J** [<6.00]
Naphthalene	**139 J [136 J]**
Arsenic	**53.4 [48.9]**
1,2,,4-Trimethylbenzene	**2,160 [2,460]**
1,3,5-Trimethylbenzene	**716 [851]**

MW-12	
Sample Date	08/10/2023
DRO	**3,620**
GRO	**16,900**
Benzene	***<50.0***
Toluene	**259**
Ethylbenzene	**779**
Total Xylenes	**2,470**
Lead	**9.37**
Naphthalene	**149 J**
Arsenic	**55.0**
1,2,,4-Trimethylbenzene	**1,710**
1,3,5-Trimethylbenzene	**543**

Concentration in µg/L

Analyte	ADEC Groundwater Cleanup Levels
DRO	1,500
GRO	2,200
Benzene	4.6
Toluene	1,100
Ethylbenzene	15
Total Xylenes	190
Lead	15
Naphthalene	1.7
Arsenic	0.52
1,2,4-Trimethylbenzene	56
1,3,5-Trimethylbenzene	60

NOYES SLOUGH
SLOUGH-1
SLOUGH-2
MW-8
MW-10
MW-7
MW-9
FLORIST
TRAILER
PAVED LOT
RESTAURANT (LOCATION APPROXIMATE)
SECOND STREET
STEESE HIGHWAY
ALLSTATE INSURANCE BUILDING
FORMER DISPENSER ISLAND
FORMER CANOPY
FORMER WASTE OIL UST
HEATING OIL UST
FORMER TREATMENT SYSTEM
MW-1
MW-2
MW-3
MW-4
MW-5
MW-6
MW-11
MW-12
MW-13
MW-14
MW-15
AS-1
AS-2
AS-3
AS-4
AS-5
AS-6
AS-7
AS-8
AS-9
AS-10
SVE-1
SVE-2
SVE-3
SVE-4
SVE-5
SVE-6
SVE-7
SVP-1
SVP-2
SVP-3

LEGEND

- PROPERTY LINE
- GROUNDWATER MONITORING WELL
- ABANDONED MONITORING WELL
- SOIL VAPOR EXTRACTION WELL
- SOIL VAPOR POINT
- AIR SPARGE
- NOYES SLOUGH SAMPLING LOCATION
- USTs — UNDERGROUND STORAGE TANKS
- S — STORM LINE
- W — WATER LINE
- **BOLD** — VALUE EXCEEDS LABORATORY METHOD DETECTION LIMIT
- **BOLD** — VALUE EXCEEDS ADEC GROUNDWATER CLEANUP LEVEL
- ***BOLD*** — CONSTITUENT CONSIDERED NON-DETECT, HOWEVER LABORATORY REPORTED DETECTION LIMIT (RDL) IS GREATER THAN THE ADEC GROUNDWATER CLEANUP LEVEL
- <100 — NOT DETECTED AT OR ABOVE THE RDL
- J — THE ASSOCIATED NUMERICAL VALUE IS AN ESTIMATED CONCENTRATION ONLY
- B — COMPOUND REPORTED AT THE LISTED VALUE DUE TO ASSOCIATED BLANK CONTAMINATION
- D — THE DILUTED RESULTS WERE REPORTED AND QUALIFIED AS BEING REPORTED AT A DILUTION
- GRO — TOTAL PETROLEUM HYDROCARBONS, GASOLINE RANGE ORGANICS
- DRO — TOTAL PETROLEUM HYDROCARBONS, DIESEL RANGE ORGANICS
- ADEC — ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
- [ ] — DUPLICATE SAMPLE RESULT
- µg/L — MICROGRAMS PER LITER
- (NS) — NOT SAMPLED

NOTES:

1. BASE MAP PROVIDED BY GHD, DATED 11/14/2012, AT A SCALE OF 1=40'.
2. PROPERTY BOUNDARY AND WELL LOCATIONS SURVEYED BY MCLANE CONSULTING, INC. IN JULY AND SEPTEMBER, 2023.
3. ALL SITE FEATURES AND LOCATIONS ARE APPROXIMATE.

0 40' 80'

APPROXIMATE SCALE 1 in. = 40 ft.

FORMER TEXACO SERVICE STATION # 211083
230 OLD STEESE HIGHWAY
FAIRBANKS, ALASKA

GROUNDWATER ANALYTICAL RESULTS MAP JULY 26 AND AUGUST 10, 2023

ARCADIS

FIGURE 4

Tables

Table 1
Groundwater Monitoring Schedule
Annual 2023
US Travel Systems, Former
(Former Texaco Station No. 211083)
230 Old Steese Hwy,
Fairbanks, Alaska

Well ID	Sample Schedule	Gauge	Sample	Comment
MW-1	Annual	Y	Y	
MW-2	Annual	Y	Y	
MW-3	Annual	Y	Y	
MW-4	Annual	Y	Y	
MW-6	Annual	Y	Y	
MW-11	Annual	Y	Y	
MW-12	Annual	Y	Y	
MW-13	Annual	Y	Y	
MW-14	Annual	Y	Y	
MW-15	Annual	Y	Y	
BD-1	Annual	N	Y	
TB	Annual	N	Y	
EQB	Annual	N	Y	
MS/MSD	Annual	N	Y	

Note:

Wells sampled for select volatile organic compounds including benzene, toluene, ethylbenzene, total xylenes, 1,2-dichloroethane, isopropylbenzene, methylene chloride, naphthalene, tetrachloroethene, 1,1,2-trichloroethane, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, and vinyl chloride by United States Environmental Proection Agency Method 8260D, 1,2-dibromoethane by USEPA Method 8011 or 8260D, total petroleum hydrocarbons gasoline range organics by Alaska Method AK101, and total petroleum hydrocarbons diesel range organics by Alaska Method AK102, arsenic and lead by USEPA 6010D.

Table 2
Current Groundwater Gauging and Analytical Results
Annual 2023
US Travel Systems, Former
(Former Texaco Station No. 211083)
230 Old Steese Hwy,
Fairbanks, Alaska

Well ID	Sample Date	TOC (feet bTOC)	DTW (feet bTOC)	GW Elev. (feet)	DRO	GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	EDB	EDC	Naph-thalene	Isopropyl-benzene (Cumeme)	Methylene chloride	Tetrachloro-ethene (Tetrachloro-ethylene)	1,1,2-Trichloro-ethane	1,2,4-Trimethyl-benzene	1,3,5-Trimethyl-benzene	Vinyl Chloride	Arsenic	Lead	Comments
ADEC Groundwater Cleanup Levels					1,500	2,200	4.6	1,100	15	190	0.075	1.7	1.7	450	110	41	0.41	56	60	0.19	0.52	15	
MW-1	07/26/23	443.63	13.40	430.23	<800 B	**1,040**	**1.65**	**0.810 J**	**9.61**	**7.52**	<0.0212	<1.00	**3.19 J**	**0.856 J**	<5.00	<1.00	***<1.00***	**1.87**	<1.00	***<1.00***	***<10.0***	<6.00	
MW-2	07/26/23	441.13	10.92	430.21	**4,320 [4,400]**	**7,700 [8,510 J]**	**0.984 J [1.21]**	**8.52 [9.08]**	**196 [200]**	**1,160 [1,180]**	<0.0208 [<0.0228]	<1.00 [<1.00]	**139 J [136 J]**	**50.9 [51.0]**	<5.00 [<5.00]	<20.0 [<20.0]	***<1.00 [<1.00]***	**2,160 [2,460]**	**716 [851]**	***<1.00 [<1.00]***	**53.4 [48.9]**	**4.19 J** [<6.00]	
MW-3	07/26/23	442.99	12.79	430.20	<800 B	**744**	**1.11**	**5.52**	**13.1**	**91.5**	<0.0200	**0.831 J**	**11.8 J**	**4.41**	<5.00	<1.00	**0.345 J**	**34.3**	**7.85**	***<1.00***	***<10.0***	<6.00	
MW-4	07/26/23	442.80	12.59	430.21	**2,270**	**3,960**	**34.9**	**393**	**78.7**	**867**	<0.0212	<1.00	**35.1 J**	**6.13**	<5.00	<20.0	***<1.00***	**167**	**63.7**	***<1.00***	**16.4**	**7.69**	
MW-6	07/26/23	441.81	11.78	430.03	<800 B J	<139 B J	**0.655 J**	**6.30 J**	**4.67 J**	**70.0**	<0.0206	<1.00 J	***<5.00 J***	**0.232 J**	<5.00 J	<1.00	***<1.00 J***	**8.92 J**	**3.04 J**	***<1.00 J***	***<10.0***	<6.00	
MW-11	08/10/23	442.58	12.66	429.92	**4,270**	**11,100**	**13.8 J**	**65.8**	**359**	**1,880**	***<20.0***	***<20.0***	**119 J**	**67.7**	<100	<20.0	***<20.0***	**1,850**	**545**	***<20.0***	***<25.6 B***	**19.2**	
MW-12	08/10/23	441.36	11.37	429.99	**3,620**	**16,900**	***<50.0***	**259**	**779**	**2,470**	***<50.0***	***<50.0***	**149 J**	**52.9**	***<250***	***<50.0***	***<50.0***	**1,710**	**543**	***<50.0***	**55.0**	**9.37**	
MW-13	08/10/23	443.66	13.71	429.95	**1,040 [1,020]**	**2,550 J [1,870 J]**	**4.13 J [3.65 J]**	<10.0 [<10.0]	**38.6 [35.8]**	**39.7 [35.4]**	***<10.0 [<10.0]***	***<10.0 [<10.0]***	**14.1 J *[<50.0 J]***	**14.1 [14.3]**	<50.0 [<50.0]	<10.0 [<10.0]	***<10.0 [<10.0]***	**103 [96.9]**	**21.0 [18.8]**	***<10.0 [<10.0]***	***<26.1 B [<21.0 B]***	**20.7 [19.5]**	
MW-14	08/10/23	440.75	10.74	430.01	**4,920**	**26,500**	***<10.0***	**1,810**	**681**	**7,370 D**	***<10.0***	***<10.0***	**211**	**39.4**	<50.0	<10.0	***<10.0***	**2,280 D**	**629**	***<10.0***	**31.4**	**26.1**	
MW-15	08/10/23	442.38	12.40	429.98	**7,740**	**49,800**	**22.5 J**	**2,260**	**2,230**	**16,800 D**	***<25.0***	***<25.0***	**380**	**80.3**	***<125***	<25.0	***<25.0***	**2,610**	**649**	***<25.0***	**45.7**	**51.7**	

Notes :
1. GRO analyzed by Alaska Method AK101 and DRO analyzed by Alaska Method AK102.
2. Lead and Arsenic analyzed by United States Environmental Protection Agency (USEPA) Method 6010D.
3. EDB analyzed by USEPA Method 8011 for wells MW-1 to MW-6 and 8260D for wells MW-11 to MW-15.
4. Additional constituents of concern analyzed by USEPA Method 8260D except where noted above.
5. Constituent concentrations are reported micrograms per liter.

Acronyms and Abbreviations:

-- = Not Available or Not Analyzed
[ ] = Blind Duplicate Sample Result
<1.00 = Not detected at or above the reported detection limit (RDL)
µg/L = Micrograms per liter
ADEC = Alaska Department of Environmental Conservation
B = The same analyte is found in the associated blank
Bold = Detected above laboratory method detection limit (MDL)
Bold and *Italicized* = Constituent considered non-detect, however Laboratory RDL is greater than the ADEC Groundwater Cleanup Level
Bold and Shaded = Value exceeds ADEC Groundwater Cleanup Level
bTOC = Below top of casing
D = Dilution
DRO = Total petroleum hydrocarbons, diesel range organics
DTW = Depth to groundwater
EDB = 1,2-Dibromoethane
EDC = 1,2-Dichloroethane
feet = Relative to NAVD88
GRO = Total petroleum hydrocarbons, gasoline range organics
GW Elev. = Groundwater elevation
ID = Identification
J = The associated numerical value is an estimated concentration only
MW = Groundwater monitoring well
TOC = Top of casing

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

Attachment A

January 18, 2023, ADEC Comment Letter and Responses

THE STATE of ALASKA
GOVERNOR MIKE DUNLEAVY

Department of Environmental Conservation

SPILL PREVENTION & RESPONSE
Contaminated Sites Program

P.O. Box 1535
Haines, Alaska 99827
Main: 907.451.2144
www.dec.alaska.gov

File: 102.26.046

January 18, 2024

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

RE: US Travel Systems, Former

Dear Mr. Kiernan:

The Alaska Department of Environmental Conservation (ADEC) has reviewed the *2023 Annual Groundwater Monitoring Report* for US Travel Systems, Former at 230 Old Steese Highway, Fairbanks submitted on November 17, 2023. This report documents groundwater monitoring completed at this site in July and August 2023 at monitoring wells MW-1 through MW-4, MW-6, and newly installed wells MW-11 through MW-15. Please see the attached table commenting on this report.

Please do not hesitate to reach out if you have any questions or concerns regarding the contents of this letter.

Sincerely,

Rebekah Reams
Environmental Program Specialist

cc (via email): Robert Burgess, ADEC
Tim Bishop, CEMREC
Skip Robinson, Arcadis

cc (via mail): Allstate Insurance
ATTN: David Mongold
230 Old Steese Highway
Fairbanks, AK 99701

ADEC Comments to *2023 Annual Groundwater Monitoring Report* for US Travel Systems, Former

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

Comment No.	Section	Comment / Recommendations	Response
1.	Conclusion and Recommendations	ADEC concurs with the recommendation to increase the groundwater sampling frequency at this site from an annual to a semi-annual schedule. Please indicate the approximate schedule on which sampling events will be completed.	The report was revised to include the planned month for each sampling event .
2.	Conclusion and Recommendations	This section indicates that analytical results from the monitoring wells are generally consistent with historical data. Please note that ADEC does not consider results from newly installed monitoring wells (MW-11 through MW-15) to be consistent with historical data. Contaminant concentrations at the newly installed wells reported results that were notably higher than what has been detected during recent groundwater monitoring events. Continued groundwater monitoring that is planned at this site will help to better evaluate the presence of groundwater contamination.	Conclusions updated.
3.	Attachment A: Field Notes	Groundwater monitoring was completed on July 26 and August 10, 2023; however, this section of the report only contains field notes from the July 26th sampling event. Please update the report to include field notes for groundwater monitoring conducted at MW-11 through MW-15 on August 10th.	The August 10, 2023 field notes have been included in the Attachment.
4.	Laboratory Data Review Checklist for Lab Report #L1640207	The calculated relative percentage differences between the primary and duplicate samples for arsenic and lead are associated with the incorrect results (i.e. lead is associated with the arsenic results and arsenic is associated with the lead results). Please update this portion of the laboratory data review checklist so each analyte is associated with the appropriate results.	The data validation report was revised

Attachment B

Field Notes

Daily Log

Project Number : 30063669

Prepared By: Evan Wujcik

Site ID: 211083

Site Name: Old Steese

City: Fairbanks

State: Alaska

Project Manager: Robinson, Gerald

Portfolio: COP 3.0

Subportfolio: West

Inside Chevron Operational Control? Yes ☐ No ☑

Staff on Site
Evan Wujcik

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

Date	Time	Description of Activities
07/26/2023	7:00	Arrive on site Locate wells MW5 assumed paved over. Could not locate.
07/26/2023	7:45	Sample MW1 Decon equipment See COC for analysis
07/26/2023	8:30	Sample MW3 Decon equipment See COC for analysis
07/26/2023	9:15	Sample MW4 Decon equipment See COC for analysis
07/26/2023	10:00	Sample MW6 MS/MSD samples collected at this location Decon equipment See COC for analysis
07/26/2023	10:45	Sample MW2 BD samples collected at this location Decon equipment See COC for analysis
07/26/2023	11:00	Load vehicle Mobilize offsite

Signature

Chevron Groundwater Sampling Form

ARCADIS

Project Number	30063669	**Well ID**	MW-4	**Date**	7/26/2023		
Site Location	Fairbanks, Alaska	**Site ID**	211083	**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)	12.59	**Total Depth (ft-bmp)**	16.5	**Water Column (ft)**	3.91	**Gallons in Well**	0.64
Water Quality Meter Make/Model	Horiba U-52	**Purge Method**	Low-Flow	**Collection Type**			Grab

Sample Time	09:15	**Well Volumes Purged**	0.99	**Sample ID**	MW-4-W-20230726	**Purge Equipment**	Bladder
Purge Start	08:50	**Gallons Purged**	0.63	**Duplicate ID**	--	**Sample Equipment**	Bladder
Purge End	09:10	**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)	Color
08:53	200	12.62	6.66	0.751	99.1	0.00	7.19	36	--
08:56	200	12.64	6.70	0.770	87.5	0.00	6.48	-1	--
08:59	200	12.67	6.72	0.783	70.2	0.00	6.19	-20	--
09:02	200	12.68	6.73	0.803	56.5	0.00	6.11	-32	--
09:05	200	12.69	6.78	0.827	33.5	0.00	6.00	-58	--
09:08	200	12.7	6.81	0.838	24.4	0.00	5.91	-64	--
09:11	200	12.72	6.84	0.844	21.2	0.00	5.92	-68	--

Comments: None

Well Casing Volume Conversion

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

Sample Information

Sample ID:	MW-4-W-20230726	Sample Time:	09:15	Sample Depth (ft-bmp) (e.g. pump intake):	13
Analytes and Methods:	See Chain-of-Custody.			Depth to Water at Time of Sampling	12.72

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

Chevron Groundwater Sampling Form

ARCADIS

Project Number	30063669	**Well ID**	MW-3	**Date**	7/26/2023		
Site Location	Fairbanks, Alaska	**Site ID**	211083	**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)	12.79	**Total Depth (ft-bmp)**	19.5	**Water Column (ft)**	6.71	**Gallons in Well**	1.09
Water Quality Meter Make/Model	Horiba U-52	**Purge Method**	Low-Flow	**Collection Type**		Grab	

Sample Time	08:30	**Well Volumes Purged**	0.58	**Sample ID**	MW-3-W-20230726	**Purge Equipment**	Bladder
Purge Start	20:00	**Gallons Purged**	0.63	**Duplicate ID**	--	**Sample Equipment**	Bladder
Purge End	20:20	**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)	Color
08:03	200	12.81	6.61	1.04	2.8	1.24	8.94	146	--
08:06	200	12.83	6.57	1.05	0.0	0.18	8.07	147	--
08:09	200	12.85	6.54	1.06	0.0	0.00	7.71	146	--
08:12	200	12.86	6.56	1.06	0.0	0.00	7.49	142	--

Comments: None

Well Casing Volume Conversion

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

Sample Information

Sample ID:	MW-3-W-20230726	Sample Time:	08:30	Sample Depth (ft-bmp) (e.g. pump intake):	13.5
Analytes and Methods:	See Chain-of-Custody.			Depth to Water at Time of Sampling	12.86

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

Chevron Groundwater Sampling Form

ARCADIS

Project Number	30063669	**Well ID**	MW-1	**Date**	7/26/2023		
Site Location	Fairbanks, Alaska	**Site ID**	211083	**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)	13.4	**Total Depth (ft-bmp)**	20	**Water Column (ft)**	6.6	**Gallons in Well**	1.07
Water Quality Meter Make/Model	Horiba U-52	**Purge Method**	Low-Flow	**Collection Type**		Grab	

Sample Time	07:45	**Well Volumes Purged**	0.74	**Sample ID**	MW-1-W-20230726	**Purge Equipment**	Bladder
Purge Start	07:20	**Gallons Purged**	0.79	**Duplicate ID**	--	**Sample Equipment**	Bladder
Purge End	07:40	**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)	Color
07:23	200	13.43	6.71	1.20	104	12.68	8.35	205	--
07:26	200	13.45	6.63	1.17	70.5	11.68	7.34	201	--
07:29	200	13.47	6.59	1.17	52.6	10.49	6.77	194	--
07:32	200	13.5	6.58	1.18	41.0	9.77	6.53	190	--
07:35	200	13.51	6.56	1.18	34.0	9.51	6.40	186	--

Comments: None

Well Casing Volume Conversion

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

Sample Information

Sample ID:	MW-1-W-20230726	Sample Time:	07:45	Sample Depth (ft-bmp) (e.g. pump intake):	14
Analytes and Methods:	See Chain-of-Custody.			Depth to Water at Time of Sampling	13.5

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

Chevron Groundwater Sampling Form

ARCADIS

Project Number	30063669	**Well ID**	MW-2	**Date**	7/26/2023		
Site Location	Fairbanks, Alaska	**Site ID**	211083	**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)	10.92	**Total Depth (ft-bmp)**	18.7	**Water Column (ft)**	7.78	**Gallons in Well**	1.26
Water Quality Meter Make/Model	Horiba U-52	**Purge Method**	Low-Flow	**Collection Type**			Grab

Sample Time	10:45	**Well Volumes Purged**	0.50	**Sample ID**	MW-2-W-20230726	**Purge Equipment**	Bladder
Purge Start	10:20	**Gallons Purged**	0.63	**Duplicate ID**	BD	**Sample Equipment**	Bladder
Purge End	10:40	**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)	Color
10:23	200	10.95	6.94	0.947	93.4	0.00	7.33	-88	--
10:26	200	10.97	6.94	0.952	76.0	0.00	6.98	-91	--
10:29	200	11	6.94	0.955	56.7	0.00	6.84	-93	--
10:32	200	11.02	6.91	0.959	44.0	0.00	6.78	-91	--

Comments: None

Well Casing Volume Conversion

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

Sample Information

Sample ID:	MW-2-W-20230726	Sample Time:	10:45	Sample Depth (ft-bmp) (e.g. pump intake):	11.5
Analytes and Methods:	See Chain-of-Custody.			Depth to Water at Time of Sampling	11.02

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

Chevron Groundwater Sampling Form

ARCADIS

Project Number	30063669	**Well ID**	MW-6	**Date**	7/26/2023		
Site Location	Fairbanks, Alaska	**Site ID**	211083	**Weather (°F)**	Clear	**Sampled by**	Evan Wujcik
Measuring Point Description	Top of Casing	**Screen Depth Interval (ft-bmp)**	-- to --	**Casing Diameter (in.)**	2	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	11.78	**Total Depth (ft-bmp)**	25.4	**Water Column (ft)**	13.62	**Gallons in Well**	2.21
Water Quality Meter Make/Model	Horiba U-52	**Purge Method**	Low-Flow	**Collection Type**			Grab

Sample Time	10:00	**Well Volumes Purged**	0.36	**Sample ID**	MW-6-W-20230726	**Purge Equipment**	Bladder
Purge Start	09:30	**Gallons Purged**	0.79	**Duplicate ID**	MS/MSD	**Sample Equipment**	Bladder
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)	Color
09:33	200	12.8	7.48	0.106	82.9	0.65	10.26	-92	--
09:36	200	12.81	7.47	0.094	68.5	0.00	9.60	-92	--
09:39	200	12.82	7.46	0.090	45.6	0.00	9.23	-98	--
09:42	200	12.83	7.42	0.088	27.3	0.00	9.06	-102	--
09:45	200	12.84	7.40	0.088	23.6	0.00	9.05	-108	--

Comments: None

Well Casing Volume Conversion

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

Sample Information

Sample ID:	MW-6-W-20230726	Sample Time:	10:00	Sample Depth (ft-bmp) (e.g. pump intake):	12.5
Analytes and Methods:	See Chain-of-Custody.			Depth to Water at Time of Sampling	12.84

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

Groundwater Gauging Log

Project Number	30063669
Client:	Chevron
Site ID:	211083
Site Location:	Fairbanks, Alaska
Measuring Point:	Top of Casing
Date(s):	07/26/2023
Sampler(s):	Evan Wujcik
Gauging Equipment:	Water Level Meter

Well ID	Date	Gauging Time	Static Water Level (ft bmp)	Depth to Product (ft bmp)	Total Depth (ft bmp)	PID Reading (ppm)	LNAPL Removed (gal)	Comments
MW-1	07/26/2023	07:04	13.40	ND	20.00	0	--	--
MW-2	07/26/2023	07:11	10.92	ND	18.70	0	--	--
MW-3	07/26/2023	07:25	12.79	ND	19.50	0	--	--
MW-4	07/26/2023	07:09	12.59	ND	16.50	0	--	--
MW-6	07/26/2023	07:13	11.78	ND	25.40	0	--	--

ft-bmp = feet below measuring point ND = Not Detected PID = Photoionization Detector Reading

ppm = parts per million -- = Not Recorded

Control Number: TSM-

TSM + project number plus date as follows: xxxxxxxx.xxxx.xxxxx - dd/mm/year

ARCADIS

TAILGATE HEALTH & SAFETY MEETING FORM

Project Name: Chevron Site 211083			**Project Location:** 230 Old Steese Hwy Fairbanks AK
Date: 8/10/23	**Time:** 0833	**Conducted by:** GJ	**Signature/Title:** [signature] GAU

Issues or concerns from previous day's activities: Smoke

Task anticipated to be performed today: well Development, Groundwater sampling, Drum handling, cooler handling

The following was used to to communicate H&S information in this briefing (check all that apply):

- [X] HASP (*including THA*)
- [X] JSAs (*specify JSA #s*): Well Development
- [ ] TCP or STAR Plan
- [X] H&S Standard (*specify number*): Heat/Cold Stress, IIPP
- [X] H&S checklist (*specify type*): Utility Clearence
- [X] Rally Point: Fromt of Allstate
- [ ]

Hazard Types (unmitigated ranking H-High, M-Medium, L-Low):

Biological	L	Chemical	H	Driving	H	Electrical	L
Environmental	M	Gravity	H	Mechanical	L	Motion	H
Personal Safety	L	Pressure	L	Radiation	L	Sound	L

Controls required to be used:

PPE, Engineering Contols, Admin Controls, Communication, 360 Walk Around, Spotters, Wash Hands, Whip Checks, Smith System, Pinch Points Marked, Sunscreen, Emergency Action Plan, Stop Work Authority, TRACK

PPE Required (If not using JSA or Permit with PPE requirements):

- [X] Hard hat
- [X] Safety glasses
- [ ] Face shield
- [ ] Safety goggles
- [X] Steel/composite toe boots
- [X] Traffic vest (*specify II or III*): II
- [ ] Life Vest (*specify type*):
- [ ] Protective Suit (*specify type*):
- [X] Protective gloves (*specify type*): Nitrile, Cut resistant, Cevlar
- [X] Other (*specify*):

Signature and Certification: I have read and understand the project specific HASP for this project.

Printed Name/Signature/Company	Sign In Time	Sign Out Time
Grantt Jeffers / [signature] / ANA	0817	1922
Maxwell Berg / [signature] / ANA	835	1732

8/10/23

I will STOP the job any time anyone is concerned or uncertain about health & safety or if anyone identifies a hazard or additional mitigation not recorded in the site, project, job or task hazard assessment.

I will be alert to any changes in personnel, conditions at the work site or hazards not covered by the original hazard assessments.

If it is necessary to **STOP THE JOB,** I will perform **TRACK**; and then amend the hazard assessments or the HASP as needed.

I will not assist a subcontractor or other party with their work unless it is absolutely necessary and then only after I have done TRACK and I have thoroughly controlled the hazard.

All site staff should arrive fit for work. If not, they should report to the supervisor any restrictions or concerns.

In the event of an injury, employees will call **WorkCare at 1.888.449.7787** and then notify the field supervisor.

Utility strike, motor vehicle accident or 3rd party protperty damage - field supervisor will immediately notify the Project or Task Manager

(1942)

ARCADIS

Daily Log

Project Name Chevron Site 211083 Project Number 30063587 Page 1 of 2

Site Location 230 old Steese Hwy Fairbanks AK Date 8/10/23

Field Personnel Grant Jeffers (GJ), Max Bero (MB)

Site Visit Purpose Well Development (MW-11 -> MW-15)

Time	Description of Activities
0817	GJ arrives onsite. Prep paperwork. Ice purchased before arrived.
0833	Tailgate & prep for well development.
0835	MB onsite
0842	Complete tailgate. Set up @ MW-11.
0843	Start Development @ MW-11. See development log for details.
Note	Calibrated Horiba U52. Good to go.
1015	Complete well development @ MW-11. Clean up & decon.
1050	Collect Equipment blank from pump (EQB-1-W-20230810).
1058	set up @ MW-13.
1137	Start well development @ MW-13. See development log for details.
1245	Completed well development of MW-13. note: DUP collected (DUP-1-W-20230810)
1300	Lunch.
1320	Setup on MW-12. Start development of MW-12. See development log for details.
1431	Complete well development of MW-12. Clean up & mob to MW-14.
1440	Start well development of MW-14. See development log for details.
1555	Completed well development of MW-14. Clean up & mob to MW-15.
1601	John Jackson (907-888-0944) stopped by & asked a few questions. Gave him my card. Alert PM.
1610	Start development of MW-15. See development log for details.
1813	Development completed @ MW-15. Clean up site. Close up drums & label.
1732	MB offsite. GJ mob to office to drop off samples & equipment & pick up bottles for waste.
1810	GJ back onsite to collect waste samples
1820	Collect waste soil sample WS-S-20230810
1830	Collect waste water sample WS-W-20230810

Project Name Chevron Site 211083 Project Number 30063587 Page 2 of 2

1841	Button up all drums. 4 soil drums (Full) + 2 water drums (1 full + 1 3/4 full). Located behind Allstate. Finish up all paperwork.
1922	GJ left site. Head to office to drop off samples.

8/10/23

ARCADIS Design & Consultancy for natural and built assets

Well Development Record Project Name: Chevron Site 211083 PG 1 of 1

Date(s): 8/10/23 Project #: 30063587 Arcadis Oversight: G. Jeffers ARCADIS Job Title: Geo

Well ID: MW-11 Total Depth (ft bTOC): 20.05 TOC ~~(bgs)~~ bgs ⊙: 0.48 Screen Interval (ft bgs): 10' - 20'

DTW (ft bTOC): 12.66 Water colmun in well(ft): 7.39 Diameter of well (in.): 2 Gallons in well: 1.25 (12.5 10 CV)

Rig operator: — Rig type: — Bailer make and size: 2" PVC (5' long) Water added: none

Surge block make and size: bailer Pump make and size: Mega Monsoon Water source: —

Time	Task	GPM	DTW (ft btoc)	TD ft btoc	Temp °C	pH	ORP (mV)	Cond. (mS/cm)	Turb NTU	DO (mg/L)	Notes/Gallons Removed/Water Clarity
0843	Set up		12.66	20.04							7.5 = PID (PPM)
0848	1st bail	—	Trace silt + VF sand, dark grayish brown, some VF strainys								
0852	Complete bail	—	12.68	Unable							1.5 gallons removed
0856	1st surge	—	15 mins for full screen interval								
0911	Complete surge	—	12.67	20.08							
0915	2nd bail	—	Trace silt + VF sand (dark gray), sheen in water								
0919	Complete bail	—	12.66	20.05							1.5 gallons removed
0943	Start Purge	1 gpm									
0948	Purge	↓	12.90	—	7.78	6.59	-51	1.08	98.0	1.68	
0953	↓	↓	12.91	—	7.19	6.54	-65	1.08	73.5	4.52	
0956	↓	↓	12.90	—	6.87	6.51	-66	1.09	54.7	1.27	
0957	—	Lower flow rate to 300 mL/min + Place pump @ 13.5' btoc									
1000	Purge	300 mL/min	12.69	—	7.08	6.46	-68	1.10	51.5	7.47	
1003	↓	↓	12.67	—	7.38	6.44	-72	1.11	54.5	6.75	
1006	↓	↓	12.67	—	7.12	6.44	-72	1.12	51.4	6.82	
1009	↓	↓	12.67	—	6.92	6.45	-71	1.11	51.8	6.42	
1010	—	Sample Collected - MW-11-W-20230810									
1015	—	Stop pump. ~17 gallons removed									
—	—	Development Complete									

8/10/23

Sample ID and Time: MW-11-W-20230810 @ 1010

Total gallons removed at completion of development: 17

Arcadis Staff: G. Jeffers

ARCADIS Design & Consultancy for natural and built assets

Well Development Record Project Name: Chevron Site 211083 PG 1 of 1

Date(s): 8/10/23 Project #: 30063587 Arcadis Oversight: G. Jeffers ARCADIS Job Title: Geo

Well ID: MW-12 Total Depth (ft bTOC): 17.27 TOC (~~abgs~~ bgs): 0.39 Screen Interval (ft bgs): 7'-17'

DTW (ft bTOC): 11.37 Water colmun in well(ft): 5.90 Diameter of well (in.): 2 Gallons in well: 1.00 (10.0) 10 CV

Rig operator: — Rig type: — Bailer make and size: 2" PVC (5' long) Water added: none

Surge block make and size: Bailer Pump make and size: Mega Monsoon Water source: —

Time	Task	GPM	DTW (ft btoc)	TD ft btoc	Temp °C	pH	ORP (mV)	Cond. (mS/cm)	Turb NTU	DO (mg/L)	Notes/Gallons Removed/Water Clarity
1321	Set	up	11.37	17.23							PID=106.7 PPM
1323	1st bail	—	some silt & VF sand (Dark gray) - odor								
1330	complete bail	—	11.42	17.29							2 gallons
1332	Surge	—	15 mins per full screen Interval								
1347	complete surge	—	11.47	17.23							
1349	2nd bail	—	some silt & VF sand (Black) - strog odor								
1354	complete bail	—	11.55	17.27							2 gallons
1406	start Purge	1 gpm									
1411	Purge	↓	12.54	—	5.80	6.87	-110	0.880	81.9	0.00	
1416	↓	↓	13.30	—	5.03	6.72	-108	0.862	119	0.00	
1417	—	Lower flow rate to 300 mL/min & pull pump to 12.5' btoc									
1420	Purge	300 mL/min	11.59	—	6.16	6.56	-105	0.829	51.4	0.00	
1423	↓	↓	11.57	—	6.52	6.53	-105	0.831	39.8	0.00	
1426	↓	↓	11.56	—	6.74	6.56	-104	0.834	32.5	0.00	
1427	—	Collect sample MW-12-W-20230810									
1431	—	Stop pump. ~15 gallons removed									
—	—	Development Complete									

9/11/23

Sample ID and Time: MW-12-W-20230810 @ 1427

Total gallons removed at completion of development: 15

Arcadis Staff:

ARCADIS Design & Consultancy for natural and built assets

Well Development Record Project Name: Chevron Site 211083 PG 1 of 1

Date(s): 8/10/23 Project #: 30063587 Arcadis Oversight: G. Jeffers ARCADIS Job Title: Geo

Well ID: MW-13 Total Depth (ft bTOC): 20.18 TOC (~~ft bgs~~ bgs): 0.47 Screen Interval (ft bgs): 10'-20'

DTW (ft bTOC): 13.72 Water colmun in well(ft): 6.46 Diameter of well (in.): 2 Gallons in well: 1.09 (10.9)

Rig operator: — Rig type: — Bailer make and size: 2" PVC (5' long) Water added: none

Surge block make and size: Bailer Pump make and size: Mega Monsoon Water source: —

Time	Task	GPM	DTW (ft btoc)	TD ft btoc	Temp °C	pH	ORP (mV)	Cond. (mS/cm)	Turb NTU	DO (mg/L)	Notes/Gallons Removed/Water Clarity
1138	Set up		13.71	20.15							PID = 4.8 PPM
1141	1st bail		silt + VF sand (Dark grayish brown) - odor								
1145	Complete bail	—	13.72	20.16							1.5 gallons
1147	Surge		15 Mins per full screen interval								
1202	Complete surge	—	13.71	20.18							
1205	2nd bail		silt w/ Trace VF sand								
1211	Complete bail	—	13.72	20.18							1.5 gallons
1216	Start Purge	1 gpm									
1221	Purge	↓	13.97	—	3.44	6.87	-91	1.03	24.3	13.27	DO is ↑
1226	↓	↓	13.98	—	3.27	6.66	-83	1.03	0.0	9.50	
1227		Drop flow rate to 300 mL/min + raise pump to 14.5' btoc									
1230	Purge	300 mL/min	13.78	—	4.02	6.43	-76	1.02	0.0	8.00	
1233	|	|	13.79	—	4.25	6.42	-77	1.02	0.0	8.05	
1236			13.79	—	4.64	6.43	-77	1.01	0.0	7.95	
1237	Collect sample MW-13-W-20230810										
	Collect DUP (BD-1-W-20230810)										
1245	Stop pump. ~16 gallons removed										
	Development Complete										

8/10/23

Sample ID and Time: MW-13-W-20230810 @ 1237 + DUP (BD-1-W-20230810)

Total gallons removed at completion of development: 16

Arcadis Staff: G. Jeffers.

ARCADIS Design & Consultancy for natural and built assets

Well Development Record Project Name: Chevron Site 211083 PG 1 of 1

Date(s): 8/10/23 Project #: 30063587 Arcadis Oversight: G. Jeffers ARCADIS Job Title: Geo

Well ID: MW-14 Total Depth (ft bTOC): 17.10 TOC (~~abgs~~ bgs): 0.49 Screen Interval (ft bgs): 7' - 17'

DTW (ft bTOC): 10.74 Water colmun in well(ft): 6.36 Diameter of well (in.): 2 Gallons in well: 1.03 (10.8) 10CV

Rig operator: — Rig type: — Bailer make and size: 2" PVC (5' long) Water added: none

Surge block make and size: Bailer Pump make and size: Mega Monsoon Water source: —

Time	Task	GPM	DTW (ft btoc)	TD ft btoc	Temp °C	pH	ORP (mV)	Cond. (mS/cm)	Turb NTU	DO (mg/L)	Notes/Gallons Removed/Water Clarity
1440	Set up		10.74	17.05							PID = 574.2 PPM
1443	1st bail		some VF sand + silt (Black) - strong odor/sheen								
1447	End 1st bail	—	10.79	17.10							1.75 gallons
1450	Surge		15 mins per full screen interval								
1505	End surge	—	10.81	17.07							
1508	2nd bail		some silt + VF sand (black) - strong odor/sheen								
1514	End 2nd bail	—	~~11.15~~ 11.10	17.09							2.5 gallons
1522	Start Purge	1gpm									
1524			Pump stopped.								
1526	Start Purge	1gpm			~~5.33~~	~~6.94~~	~~-114~~	~~0.715~~	~~312~~	~~5.06~~	
1531	Purge	|	—	—	5.33	6.94	-114	0.715	312	5.06	
1536	↓	|	—	—	5.21	6.70	-95	0.716	115	5.32	
1537			Lower flow rate to 300 mL/min & pull pump to 12' bgs								
1539			stop pump to recharge								
1541			Start pump - WL = 10.80 (Equilized)								
1544	Purge	300 mL/min	11.10	—	6.74	6.43	-83	0.739	20.5	0.00	
1547	↓	↓	11.14	—	6.60	6.43	-83	0.738	57.5	0.00	
1550	↓	↓	11.16	—	6.74	6.43	-83	0.739	57.5	0.00	
1551			Collect sample MW-14-W-20230810								
1555			Stop pump. ~18 gallons removed								
			Development complete								

8/10/23

Sample ID and Time: MW-14-W-20230810 @ 1551

Total gallons removed at completion of development: 18

Arcadis Staff: G. Jeffers

ARCADIS Design & Consultancy for natural and built assets

Well Development Record Project Name: Chevron Site 216083 PG 1 of 1

Date(s): 8/10/23 Project #: 30063587 Arcadis Oversight: G. Jeffers ARCADIS Job Title: Geo

Well ID: MW-15 Total Depth (ft bTOC): 17.20 TOC (~~ags~~ bgs): 0.38 Screen Interval (ft bgs): 7'-17'

DTW (ft bTOC): 12.40 Water colmun in well(ft): 4.80 Diameter of well (in.): 2 Gallons in well: 0.816 (8.16) 10 CV

Rig operator: — Rig type: — Bailer make and size: 2" PVC (5' long) Water added: none

Surge block make and size: Bailer Pump make and size: Mega Monsoon Water source: —

Time	Task	GPM	DTW (ft btoc)	TD ft btoc	Temp °C	pH	ORP (mV)	Cond. (mS/cm)	Turb NTU	DO (mg/L)	Notes/Gallons Removed/Water Clarity
1610	Set up		12.40	17.20							PID = 100.0 PPM
1612	1st bail		Trace silt & VF Sand (Dark Brown) — odor								
1615	End bail	—	12.61	17.20							1.25 gallons
1616	Surge		15 mins per full screen interval								
1631	End Surge	—	12.46	17.20							
1636	2nd bail		Trace silt (Dark Brown) - strong odor								
1639	End bail	—	12.49	17.20							1.25 gallons
16:47	Start Purge	1gpm									
1652	Purge	↓	14.52	—	5.75	6.93	-119	0.902	110	1.75	
1657	↓	↓		—	5.19	6.65	-109	0.854	28.8	0.00	
1658		Lower flow rate to 300 mL/min & raise pump to 'bgs									
~~1801~~					~~5.19~~	~~6.65~~	~~-109~~	~~0.854~~			8
1801	Purge	300 mL/min	12.59	—	7.59	6.50	-104	0.794	24.4	0.00	
1804	↓	↓	12.59	—	8.33	6.49	-105	0.802	120.0	0.00	
1807	↓	↓	12.59	—	8.59	6.50	-107	0.810	105	0.01	
1808	Collect sample MW-15-W-20230810										
1813	Stop pump. ~15 gallons removed										
	Development Complete										

8/10/23

Sample ID and Time: MW-15-W-20230810 @ 1808

Total gallons removed at completion of development: 15

Arcadis Staff: G. Jeffers

Attachment C

Laboratory Analytical Results

ANALYTICAL REPORT

August 09, 2023

Revised Report

Arcadis - Chevron - AK

Sample Delivery Group:	L1640207
Samples Received:	07/28/2023
Project Number:	30063669 19.45
Description:	211083
Site:	230 OLD STEESE HWY FAIRBANKS
Report To:	Gerald Robinson 880 H St. Anchorage, AK 99501

Entire Report Reviewed By:

Brian Ford

Project Manager

Pace Analytical National

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MW-1-W-20230726 L1640207-01 GW

Collected by: EW | Collected date/time: 07/26/23 07:45 | Received date/time: 07/28/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010D	WG2105927	1	08/03/23 17:21	08/04/23 10:53	CCE	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG2106866	5	08/03/23 19:35	08/03/23 19:35	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2104424	1	07/31/23 05:56	07/31/23 05:56	DYW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2107475	1	08/03/23 21:10	08/03/23 21:10	DYW	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG2106096	1.06	08/02/23 10:19	08/02/23 19:51	LTB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2107635	1	08/05/23 13:46	08/07/23 13:06	NH	Mt. Juliet, TN

MW-3-W-20230726 L1640207-02 GW

Collected by: EW | Collected date/time: 07/26/23 08:30 | Received date/time: 07/28/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010D	WG2105927	1	08/03/23 17:21	08/04/23 10:56	CCE	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG2106866	5	08/03/23 20:41	08/03/23 20:41	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2104424	1	07/31/23 06:18	07/31/23 06:18	DYW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2107475	1	08/03/23 21:31	08/03/23 21:31	DYW	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG2106096	1	08/02/23 10:19	08/02/23 18:21	LTB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2108267	1	08/07/23 06:17	08/08/23 06:29	DMG	Mt. Juliet, TN

MW-4-W-20230726 L1640207-03 GW

Collected by: EW | Collected date/time: 07/26/23 09:15 | Received date/time: 07/28/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010D	WG2105927	1	08/03/23 17:21	08/04/23 10:59	CCE	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG2108219	5	08/05/23 09:51	08/05/23 09:51	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2104424	1	07/31/23 06:40	07/31/23 06:40	DYW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2107475	20	08/04/23 01:44	08/04/23 01:44	DYW	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG2106096	1.06	08/02/23 10:19	08/02/23 20:04	LTB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2108267	1.18	08/07/23 06:17	08/08/23 06:55	DMG	Mt. Juliet, TN

MW-6-W-20230726 L1640207-04 GW

Collected by: EW | Collected date/time: 07/26/23 10:00 | Received date/time: 07/28/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010D	WG2105927	1	08/03/23 17:21	08/04/23 10:42	CCE	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG2106866	1	08/03/23 16:14	08/03/23 16:14	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2104424	1	07/31/23 07:02	07/31/23 07:02	DYW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2107475	1	08/03/23 21:53	08/03/23 21:53	DYW	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG2106096	1.03	08/02/23 10:19	08/02/23 17:54	LTB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2108267	1	08/07/23 06:17	08/08/23 07:20	DMG	Mt. Juliet, TN

MW-2-W-20230726 L1640207-05 GW

Collected by: EW | Collected date/time: 07/26/23 10:45 | Received date/time: 07/28/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010D	WG2105927	1	08/03/23 17:21	08/04/23 11:02	CCE	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG2108219	5	08/05/23 10:14	08/05/23 10:14	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2104424	1	07/31/23 07:24	07/31/23 07:24	DYW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2107475	20	08/04/23 02:05	08/04/23 02:05	DYW	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG2106096	1.04	08/02/23 10:19	08/02/23 20:57	LTB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2108267	1	08/07/23 06:17	08/08/23 09:27	DMG	Mt. Juliet, TN

BD-1-W-20230726 L1640207-06 GW

Collected by: EW | Collected date/time: 07/26/23 00:00 | Received date/time: 07/28/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010D	WG2105927	1	08/03/23 17:21	08/04/23 11:10	CCE	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG2108219	5	08/05/23 10:36	08/05/23 10:36	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2104424	1	07/31/23 07:47	07/31/23 07:47	DYW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2107475	20	08/04/23 02:27	08/04/23 02:27	DYW	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG2106096	1.14	08/02/23 10:19	08/02/23 21:09	LTB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2108267	1	08/07/23 06:17	08/08/23 09:52	DMG	Mt. Juliet, TN

EQB-1-W-20230726 L1640207-07 GW

Collected by: EW | Collected date/time: 07/26/23 11:00 | Received date/time: 07/28/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010D	WG2105927	1	08/03/23 17:21	08/04/23 11:13	CCE	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG2106866	1	08/03/23 11:21	08/03/23 11:21	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2104424	1	07/31/23 04:29	07/31/23 04:29	DYW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2107475	1	08/03/23 22:13	08/03/23 22:13	DYW	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG2106096	1.01	08/02/23 10:19	08/02/23 21:22	LTB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2108267	1	08/07/23 06:17	08/08/23 10:17	DMG	Mt. Juliet, TN

TRIP BLANK 1-20230726 L1640207-08 GW

Collected by: EW | Collected date/time: 07/26/23 00:00 | Received date/time: 07/28/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method AK101	WG2108219	1	08/05/23 05:03	08/05/23 05:03	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2104424	1	07/31/23 04:51	07/31/23 04:51	DYW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2107475	1	08/03/23 20:07	08/03/23 20:07	DYW	Mt. Juliet, TN

TRIP BLANK 2-20230726 L1640207-09 GW

Collected by: EW | Collected date/time: 07/26/23 00:00 | Received date/time: 07/28/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method AK101	WG2108219	1	08/05/23 05:25	08/05/23 05:25	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2104424	1	07/31/23 05:12	07/31/23 05:12	DYW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2107475	1	08/03/23 20:28	08/03/23 20:28	DYW	Mt. Juliet, TN

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

Report Revision History

Level II Report - Version 1: 08/09/23 07:51

Project Comments

revised: after the fact request to remove EDB 8260

Sample Delivery Group (SDG) Narrative

pH outside of method requirement.

Batch	Method	Lab Sample ID
WG2108219	AK101	L1640207-06, 08, 09

Volatile Organic Compounds (GC) by Method AK101

The same analyte is found in the associated blank.

Batch	Analyte	Lab Sample ID
WG2106866	TPHGAK C6 to C10	L1640207-01, 02, 04
WG2108219	TPHGAK C6 to C10	L1640207-08, 09

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

Batch	Lab Sample ID	Analytes
WG2106866	(MSD) R3957102-5, L1640207-04	TPHGAK C6 to C10

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

Batch	Lab Sample ID	Analytes
WG2106866	(MSD) R3957102-5, L1640207-04	TPHGAK C6 to C10

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
WG2104424	L1640207-01	Naphthalene
WG2104424	L1640207-02	Naphthalene
WG2104424	L1640207-03	Naphthalene
WG2104424	L1640207-04	Naphthalene
WG2104424	L1640207-05	Naphthalene
WG2104424	L1640207-06	Naphthalene
WG2104424	L1640207-07	Naphthalene
WG2104424	L1640207-08	Naphthalene
WG2104424	L1640207-09	Naphthalene

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

Batch	Lab Sample ID	Analytes
WG2104424	(MS) R3956585-4, (MSD) R3956585-5, L1640207-04	1,2,4-Trimethylbenzene, m&p-Xylene and Toluene

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

Batch	Lab Sample ID	Analytes
WG2104424	(MS) R3956585-4, (MSD) R3956585-5, L1640207-04	o-Xylene and Xylenes, Total

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

Batch	Lab Sample ID	Analytes
WG2104424	(MSD) R3956585-5, L1640207-04	1,1,2-Trichloroethane, 1,2-Dichloroethane, 1,3,5-Trimethylbenzene, Benzene, Ethylbenzene, Isopropylbenzene, Methylene Chloride and Vinyl chloride

Semi-Volatile Organic Compounds (GC) by Method AK102

The same analyte is found in the associated blank.

Batch	Analyte	Lab Sample ID
WG2107635	AK102 DRO C10-C25	L1640207-01
WG2108267	AK102 DRO C10-C25	L1640207-02, 03, 04, 05, 07

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

Batch	Lab Sample ID	Analytes
WG2107635	(MS) R3957655-4, (MSD) R3957655-5	AK102 DRO C10-C25
WG2108267	(MS) R3958057-6, (MSD) R3958057-10, L1640207-04	AK102 DRO C10-C25

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Arsenic	U		4.40	10.0	1	08/04/2023 10:53	WG2105927
Lead	U		2.99	6.00	1	08/04/2023 10:53	WG2105927

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
TPHGAK C6 to C10	1040	B	143	500	5	08/03/2023 19:35	WG2106866
(S) a,a,a-Trifluorotoluene(FID)	*74.9*			*50.0-150*		*08/03/2023 19:35*	WG2106866

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	1.65		0.0941	1.00	1	07/31/2023 05:56	WG2104424
1,2-Dichloroethane	U		0.0819	1.00	1	07/31/2023 05:56	WG2104424
Ethylbenzene	9.61		0.137	1.00	1	07/31/2023 05:56	WG2104424
Isopropylbenzene	0.856	J	0.105	1.00	1	07/31/2023 05:56	WG2104424
Methylene Chloride	U		0.430	5.00	1	07/31/2023 05:56	WG2104424
Naphthalene	3.19	C3 J	1.00	5.00	1	07/31/2023 05:56	WG2104424
Tetrachloroethene	U		0.300	1.00	1	08/03/2023 21:10	WG2107475
Toluene	0.810	J	0.278	1.00	1	07/31/2023 05:56	WG2104424
1,1,2-Trichloroethane	U		0.158	1.00	1	07/31/2023 05:56	WG2104424
1,2,4-Trimethylbenzene	1.87		0.322	1.00	1	07/31/2023 05:56	WG2104424
1,3,5-Trimethylbenzene	U		0.104	1.00	1	07/31/2023 05:56	WG2104424
Vinyl chloride	U		0.234	1.00	1	07/31/2023 05:56	WG2104424
Xylenes, Total	7.52		0.174	3.00	1	07/31/2023 05:56	WG2104424
o-Xylene	0.513	J	0.174	1.00	1	07/31/2023 05:56	WG2104424
m&p-Xylene	7.01		0.430	2.00	1	07/31/2023 05:56	WG2104424
(S) Toluene-d8	*111*			*80.0-120*		*07/31/2023 05:56*	WG2104424
(S) Toluene-d8	*107*			*80.0-120*		*08/03/2023 21:10*	WG2107475
(S) 4-Bromofluorobenzene	*102*			*77.0-126*		*07/31/2023 05:56*	WG2104424
(S) 4-Bromofluorobenzene	*88.9*			*77.0-126*		*08/03/2023 21:10*	WG2107475
(S) 1,2-Dichloroethane-d4	*114*			*70.0-130*		*07/31/2023 05:56*	WG2104424
(S) 1,2-Dichloroethane-d4	*106*			*70.0-130*		*08/03/2023 21:10*	WG2107475

EDB / DBCP by Method 8011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Ethylene Dibromide	U		0.00568	0.0212	1.06	08/02/2023 19:51	WG2106096

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	437	B J	170	800	1	08/07/2023 13:06	WG2107635
(S) o-Terphenyl	*65.0*			*50.0-150*		*08/07/2023 13:06*	WG2107635

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Arsenic	U		4.40	10.0	1	08/04/2023 10:56	WG2105927
Lead	U		2.99	6.00	1	08/04/2023 10:56	WG2105927

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	744	B	143	500	5	08/03/2023 20:41	WG2106866
(S) a,a,a-Trifluorotoluene(FID)	*74.8*			*50.0-150*		*08/03/2023 20:41*	WG2106866

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	1.11		0.0941	1.00	1	07/31/2023 06:18	WG2104424
1,2-Dichloroethane	0.831	J	0.0819	1.00	1	07/31/2023 06:18	WG2104424
Ethylbenzene	13.1		0.137	1.00	1	07/31/2023 06:18	WG2104424
Isopropylbenzene	4.41		0.105	1.00	1	07/31/2023 06:18	WG2104424
Methylene Chloride	U		0.430	5.00	1	07/31/2023 06:18	WG2104424
Naphthalene	11.8	C3	1.00	5.00	1	07/31/2023 06:18	WG2104424
Tetrachloroethene	U		0.300	1.00	1	08/03/2023 21:31	WG2107475
Toluene	5.52		0.278	1.00	1	07/31/2023 06:18	WG2104424
1,1,2-Trichloroethane	0.345	J	0.158	1.00	1	07/31/2023 06:18	WG2104424
1,2,4-Trimethylbenzene	34.3		0.322	1.00	1	07/31/2023 06:18	WG2104424
1,3,5-Trimethylbenzene	7.85		0.104	1.00	1	07/31/2023 06:18	WG2104424
Vinyl chloride	U		0.234	1.00	1	07/31/2023 06:18	WG2104424
Xylenes, Total	91.5		0.174	3.00	1	07/31/2023 06:18	WG2104424
o-Xylene	28.9		0.174	1.00	1	07/31/2023 06:18	WG2104424
m&p-Xylene	62.6		0.430	2.00	1	07/31/2023 06:18	WG2104424
(S) Toluene-d8	*110*			*80.0-120*		*07/31/2023 06:18*	WG2104424
(S) Toluene-d8	*112*			*80.0-120*		*08/03/2023 21:31*	WG2107475
(S) 4-Bromofluorobenzene	*105*			*77.0-126*		*07/31/2023 06:18*	WG2104424
(S) 4-Bromofluorobenzene	*91.2*			*77.0-126*		*08/03/2023 21:31*	WG2107475
(S) 1,2-Dichloroethane-d4	*108*			*70.0-130*		*07/31/2023 06:18*	WG2104424
(S) 1,2-Dichloroethane-d4	*108*			*70.0-130*		*08/03/2023 21:31*	WG2107475

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	08/02/2023 18:21	WG2106096

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
AK102 DRO C10-C25	399	B J	170	800	1	08/08/2023 06:29	WG2108267
(S) o-Terphenyl	*106*			*50.0-150*		*08/08/2023 06:29*	WG2108267

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Arsenic	16.4		4.40	10.0	1	08/04/2023 10:59	WG2105927
Lead	7.69		2.99	6.00	1	08/04/2023 10:59	WG2105927

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
TPHGAK C6 to C10	3960		143	500	5	08/05/2023 09:51	WG2108219
(S) a,a,a-Trifluorotoluene(FID)	*93.9*			*50.0-150*		*08/05/2023 09:51*	WG2108219

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	34.9		0.0941	1.00	1	07/31/2023 06:40	WG2104424
1,2-Dichloroethane	U		0.0819	1.00	1	07/31/2023 06:40	WG2104424
Ethylbenzene	78.7		0.137	1.00	1	07/31/2023 06:40	WG2104424
Isopropylbenzene	6.13		0.105	1.00	1	07/31/2023 06:40	WG2104424
Methylene Chloride	U		0.430	5.00	1	07/31/2023 06:40	WG2104424
Naphthalene	35.1	C3	1.00	5.00	1	07/31/2023 06:40	WG2104424
Tetrachloroethene	U		6.00	20.0	20	08/04/2023 01:44	WG2107475
Toluene	393		5.56	20.0	20	08/04/2023 01:44	WG2107475
1,1,2-Trichloroethane	U		0.158	1.00	1	07/31/2023 06:40	WG2104424
1,2,4-Trimethylbenzene	167		0.322	1.00	1	07/31/2023 06:40	WG2104424
1,3,5-Trimethylbenzene	63.7		0.104	1.00	1	07/31/2023 06:40	WG2104424
Vinyl chloride	U		0.234	1.00	1	07/31/2023 06:40	WG2104424
Xylenes, Total	867		3.48	60.0	20	08/04/2023 01:44	WG2107475
o-Xylene	190		3.48	20.0	20	08/04/2023 01:44	WG2107475
m&p-Xylene	677		8.60	40.0	20	08/04/2023 01:44	WG2107475
(S) Toluene-d8	*109*			*80.0-120*		*07/31/2023 06:40*	WG2104424
(S) Toluene-d8	*107*			*80.0-120*		*08/04/2023 01:44*	WG2107475
(S) 4-Bromofluorobenzene	*118*			*77.0-126*		*07/31/2023 06:40*	WG2104424
(S) 4-Bromofluorobenzene	*88.1*			*77.0-126*		*08/04/2023 01:44*	WG2107475
(S) 1,2-Dichloroethane-d4	*112*			*70.0-130*		*07/31/2023 06:40*	WG2104424
(S) 1,2-Dichloroethane-d4	*105*			*70.0-130*		*08/04/2023 01:44*	WG2107475

EDB / DBCP by Method 8011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Ethylene Dibromide	U		0.00568	0.0212	1.06	08/02/2023 20:04	WG2106096

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	2270	B	201	944	1.18	08/08/2023 06:55	WG2108267
(S) o-Terphenyl	*104*			*50.0-150*		*08/08/2023 06:55*	WG2108267

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Arsenic	U		4.40	10.0	1	08/04/2023 10:42	WG2105927
Lead	U		2.99	6.00	1	08/04/2023 10:42	WG2105927

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	139	B J3 J6	28.7	100	1	08/03/2023 16:14	WG2106866
(S) a,a,a-Trifluorotoluene(FID)	*63.2*			*50.0-150*		*08/03/2023 16:14*	WG2106866

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	0.655	J J3	0.0941	1.00	1	07/31/2023 07:02	WG2104424
1,2-Dichloroethane	U	J3	0.0819	1.00	1	07/31/2023 07:02	WG2104424
Ethylbenzene	4.67	J3	0.137	1.00	1	07/31/2023 07:02	WG2104424
Isopropylbenzene	0.232	J J3	0.105	1.00	1	07/31/2023 07:02	WG2104424
Methylene Chloride	U	J3	0.430	5.00	1	07/31/2023 07:02	WG2104424
Naphthalene	U	C3	1.00	5.00	1	07/31/2023 07:02	WG2104424
Tetrachloroethene	U		0.300	1.00	1	08/03/2023 21:53	WG2107475
Toluene	6.30	J6	0.278	1.00	1	07/31/2023 07:02	WG2104424
1,1,2-Trichloroethane	U	J3	0.158	1.00	1	07/31/2023 07:02	WG2104424
1,2,4-Trimethylbenzene	8.92	J6	0.322	1.00	1	07/31/2023 07:02	WG2104424
1,3,5-Trimethylbenzene	3.04	J3	0.104	1.00	1	07/31/2023 07:02	WG2104424
Vinyl chloride	U	J3	0.234	1.00	1	07/31/2023 07:02	WG2104424
Xylenes, Total	70.0	V	0.174	3.00	1	07/31/2023 07:02	WG2104424
o-Xylene	31.7	V	0.174	1.00	1	07/31/2023 07:02	WG2104424
m&p-Xylene	38.3	J6	0.430	2.00	1	07/31/2023 07:02	WG2104424
(S) Toluene-d8	*112*			*80.0-120*		*07/31/2023 07:02*	WG2104424
(S) Toluene-d8	*113*			*80.0-120*		*08/03/2023 21:53*	WG2107475
(S) 4-Bromofluorobenzene	*106*			*77.0-126*		*07/31/2023 07:02*	WG2104424
(S) 4-Bromofluorobenzene	*92.9*			*77.0-126*		*08/03/2023 21:53*	WG2107475
(S) 1,2-Dichloroethane-d4	*106*			*70.0-130*		*07/31/2023 07:02*	WG2104424
(S) 1,2-Dichloroethane-d4	*104*			*70.0-130*		*08/03/2023 21:53*	WG2107475

EDB / DBCP by Method 8011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Ethylene Dibromide	U		0.00552	0.0206	1.03	08/02/2023 17:54	WG2106096

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
AK102 DRO C10-C25	274	B J J6	170	800	1	08/08/2023 07:20	WG2108267
(S) o-Terphenyl	*103*			*50.0-150*		*08/08/2023 07:20*	WG2108267

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Arsenic	53.4		4.40	10.0	1	08/04/2023 11:02	WG2105927
Lead	4.19	J	2.99	6.00	1	08/04/2023 11:02	WG2105927

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
TPHGAK C6 to C10	7700		143	500	5	08/05/2023 10:14	WG2108219
(S) a,a,a-Trifluorotoluene(FID)	*89.2*			*50.0-150*		*08/05/2023 10:14*	WG2108219

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	0.984	J	0.0941	1.00	1	07/31/2023 07:24	WG2104424
1,2-Dichloroethane	U		0.0819	1.00	1	07/31/2023 07:24	WG2104424
Ethylbenzene	196		0.137	1.00	1	07/31/2023 07:24	WG2104424
Isopropylbenzene	50.9		0.105	1.00	1	07/31/2023 07:24	WG2104424
Methylene Chloride	U		0.430	5.00	1	07/31/2023 07:24	WG2104424
Naphthalene	139	C3	1.00	5.00	1	07/31/2023 07:24	WG2104424
Tetrachloroethene	U		6.00	20.0	20	08/04/2023 02:05	WG2107475
Toluene	8.52		0.278	1.00	1	07/31/2023 07:24	WG2104424
1,1,2-Trichloroethane	U		0.158	1.00	1	07/31/2023 07:24	WG2104424
1,2,4-Trimethylbenzene	2160		6.44	20.0	20	08/04/2023 02:05	WG2107475
1,3,5-Trimethylbenzene	716		2.08	20.0	20	08/04/2023 02:05	WG2107475
Vinyl chloride	U		0.234	1.00	1	07/31/2023 07:24	WG2104424
Xylenes, Total	1160		3.48	60.0	20	08/04/2023 02:05	WG2107475
o-Xylene	288		3.48	20.0	20	08/04/2023 02:05	WG2107475
m&p-Xylene	874		8.60	40.0	20	08/04/2023 02:05	WG2107475
(S) Toluene-d8	*111*			*80.0-120*		*07/31/2023 07:24*	WG2104424
(S) Toluene-d8	*112*			*80.0-120*		*08/04/2023 02:05*	WG2107475
(S) 4-Bromofluorobenzene	*121*			*77.0-126*		*07/31/2023 07:24*	WG2104424
(S) 4-Bromofluorobenzene	*92.1*			*77.0-126*		*08/04/2023 02:05*	WG2107475
(S) 1,2-Dichloroethane-d4	*120*			*70.0-130*		*07/31/2023 07:24*	WG2104424
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*		*08/04/2023 02:05*	WG2107475

EDB / DBCP by Method 8011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Ethylene Dibromide	U		0.00557	0.0208	1.04	08/02/2023 20:57	WG2106096

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	4320	B	170	800	1	08/08/2023 09:27	WG2108267
(S) o-Terphenyl	*106*			*50.0-150*		*08/08/2023 09:27*	WG2108267

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Arsenic	48.9		4.40	10.0	1	08/04/2023 11:10	WG2105927
Lead	U		2.99	6.00	1	08/04/2023 11:10	WG2105927

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	8510		143	500	5	08/05/2023 10:36	WG2108219
(S) a,a,a-Trifluorotoluene(FID)	*92.6*			*50.0-150*		*08/05/2023 10:36*	WG2108219

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	1.21		0.0941	1.00	1	07/31/2023 07:47	WG2104424
1,2-Dichloroethane	U		0.0819	1.00	1	07/31/2023 07:47	WG2104424
Ethylbenzene	200		0.137	1.00	1	07/31/2023 07:47	WG2104424
Isopropylbenzene	51.0		0.105	1.00	1	07/31/2023 07:47	WG2104424
Methylene Chloride	U		0.430	5.00	1	07/31/2023 07:47	WG2104424
Naphthalene	136	C3	1.00	5.00	1	07/31/2023 07:47	WG2104424
Tetrachloroethene	U		6.00	20.0	20	08/04/2023 02:27	WG2107475
Toluene	9.08		0.278	1.00	1	07/31/2023 07:47	WG2104424
1,1,2-Trichloroethane	U		0.158	1.00	1	07/31/2023 07:47	WG2104424
1,2,4-Trimethylbenzene	2460		6.44	20.0	20	08/04/2023 02:27	WG2107475
1,3,5-Trimethylbenzene	851		2.08	20.0	20	08/04/2023 02:27	WG2107475
Vinyl chloride	U		0.234	1.00	1	07/31/2023 07:47	WG2104424
Xylenes, Total	1180		3.48	60.0	20	08/04/2023 02:27	WG2107475
o-Xylene	279		3.48	20.0	20	08/04/2023 02:27	WG2107475
m&p-Xylene	896		8.60	40.0	20	08/04/2023 02:27	WG2107475
(S) Toluene-d8	*115*			*80.0-120*		*07/31/2023 07:47*	WG2104424
(S) Toluene-d8	*109*			*80.0-120*		*08/04/2023 02:27*	WG2107475
(S) 4-Bromofluorobenzene	*119*			*77.0-126*		*07/31/2023 07:47*	WG2104424
(S) 4-Bromofluorobenzene	*85.9*			*77.0-126*		*08/04/2023 02:27*	WG2107475
(S) 1,2-Dichloroethane-d4	*118*			*70.0-130*		*07/31/2023 07:47*	WG2104424
(S) 1,2-Dichloroethane-d4	*109*			*70.0-130*		*08/04/2023 02:27*	WG2107475

EDB / DBCP by Method 8011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Ethylene Dibromide	U		0.00611	0.0228	1.14	08/02/2023 21:09	WG2106096

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
AK102 DRO C10-C25	4400		170	800	1	08/08/2023 09:52	WG2108267
(S) o-Terphenyl	*109*			*50.0-150*		*08/08/2023 09:52*	WG2108267

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Arsenic	U		4.40	10.0	1	08/04/2023 11:13	WG2105927
Lead	U		2.99	6.00	1	08/04/2023 11:13	WG2105927

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TPHGAK C6 to C10	U		28.7	100	1	08/03/2023 11:21	WG2106866
(S) a,a,a-Trifluorotoluene(FID)	*63.0*			*50.0-150*		*08/03/2023 11:21*	WG2106866

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	U		0.0941	1.00	1	07/31/2023 04:29	WG2104424
1,2-Dichloroethane	U		0.0819	1.00	1	07/31/2023 04:29	WG2104424
Ethylbenzene	U		0.137	1.00	1	07/31/2023 04:29	WG2104424
Isopropylbenzene	U		0.105	1.00	1	07/31/2023 04:29	WG2104424
Methylene Chloride	U		0.430	5.00	1	07/31/2023 04:29	WG2104424
Naphthalene	U	C3	1.00	5.00	1	07/31/2023 04:29	WG2104424
Tetrachloroethene	U		0.300	1.00	1	08/03/2023 22:13	WG2107475
Toluene	U		0.278	1.00	1	07/31/2023 04:29	WG2104424
1,1,2-Trichloroethane	U		0.158	1.00	1	07/31/2023 04:29	WG2104424
1,2,4-Trimethylbenzene	U		0.322	1.00	1	07/31/2023 04:29	WG2104424
1,3,5-Trimethylbenzene	U		0.104	1.00	1	07/31/2023 04:29	WG2104424
Vinyl chloride	U		0.234	1.00	1	07/31/2023 04:29	WG2104424
Xylenes, Total	U		0.174	3.00	1	07/31/2023 04:29	WG2104424
o-Xylene	U		0.174	1.00	1	07/31/2023 04:29	WG2104424
m&p-Xylene	U		0.430	2.00	1	07/31/2023 04:29	WG2104424
(S) Toluene-d8	*118*			*80.0-120*		*07/31/2023 04:29*	WG2104424
(S) Toluene-d8	*109*			*80.0-120*		*08/03/2023 22:13*	WG2107475
(S) 4-Bromofluorobenzene	*106*			*77.0-126*		*07/31/2023 04:29*	WG2104424
(S) 4-Bromofluorobenzene	*92.6*			*77.0-126*		*08/03/2023 22:13*	WG2107475
(S) 1,2-Dichloroethane-d4	*109*			*70.0-130*		*07/31/2023 04:29*	WG2104424
(S) 1,2-Dichloroethane-d4	*103*			*70.0-130*		*08/03/2023 22:13*	WG2107475

EDB / DBCP by Method 8011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Ethylene Dibromide	U		0.00541	0.0202	1.01	08/02/2023 21:22	WG2106096

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
AK102 DRO C10-C25	195	B J	170	800	1	08/08/2023 10:17	WG2108267
(S) o-Terphenyl	*93.0*			*50.0-150*		*08/08/2023 10:17*	WG2108267

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
TPHGAK C6 to C10	38.2	B J	28.7	100	1	08/05/2023 05:03	WG2108219
(S) a,a,a-Trifluorotoluene(FID)	*89.9*			*50.0-150*		*08/05/2023 05:03*	WG2108219

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	U		0.0941	1.00	1	07/31/2023 04:51	WG2104424
1,2-Dichloroethane	U		0.0819	1.00	1	07/31/2023 04:51	WG2104424
Ethylbenzene	U		0.137	1.00	1	07/31/2023 04:51	WG2104424
Isopropylbenzene	U		0.105	1.00	1	07/31/2023 04:51	WG2104424
Methylene Chloride	U		0.430	5.00	1	07/31/2023 04:51	WG2104424
Naphthalene	U	C3	1.00	5.00	1	07/31/2023 04:51	WG2104424
Tetrachloroethene	U		0.300	1.00	1	08/03/2023 20:07	WG2107475
Toluene	U		0.278	1.00	1	07/31/2023 04:51	WG2104424
1,1,2-Trichloroethane	U		0.158	1.00	1	07/31/2023 04:51	WG2104424
1,2,4-Trimethylbenzene	U		0.322	1.00	1	07/31/2023 04:51	WG2104424
1,3,5-Trimethylbenzene	U		0.104	1.00	1	07/31/2023 04:51	WG2104424
Vinyl chloride	U		0.234	1.00	1	07/31/2023 04:51	WG2104424
Xylenes, Total	U		0.174	3.00	1	07/31/2023 04:51	WG2104424
o-Xylene	U		0.174	1.00	1	07/31/2023 04:51	WG2104424
m&p-Xylene	U		0.430	2.00	1	07/31/2023 04:51	WG2104424
(S) Toluene-d8	*115*			*80.0-120*		*07/31/2023 04:51*	WG2104424
(S) Toluene-d8	*113*			*80.0-120*		*08/03/2023 20:07*	WG2107475
(S) 4-Bromofluorobenzene	*102*			*77.0-126*		*07/31/2023 04:51*	WG2104424
(S) 4-Bromofluorobenzene	*89.6*			*77.0-126*		*08/03/2023 20:07*	WG2107475
(S) 1,2-Dichloroethane-d4	*114*			*70.0-130*		*07/31/2023 04:51*	WG2104424
(S) 1,2-Dichloroethane-d4	*101*			*70.0-130*		*08/03/2023 20:07*	WG2107475

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
TPHGAK C6 to C10	33.6	B J	28.7	100	1	08/05/2023 05:25	WG2108219
(S) a,a,a-Trifluorotoluene(FID)	*95.9*			*50.0-150*		*08/05/2023 05:25*	WG2108219

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	U		0.0941	1.00	1	07/31/2023 05:12	WG2104424
1,2-Dichloroethane	U		0.0819	1.00	1	07/31/2023 05:12	WG2104424
Ethylbenzene	U		0.137	1.00	1	07/31/2023 05:12	WG2104424
Isopropylbenzene	U		0.105	1.00	1	07/31/2023 05:12	WG2104424
Methylene Chloride	U		0.430	5.00	1	07/31/2023 05:12	WG2104424
Naphthalene	U	C3	1.00	5.00	1	07/31/2023 05:12	WG2104424
Tetrachloroethene	U		0.300	1.00	1	08/03/2023 20:28	WG2107475
Toluene	U		0.278	1.00	1	07/31/2023 05:12	WG2104424
1,1,2-Trichloroethane	U		0.158	1.00	1	07/31/2023 05:12	WG2104424
1,2,4-Trimethylbenzene	U		0.322	1.00	1	07/31/2023 05:12	WG2104424
1,3,5-Trimethylbenzene	U		0.104	1.00	1	07/31/2023 05:12	WG2104424
Vinyl chloride	U		0.234	1.00	1	07/31/2023 05:12	WG2104424
Xylenes, Total	U		0.174	3.00	1	07/31/2023 05:12	WG2104424
o-Xylene	U		0.174	1.00	1	07/31/2023 05:12	WG2104424
m&p-Xylene	U		0.430	2.00	1	07/31/2023 05:12	WG2104424
(S) Toluene-d8	*115*			*80.0-120*		*07/31/2023 05:12*	WG2104424
(S) Toluene-d8	*113*			*80.0-120*		*08/03/2023 20:28*	WG2107475
(S) 4-Bromofluorobenzene	*103*			*77.0-126*		*07/31/2023 05:12*	WG2104424
(S) 4-Bromofluorobenzene	*91.0*			*77.0-126*		*08/03/2023 20:28*	WG2107475
(S) 1,2-Dichloroethane-d4	*115*			*70.0-130*		*07/31/2023 05:12*	WG2104424
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*		*08/03/2023 20:28*	WG2107475

Method Blank (MB)

(MB) R3956986-1 08/04/23 10:37

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Arsenic	U		4.40	10.0
Lead	U		2.99	6.00

Laboratory Control Sample (LCS)

(LCS) R3956986-2 08/04/23 10:40

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Arsenic	1000	999	99.9	80.0-120	
Lead	1000	1020	102	80.0-120	

L1640207-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1640207-04 08/04/23 10:42 • (MS) R3956986-4 08/04/23 10:48 • (MSD) R3956986-5 08/04/23 10:51

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	%	%		%			%	%
Arsenic	1000	U	1000	990	100	99.0	1	75.0-125			1.32	20
Lead	1000	U	1020	1010	102	101	1	75.0-125			0.447	20

Method Blank (MB)

(MB) R3957102-3 08/03/23 10:29

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
TPHGAK C6 to C10	41.6	J	28.7	100
(S) a,a,a-Trifluorotoluene(FID)	*73.1*			*60.0-120*

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

(LCS) R3957102-1 08/03/23 09:06 • (LCSD) R3957102-2 08/03/23 09:32

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPHGAK C6 to C10	5000	4090	4080	81.8	81.6	60.0-120			0.245	20
(S) a,a,a-Trifluorotoluene(FID)				*84.0*	*85.0*	*60.0-120*				

L1640207-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1640207-04 08/03/23 16:14 • (MS) R3957102-4 08/03/23 21:30 • (MSD) R3957102-5 08/03/23 22:15

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 %
TPHGAK C6 to C10	5000	139	3790	3060	73.0	58.4	1	70.0-130		J3 J6	21.3	20
(S) a,a,a-Trifluorotoluene(FID)					*82.5*	*77.8*		*50.0-150*				

Method Blank (MB)

(MB) R3958233-3 08/05/23 04:41

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
TPHGAK C6 to C10	62.4	J	28.7	100
(S) a,a,a-Trifluorotoluene(FID)	*88.2*			*60.0-120*

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

(LCS) R3958233-1 08/05/23 03:34 • (LCSD) R3958233-2 08/05/23 03:56

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPHGAK C6 to C10	5000	4250	4130	85.0	82.6	60.0-120			2.86	20
(S) a,a,a-Trifluorotoluene(FID)				*91.2*	*90.8*	*60.0-120*				

L1642034-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1642034-02 08/05/23 09:07 • (MS) R3958233-4 08/05/23 13:12 • (MSD) R3958233-5 08/05/23 13:34

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 %
TPHGAK C6 to C10	5000	293	4440	4510	82.9	84.3	1	70.0-130			1.56	20
(S) a,a,a-Trifluorotoluene(FID)					*89.7*	*91.0*		*50.0-150*				

Method Blank (MB)

(MB) R3956585-3 07/31/23 04:07

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.0941	1.00
1,2-Dichloroethane	U		0.0819	1.00
Ethylbenzene	U		0.137	1.00
Isopropylbenzene	U		0.105	1.00
Methylene Chloride	U		0.430	5.00
Naphthalene	U		1.00	5.00
Toluene	U		0.278	1.00
1,1,2-Trichloroethane	U		0.158	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-Xylene	U		0.430	2.00
(S) Toluene-d8	*112*			*80.0-120*
(S) 4-Bromofluorobenzene	*103*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*112*			*70.0-130*

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

(LCS) R3956585-1 07/31/23 03:01 • (LCSD) R3956585-2 07/31/23 03:23

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	4.90	4.93	98.0	98.6	70.0-123			0.610	20
1,2-Dichloroethane	5.00	5.13	5.17	103	103	70.0-128			0.777	20
Ethylbenzene	5.00	5.08	5.13	102	103	79.0-123			0.979	20
Isopropylbenzene	5.00	5.03	5.27	101	105	76.0-127			4.66	20
Methylene Chloride	5.00	4.81	4.81	96.2	96.2	67.0-120			0.000	20
Naphthalene	5.00	3.41	3.80	68.2	76.0	54.0-135			10.8	20
Toluene	5.00	5.01	5.26	100	105	79.0-120			4.87	20
1,1,2-Trichloroethane	5.00	5.05	5.19	101	104	80.0-120			2.73	20
1,2,4-Trimethylbenzene	5.00	4.54	4.81	90.8	96.2	76.0-121			5.78	20
1,3,5-Trimethylbenzene	5.00	4.95	4.72	99.0	94.4	76.0-122			4.76	20
Vinyl chloride	5.00	4.79	4.87	95.8	97.4	67.0-131			1.66	20
Xylenes, Total	15.0	14.6	15.2	97.3	101	79.0-123			4.03	20
o-Xylene	5.00	4.77	5.03	95.4	101	80.0-122			5.31	20
m&p-Xylene	10.0	9.79	10.2	97.9	102	80.0-122			4.10	20
(S) Toluene-d8				*109*	*111*	*80.0-120*				
(S) 4-Bromofluorobenzene				*105*	*104*	*77.0-126*				

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

(LCS) R3956585-1 07/31/23 03:01 • (LCSD) R3956585-2 07/31/23 03:23

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 %
(S) 1,2-Dichloroethane-d4				*109*	*112*	*70.0-130*				

L1640207-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1640207-04 07/31/23 07:02 • (MS) R3956585-4 07/31/23 11:49 • (MSD) R3956585-5 07/31/23 12:11

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 %
Benzene	5.00	0.655	2.83	4.71	43.5	81.1	1	17.0-158		J3	49.9	27
1,2-Dichloroethane	5.00	U	3.03	4.58	60.6	91.6	1	29.0-151		J3	40.7	27
Ethylbenzene	5.00	4.67	6.64	9.04	39.4	87.4	1	30.0-155		J3	30.6	27
Isopropylbenzene	5.00	0.232	2.63	4.60	48.0	87.4	1	28.0-157		J3	54.5	27
Methylene Chloride	5.00	U	2.44	4.07	48.8	81.4	1	23.0-144		J3	50.1	28
Naphthalene	5.00	U	3.42	4.61	68.4	92.2	1	12.0-156			29.6	35
Toluene	5.00	6.30	6.41	7.98	2.20	33.6	1	26.0-154	J6		21.8	28
1,1,2-Trichloroethane	5.00	U	3.27	4.86	65.4	97.2	1	35.0-147		J3	39.1	27
1,2,4-Trimethylbenzene	5.00	8.92	9.37	11.3	9.00	47.6	1	26.0-154	J6		18.7	27
1,3,5-Trimethylbenzene	5.00	3.04	4.73	6.51	33.8	69.4	1	28.0-153		J3	31.7	27
Vinyl chloride	5.00	U	1.72	3.34	34.4	66.8	1	10.0-160		J3	64.0	27
Xylenes, Total	15.0	70.0	67.2	73.1	0.000	20.7	1	29.0-154	V	V	8.41	28
o-Xylene	5.00	31.7	31.0	32.7	0.000	20.0	1	45.0-144	V	V	5.34	26
m&p-Xylene	10.0	38.3	36.2	40.4	0.000	21.0	1	43.0-146	J6	J6	11.0	26
(S) Toluene-d8					*111*	*109*		*80.0-120*				
(S) 4-Bromofluorobenzene					*107*	*105*		*77.0-126*				
(S) 1,2-Dichloroethane-d4					*111*	*107*		*70.0-130*				

Method Blank (MB)

(MB) R3957080-2 08/03/23 19:16

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Tetrachloroethene	U		0.300	1.00
Toluene	U		0.278	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-Xylene	U		0.430	2.00
(S) Toluene-d8	*105*			*80.0-120*
(S) 4-Bromofluorobenzene	*92.7*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3957080-1 08/03/23 18:33

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Tetrachloroethene	5.00	4.90	98.0	72.0-132	
Toluene	5.00	5.08	102	79.0-120	
1,2,4-Trimethylbenzene	5.00	5.19	104	76.0-121	
1,3,5-Trimethylbenzene	5.00	5.12	102	76.0-122	
Xylenes, Total	15.0	13.7	91.3	79.0-123	
o-Xylene	5.00	4.54	90.8	80.0-122	
m&p-Xylene	10.0	9.14	91.4	80.0-122	
(S) Toluene-d8			*108*	*80.0-120*	
(S) 4-Bromofluorobenzene			*98.0*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*106*	*70.0-130*	

Method Blank (MB)

(MB) R3957359-1 08/02/23 17:26

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

L1640207-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1640207-02 08/02/23 18:21 • (DUP) R3957359-3 08/02/23 18:08

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Ethylene Dibromide	U	U	1.06	0.000		20

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

(LCS) R3957359-4 08/02/23 20:31 • (LCSD) R3957359-5 08/02/23 23:16

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethylene Dibromide	0.250	0.241	0.229	96.4	91.6	60.0-140			5.11	20

L1640207-04 Original Sample (OS) • Matrix Spike (MS)

(OS) L1640207-04 08/02/23 17:54 • (MS) R3957359-2 08/02/23 17:40

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Ethylene Dibromide	0.0995	U	0.121	122	1	64.0-159	

Method Blank (MB)

(MB) R3957655-1 08/07/23 10:17

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
AK102 DRO C10-C25	259	J	170	800
(S) o-Terphenyl	*78.2*			*60.0-120*

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

(LCS) R3957655-2 08/07/23 10:40 • (LCSD) R3957655-3 08/07/23 11:01

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 %
AK102 DRO C10-C25	6000	5010	5170	83.5	86.2	75.0-125			3.14	20
(S) o-Terphenyl				*70.4*	*79.8*	*60.0-120*				

L1641298-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1641298-02 08/07/23 18:13 • (MS) R3957655-4 08/07/23 18:34 • (MSD) R3957655-5 08/07/23 18:55

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
AK102 DRO C10-C25	5720	766	4740	4860	69.5	71.6	1	75.0-125	J6	J6	2.50	20
(S) o-Terphenyl					*60.1*	*69.5*		*50.0-150*				

Method Blank (MB)

(MB) R3958057-1 08/07/23 18:38

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
AK102 DRO C10-C25	439	J	170	800
(S) o-Terphenyl	*104*			*60.0-120*

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

(LCS) R3958057-2 08/07/23 19:05 • (LCSD) R3958057-3 08/07/23 19:30

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 %
AK102 DRO C10-C25	6000	5470	5540	91.2	92.3	75.0-125			1.27	20
(S) o-Terphenyl				*113*	*119*	*60.0-120*				

L1640207-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1640207-04 08/08/23 07:20 • (MS) R3958057-6 08/08/23 07:45 • (MSD) R3958057-7 08/08/23 08:11

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	274	4680	4510	73.4	77.6	1	75.0-125	J6		3.70	20
(S) o-Terphenyl					*108*	*109*		*50.0-150*				

L1641225-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1641225-01 08/08/23 10:42 • (MS) R3958057-8 08/08/23 11:58 • (MSD) R3958057-10 08/08/23 15:17

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	5720	195	4500	4620	75.3	73.7	1	75.0-125		J6	2.63	20
(S) o-Terphenyl					*102*	*104*		*50.0-150*				

Sample Narrative:

OS: Surrogate failure due to matrix interference during extraction procedure.

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.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
V	The sample concentration is too high to evaluate accurate spike recoveries.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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

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

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

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

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

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

Pres Chk

Report to: **Gerald Robinson**

Email To: **Alaura.Gonzalez@arcadis.com;Gerald.Robinson**

Project Description: **211083**

City/State Collected: Fairbanks, AK

Please Circle: PT MT CT ET (AK)

Phone: **907-276-8095**

Client Project # **30063669 19.45**

Lab Project # **CHEVARCAK-211083**

Collected by (print): E. Wijcik

Site/Facility ID # **230 OLD STEESE HWY**

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

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

Quote #

Date Results Needed

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	AK101 40mlAmb HCl	AK102 100ml Amb HCl	EDB 8011 40mlClr-NaThio	Total As,Pb 6010 250mlHDPE-HNO3	VOCs 8260* 40mlAmb-HCl	Remarks	Sample # (lab only)
MW-1-W-20230726	Grab	GW	-	7.26.23	0745	12	X	X	X	X	X		-01
MW-3-W-20230726		GW	-		0830	12	X	X	X	X	X		-02
MW-4-W-20230726		GW	-		0915	12	X	X	X	X	X		-03
MW-6-W-20230726		GW	-		1000	36	X	X	X	X	X	MS/MSD	-04
MW-2-W-20230726		GW	-		1045	12	X	X	X	X	X		-05
BD-1-W-20230726		GW	-		-	12	X	X	X	X	X		-06
EQB-1-W-20230726		GW	-		1100	12	X	X	X	X	X		-07
Trip Blank 1	-	GW	-	-	-	5	X				X		-08
Trip Blank 2	-	GW	-	-	-	5	X				X		-09
		GW											

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

Remarks:*VOC list=BTEX, EDC, PCE, isopropylbenzene, methylene chloride, naphthalene, 1,1,2-trichloroethane, 1,2,4-TMB, 1,3,5-TMB, vinyl chloride

pH _____ Temp _____

Flow _____ Other _____

Samples returned via: __ UPS X FedEx __ Courier _____

Tracking # 435799185718

Relinquished by : (Signature) — Date: 7.27.23 — Time: 1100 — Received by: (Signature)

Relinquished by : (Signature) — Date: — Time: — Received by: (Signature)

Relinquished by : (Signature) — Date: — Time: — Received for lab by: (Signature)

Trip Blank Received: Yes / No (HCL / MeoH / TBR) — 4-NaThio 6

Temp: 3.3 °C — Bottles Received: 108

Date: 07/28/23 — Time: 0845

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Sample Receipt Checklist

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

Chain of Custody Page 1 of 1

Pace
PEOPLE ADVANCING SCIENCE

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

SDG # 164021
C209

Acctnum: **CHEVARCAK**
Template: **T233404**
Prelogin: **P1010382**
PM: **110 - Brian Ford**
PB:
Shipped Via:

ANALYTICAL REPORT

August 29, 2023

Revised Report

Arcadis - Chevron - AK

Sample Delivery Group:	L1645570
Samples Received:	08/12/2023
Project Number:	30063669 05.42
Description:	211083
Site:	230 OLD STEESE HWY FAIRBANKS
Report To:	Gerald Robinson 880 H St. Anchorage, AK 99501

Entire Report Reviewed By:

Brian Ford

Project Manager

Pace Analytical National

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

TABLE OF CONTENTS

MW-11-W-20230810 L1645570-01 GW

Collected by: G. Jeffers | Collected date/time: 08/10/23 10:10 | Received date/time: 08/12/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010D	WG2120445	1	08/25/23 08:38	08/28/23 18:03	ZSA	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG2116271	10	08/20/23 23:05	08/20/23 23:05	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2115523	20	08/17/23 00:40	08/17/23 00:40	BAM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2114922	1	08/18/23 11:00	08/19/23 05:15	TJD	Mt. Juliet, TN

MW-12-W-20230810 L1645570-02 GW

Collected by: G. Jeffers | Collected date/time: 08/10/23 14:27 | Received date/time: 08/12/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010D	WG2120445	1	08/25/23 08:38	08/28/23 18:06	ZSA	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG2116271	20	08/20/23 23:27	08/20/23 23:27	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2115523	50	08/17/23 01:01	08/17/23 01:01	BAM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2114922	1	08/18/23 11:00	08/19/23 05:35	TJD	Mt. Juliet, TN

MW-13-W-20230810 L1645570-03 GW

Collected by: G. Jeffers | Collected date/time: 08/10/23 12:37 | Received date/time: 08/12/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010D	WG2120445	1	08/25/23 08:38	08/28/23 18:09	ZSA	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG2114993	1	08/16/23 17:20	08/16/23 17:20	BAM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2115523	10	08/17/23 01:22	08/17/23 01:22	BAM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2114922	1	08/18/23 11:00	08/19/23 05:55	TJD	Mt. Juliet, TN

MW-14-W-20230810 L1645570-04 GW

Collected by: G. Jeffers | Collected date/time: 08/10/23 15:51 | Received date/time: 08/12/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010D	WG2120445	1	08/25/23 08:38	08/28/23 18:12	ZSA	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG2114993	10	08/16/23 18:27	08/16/23 18:27	BAM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2114642	10	08/16/23 06:31	08/16/23 06:31	BAM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2115523	100	08/17/23 01:43	08/17/23 01:43	BAM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2114922	1	08/18/23 11:00	08/19/23 06:15	TJD	Mt. Juliet, TN

MW-15-W-20230810 L1645570-05 GW

Collected by: G. Jeffers | Collected date/time: 08/10/23 17:08 | Received date/time: 08/12/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010D	WG2120445	1	08/25/23 08:38	08/28/23 18:15	ZSA	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG2114993	25	08/16/23 18:49	08/16/23 18:49	BAM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2114642	25	08/16/23 06:52	08/16/23 06:52	BAM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2115523	250	08/17/23 02:04	08/17/23 02:04	BAM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2117859	1	08/22/23 05:24	08/22/23 20:28	DMG	Mt. Juliet, TN

BD-1-W-20230810 L1645570-06 GW

Collected by: G. Jeffers | Collected date/time: 08/10/23 00:00 | Received date/time: 08/12/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010D	WG2120445	1	08/25/23 08:38	08/28/23 18:18	ZSA	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG2114993	1	08/16/23 17:42	08/16/23 17:42	BAM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2115523	10	08/17/23 02:25	08/17/23 02:25	BAM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2117859	1	08/22/23 05:24	08/22/23 20:54	DMG	Mt. Juliet, TN

EQB-1-W-20230810 L1645570-07 GW

Collected by: G. Jeffers
Collected date/time: 08/10/23 00:00
Received date/time: 08/12/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010D	WG2120445	1	08/25/23 08:38	08/28/23 18:21	ZSA	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG2114993	1	08/16/23 16:12	08/16/23 16:12	BAM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2114642	1	08/16/23 02:52	08/16/23 02:52	BAM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2117859	1	08/22/23 05:24	08/22/23 21:19	DMG	Mt. Juliet, TN

TB-1-20230810 L1645570-08 GW

Collected by: G. Jeffers
Collected date/time: 08/10/23 00:00
Received date/time: 08/12/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method AK101	WG2114993	1	08/16/23 15:28	08/16/23 15:28	BAM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2114642	1	08/16/23 01:47	08/16/23 01:47	BAM	Mt. Juliet, TN

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

Report Revision History

Level II Report - Version 1: 08/29/23 11:22

Project Comments

revised: Isopropylbenzene, Methylene Chloride, Tetrachloroethene, 1,1,2-trichloroethane, and vinyl chloride requested after the fact.

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
WG2115523	L1645570-01	Naphthalene
WG2115523	L1645570-02	Naphthalene
WG2115523	L1645570-03	Naphthalene
WG2115523	L1645570-06	Naphthalene

Semi-Volatile Organic Compounds (GC) by Method AK102

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

Batch	Analyte	Lab Sample ID
WG2114922	o-Terphenyl	(LCS) R3964065-2

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

Batch	Lab Sample ID	Analytes
WG2114922	(MS) R3964065-4	AK102 DRO C10-C25

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Lead	19.2		2.99	6.00	1	08/28/2023 18:03	WG2120445

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
TPHGAK C6 to C10	11100		287	1000	10	08/20/2023 23:05	WG2116271
(S) a,a,a-Trifluorotoluene(FID)	*93.5*			*50.0-150*		*08/20/2023 23:05*	WG2116271

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	13.8	J	1.88	20.0	20	08/17/2023 00:40	WG2115523
1,2-Dibromoethane	U		2.52	20.0	20	08/17/2023 00:40	WG2115523
1,2-Dichloroethane	U		1.64	20.0	20	08/17/2023 00:40	WG2115523
Ethylbenzene	359		2.74	20.0	20	08/17/2023 00:40	WG2115523
Isopropylbenzene	67.7		2.10	20.0	20	08/17/2023 00:40	WG2115523
Methylene Chloride	U		8.60	100	20	08/17/2023 00:40	WG2115523
Naphthalene	119	C3	20.0	100	20	08/17/2023 00:40	WG2115523
Tetrachloroethene	U		6.00	20.0	20	08/17/2023 00:40	WG2115523
Toluene	65.8		5.56	20.0	20	08/17/2023 00:40	WG2115523
1,1,2-Trichloroethane	U		3.16	20.0	20	08/17/2023 00:40	WG2115523
1,2,4-Trimethylbenzene	1850		6.44	20.0	20	08/17/2023 00:40	WG2115523
1,3,5-Trimethylbenzene	545		2.08	20.0	20	08/17/2023 00:40	WG2115523
Vinyl chloride	U		4.68	20.0	20	08/17/2023 00:40	WG2115523
Xylenes, Total	1880		3.48	60.0	20	08/17/2023 00:40	WG2115523
o-Xylene	256		3.48	20.0	20	08/17/2023 00:40	WG2115523
m&p-Xylene	1620		8.60	40.0	20	08/17/2023 00:40	WG2115523
(S) Toluene-d8	*107*			*80.0-120*		*08/17/2023 00:40*	WG2115523
(S) 4-Bromofluorobenzene	*98.6*			*77.0-126*		*08/17/2023 00:40*	WG2115523
(S) 1,2-Dichloroethane-d4	*112*			*70.0-130*		*08/17/2023 00:40*	WG2115523

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	4270		170	800	1	08/19/2023 05:15	WG2114922
(S) o-Terphenyl	*58.2*			*50.0-150*		*08/19/2023 05:15*	WG2114922

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Lead	9.37		2.99	6.00	1	08/28/2023 18:06	WG2120445

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	16900		574	2000	20	08/20/2023 23:27	WG2116271
(S) a,a,a-Trifluorotoluene(FID)	*90.8*			*50.0-150*		*08/20/2023 23:27*	WG2116271

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	U		4.71	50.0	50	08/17/2023 01:01	WG2115523
1,2-Dibromoethane	U		6.30	50.0	50	08/17/2023 01:01	WG2115523
1,2-Dichloroethane	U		4.09	50.0	50	08/17/2023 01:01	WG2115523
Ethylbenzene	779		6.85	50.0	50	08/17/2023 01:01	WG2115523
Isopropylbenzene	52.9		5.25	50.0	50	08/17/2023 01:01	WG2115523
Methylene Chloride	U		21.5	250	50	08/17/2023 01:01	WG2115523
Naphthalene	149	C3 J	50.0	250	50	08/17/2023 01:01	WG2115523
Tetrachloroethene	U		15.0	50.0	50	08/17/2023 01:01	WG2115523
Toluene	259		13.9	50.0	50	08/17/2023 01:01	WG2115523
1,1,2-Trichloroethane	U		7.90	50.0	50	08/17/2023 01:01	WG2115523
1,2,4-Trimethylbenzene	1710		16.1	50.0	50	08/17/2023 01:01	WG2115523
1,3,5-Trimethylbenzene	543		5.20	50.0	50	08/17/2023 01:01	WG2115523
Vinyl chloride	U		11.7	50.0	50	08/17/2023 01:01	WG2115523
Xylenes, Total	2470		8.70	150	50	08/17/2023 01:01	WG2115523
o-Xylene	155		8.70	50.0	50	08/17/2023 01:01	WG2115523
m&p-Xylene	2310		21.5	100	50	08/17/2023 01:01	WG2115523
(S) Toluene-d8	*102*			*80.0-120*		*08/17/2023 01:01*	WG2115523
(S) 4-Bromofluorobenzene	*92.4*			*77.0-126*		*08/17/2023 01:01*	WG2115523
(S) 1,2-Dichloroethane-d4	*116*			*70.0-130*		*08/17/2023 01:01*	WG2115523

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
AK102 DRO C10-C25	3620		170	800	1	08/19/2023 05:35	WG2114922
(S) o-Terphenyl	*56.2*			*50.0-150*		*08/19/2023 05:35*	WG2114922

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Lead	20.7		2.99	6.00	1	08/28/2023 18:09	WG2120445

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	2550		28.7	100	1	08/16/2023 17:20	WG2114993
(S) a,a,a-Trifluorotoluene(FID)	*111*			*50.0-150*		*08/16/2023 17:20*	WG2114993

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	4.13	J	0.941	10.0	10	08/17/2023 01:22	WG2115523
1,2-Dibromoethane	U		1.26	10.0	10	08/17/2023 01:22	WG2115523
1,2-Dichloroethane	U		0.819	10.0	10	08/17/2023 01:22	WG2115523
Ethylbenzene	38.6		1.37	10.0	10	08/17/2023 01:22	WG2115523
Isopropylbenzene	14.1		1.05	10.0	10	08/17/2023 01:22	WG2115523
Methylene Chloride	U		4.30	50.0	10	08/17/2023 01:22	WG2115523
Naphthalene	14.1	C3 J	10.0	50.0	10	08/17/2023 01:22	WG2115523
Tetrachloroethene	U		3.00	10.0	10	08/17/2023 01:22	WG2115523
Toluene	U		2.78	10.0	10	08/17/2023 01:22	WG2115523
1,1,2-Trichloroethane	U		1.58	10.0	10	08/17/2023 01:22	WG2115523
1,2,4-Trimethylbenzene	103		3.22	10.0	10	08/17/2023 01:22	WG2115523
1,3,5-Trimethylbenzene	21.0		1.04	10.0	10	08/17/2023 01:22	WG2115523
Vinyl chloride	U		2.34	10.0	10	08/17/2023 01:22	WG2115523
Xylenes, Total	39.7		1.74	30.0	10	08/17/2023 01:22	WG2115523
o-Xylene	2.20	J	1.74	10.0	10	08/17/2023 01:22	WG2115523
m&p-Xylene	37.5		4.30	20.0	10	08/17/2023 01:22	WG2115523
(S) Toluene-d8	*104*			*80.0-120*		*08/17/2023 01:22*	WG2115523
(S) 4-Bromofluorobenzene	*93.3*			*77.0-126*		*08/17/2023 01:22*	WG2115523
(S) 1,2-Dichloroethane-d4	*118*			*70.0-130*		*08/17/2023 01:22*	WG2115523

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
AK102 DRO C10-C25	1040		170	800	1	08/19/2023 05:55	WG2114922
(S) o-Terphenyl	*76.2*			*50.0-150*		*08/19/2023 05:55*	WG2114922

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

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Lead	26.1		2.99	6.00	1	08/28/2023 18:12	WG2120445

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	26500		287	1000	10	08/16/2023 18:27	WG2114993
(S) a,a,a-Trifluorotoluene(FID)	*104*			*50.0-150*		*08/16/2023 18:27*	WG2114993

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	U		0.941	10.0	10	08/16/2023 06:31	WG2114642
1,2-Dibromoethane	U		1.26	10.0	10	08/16/2023 06:31	WG2114642
1,2-Dichloroethane	U		0.819	10.0	10	08/16/2023 06:31	WG2114642
Ethylbenzene	681		1.37	10.0	10	08/16/2023 06:31	WG2114642
Isopropylbenzene	39.4		1.05	10.0	10	08/16/2023 06:31	WG2114642
Methylene Chloride	U		4.30	50.0	10	08/16/2023 06:31	WG2114642
Naphthalene	211		10.0	50.0	10	08/16/2023 06:31	WG2114642
Tetrachloroethene	U		3.00	10.0	10	08/16/2023 06:31	WG2114642
Toluene	1810		2.78	10.0	10	08/16/2023 06:31	WG2114642
1,1,2-Trichloroethane	U		1.58	10.0	10	08/16/2023 06:31	WG2114642
1,2,4-Trimethylbenzene	2280		32.2	100	100	08/17/2023 01:43	WG2115523
1,3,5-Trimethylbenzene	629		1.04	10.0	10	08/16/2023 06:31	WG2114642
Vinyl chloride	U		2.34	10.0	10	08/16/2023 06:31	WG2114642
Xylenes, Total	7370		17.4	300	100	08/17/2023 01:43	WG2115523
o-Xylene	2070		17.4	100	100	08/17/2023 01:43	WG2115523
m&p-Xylene	5300		43.0	200	100	08/17/2023 01:43	WG2115523
(S) Toluene-d8	*103*			*80.0-120*		*08/16/2023 06:31*	WG2114642
(S) Toluene-d8	*104*			*80.0-120*		*08/17/2023 01:43*	WG2115523
(S) 4-Bromofluorobenzene	*97.8*			*77.0-126*		*08/16/2023 06:31*	WG2114642
(S) 4-Bromofluorobenzene	*94.3*			*77.0-126*		*08/17/2023 01:43*	WG2115523
(S) 1,2-Dichloroethane-d4	*102*			*70.0-130*		*08/16/2023 06:31*	WG2114642
(S) 1,2-Dichloroethane-d4	*113*			*70.0-130*		*08/17/2023 01:43*	WG2115523

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
AK102 DRO C10-C25	4920		170	800	1	08/19/2023 06:15	WG2114922
(S) o-Terphenyl	*57.7*			*50.0-150*		*08/19/2023 06:15*	WG2114922

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Lead	51.7		2.99	6.00	1	08/28/2023 18:15	WG2120445

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	49800		718	2500	25	08/16/2023 18:49	WG2114993
(S) a,a,a-Trifluorotoluene(FID)	*104*			*50.0-150*		*08/16/2023 18:49*	WG2114993

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	22.5	J	2.35	25.0	25	08/16/2023 06:52	WG2114642
1,2-Dibromoethane	U		3.15	25.0	25	08/16/2023 06:52	WG2114642
1,2-Dichloroethane	U		2.05	25.0	25	08/16/2023 06:52	WG2114642
Ethylbenzene	2230		3.43	25.0	25	08/16/2023 06:52	WG2114642
Isopropylbenzene	80.3		2.63	25.0	25	08/16/2023 06:52	WG2114642
Methylene Chloride	U		10.7	125	25	08/16/2023 06:52	WG2114642
Naphthalene	380		25.0	125	25	08/16/2023 06:52	WG2114642
Tetrachloroethene	U		7.50	25.0	25	08/16/2023 06:52	WG2114642
Toluene	2260		6.95	25.0	25	08/16/2023 06:52	WG2114642
1,1,2-Trichloroethane	U		3.95	25.0	25	08/16/2023 06:52	WG2114642
1,2,4-Trimethylbenzene	2610		8.05	25.0	25	08/16/2023 06:52	WG2114642
1,3,5-Trimethylbenzene	649		2.60	25.0	25	08/16/2023 06:52	WG2114642
Vinyl chloride	U		5.85	25.0	25	08/16/2023 06:52	WG2114642
Xylenes, Total	16800		43.5	750	250	08/17/2023 02:04	WG2115523
o-Xylene	5210		43.5	250	250	08/17/2023 02:04	WG2115523
m&p-Xylene	11600		108	500	250	08/17/2023 02:04	WG2115523
(S) Toluene-d8	*103*			*80.0-120*		*08/16/2023 06:52*	WG2114642
(S) Toluene-d8	*107*			*80.0-120*		*08/17/2023 02:04*	WG2115523
(S) 4-Bromofluorobenzene	*92.9*			*77.0-126*		*08/16/2023 06:52*	WG2114642
(S) 4-Bromofluorobenzene	*93.8*			*77.0-126*		*08/17/2023 02:04*	WG2115523
(S) 1,2-Dichloroethane-d4	*103*			*70.0-130*		*08/16/2023 06:52*	WG2114642
(S) 1,2-Dichloroethane-d4	*113*			*70.0-130*		*08/17/2023 02:04*	WG2115523

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
AK102 DRO C10-C25	7740		170	800	1	08/22/2023 20:28	WG2117859
(S) o-Terphenyl	*89.4*			*50.0-150*		*08/22/2023 20:28*	WG2117859

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Lead	19.5		2.99	6.00	1	08/28/2023 18:18	WG2120445

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	1870		28.7	100	1	08/16/2023 17:42	WG2114993
(S) a,a,a-Trifluorotoluene(FID)	*109*			*50.0-150*		*08/16/2023 17:42*	WG2114993

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	3.65	J	0.941	10.0	10	08/17/2023 02:25	WG2115523
1,2-Dibromoethane	U		1.26	10.0	10	08/17/2023 02:25	WG2115523
1,2-Dichloroethane	U		0.819	10.0	10	08/17/2023 02:25	WG2115523
Ethylbenzene	35.8		1.37	10.0	10	08/17/2023 02:25	WG2115523
Isopropylbenzene	14.3		1.05	10.0	10	08/17/2023 02:25	WG2115523
Methylene Chloride	U		4.30	50.0	10	08/17/2023 02:25	WG2115523
Naphthalene	U	C3	10.0	50.0	10	08/17/2023 02:25	WG2115523
Tetrachloroethene	U		3.00	10.0	10	08/17/2023 02:25	WG2115523
Toluene	U		2.78	10.0	10	08/17/2023 02:25	WG2115523
1,1,2-Trichloroethane	U		1.58	10.0	10	08/17/2023 02:25	WG2115523
1,2,4-Trimethylbenzene	96.9		3.22	10.0	10	08/17/2023 02:25	WG2115523
1,3,5-Trimethylbenzene	18.8		1.04	10.0	10	08/17/2023 02:25	WG2115523
Vinyl chloride	U		2.34	10.0	10	08/17/2023 02:25	WG2115523
Xylenes, Total	35.4		1.74	30.0	10	08/17/2023 02:25	WG2115523
o-Xylene	2.44	J	1.74	10.0	10	08/17/2023 02:25	WG2115523
m&p-Xylene	33.0		4.30	20.0	10	08/17/2023 02:25	WG2115523
(S) Toluene-d8	*106*			*80.0-120*		*08/17/2023 02:25*	WG2115523
(S) 4-Bromofluorobenzene	*93.4*			*77.0-126*		*08/17/2023 02:25*	WG2115523
(S) 1,2-Dichloroethane-d4	*110*			*70.0-130*		*08/17/2023 02:25*	WG2115523

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
AK102 DRO C10-C25	1020		170	800	1	08/22/2023 20:54	WG2117859
(S) o-Terphenyl	*96.1*			*50.0-150*		*08/22/2023 20:54*	WG2117859

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Lead	U		2.99	6.00	1	08/28/2023 18:21	WG2120445

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TPHGAK C6 to C10	U		28.7	100	1	08/16/2023 16:12	WG2114993
(S) a,a,a-Trifluorotoluene(FID)	*102*			*50.0-150*		*08/16/2023 16:12*	WG2114993

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	U		0.0941	1.00	1	08/16/2023 02:52	WG2114642
1,2-Dibromoethane	U		0.126	1.00	1	08/16/2023 02:52	WG2114642
1,2-Dichloroethane	U		0.0819	1.00	1	08/16/2023 02:52	WG2114642
Ethylbenzene	U		0.137	1.00	1	08/16/2023 02:52	WG2114642
Isopropylbenzene	U		0.105	1.00	1	08/16/2023 02:52	WG2114642
Methylene Chloride	U		0.430	5.00	1	08/16/2023 02:52	WG2114642
Naphthalene	U		1.00	5.00	1	08/16/2023 02:52	WG2114642
Tetrachloroethene	U		0.300	1.00	1	08/16/2023 02:52	WG2114642
Toluene	U		0.278	1.00	1	08/16/2023 02:52	WG2114642
1,1,2-Trichloroethane	U		0.158	1.00	1	08/16/2023 02:52	WG2114642
1,2,4-Trimethylbenzene	U		0.322	1.00	1	08/16/2023 02:52	WG2114642
1,3,5-Trimethylbenzene	U		0.104	1.00	1	08/16/2023 02:52	WG2114642
Vinyl chloride	U		0.234	1.00	1	08/16/2023 02:52	WG2114642
Xylenes, Total	U		0.174	3.00	1	08/16/2023 02:52	WG2114642
o-Xylene	U		0.174	1.00	1	08/16/2023 02:52	WG2114642
m&p-Xylene	U		0.430	2.00	1	08/16/2023 02:52	WG2114642
(S) Toluene-d8	*105*			*80.0-120*		*08/16/2023 02:52*	WG2114642
(S) 4-Bromofluorobenzene	*93.4*			*77.0-126*		*08/16/2023 02:52*	WG2114642
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*		*08/16/2023 02:52*	WG2114642

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
AK102 DRO C10-C25	U		170	800	1	08/22/2023 21:19	WG2117859
(S) o-Terphenyl	*96.2*			*50.0-150*		*08/22/2023 21:19*	WG2117859

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TPHGAK C6 to C10	U		28.7	100	1	08/16/2023 15:28	WG2114993
(S) a,a,a-Trifluorotoluene(FID)	*94.1*			*50.0-150*		*08/16/2023 15:28*	WG2114993

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	U		0.0941	1.00	1	08/16/2023 01:47	WG2114642
1,2-Dibromoethane	U		0.126	1.00	1	08/16/2023 01:47	WG2114642
1,2-Dichloroethane	U		0.0819	1.00	1	08/16/2023 01:47	WG2114642
Ethylbenzene	U		0.137	1.00	1	08/16/2023 01:47	WG2114642
Isopropylbenzene	U		0.105	1.00	1	08/16/2023 01:47	WG2114642
Methylene Chloride	U		0.430	5.00	1	08/16/2023 01:47	WG2114642
Naphthalene	U		1.00	5.00	1	08/16/2023 01:47	WG2114642
Tetrachloroethene	U		0.300	1.00	1	08/16/2023 01:47	WG2114642
Toluene	U		0.278	1.00	1	08/16/2023 01:47	WG2114642
1,1,2-Trichloroethane	U		0.158	1.00	1	08/16/2023 01:47	WG2114642
1,2,4-Trimethylbenzene	U		0.322	1.00	1	08/16/2023 01:47	WG2114642
1,3,5-Trimethylbenzene	U		0.104	1.00	1	08/16/2023 01:47	WG2114642
Vinyl chloride	U		0.234	1.00	1	08/16/2023 01:47	WG2114642
Xylenes, Total	U		0.174	3.00	1	08/16/2023 01:47	WG2114642
o-Xylene	U		0.174	1.00	1	08/16/2023 01:47	WG2114642
m&p-Xylene	U		0.430	2.00	1	08/16/2023 01:47	WG2114642
(S) Toluene-d8	*107*			*80.0-120*		*08/16/2023 01:47*	WG2114642
(S) 4-Bromofluorobenzene	*93.4*			*77.0-126*		*08/16/2023 01:47*	WG2114642
(S) 1,2-Dichloroethane-d4	*106*			*70.0-130*		*08/16/2023 01:47*	WG2114642

Method Blank (MB)

(MB) R3966522-1 08/28/23 17:28

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

Laboratory Control Sample (LCS)

(LCS) R3966522-2 08/28/23 17:31

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Lead	1000	993	99.3	80.0-120	

L1645579-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1645579-06 08/28/23 17:34 • (MS) R3966522-4 08/28/23 17:40 • (MSD) R3966522-5 08/28/23 17:42

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	%	%		%			%	%
Lead	1000	U	996	961	99.6	96.1	1	75.0-125			3.66	20

L1645669-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1645669-01 08/28/23 17:45 • (MS) R3966522-6 08/28/23 17:48 • (MSD) R3966522-7 08/28/23 17:51

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	%	%		%			%	%
Lead	1000	6.31	975	952	96.9	94.6	1	75.0-125			2.35	20

Method Blank (MB)

(MB) R3962221-3 08/16/23 11:27

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
TPHGAK C6 to C10	54.8	J	28.7	100
(S) a,a,a-Trifluorotoluene(FID)	*95.3*			*60.0-120*

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

(LCS) R3962221-1 08/16/23 09:26 • (LCSD) R3962221-2 08/16/23 09:49

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPHGAK C6 to C10	5000	4480	4620	89.6	92.4	60.0-120			3.08	20
(S) a,a,a-Trifluorotoluene(FID)				*91.9*	*68.2*	*60.0-120*				

Method Blank (MB)

(MB) R3963966-3 08/20/23 13:33

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
TPHGAK C6 to C10	56.8	J	28.7	100
(S) a,a,a-Trifluorotoluene(FID)	*93.4*			*60.0-120*

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

(LCS) R3963966-1 08/20/23 12:24 • (LCSD) R3963966-2 08/20/23 12:47

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPHGAK C6 to C10	5000	3900	3860	78.0	77.2	60.0-120			1.03	20
(S) a,a,a-Trifluorotoluene(FID)				*98.6*	*95.2*	*60.0-120*				

Method Blank (MB)

(MB) R3961638-3 08/15/23 22:42

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.0941	1.00
1,2-Dibromoethane	U		0.126	1.00
1,2-Dichloroethane	U		0.0819	1.00
Ethylbenzene	U		0.137	1.00
Isopropylbenzene	U		0.105	1.00
Methylene Chloride	U		0.430	5.00
Naphthalene	U		1.00	5.00
Tetrachloroethene	U		0.300	1.00
Toluene	U		0.278	1.00
1,1,2-Trichloroethane	U		0.158	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-Xylene	U		0.430	2.00
(S) Toluene-d8	*110*			*80.0-120*
(S) 4-Bromofluorobenzene	*95.5*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*108*			*70.0-130*

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

(LCS) R3961638-1 08/15/23 21:14 • (LCSD) R3961638-2 08/15/23 21:36

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	4.88	4.64	97.6	92.8	70.0-123			5.04	20
1,2-Dibromoethane	5.00	4.64	4.65	92.8	93.0	80.0-122			0.215	20
1,2-Dichloroethane	5.00	5.43	5.12	109	102	70.0-128			5.88	20
Ethylbenzene	5.00	4.73	4.53	94.6	90.6	79.0-123			4.32	20
Isopropylbenzene	5.00	4.49	4.63	89.8	92.6	76.0-127			3.07	20
Methylene Chloride	5.00	4.98	5.09	99.6	102	67.0-120			2.18	20
Naphthalene	5.00	4.64	4.89	92.8	97.8	54.0-135			5.25	20
Tetrachloroethene	5.00	4.32	4.16	86.4	83.2	72.0-132			3.77	20
Toluene	5.00	4.56	4.61	91.2	92.2	79.0-120			1.09	20
1,1,2-Trichloroethane	5.00	4.84	4.78	96.8	95.6	80.0-120			1.25	20
1,2,4-Trimethylbenzene	5.00	5.06	5.16	101	103	76.0-121			1.96	20
1,3,5-Trimethylbenzene	5.00	4.88	4.98	97.6	99.6	76.0-122			2.03	20
Vinyl chloride	5.00	6.29	6.44	126	129	67.0-131			2.36	20
Xylenes, Total	15.0	13.9	13.4	92.7	89.3	79.0-123			3.66	20

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

(LCS) R3961638-1 08/15/23 21:14 • (LCSD) R3961638-2 08/15/23 21:36

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 %
o-Xylene	5.00	4.60	4.41	92.0	88.2	80.0-122			4.22	20
m&p-Xylene	10.0	9.32	9.01	93.2	90.1	80.0-122			3.38	20
(S) Toluene-d8				*107*	*103*	*80.0-120*				
(S) 4-Bromofluorobenzene				*95.6*	*95.1*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*111*	*114*	*70.0-130*				

Method Blank (MB)

(MB) R3962215-3 08/16/23 19:41

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.0941	1.00
1,2-Dibromoethane	U		0.126	1.00
1,2-Dichloroethane	U		0.0819	1.00
Ethylbenzene	U		0.137	1.00
Isopropylbenzene	U		0.105	1.00
Methylene Chloride	U		0.430	5.00
Naphthalene	U		1.00	5.00
Tetrachloroethene	U		0.300	1.00
Toluene	U		0.278	1.00
1,1,2-Trichloroethane	U		0.158	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-Xylene	U		0.430	2.00
(S) Toluene-d8	*108*			*80.0-120*
(S) 4-Bromofluorobenzene	*94.3*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*118*			*70.0-130*

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

(LCS) R3962215-1 08/16/23 18:38 • (LCSD) R3962215-2 08/16/23 18:59

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	4.83	4.98	96.6	99.6	70.0-123			3.06	20
1,2-Dibromoethane	5.00	4.50	4.42	90.0	88.4	80.0-122			1.79	20
1,2-Dichloroethane	5.00	4.84	5.00	96.8	100	70.0-128			3.25	20
Ethylbenzene	5.00	4.46	4.57	89.2	91.4	79.0-123			2.44	20
Isopropylbenzene	5.00	4.64	4.59	92.8	91.8	76.0-127			1.08	20
Methylene Chloride	5.00	5.53	5.46	111	109	67.0-120			1.27	20
Naphthalene	5.00	3.42	3.47	68.4	69.4	54.0-135			1.45	20
Tetrachloroethene	5.00	4.66	4.87	93.2	97.4	72.0-132			4.41	20
Toluene	5.00	4.72	4.71	94.4	94.2	79.0-120			0.212	20
1,1,2-Trichloroethane	5.00	4.75	4.81	95.0	96.2	80.0-120			1.26	20
1,2,4-Trimethylbenzene	5.00	4.81	4.70	96.2	94.0	76.0-121			2.31	20
1,3,5-Trimethylbenzene	5.00	4.44	4.40	88.8	88.0	76.0-122			0.905	20
Vinyl chloride	5.00	4.79	5.01	95.8	100	67.0-131			4.49	20
Xylenes, Total	15.0	13.7	13.5	91.3	90.0	79.0-123			1.47	20

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

(LCS) R3962215-1 08/16/23 18:38 • (LCSD) R3962215-2 08/16/23 18:59

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 %
o-Xylene	5.00	4.44	4.56	88.8	91.2	80.0-122			2.67	20
m&p-Xylene	10.0	9.21	8.93	92.1	89.3	80.0-122			3.09	20
(S) Toluene-d8				*108*	*105*	*80.0-120*				
(S) 4-Bromofluorobenzene				*97.7*	*96.1*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*113*	*114*	*70.0-130*				

Method Blank (MB)

(MB) R3964065-1 08/18/23 21:34

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
AK102 DRO C10-C25	U		170	800
(S) o-Terphenyl	*101*			*60.0-120*

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

(LCS) R3964065-2 08/18/23 21:54 • (LCSD) R3964065-3 08/18/23 22:15

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
AK102 DRO C10-C25	6000	6850	6050	114	101	75.0-125			12.4	20
(S) o-Terphenyl				*136*	*117*	*60.0-120*	J1			

L1644984-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1644984-02 08/18/23 22:55 • (MS) R3964065-4 08/18/23 23:15 • (MSD) R3964065-5 08/18/23 23:35

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
AK102 DRO C10-C25	6000	U	4260	4750	71.0	79.2	1	75.0-125	J6		10.9	20
(S) o-Terphenyl					*93.1*	*115*		*50.0-150*				

L1645337-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1645337-03 08/19/23 02:33 • (MS) R3964065-6 08/19/23 02:53 • (MSD) R3964065-7 08/19/23 03:14

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
AK102 DRO C10-C25	6000	170	5600	5130	93.3	85.5	1	75.0-125			8.76	20
(S) o-Terphenyl					*118*	*118*		*50.0-150*				

Method Blank (MB)

(MB) R3964188-1 08/22/23 19:12

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
AK102 DRO C10-C25	U		170	800
(S) o-Terphenyl	*98.5*			*60.0-120*

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

(LCS) R3964188-2 08/22/23 19:38 • (LCSD) R3964188-3 08/22/23 20:03

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
AK102 DRO C10-C25	6000	5750	5600	95.8	93.3	75.0-125			2.64	20
(S) o-Terphenyl				*114*	*119*	*60.0-120*				

L1645579-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1645579-06 08/23/23 00:18 • (MS) R3964188-4 08/22/23 23:27 • (MSD) R3964188-5 08/22/23 23:53

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
AK102 DRO C10-C25	6000	503	6070	6050	92.8	92.4	1	75.0-125			0.330	20
(S) o-Terphenyl					*113*	*116*		*50.0-150*				

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

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

Qualifier	Description
C3	The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Method sensitivity check is acceptable.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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

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

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

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

Company Name/Address:
Arcadis - Chevron - AK

880 H St.
Anchorage, AK 99501

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

Pres Chk

Report to: **Gerald Robinson**

Email To: **Alaura.Gonzalez@arcadis.com;Gerald.Robinson**

Project Description: **211083**

City/State Collected: **Fairbanks AK**

Please Circle: PT MT CT ET (AK)

Phone: **907-276-8095**

Client Project # **30063669 05.42**

Lab Project # **CHEVARCAK-211083**

Collected by (print): **Grant Jeffers**

Site/Facility ID # **230 OLD STEESE HWY**

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

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

Quote #

Date Results Needed: **Standard**

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	8260 124-TMB,135-TMB 40mlAmb-HCl	8260 BTEXN,EDC,EDB 40mlAmb-HCl	AK101 40mlAmb HCl	AK102 100ml Amb HCl	Lead 6010 250mlHDPE-HNO3	<2	Remarks	Sample # (lab only)
MW-11-W-20230810	Grab	GW	–	8/10/23	1010	9	X	X	X	X	X			-01
MW-12-W-20230810		GW	–		1427									-02
MW-13-W-20230810		GW	–		1237									-03
MW-14-W-20230810		GW	–		1551									-04
MW-15-W-20230810		GW	–		1708									-05
BD-1-W-20230810		GW	–		–									-06
EQB-1-W-20230810		GW	–		1050									-07
TB-1	–	–	–	–	–	–								-08

Chain of Custody Page 1 of 1

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN

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

SDG # L1645570

A187

Acctnum: **CHEVARCAK**
Template: **T233886**
Prelogin: **P1011534**
PM: **110 - Brian Ford**
PB: /

Shipped Via: **FedEX 2nd Day**

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

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: __ UPS X FedEx __ Courier _____

Tracking # 6841 8342 4740

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

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	8/11/23	1200	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			(14)

Trip Blank Received: Yes / No
HCl / MeoH
TBR

Temp: GBAG °C Bottles Received: 63
3.9+0=3.9

If preservation required by Login: Date/Time

Date: 8/12/23 Time: 900

PH-10BDH4321 TRC-2144141
CR6-20221V
PH-10BDH4321 TRC-2144141

Condition: NCF / OK

ANALYTICAL REPORT

August 31, 2023

Arcadis - Chevron - AK

Sample Delivery Group:	L1650606
Samples Received:	08/12/2023
Project Number:	30063669 05.42
Description:	211083
Site:	230 OLD STEESE HWY FAIRBANKS
Report To:	Gerald Robinson 880 H St. Anchorage, AK 99501

Entire Report Reviewed By:

Brian Ford

Project Manager

Pace Analytical National

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

TABLE OF CONTENTS

MW-11-W-20230810 L1650606-01 GW

Collected by: G. Jeffers | Collected date/time: 08/10/23 10:10 | Received date/time: 08/12/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010D	WG2120445	1	08/25/23 08:38	08/28/23 18:03	JDG	Mt. Juliet, TN

MW-12-W-20230810 L1650606-02 GW

Collected by: G. Jeffers | Collected date/time: 08/10/23 14:27 | Received date/time: 08/12/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010D	WG2120445	1	08/25/23 08:38	08/28/23 18:06	JDG	Mt. Juliet, TN

MW-13-W-20230810 L1650606-03 GW

Collected by: G. Jeffers | Collected date/time: 08/10/23 12:37 | Received date/time: 08/12/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010D	WG2120445	1	08/25/23 08:38	08/28/23 18:09	JDG	Mt. Juliet, TN

MW-14-W-20230810 L1650606-04 GW

Collected by: G. Jeffers | Collected date/time: 08/10/23 15:51 | Received date/time: 08/12/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010D	WG2120445	1	08/25/23 08:38	08/28/23 18:12	JDG	Mt. Juliet, TN

MW-15-W-20230810 L1650606-05 GW

Collected by: G. Jeffers | Collected date/time: 08/10/23 17:08 | Received date/time: 08/12/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010D	WG2120445	1	08/25/23 08:38	08/28/23 18:15	JDG	Mt. Juliet, TN

BD-1-W-20230810 L1650606-06 GW

Collected by: G. Jeffers | Collected date/time: 08/10/23 00:00 | Received date/time: 08/12/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010D	WG2120445	1	08/25/23 08:38	08/28/23 18:18	JDG	Mt. Juliet, TN

EQB-1-W-20230810 L1650606-07 GW

Collected by: G. Jeffers | Collected date/time: 08/10/23 10:50 | Received date/time: 08/12/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010D	WG2120445	1	08/25/23 08:38	08/28/23 18:21	JDG	Mt. Juliet, TN

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

Metals (ICP) by Method 6010D

The same analyte is found in the associated blank.

Batch	Analyte	Lab Sample ID
WG2120445	Arsenic	L1650606-01, 02, 03, 04, 05, 06

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Arsenic	25.6	B	4.40	10.0	1	08/28/2023 18:03	WG2120445

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Arsenic	55.0	B	4.40	10.0	1	08/28/2023 18:06	WG2120445

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Arsenic	26.1	B	4.40	10.0	1	08/28/2023 18:09	WG2120445

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Arsenic	31.4	B	4.40	10.0	1	08/28/2023 18:12	WG2120445

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Arsenic	45.7	B	4.40	10.0	1	08/28/2023 18:15	WG2120445

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Arsenic	21.0	B	4.40	10.0	1	08/28/2023 18:18	WG2120445

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Arsenic	U		4.40	10.0	1	08/28/2023 18:21	WG2120445

Method Blank (MB)

(MB) R3965735-1 08/25/23 18:52

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Arsenic	5.92	J	4.40	10.0

Laboratory Control Sample (LCS)

(LCS) R3965735-2 08/25/23 18:55

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	1000	981	98.1	80.0-120	

L1645579-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1645579-06 08/25/23 18:57 • (MS) R3965735-4 08/25/23 19:03 • (MSD) R3965735-5 08/25/23 19:05

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 %
Arsenic	1000	U	990	950	99.0	95.0	1	75.0-125			4.15	20

L1645669-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1645669-01 08/25/23 19:08 • (MS) R3965735-6 08/25/23 19:10 • (MSD) R3965735-7 08/25/23 19:13

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 %
Arsenic	1000	U	975	957	97.5	95.7	1	75.0-125			1.87	20

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

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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

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

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

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

Company Name/Address:
Arcadis - Chevron - AK

880 H St.
Anchorage, AK 99501

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

Pres Chk

Report to:
Gerald Robinson

Email To:
Alaura.Gonzalez@arcadis.com;Gerald.Robinson

Project Description:
211083

City/State Collected: Fairbanks AK

Please Circle: PT MT CT ET (AK)

Phone: 907-276-8095

Client Project #
30063669 05.42

Lab Project #
CHEVARCAK-211083

Collected by (print):
Grant Jeffers

Site/Facility ID #
230 OLD STEESE HWY

P.O. #

Collected by (signature):

Immediately
Packed on Ice N ___ Y X

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

Quote #

Date Results Needed: Standard

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	8260 124-TMB,135-TMB 40mlAmb-HCl	8260 BTEXN,EDC,EDB 40mlAmb-HCl	AK101 40mlAmb HCl	AK102 100ml Amb HCl	Lead 6010 250mlHDPE-HNO3	<2						Remarks	Sample # (lab only)
MW-11-W-20230810	Grab	GW	–	8/10/23	1010	9	X	X	X	X	X								-01
MW-12-W-20230810		GW	–		1427														-02
MW-13-W-20230810		GW	–		1237														-03
MW-14-W-20230810		GW	–		1551														-04
MW-15-W-20230810		GW	–		1708														-05
BD-1-W-20230810		GW	–		–														-06
EQB-1-W-20230810		GW	–		1050														-07
TB-1	–	–	–	–	–	–													~~-08~~

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

Pace
PEOPLE ADVANCING SCIENCE

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

SDG # ~~L1645570~~ AV 8/9/23
A187
L1650606
Acctnum: CHEVARCAK
Template: T233886
Prelogin: P1011534
PM: 110 - Brian Ford
PB: /
Shipped Via: FedEX 2nd Day

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

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS X FedEx __ Courier _____

Tracking # 6841 8342 4740

Sample Receipt Checklist

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

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	8/11/23	1200	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) (14)

Trip Blank Received: Yes (No) HCl / MeoH TBR
Temp: GBABC 3.9 to 3.9 Bottles Received: 63
Date: 8/12/23 Time: 900

If preservation required by Login: Date/Time

PH-10BDH4321 TRC-2144141
CR6-20221V
PH-10BDH4321 TRC-2144141

Condition: NCF / OK

L1645570 CHEVARCAK re-log

R5

please re-log all samples (except -08 TB-1) for ASICP as R5 due 09/07. report from existing data.

Time estimate: oh **Time spent:** oh

Members

BF Brian Ford

Attachment D

Historical Groundwater Analytical Results

Table 1. Historical Groundwater Gauging and Analytical Results
Second Quarter 1993 through 2022
Former Texaco Service Station 211083
230 Old Steese Highway
Fairbanks, Alaska

Well ID	Sample Date	Screen Interval (ft bTOC)	TOC (ft amsl)	DTW (ft bTOC)	LNAPL Thickness (ft)	GW Elev (ft amsl)	DRO (mg/L)	GRO (mg/L)	RRO (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)	EDB (mg/L)	Lead (mg/L)	Dissolved Lead (mg/L)	Comments
ADEC Groundwater Cleanup Levels							**1.5**	**2.2**	**1.1**	**0.0046**	**1.1**	**0.015**	**0.19**	**0.14**	**0.000075**	**0.015**	**0.015**	
MW-1	6/28/1993	--	--	--	--	--	--	--	--	**26**	**29**	**3.2**	**14**	--	--	--	--	
MW-1	3/8/1994	--	--	--	--	--	--	--	--	**22**	**24**	**2.4**	**12**	--	--	--	--	
MW-1	7/7/1994	--	--	--	--	--	--	--	--	**22**	**23**	**2**	**11**	--	--	--	--	
MW-1	2/22/1995	--	--	--	--	--	--	--	--	**21**	**25**	**2.2**	**12**	--	--	--	--	
MW-1	5/9/1995	--	--	--	--	--	--	--	--	**17**	**21**	**1.9**	**10**	--	--	--	--	
MW-1	8/31/1995	--	--	--	--	--	--	--	--	**15**	**16**	**1.1**	**6.8**	--	--	--	--	
MW-1	12/18/1995	--	--	--	--	--	--	--	--	**18**	**20**	**1.1**	**9.8**	--	--	--	--	
MW-1	7/11/1996	--	--	--	--	--	--	--	--	**15**	**19**	**1.1**	**0.1**	--	--	--	--	
MW-1	12/4/1996	--	--	--	--	--	--	--	--	**13.1**	**17.9**	**0.877**	**12.4**	--	--	--	--	
MW-1	7/29/1997	--	--	--	--	--	--	--	--	**15.8**	**17.6**	**0.351**	**10.4**	--	--	--	--	
MW-1	1/9/1998	--	--	--	--	--	--	--	--	**17.1**	**23.1**	**1.24**	**11.3**	--	--	--	--	
MW-1	6/30/1998	--	--	--	--	--	--	--	--	**0.471**	**2.07**	**0.181**	**3.62**	--	--	--	--	
MW-1	1/13/1999	--	--	--	--	--	--	--	--	**0.00134**	**0.00559**	**0.00179**	**0.0212**	--	--	--	--	
MW-1	7/20/1999	--	--	--	--	--	--	--	--	<0.001	<0.001	**0.00145**	**0.00315**	--	--	--	--	
MW-1	2/4/2000	--	--	--	--	--	--	--	--	**0.00265 / 0.00247**	<0.001 / <0.001	**0.00483 / 0.00489**	**0.00861 / 0.00881**	--	--	--	--	
MW-1	12/6/2000	--	--	--	--	--	--	**0.0739**	--	**0.00065**	**0.00112**	**0.000574**	**0.00264**	--	--	--	--	
MW-1	2/22/2002	--	--	--	--	--	--	**0.378**	--	<0.001	<0.001	**0.00193**	**0.00326**	--	--	--	--	
MW-1	8/20/2002	--	--	--	--	--	--	<0.05	--	<0.0002	<0.0005	<0.0005	<0.001	--	--	--	--	
MW-1	9/3/2003	--	--	--	--	--	--	<0.05	--	<0.0002	<0.0005	<0.0005	<0.001	--	--	--	--	
MW-1	4/20/2004	--	--	--	--	--	--	**0.18**	--	**0.0018**	**0.00165**	**0.00054**	**0.00482**	--	--	--	--	
MW-1	4/21/2005	--	--	--	--	--	--	**1.2 / 1.3**	--	**0.012 / 0.012**	<0.002 / <0.002	**0.0024 / 0.0029**	**0.0063 / 0.0076**	--	--	--	--	
MW-1	9/6/2005	--	--	--	--	--	--	**0.34 / 0.36**	--	**0.0085 / 0.0087**	<0.002 / <0.002	**0.0006 / 0.0007**	**0.0055 / 0.0056**	--	<0.0000094 / <0.0000092	--	--	
MW-1	10/7/2005	--	438.44	13.06	--	425.38	--	--	--	--	--	--	--	--	--	--	--	
MW-1	4/5/2006	--	438.44	15.17	--	423.27	--	--	--	--	--	--	--	--	--	--	--	
MW-1	4/6/2006	--	--	--	--	--	--	**0.74**	--	**0.0099**	**0.0007**	**0.0014**	**0.0041**	<0.02	<0.0000096	--	--	
MW-1	6/23/2006	--	438.44	14.15	--	424.29	--	--	--	--	--	--	--	--	--	--	--	
MW-1	7/10/2006	--	438.44	12.96	--	425.48	--	--	--	--	--	--	--	--	--	--	--	
MW-1	8/1/2006	--	438.44	13.74	--	424.70	--	--	--	--	--	--	--	--	--	--	--	
MW-1	9/6/2006	--	438.44	13.35	--	425.09	**1**	**0.7**	--	**0.0074**	**0.0006**	**0.0011**	**0.0041**	--	<0.0000094	--	--	
MW-1	10/31/2006	--	438.44	14.35	--	424.09	--	--	--	--	--	--	--	--	--	--	--	
MW-1	11/28/2006	--	101.43	14.44	--	86.99	--	--	--	--	--	--	--	--	--	--	--	
MW-1	12/24/2006	--	101.43	14.73	--	86.70	--	--	--	--	--	--	--	--	--	--	--	
MW-1	2/2/2007	--	101.43	14.92	--	86.51	--	--	--	--	--	--	--	--	--	--	--	
MW-1	3/6/2007	--	101.43	15.16	--	86.27	--	--	--	--	--	--	--	--	--	--	--	
MW-1	3/8/2007	--	--	--	--	--	**1.6 / 1.9**	**1.3 / 1.3**	--	**0.02 / 0.01**	<0.005 / <0.005	**0.007 / 0.008**	**0.008 / 0.008**	--	<0.0000098 / <0.0000097	--	--	
MW-1	4/30/2007	--	101.43	14.84	--	86.59	--	--	--	--	--	--	--	--	--	--	--	
MW-1	5/18/2007	--	101.43	14.58	--	86.85	--	--	--	--	--	--	--	--	--	--	--	
MW-1	6/29/2007	--	101.43	14.43	--	87.00	--	--	--	--	--	--	--	--	--	--	--	
MW-1	7/30/2007	--	101.43	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	8/8/2007	--	101.43	14.11	--	87.32	--	--	--	--	--	--	--	--	--	--	--	
MW-1	9/8/2007	--	101.43	13.68	--	87.75	**0.84 / 0.86**	**1.3 / 1.4**	--	**0.02 / 0.02**	**0.002 / 0.002**	**0.005 / 0.005**	**0.01 / 0.01**	--	<0.0000097 / <0.0000095	--	--	
MW-1	4/6/2008	--	101.43	15.47	--	85.96	--	--	--	--	--	--	--	--	--	--	--	
MW-1	4/7/2008	--	--	--	--	--	**1.03**	**3.28**	<0.743	**0.0118**	**0.00333**	**0.0282**	**0.0142**	--	--	--	--	
MW-1	9/15/2008	--	101.43	12.94	--	88.49	**0.41**	**0.2**	--	**0.002**	<0.001	**0.002**	**0.002**	--	--	--	--	
MW-1	5/7/2009	--	101.43	13.35	--	88.08	**0.89**	**1.2**	**0.22**	**0.011**	<0.005	<0.005	**0.0078**	--	--	--	--	
MW-1	9/9/2009	--	101.43	13.40	--	88.03	**0.50**	**0.15**	--	**0.0008 J**	<0.0005	**0.0006 J**	**0.0018 J**	--	--	--	--	
MW-1	7/27/2010	--	101.43	14.18	--	87.25	**0.33**	**0.048 J**	--	<0.0005	<0.0005	<0.0005	<0.0015	--	--	--	--	
MW-1	10/6/2010	--	101.43	14.63	--	86.80	**0.81**	**0.61 J**	--	**0.0061**	**0.0013 J**	**0.0006 J**	**0.0044 J**	--	--	--	--	
MW-1	6/13/2011	--	101.43	14.14	--	87.29	**1.1**	**1.5 J**	--	**0.018**	<0.0050	**0.0016 J**	**0.0060**	--	--	--	--	
MW-1	8/2/2011	--	101.43	13.04	--	88.39	**0.76**	**1.7 J**	--	**0.011**	<0.0050	**0.0020**	**0.0067**	--	--	--	--	
MW-1	6/18/2012	--	101.43	13.19	--	88.24	**0.93**	**2.5 J**	--	**0.019 J**	**0.0036 J**	**0.0070 J**	**0.0092 J**	--	--	--	--	
MW-1	8/21/2012	--	101.43	14.15	--	87.28	**0.50**	**0.40**	--	**0.0042**	**0.0011 J**	**0.0048**	**0.0062**	--	--	--	--	
MW-1	6/6/2013	--	101.43	12.47	--	88.96	--	--	--	--	--	--	--	--	--	--	--	
MW-1	6/7/2013	--	--	--	--	--	**1.0**	**4.2 J**	--	**0.023**	**0.0018**	**0.019**	**0.022**	--	--	--	--	
MW-1	8/22/2013	--	101.43	14.01	--	87.42	**0.61 J**	**0.081 J**	--	<0.00024	<0.00023	**0.0013**	<0.00072	--	--	--	--	
MW-1	5/8/2014	--	443.90	13.10	--	430.8	**0.62**	**1.7 J**	--	**0.0040**	**0.00075 J**	**0.0074**	**0.0070**	--	--	--	--	
MW-1	9/26/2014	--	443.90	11.85	--	432.05	**0.33 J**	**0.089 J**	--	**0.00069 J**	<0.00011	<0.00016	<0.00040	--	--	--	--	
MW-1	2/4/2015	--	443.90	14.52	--	429.38	--	--	--	--	--	--	--	--	--	--	--	
MW-1	2/5/2015	--	--	--	--	--	**0.42 J**	<0.050 J	--	**0.00019 J**	<0.00011	<0.00016	<0.00040	--	--	--	--	
MW-1	9/17/2015	--	443.90	11.79	--	432.11	**0.71**	**2.1**	--	**0.009**	**0.003**	**0.004**	**0.016**	--	--	--	--	
MW-1	6/1/2016	--	443.90	13.84	--	430.06	**0.49 J**	**0.73**	--	**0.002**	<0.0005	**0.001**	**0.003**	--	--	--	--	
MW-1	7/24/2017	--	443.63	13.45	--	430.18	**0.19 J**	**0.25**	--	**0.001**	<0.0005	<0.0005	**0.0009 J**	--	--	--	--	
MW-1	8/21/2018	--	443.68	12.41	--	431.27	**0.32**	**0.96**	--	**0.003**	**0.001**	**0.005**	**0.009**	--	--	--	--	
MW-1	7/9/2019	--	443.57	14.50	0.00	429.07	**0.55**	**0.98**	--	**0.0016 J**	<0.0020 B	**0.018**	**0.0151 J**	--	--	--	--	DTW from the recent survey notes dated 7/23/2019
MW-1	7/21/2020	--	443.57	11.71	0.00	431.86	**0.411 J**	**1.12**	--	**0.0025**	**0.000388 J**	**0.0182**	**0.00847**	--	--	--	--	
MW-1	7/14/2021	--	443.57	13.58	0.00	429.99	<0.800 B	<0.100 B	--	**0.000204 J**	<0.00100	**0.00107 J**	**0.00382 J**	--	--	--	--	
MW-1	7/11/2022	--	443.57	12.70	0.00	430.87	**0.601 J**	**1.28**	--	**0.00418**	**0.000555 J**	**0.0022**	**0.00793**	--	--	--	--	
MW-2	6/28/1993	--	--	--	--	--	--	--	--	**8.8**	**19**	**2.8**	**11**	--	--	--	--	
MW-2	3/8/1994	--	--	--	--	--	--	--	--	**8.8 / 4.6**	**15 / 16**	**2.2 / 2.3**	**9.7 / 10**	--	--	--	--	
MW-2	7/8/1994	--	--	--	--	--	--	--	--	**2.8**	**5**	**1.5**	**5.6**	--	--	--	--	
MW-2	2/22/1995	--	--	--	--	--	--	--	--	**3.1**	**3.8**	**1.2**	**4.6**	--	--	--	--	
MW-2	5/9/1995	--	--	--	--	--	--	--	--	**3.1**	**8.3**	**1.3**	**9**	--	--	--	--	

Table 1. Historical Groundwater Gauging and Analytical Results
Second Quarter 1993 through 2022
Former Texaco Service Station 211083
230 Old Steese Highway
Fairbanks, Alaska

Well ID	Sample Date	Screen Interval (ft bTOC)	TOC (ft amsl)	DTW (ft bTOC)	LNAPL Thickness (ft)	GW Elev (ft amsl)	DRO (mg/L)	GRO (mg/L)	RRO (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)	EDB (mg/L)	Lead (mg/L)	Dissolved Lead (mg/L)	Comments
ADEC Groundwater Cleanup Levels							**1.5**	**2.2**	**1.1**	**0.0046**	**1.1**	**0.015**	**0.19**	**0.14**	**0.000075**	**0.015**	**0.015**	
MW-2	8/31/1995	--	--	--	--	--	--	--	--	**1.2**	**0.29**	**0.41**	**1.6**	--	--	--	--	
MW-2	12/18/1995	--	--	--	--	--	--	--	--	**2.2**	**5.3**	**0.36**	**4.7**	--	--	--	--	
MW-2	7/11/1996	--	--	--	--	--	--	--	--	**0.326 / 0.319**	**1.443 / 1.339**	**0.095 / 0.167**	**2.012 / 2.017**	--	--	--	--	
MW-2	12/4/1996	--	--	--	--	--	--	--	--	**0.0424 / 0.05**	**0.00138 / 0.00193**	**0.0107 / 0.0133**	**0.0278 / 0.0367**	--	--	--	--	
MW-2	7/29/1997	--	--	--	--	--	--	--	--	**1.13 / 1.11**	**2.14 / 2.21**	**0.213 / 0.209**	**0.984 / 0.978**	--	--	--	--	
MW-2	1/9/1998	--	--	--	--	--	--	--	--	**0.00244 / 0.00248**	**0.00304 / 0.00303**	<0.001 / <0.001	**0.0033 / 0.00308**	--	--	--	--	
MW-2	6/30/1998	--	--	--	--	--	--	--	--	**0.00516 / 0.00507**	<0.0005 / <0.0005	**0.00099 / 0.00102**	**0.0038 / 0.00378**	--	--	--	--	
MW-2	7/20/1999	--	--	--	--	--	--	--	--	**0.0305**	**0.139**	**0.0557**	**0.245**	--	--	--	--	
MW-2	2/7/2000	--	--	--	--	--	--	--	--	**0.194**	**0.498**	**0.326**	**1.29**	--	--	--	--	
MW-2	11/17/2000	--	--	--	--	--	--	**5**	--	**0.076**	**0.51**	**0.245**	**1.16**	--	--	--	--	
MW-2	7/30/2001	--	--	--	--	--	--	<0.05	--	<0.0002	<0.0005	<0.0005	**0.00323**	--	--	--	--	
MW-2	8/19/2002	--	--	--	--	--	--	**0.686**	--	**0.0571**	**0.037**	**0.15**	**0.926**	--	--	--	--	
MW-2	2/7/2003	--	--	--	--	--	--	**3.11**	--	**0.0336**	**0.172**	**0.0748**	**0.626**	--	--	--	--	
MW-2	9/3/2003	--	--	--	--	--	--	**0.722**	--	**0.00726**	**0.0216**	**0.0274**	**0.205**	--	--	--	--	
MW-2	4/20/2004	--	--	--	--	--	--	**26.5**	--	**0.182**	**0.809**	**1.38**	**8.39**	--	--	--	--	
MW-2	4/21/2005	--	--	--	--	--	--	**22**	--	**0.11**	**0.37**	**1**	**4.2**	--	--	--	--	
MW-2	9/6/2005	--	--	--	--	--	--	**15**	--	**0.066**	**0.18**	**0.53**	**2.7**	--	--	--	--	
MW-2	10/7/2005	--	435.91	10.53	--	425.38	--	--	--	--	--	--	--	--	--	--	--	
MW-2	4/5/2006	--	435.92	12.64	--	423.28	--	--	--	--	--	--	--	--	--	--	--	
MW-2	4/6/2006	--	--	--	--	--	**3.1**	**32**	**0.67**	**0.087**	**0.76**	**1.1**	**7.4**	<0.2	**0.000048**	**0.0276**	--	
MW-2	6/23/2006	--	435.92	11.65	--	424.28	--	--	--	--	--	--	--	--	--	--	--	
MW-2	7/10/2006	--	435.92	10.41	--	425.51	--	--	--	--	--	--	--	--	--	--	--	
MW-2	8/1/2006	--	435.92	11.25	--	424.67	--	--	--	--	--	--	--	--	--	--	--	
MW-2	9/6/2006	--	435.92	10.83	--	425.09	**0.76**	**7.6**	<0.1	**0.031**	**0.075**	**0.27**	**1.4**	<0.1	<0.0000097	<0.0069	--	
MW-2	10/31/2006	--	435.92	11.84	--	424.08	--	--	--	--	--	--	--	--	--	--	--	
MW-2	11/28/2006	--	98.91	11.92	--	86.99	--	--	--	--	--	--	--	--	--	--	--	
MW-2	12/24/2006	--	98.91	12.20	--	86.71	--	--	--	--	--	--	--	--	--	--	--	
MW-2	2/2/2007	--	98.91	12.38	--	86.53	--	--	--	--	--	--	--	--	--	--	--	
MW-2	3/6/2007	--	98.91	12.62	--	86.29	--	--	--	--	--	--	--	--	--	--	--	
MW-2	3/8/2007	--	--	--	--	--	**1.5**	**22**	<0.19	**0.07**	**0.4**	**0.8**	**4.8**	<0.2	**0.0000098**	**0.0193**	--	
MW-2	4/30/2007	--	98.91	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	5/18/2007	--	98.91	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	6/29/2007	--	98.91	11.92	--	86.99	--	--	--	--	--	--	--	--	--	--	--	
MW-2	7/30/2007	--	98.91	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	8/8/2007	--	98.91	11.74	--	87.17	--	--	--	--	--	--	--	--	--	--	--	
MW-2	9/8/2007	--	98.91	11.18	--	87.73	**0.79**	**6.1**	**0.045**	**0.04**	**0.07**	**0.3**	**1.2**	<0.05	<0.0000098	<0.0069	--	
MW-2	4/6/2008	--	98.91	12.97	--	85.94	--	--	--	--	--	--	--	--	--	--	--	
MW-2	4/7/2008	--	--	--	--	--	**2.37**	**22.7**	<0.75	**0.0555**	**0.332**	**0.893**	**4.84**	<0.02	--	**0.0593**	--	
MW-2	9/15/2008	--	98.91	10.40	--	88.51	**1.1 / 0.91**	**4.3 / 5.9**	**0.085 / 0.091**	**0.02 / 0.02**	**0.04 / 0.05**	**0.2 / 0.2**	**0.8 / 0.8**	**0.03 / 0.04**	--	<0.0069 / <0.0069	--	
MW-2	5/7/2009	--	98.91	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	9/9/2009	--	98.91	10.85	--	88.06	**1.3**	**0.71**	--	**0.0006 J**	**0.006**	**0.013**	**0.13**	<0.0005	--	--	**0.0262**	
MW-2	7/28/2010	--	98.91	11.64	--	87.27	**0.40 / 0.39**	**0.38 / 0.36**	**0.095 J / 0.10 J**	<0.0020 / <0.0050	**0.0011 J / 0.0012 J**	**0.0049 / 0.0055**	**0.060 / 0.068**	--	--	**0.0143 J / 0.0150 J**	--	
MW-2	10/6/2010	--	98.91	12.12	--	86.79	**0.43 / 0.41**	**1.7 / 1.6**	**0.15 J / 0.13 J**	<0.010 / <0.0050	**0.0027 J / 0.0057 J**	**0.014 J / 0.031 J**	**0.30 J / 0.65 J**	--	--	--	--	
MW-2	6/13/2011	--	98.91	11.63	--	87.28	--	--	--	--	--	--	--	--	--	--	--	
MW-2	6/14/2011	--	--	--	--	--	**1.5**	**2.3**	<0.14	<0.020	**0.0093 J**	**0.13**	**0.44**	--	--	**0.0068 J**	--	
MW-2	8/2/2011	--	98.91	10.57	--	88.34	**0.40**	**0.56**	**0.18 J**	<0.0005	**0.0012 J**	**0.027**	**0.075**	--	--	**0.0110 J**	--	
MW-2	6/18/2012	--	98.91	10.67	--	88.24	**0.63**	**1.6**	--	<0.011	**0.0033**	**0.052**	**0.24**	--	--	**0.0047 J**	--	
MW-2	8/21/2012	--	98.91	11.56	--	87.35	**2.7**	**8.5**	--	**0.038**	**0.026**	**0.26**	**2.0**	--	--	<0.0051	--	
MW-2	6/6/2013	--	98.91	10.04	--	88.87	--	--	--	--	--	--	--	--	--	--	--	
MW-2	6/7/2013	--	--	--	--	--	**0.76**	**1.4 J**	<0.43	**0.00077 J**	**0.00090 J**	**0.029**	**0.28**	--	--	**0.0029 J**	--	
MW-2	8/22/2013	--	98.91	11.40	--	87.51	**0.68 J**	**0.43**	**0.18 J**	<0.00024	<0.00029 J	**0.0038**	**0.078**	--	--	<0.0087 J	--	
MW-2	5/8/2014	--	441.60	10.50	--	431.1	**0.33 J**	**0.30**	**0.20 J**	**0.00071 J**	**0.00032 J**	**0.0032**	**0.056**	--	--	**0.0015**	--	
MW-2	9/26/2014	--	441.60	9.29	--	432.31	**0.44 J**	**0.81**	**0.21 J**	**0.00087 J**	**0.00089 J**	**0.028**	**0.12**	--	--	**0.0024**	--	
MW-2	2/4/2015	--	441.60	11.97	--	429.63	--	--	--	--	--	--	--	--	--	--	--	
MW-2	2/5/2015	--	--	--	--	--	**1.5 / 1.6**	**0.29 / 0.27**	**0.85 / 1.0**	**0.00034 J / 0.00042 J**	<0.00011 / <0.00011	**0.0015 / 0.0016**	**0.048 / 0.047**	--	--	**0.038 / 0.044**	--	
MW-2	9/17/2015	--	441.60	9.26	--	432.34	**0.49 / 0.47**	**1.2 / 1.7**	**0.13 J / 0.15 J**	**0.0009 J / 0.014 J**	**0.002 J / 0.024 J**	**0.029 J / 0.069 J**	**0.24 / 0.18**	--	--	0.0057 J / <0.0051	--	
MW-2	6/1/2016	--	441.60	11.35	--	430.25	**3.2 J**	**9.8**	--	<0.0030	**0.0060**	**0.22**	**1.7**	--	--	<0.0051	--	
MW-2	7/25/2017	--	441.12	10.98	--	430.14	**4.3**	**12**	<0.15	<0.0030	**0.007**	**0.18**	**2.1**	--	--	**0.0079 J**	--	
MW-2	7/25/2017	--	441.12	10.98	--	430.14	--	**12**	**0.15 U**	**0.003 U**	**0.007**	**0.18**	**2.1**	--	--	-	**0.0079 J**	
MW-2	8/21/2018	--	441.17	9.90	--	431.27	**1.8**	**4.0 / 4.3**	<0.084	**0.002 J / 0.025 J**	**0.003 J / 0.070 J**	**0.081 J / 0.040 J**	**0.65 / 0.94**	--	**0.000089**	<0.0071	--	
MW-2	7/9/2019	--	441.07	12.04	0.00	429.03	**2.7**	**12**	--	**0.0029 J**	**0.013**	**0.32 D**	**3.06 D**	--	--	**0.0047 J**	--	DTW from the recent survey notes dated 7/23/2019
MW-2	7/22/2020	--	441.07	9.23	0.00	431.84	**1.33**	**2.94 J**	--	**0.00133**	**0.00371**	**0.0755**	**0.641**	--	--	<0.00600	--	
MW-2	7/14/2021	--	441.07	11.12	0.00	429.95	**4.67 [4.29]**	**11.0 [11.1]**	--	**0.00402 J [0.00319 J]**	**0.0151 J [0.0141]**	**0.277 [0.238]**	**2.25 [2.07]**	--	-- [--]	**0.00312 J [0.00432 J]**	--	
MW-2	7/11/2022	--	441.07	10.25	0.00	430.82	**3.58**	**5.94**	--	***<0.0200 J***	**0.00631 J**	**0.158 J**	**1.5**	--	<0.0000206	**0.00365 J**	--	
MW-3	6/28/1993	--	--	--	--	--	--	--	--	**19**	**27**	**3.1**	**13**	--	--	--	--	
MW-3	3/8/1994	--	--	--	--	--	--	--	--	**19**	**28**	**2.9**	**14**	--	--	--	--	
MW-3	7/8/1994	--	--	--	--	--	--	--	--	**18 / 14**	**25 / 19**	**2.4 / 3**	**13 / 14**	--	--	--	--	
MW-3	2/22/1995	--	--	--	--	--	--	--	--	**21 / 23**	**28 / 29**	**2.5 / 2.6**	**13 / 13**	--	--	--	--	
MW-3	5/9/1995	--	--	--	--	--	--	--	--	**8.5**	**11**	**0.54**	**7.7**	--	--	--	--	
MW-3	8/31/1995	--	--	--	--	--	--	--	--	**9.7 / 11**	**8 / 8.8**	**1.2 / 0.98**	**9.3 / 8.3**	--	--	--	--	
MW-3	12/18/1995	--	--	--	--	--	--	--	--	**0.69**	**2.8**	**0.22**	**3.2**	--	--	--	--	
MW-3	7/11/1996	--	--	--	--	--	--	--	--	**0.016**	**0.89**	**0.2**	**2.1**	--	--	--	--	
MW-3	12/4/1996	--	--	--	--	--	--	--	--	<0.04	**0.211**	**0.409**	**3.02**	--	--	--	--	
MW-3	7/29/1997	--	--	--	--	--	--	--	--	<0.001	**0.00842**	**0.0276**	**0.259**	--	--	--	--	
MW-3	1/9/1998	--	--	--	--	--	--	--	--	**0.0399**	**0.0131**	**0.0876**	**0.731**	--	--	--	--	
MW-3	6/30/1998	--	--	--	--	--	--	--	--	**0.0146**	**0.0279**	**0.15**	**1.355**	--	--	--	--	
MW-3	1/13/1999	--	--	--	--	--	--	--	--	**0.616**	**0.0192**	**0.048**	**0.581**	--	--	--	--	

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Second Quarter 1993 through 2022
Former Texaco Service Station 211083
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Well ID	Sample Date	Screen Interval (ft bTOC)	TOC (ft amsl)	DTW (ft bTOC)	LNAPL Thickness (ft)	GW Elev (ft amsl)	DRO (mg/L)	GRO (mg/L)	RRO (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)	EDB (mg/L)	Lead (mg/L)	Dissolved Lead (mg/L)	Comments
ADEC Groundwater Cleanup Levels							**1.5**	**2.2**	**1.1**	**0.0046**	**1.1**	**0.015**	**0.19**	**0.14**	**0.000075**	**0.015**	**0.015**	
MW-3	7/20/1999	--	--	--	--	--	--	--	--	**1.9**	**0.086**	**0.175**	**1.327**	--	--	--	--	
MW-3	2/4/2000	--	--	--	--	--	--	--	--	**3.76**	**0.0729**	**0.0701**	**0.751**	--	--	--	--	
MW-3	11/17/2000	--	--	--	--	--	--	**3.88 / 3.86**	--	**1.01 / 0.948**	**0.051 / 0.0468**	**0.0436 / 0.0442**	**0.33 / 0.32**	--	--	--	--	
MW-3	7/30/2001	--	--	--	--	--	--	<0.05	--	<0.001	<0.001	<0.001	<0.002	--	--	--	--	
MW-3	2/22/2002	--	--	--	--	--	--	**3.34 / 9.82**	--	**0.796 / 1.05**	**0.118 / 0.443**	**0.0562 / 0.281**	**0.22 / 1.404**	--	--	--	--	
MW-3	8/20/2002	--	--	--	--	--	--	**0.746**	--	**0.194**	**0.0334**	**0.00499**	**0.136**	--	--	--	--	
MW-3	2/6/2003	--	--	--	--	--	--	**6.09**	--	**0.773**	**0.0749**	**0.074**	**0.259**	--	--	--	--	
MW-3	9/3/2003	--	--	--	--	--	--	**1.81**	--	**0.644**	**0.023**	**0.0181**	**0.272**	--	--	--	--	
MW-3	4/20/2004	--	--	--	--	--	--	**19**	--	**1.62**	**0.242**	**0.972**	**3.41**	--	--	--	--	
MW-3	4/21/2005	--	--	--	--	--	--	**24**	--	**0.83**	**0.62**	**0.94**	**3.5**	--	--	--	--	
MW-3	9/6/2005	--	--	--	--	--	--	**14**	--	**0.6**	**0.45**	**0.41**	**1.9**	--	--	--	--	
MW-3	10/7/2005	--	437.79	12.43	--	425.36	--	--	--	--	--	--	--	--	--	--	--	
MW-3	4/5/2006	--	437.79	14.54	--	423.25	--	--	--	--	--	--	--	--	--	--	--	
MW-3	4/6/2006	--	--	--	--	--	**2.6**	**23**	**0.23**	**1.5**	**0.98**	**0.93**	**3.8**	<0.25	**0.00003**	**0.0197**	--	
MW-3	6/23/2006	--	437.79	13.53	--	424.26	--	--	--	--	--	--	--	--	--	--	--	
MW-3	7/10/2006	--	437.79	12.31	--	425.48	--	--	--	--	--	--	--	--	--	--	--	
MW-3	8/1/2006	--	437.79	13.14	--	424.65	--	--	--	--	--	--	--	--	--	--	--	
MW-3	9/6/2006	--	437.79	12.73	--	425.06	**1.2**	**8.1**	**0.15**	**0.61**	**0.29**	**0.2**	**1.1**	<0.1	<0.0000095	**0.0268**	--	
MW-3	10/31/2006	--	437.79	13.74	--	424.05	--	--	--	--	--	--	--	--	--	--	--	
MW-3	11/28/2006	--	100.78	13.82	--	86.96	--	--	--	--	--	--	--	--	--	--	--	
MW-3	12/24/2006	--	100.78	14.09	--	86.69	--	--	--	--	--	--	--	--	--	--	--	
MW-3	2/2/2007	--	100.78	14.29	--	86.49	--	--	--	--	--	--	--	--	--	--	--	
MW-3	3/8/2007	--	100.78	14.52	--	86.26	**1.7**	**22**	<0.2	**0.7**	**0.8**	**0.8**	**3.1**	<0.2	<0.0000096	**0.0312**	--	
MW-3	4/30/2007	--	100.78	14.16	--	86.62	--	--	--	--	--	--	--	--	--	--	--	
MW-3	5/18/2007	--	100.78	13.92	--	86.86	--	--	--	--	--	--	--	--	--	--	--	
MW-3	6/29/2007	--	100.78	13.82	--	86.96	--	--	--	--	--	--	--	--	--	--	--	
MW-3	7/30/2007	--	100.78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-3	8/8/2007	--	100.78	13.49	--	87.29	--	--	--	--	--	--	--	--	--	--	--	
MW-3	9/8/2007	--	100.78	13.06	--	87.72	**2**	**13**	**0.16**	**0.6**	**1**	**0.4**	**2**	<0.2	<0.00001	<0.0069	--	
MW-3	4/6/2008	--	100.78	14.82	--	85.96	--	--	--	--	--	--	--	--	--	--	--	
MW-3	4/7/2008	--	--	--	--	--	**2.61 / 1.91**	**13.7 / 19.5**	<0.735 / <0.728	**0.229 / 0.258**	**0.419 / 0.538**	**0.37 / 0.385**	**2.06 / 2.18**	<0.01 / <0.0	**0.000012 / 0.000012**	**0.0749 / 0.0693**	--	
MW-3	9/15/2008	--	100.78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-3	5/7/2009	--	100.78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-3	9/9/2009	--	100.78	12.75	--	88.03	**0.71 / 0.87**	**0.20 J / 0.23**	--	<0.0005 / <0.0005	<0.0005 / <0.0005	0.0006 J / <0.0005	**0.004 / 0.004**	.0005 / <0.0	--	--	**0.0245 / 0.0244**	
MW-3	7/28/2010	--	100.78	13.56	--	87.22	**0.74**	**0.49**	**0.36**	<0.0050	<0.0005	**0.0005 J**	**0.0042 J**	--	--	**0.0202**	--	
MW-3	10/6/2010	--	100.78	14.01	--	86.77	**1.3**	**1.2**	**0.64**	<0.020	**0.0013 J**	**0.012**	**0.031**	--	--	--	--	
MW-3	6/13/2011	--	100.78	13.52	--	87.26	--	--	--	--	--	--	--	--	--	--	--	
MW-3	6/14/2011	--	--	--	--	--	**2.7 / 2.3**	**4.3 J / 4.1 J**	**0.62 / 0.55**	**0.058 / 0.058**	**0.056 / 0.057**	**0.11 / 0.11**	**0.13 / 0.12**	--	--	**0.0157 / 0.0166**	--	
MW-3	8/2/2011	--	100.78	12.44	--	88.34	**1.4 / 1.6**	**3.1 J / 2.8 J**	**0.41 / 0.52**	**0.070 / 0.072**	**0.013 / 0.011**	**0.058 / 0.058**	**0.15 / 0.15**	--	--	**0.0066 J / 0.0050 J**	--	
MW-3	6/18/2012	--	100.78	12.54	--	88.24	**3.6 / 2.8**	**11 / 11**	--	**0.19 / 0.18**	**0.56 / 0.58**	**0.37 / 0.36**	**1.3 / 1.3**	--	--	**0.0106 J / 0.0103 J**	--	
MW-3	8/22/2012	--	100.78	13.59	--	87.19	**0.67 / 0.64**	**2.1 / 2.1**	--	**0.028 / 0.028**	**0.043 / 0.043**	**0.059 / 0.056**	**0.20 / 0.19**	--	--	**0.0133 J / 0.0131 J**	--	
MW-3	6/6/2013	--	100.78	12.08	--	88.70	--	--	--	--	--	--	--	--	--	--	--	
MW-3	6/7/2013	--	--	--	--	--	**1.1 / 1.1**	**0.13 / 0.12**	<0.43 / <0.45	**0.00046 J / 0.00039 J**	**0.00066 J / 0.00067 J**	**0.0027 / 0.0023**	**0.015 / 0.012**	--	--	**0.0024 J / 0.0028 J**	--	
MW-3	8/21/2013	--	100.78	13.45	--	87.33	**0.96 J / 0.90 J**	**0.21 / 0.33**	**0.61 J / 0.56 J**	<0.00024 / <0.00024	<0.00023 / <0.00023	**0.00068 J / 0.0011**	**0.0014 J / 0.0034**	--	--	<0.0062 J / <0.0060 J	--	
MW-3	5/8/2014	--	443.39	12.41	--	430.98	**0.64**	<0.050	**0.44**	<0.00015	<0.00011	<0.00016	<0.00040	--	--	**0.0037**	--	
MW-3	9/26/2014	--	443.39	11.15	--	432.24	**0.18 J/0.26 J**	**0.12 J/0.30 J**	**0.51 J/0.26 J**	**0.0029 J/0.0082 J**	**0.00012 J/0.00032 J**	<0.00016/<0.00016	**0.0078 J/0.026 J**	--	--	**0.0017/0.0021**	--	
MW-3	2/4/2015	--	443.39	13.88	--	429.51	--	--	--	--	--	--	--		--	--	--	
MW-3	2/5/2015	--	--	--	--	--	**0.71**	**0.22**	**1.0**	**0.0030**	<0.00011	**0.0017**	**0.0013 J**		--	**0.056**	--	
MW-3	9/17/2015	--	443.39	11.14	--	432.25	**0.48**	**1.9**	**0.16 J**	**0.014**	**0.023**	**0.067**	**0.17**	--	--	<0.0051	--	
MW-3	6/1/2016	--	443.39	13.24	--	430.15	**0.46 J / 0.43 J**	**1.7 / 1.5**	--	**0.0070 / 0.0080**	**0.076 / 0.076**	**0.063 / 0.061**	**0.30 / 0.29**	--	--	<0.0051 / <0.0051	--	
MW-3	7/25/2017	--	442.99	12.89	--	430.10	**0.22 J / 0.24 J**	**1.0 / 0.82**	<0.082 / <0.083	**0.001 / 0.001**	**0.009 / 0.008**	**0.009 / 0.009**	**0.057 / 0.058**	--	--	<0.0060 / <0.0060	--	
MW-3	8/21/2018	--	443.03	11.78	--	431.25	**0.21 J**	**0.74**	<0.085	**0.002**	**0.007**	**0.019**	**0.039**	-	-	<0.0071		
MW-3	7/9/2019	--	442.97	13.91	0.00	429.06	**0.61**	**2.9 J**	--	**0.0034**	**0.14**	**0.14 DJ**	**0.687 D**	--	--	**0.0042 J**	--	DTW from the recent survey notes dated 7/23/2019
MW-3	7/21/2020	--	442.97	11.10	0.00	431.87	**0.259 J [0.266 J]**	**0.334 [0.365]**	--	**0.000864 J [0.000788 J]**	**0.00467 [0.00423]**	**0.0184 [0.0149]**	**0.0414 [0.0326]**	--	--	<0.00600	--	
MW-3	7/14/2021	--	442.97	13.00	0.00	429.97	<0.800 B J	**0.292 J**	--	**0.000352 J**	**0.00385**	**0.00917**	**0.0362**	--	--	<0.00600	--	
MW-3	7/11/2022	--	442.97	12.12	0.00	430.85	***<2.00***	**0.137**	--	**0.000191 J**	<0.00100	**0.000498 J**	**0.00371**	--	--	<0.00600	--	
MW-4	6/28/1993	--	--	--	--	--	--	--	--	**49**	**44**	**3.4**	**14**	--	--	--	--	
MW-4	3/8/1994	--	--	--	--	--	--	--	--	**35**	**34**	**4.4**	**21**	--	--	--	--	
MW-4	7/7/1994	--	--	--	--	--	--	--	--	**37**	**38**	**3**	**16**	--	--	--	--	
MW-4	2/22/1995	--	--	--	--	--	--	--	--	**44**	**38**	**2.9**	**15**	--	--	--	--	
MW-4	5/9/1995	--	--	--	--	--	--	--	--	**31**	**29**	**2.2**	**12**	--	--	--	--	
MW-4	8/31/1995	--	--	--	--	--	--	--	--	**24**	**22**	**1.5**	**9.1**	--	--	--	--	
MW-4	12/18/1995	--	--	--	--	--	--	--	--	**23 / 21**	**25 / 24**	**1.9 / 1.9**	**13 / 13**	--	--	--	--	
MW-4	7/11/1996	--	--	--	--	--	--	--	--	**16**	**19**	**2.3**	**18**	--	--	--	--	
MW-4	12/4/1996	--	--	--	--	--	--	--	--	**4.68**	**8.72**	**0.795**	**9.32**	--	--	--	--	
MW-4	7/29/1997	--	--	--	--	--	--	--	--	**0.214**	**0.648**	**0.225**	**3.96**	--	--	--	--	
MW-4	1/9/1998	--	--	--	--	--	--	--	--	**0.033**	**0.249**	**0.151**	**2.05**	--	--	--	--	
MW-4	6/30/1998	--	--	--	--	--	--	--	--	**0.182**	**0.302**	**0.172**	**1.803**	--	--	--	--	
MW-4	7/20/1999	--	--	--	--	--	--	--	--	**0.0389**	**0.097**	**0.123**	**0.823**	--	--	--	--	
MW-4	12/6/2000	--	--	--	--	--	--	**2.79 / 3.2**	--	**0.0827 / 0.0684**	**0.02 / 0.0177**	**0.0913 / 0.0768**	**0.364 / 0.317**	--	--	--	--	
MW-4	7/30/2001	--	--	--	--	--	--	**4.81 / 1.85**	--	**0.0261 / 0.0146**	**0.0108 / 0.00803**	**0.104 / 0.074**	**0.36 / 0.283**	--	--	--	--	
MW-4	2/22/2002	--	--	--	--	--	--	**2.36 / 0.828**	--	**0.0043 / 0.00277**	**0.00834 / 0.00633**	**0.0276 / 0.0149**	**0.135 / 0.0993**	--	--	--	--	
MW-4	8/19/2002	--	--	--	--	--	--	**3.44 / 3.45**	--	**0.0528 / 0.112**	**0.0228 / 0.0499**	**0.115 / 0.138**	**0.353 / 0.436**	--	--	--	--	
MW-4	2/7/2003	--	--	--	--	--	--	**5.93 / 6.75**	--	**0.0267 / 0.027**	**0.0181 / 0.0192**	**0.131 / 0.134**	**0.361 / 0.375**	--	--	--	--	
MW-4	9/3/2003	--	--	--	--	--	--	**2.48 / 2.46**	--	**0.0408 / 0.0408**	**0.0126 / 0.0128**	**0.0728 / 0.0755**	**0.164 / 0.175**	--	--	--	--	
MW-4	4/20/2004	--	--	--	--	--	--	**6.61 / 7.2**	--	**0.299 / 0.329**	**0.0378 / 0.0411**	**0.139 / 0.13**	**0.4356 / 0.4065**	--	--	--	--	
MW-4	4/21/2005	--	--	--	--	--	--	**12**	--	--	--	--	--	--	**0.00027 J / 0.00027 J**	--	--	

Table 1. Historical Groundwater Gauging and Analytical Results
Second Quarter 1993 through 2022
Former Texaco Service Station 211083
230 Old Steese Highway
Fairbanks, Alaska

Well ID	Sample Date	Screen Interval (ft bTOC)	TOC (ft amsl)	DTW (ft bTOC)	LNAPL Thickness (ft)	GW Elev (ft amsl)	DRO (mg/L)	GRO (mg/L)	RRO (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)	EDB (mg/L)	Lead (mg/L)	Dissolved Lead (mg/L)	Comments
ADEC Groundwater Cleanup Levels							**1.5**	**2.2**	**1.1**	**0.0046**	**1.1**	**0.015**	**0.19**	**0.14**	**0.000075**	**0.015**	**0.015**	
MW-4	9/6/2005	--	--	--	--	--	--	**9.1**	--	--	--	--	--	--	**0.0034**	--	--	
MW-4	10/7/2005	--	437.69	12.31	--	425.38	--	--	--	--	--	--	--	--	--	--	--	
MW-4	4/5/2006	--	437.69	14.41	--	423.28	--	--	--	--	--	--	--	--	--	--	--	
MW-4	4/6/2006	--	--	--	--	--	--	**19 / 19**	--	**2.3 / 2.3**	**0.93 / 0.92**	**0.32 / 0.33**	**1.4 / 1.5**	<0.2 / <0.2	**0.00018 / 0.00017**	--	--	
MW-4	6/23/2006	--	437.69	13.41	--	424.29	--	--	--	--	--	--	--	--	--	--	--	
MW-4	7/10/2006	--	437.69	12.21	--	425.48	--	--	--	--	--	--	--	--	--	--	--	
MW-4	8/1/2006	--	437.69	13.00	--	424.69	--	--	--	--	--	--	--	--	--	--	--	
MW-4	9/6/2006	--	437.69	12.61	--	425.08	**4.4 / 5**	**13 / 12**	--	**1.7 / 1.6**	**0.39 / 0.38**	**0.28 / 0.27**	**1.8 / 1.8**	--	**0.01 / 0.0095**	--	--	
MW-4	10/31/2006	--	437.69	13.61	--	424.08	--	--	--	--	--	--	--	--	--	--	--	
MW-4	11/28/2006	--	100.67	13.69	--	86.98	--	--	--	--	--	--	--	--	--	--	--	
MW-4	12/24/2006	--	100.67	13.97	--	86.70	--	--	--	--	--	--	--	--	--	--	--	
MW-4	2/2/2007	--	100.67	14.16	--	86.51	--	--	--	--	--	--	--	--	--	--	--	
MW-4	3/6/2007	--	100.67	14.40	--	86.27	--	--	--	--	--	--	--	--	--	--	--	
MW-4	3/8/2007	--	--	--	--	--	**6.6**	**26**	--	**2.9**	**1.6**	**0.4**	**2.1**	--	**0.00077**	--	--	
MW-4	4/30/2007	--	100.67	14.07	--	86.60	--	--	--	--	--	--	--	--	--	--	--	
MW-4	5/18/2007	--	100.67	13.82	--	86.85	--	--	--	--	--	--	--	--	--	--	--	
MW-4	6/29/2007	--		13.69	--	86.98	--	--	--	--	--	--	--	--	--	--	--	
MW-4	7/30/2007	--	100.67	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	8/8/2007	--	100.67	13.38	--	87.29	--	--	--	--	--	--	--	--	--	--	--	
MW-4	9/8/2007	--	100.67	12.93	--	87.74	**6.6**	**16**	--	**1.5**	**0.6**	**0.3**	**1.6**	--	**0.0053**	--	--	
MW-4	4/6/2008	--	100.67	14.75	--	85.92	--	--	--	--	--	--	--	--	--	--	--	
MW-4	4/7/2008	--	--	--	--	--	**7.81**	**29.4**	<0.721	**3.33**	**1.38**	**0.501**	**2.49**	--	**0.000112**	--	--	
MW-4	9/15/2008	--	100.67	12.21	--	88.46	**4.1**	**1.9**	--	**0.04**	**0.01**	**0.01**	**0.1**	--	**0.0001**	--	--	
MW-4	5/7/2009	--	100.67	12.59	--	88.08	**2.5**	**0.8 / 0.66**	**0.43**	<0.005 / <0.005	<0.005 / <0.005	<0.005 / <0.005	**0.024 / 0.021**	--	<0.0000096	--	--	
MW-4	9/9/2009	--	100.67	12.66	--	88.01	**2.8**	**0.67**	--	<0.0020	**0.0016 J**	**0.0024**	**0.028**	--	**0.00026**	--	--	
MW-4	7/28/2010	--	100.67	13.44	--	87.23	**1.3**	**0.059 J**	--	<0.0005	<0.0005	<0.0005	<0.0015	--	<0.0000096	--	--	
MW-4	10/6/2010	--	100.67	13.88	--	86.79	**1.6 J / 2.0 J**	**1.1 J / 0.048 J**	--	<0.0050 / 0.0038	0.0019 J / <0.0005 J	0.0040 J / <0.0005 J	0.020 J / <0.0015 J	--	<0.0000098 / <0.0000098	--	--	
MW-4	6/13/2011	--	100.67	13.34	--	87.33	**6.5 / 7.3**	**2.1 J / 2.1 J**	--	**0.020 / 0.020**	**0.0073 / 0.0075**	**0.0081 / 0.0083**	**0.049 / 0.050**	--	**-- / 0.000062**	--	--	
MW-4	8/2/2011	--	100.67	12.32	--	88.35	**2.7 / 2.9**	**2.0 J / 2.2 J**	--	**0.019 / 0.019**	0.0031 J / <0.0005 J	**0.014 / 0.014**	**0.12 / 0.12**	--	**0.00026 / 0.00026**	--	--	
MW-4	6/18/2012	--	100.67	12.43	--	88.24	**4.1 / 5.4**	**4.2 / 4.3**	--	**0.052 / 0.053**	**0.043 /0.042**	**0.041 / 0.041**	**0.55 / 0.55**	--	**0.00078 / 0.00084**	--	--	
MW-4	8/22/2012	--	100.67	13.47	--	87.20	**2.3**	**2.8 J**	--	**0.032**	**0.0083**	**0.012**	**0.072**	--	**0.000056**	--	--	
MW-4	6/6/2013	--	100.67	11.96	--	88.71	--	--	--	--	--	--	--	--	--	--	--	
MW-4	6/7/2013	--	--	--	--	--	**2.3 / 2.5**	**0.87 J / 0.96**	--	**0.0040 / 0.0049**	**0.0025 / 0.0032**	**0.0039 / 0.0041**	**0.022 / 0.023**	--	**0.0000095 J / 0.0000094 J**	--	--	
MW-4	8/22/2013	--	100.67	13.56	--	87.11	**1.7 J**	**0.27**	--	<0.00024	<0.00023	**0.00057 J**	**0.0028 J**	--	--	--	--	
MW-4	5/8/2014	--	443.10	12.26	--	430.84	--	--	--	--	--	--	--	--	--	--	--	
MW-4	5/9/2014	--	--	--	--	--	**1.1 / 1.2**	**0.67 / 0.71 J**	--	**0.00021 J / 0.00020 J**	**0.00035 J / 0.00030 J**	**0.0011 / 0.0010**	**0.0046 / 0.0044**	--	<0.0000044	--	--	
MW-4	9/26/2014	--	443.10	11.04	--	432.06	**1.7 J**	**1.1**	--	**0.0030**	**0.00049 J**	**0.0063**	**0.11**	--	<0.000014/0.000023 J	--	--	
MW-4	2/4/2015	--	443.10	13.78	--	429.32	Not sample due to well volume and sampling device not collecting due to temperature.											
MW-4	9/17/2015	--	443.10	11.06	--	432.04	**2.0**	**1.1**	--	**0.012**	<0.0005	**0.004**	**0.012**	--	<0.0000095	--	--	
MW-4	6/1/2016	--	443.10	13.12	--	429.98	**5.1 J**	**2.8**	--	**0.027**	**0.010**	**0.021**	**0.083**	--	<0.0000096	--	--	
MW-4	7/24/2017	--	442.90	12.73	--	430.17	**2.0**	**2.9**	--	**0.034**	**0.020**	**0.017**	**0.11**	--	<0.0000095	--	--	
MW-4	8/21/2018	--	442.83	11.54	--	431.29	**2.4**	**2.0**	--	**0.040**	**0.022**	**0.020**	**0.23**	-	**0.000057**	--	-	
MW-4	7/9/2019	--	442.74	13.68	0.00	429.06	**2.9**	**3.7**	--	**0.054**	**0.11**	**0.052**	**0.383 D**	--	<0.00040	--	--	DTW from the recent survey notes dated 7/23/2019
MW-4	7/22/2020	--	442.74	10.90	0.00	431.84	**2.17 [2.26]**	**1.86 [2.28]**	--	**0.0259 [0.0232]**	**0.127 [0.113]**	**0.0333 [0.0293]**	**0.505 [0.522]**	--	**0.0000229** [<0.0000200]	-- [--]	--	
MW-4	7/14/2021	--	442.74	12.77	0.00	429.97	**2.56 J**	**3.32 J**	--	**0.0381**	**0.230**	**0.0518**	**0.652**	--	<0.0000200	--	--	
MW-4	7/11/2022	--	442.74	11.90	0.00	430.84	**4.12 [4.15]**	**3.72 [3.92]**	--	**0.0334 [0.0405]**	**0.203 [0.256]**	**0.0542 [0.0587]**	**0.651 [0.733]**	--	**0.0000592 J [0.0000535]**	--	--	
MW-5	6/28/1993	--	--	--	--	--	--	--	--	**12**	**32**	**3.6**	**15**	--	--	--	--	
MW-5	3/8/1994	--	--	--	--	--	--	--	--	**8.6**	**15**	**2.2**	**9.5**	--	--	--	--	
MW-5	7/7/1994	--	--	--	--	--	--	--	--	**1.8**	**4.5**	**1.4**	**5.8**	--	--	--	--	
MW-5	2/23/1995	--	--	--	--	--	--	--	--	**5.1**	**18**	**2.4**	**12**	--	--	--	--	
MW-5	5/9/1995	--	--	--	--	--	--	--	--	**0.74**	**2.1**	**0.32**	**1.7**	--	--	--	--	
MW-5	8/31/1995	--	--	--	--	--	--	--	--	**1.4**	**1.6**	**0.64**	**1.9**	--	--	--	--	
MW-5	12/18/1995	--	--	--	--	--	--	--	--	**0.1**	**2.3**	**0.16**	**1.5**	--	--	--	--	
MW-5	7/11/1996	--	--	--	--	--	--	--	--	**0.206**	**0.666**	**0.046**	**0.592**	--	--	--	--	
MW-5	12/4/1996	--	--	--	--	--	--	--	--	**0.0781**	**0.0689**	**0.032**	**0.0367**	--	--	--	--	
MW-5	7/29/1997	--	--	--	--	--	--	--	--	**0.118**	**0.0492**	**0.0326**	**0.111**	--	--	--	--	
MW-5	1/9/1998	--	--	--	--	--	--	--	--	**0.318**	**0.115**	**0.216**	**0.594**	--	--	--	--	
MW-5	6/30/1998	--	--	--	--	--	--	--	--	**0.289**	**0.174**	**0.178**	**0.58**	--	--	--	--	
MW-5	7/20/1999	--	--	--	--	--	--	--	--	**0.219**	**0.171**	**0.162**	**0.548**	--	--	--	--	
MW-5	12/7/2000	--	--	--	--	--	--	**0.243**	--	**0.0131**	**0.0107**	**0.0105**	**0.0317**	--	--	--	--	
MW-5	5/13/2009	--	--	10.83	--	--	**3**	**8.1**	--	**0.15**	**0.16**	**0.2**	**0.89**	--	--	--	--	
MW-5	9/9/2009	--	--	10.85	--	--	**0.58**	**0.054 J**	--	<0.0005	<0.0005	<0.0005	**0.0023 J**	--	--	--	--	
MW-5	7/27/2010	--	--	11.63	--	--	**0.27**	**0.057 J**	--	<0.0005	**0.0007 J**	**0.001 J**	**0.0046 J**	--	--	--	--	
MW-5	10/6/2010	--	--	12.10	--	--	**6.2**	**2.8 J**	--	**0.022 J**	**0.012 J**	**0.040 J**	**0.14 J**	--	--	--	--	
MW-5	6/13/2011	--	--	11.60	--	--	**6.1**	**5.3 J**	--	**0.049**	**0.016**	**0.11**	**0.20**	--	--	--	--	
MW-5	8/2/2011	--	--	7.57	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-5	8/3/2011	--	--	--	--	--	**3.1**	**4.9**	--	**0.044**	**0.027**	**0.13**	**0.32**	--	--	--	--	
MW-5	6/18/2012	--	--	10.64	--	--	**2.7**	**6.3**	--	**0.041**	**0.054**	**0.11**	**0.38**	--	--	--	--	
MW-5	8/22/2012	--	--	11.66	--	--	**4.7**	**8.4**	--	**0.057**	**0.41**	**0.17**	**0.69**	--	--	--	--	
MW-5	6/6/2013	--		10.16	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-5	6/7/2013	--		--	--	--	**2.0**	**2.6**	--	**0.0096**	**0.11**	**0.043**	**0.49**	--	--	--	--	
MW-5	8/22/2013	--	--	11.50	--	--	**0.65 J**	<0.050	--	<0.00024	<0.00023	<0.00024	<0.00072	--	--	--	--	
MW-5	5/8/2014	--	441.44	10.52	--	430.92	**4.1**	**7.8**	--	**0.023**	**0.037**	**0.20**	**0.50**	--	--	--	--	
MW-5	9/26/2014	--	441.44	9.18	--	432.26	**4.7 J**	**7.6**	--	**0.019**	**0.082**	**0.18**	**0.65**	--	--	--	--	
MW-5	2/4/2015	--	441.44	12.00	--	429.44	--	--	--	--	--	--	--	--	--	--	--	
MW-5	2/5/2015	--	--	--	--	--	**5.1**	**3.7 J**	--	**0.066**	**0.0072**	**0.043**	**0.13**	--	--	--	--	
MW-5	9/17/2015	--	441.44	9.26	--	432.18	**4.6**	**5.3**	--	**0.044**	**0.054**	**0.13**	**0.34**	--	--	--	--	
MW-5	6/1/2016	--	441.44	11.33	--	430.11	**4.2 J**	**6.1**	--	**0.027**	**0.13**	**0.16**	**0.75**	--	--	--	--	

Table 1. Historical Groundwater Gauging and Analytical Results
Second Quarter 1993 through 2022
Former Texaco Service Station 211083
230 Old Steese Highway
Fairbanks, Alaska

Well ID	Sample Date	Screen Interval (ft bTOC)	TOC (ft amsl)	DTW (ft bTOC)	LNAPL Thickness (ft)	GW Elev (ft amsl)	DRO (mg/L)	GRO (mg/L)	RRO (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)	EDB (mg/L)	Lead (mg/L)	Dissolved Lead (mg/L)	Comments
ADEC Groundwater Cleanup Levels							**1.5**	**2.2**	**1.1**	**0.0046**	**1.1**	**0.015**	**0.19**	**0.14**	**0.000075**	**0.015**	**0.015**	
MW-5	7/25/2017	--	441.13	10.97	--	430.16	**3.9**	**12**	--	**0.042**	**0.68**	**0.2**	**1.3**	--	--	--	--	
MW-5	7/25/2017	--	441.13	10.97	--	430.16	**3.9**	**12**	-	**0.042**	**0.68**	**0.20**	**1.3**	-	-	-	-	
MW-5	8/21/2018	--	441.18	9.89	--	431.29	**3.0**	**9.0**	--	**0.063**	**0.53**	**0.26**	**1.7**	-	-	-	-	
MW-5	7/9/2019	--	441.08	12.00	0.00	429.08	**2.1**	**8.3**	--	**0.028**	**0.52 D**	**0.27 DJ**	**1.7 D**	--	--	--	--	DTW from the recent survey notes dated 7/23/2019
MW-5	7/22/2020	--	441.08	9.00	0.00	432.08	**1.98**	**6.20**	--	**0.0152**	**0.553**	**0.258**	**1.82**	--	--	--	--	
MW-5	7/14/2021	--	441.08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Could not be located due to current construction
MW-5	7/11/2022	--	441.08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Could not be located due to current construction
MW-6	7/8/1994	--	--	--	--	--	--	--	--	**37**	**34**	**2.5**	**12**	--	--	--	--	
MW-6	6/30/1998	--	--	--	--	--	--	--	--	**0.114**	**0.119**	**0.0314**	**0.145**	--	--	--	--	
MW-6	1/13/1999	--	--	--	--	--	--	--	--	**0.123 / 0.105**	**0.133 / 0.116**	**0.0625 / 0.0518**	**0.209 / 0.181**	--	--	--	--	
MW-6	7/20/1999	--	--	--	--	--	--	--	--	**0.0453 / 0.0554**	**0.0403 / 0.0721**	**0.0319 / 0.0326**	**0.0607 / 0.0848**	--	--	--	--	
MW-6	12/7/2000	--	--	--	--	--	--	**1.06**	--	**0.0604**	**0.0342**	**0.0482**	**0.0704**	--	--	--	--	
MW-6	7/30/2001	--	--	--	--	--	--	<0.05	--	<0.0002	<0.0005	<0.0005	<0.001	--	--	--	--	
MW-6	2/22/2002	--	--	--	--	--	--	**6.82**	--	**1.7**	**0.207**	**0.227**	**0.608**	--	--	--	--	
MW-6	8/19/2002	--	--	--	--	--	--	**0.255**	--	**0.0442**	**0.0209**	**0.0159**	**0.0372**	--	--	--	--	
MW-6	2/7/2003	--	--	--	--	--	--	**5.72**	--	**0.86**	**0.0479**	**0.206**	**0.575**	--	--	--	--	
MW-6	9/3/2003	--	--	--	--	--	--	**1.65**	--	**0.147**	**0.0081**	**0.0797**	**0.0281**	--	--	--	--	
MW-6	4/20/2004	--	--	--	--	--	--	**8.48**	--	**0.848**	**0.144**	**0.333**	**0.9584**	--	--	--	--	
MW-6	4/21/2005	--	--	--	--	--	--	**12**	--	--	--	--	--	--	--	--	--	
MW-6	9/6/2005	--	--	--	--	--	--	**23**	--	--	--	--	--	--	--	--	--	
MW-6	10/7/2005	--	436.82	11.41	--	425.41	--	--	--	--	--	--	--	--	--	--	--	
MW-6	4/5/2006	--	436.82	13.51	--	423.31	--	--	--	--	--	--	--	--	--	--	--	
MW-6	4/6/2006	--	--	--	--	--	--	**32**	--	**0.81**	**4.4**	**0.57**	**4.6**	<0.5	--	--	--	
MW-6	6/23/2006	--	436.82	12.56	--	424.26	--	--	--	--	--	--	--	--	--	--	--	
MW-6	7/10/2006	--	436.82	11.32	--	425.50	--	--	--	--	--	--	--	--	--	--	--	
MW-6	8/1/2006	--	436.82	12.08	--	424.74	--	--	--	--	--	--	--	--	--	--	--	
MW-6	9/6/2006	--	436.82	11.71	--	425.11	**4.4**	**19**	--	**0.52**	**2.1**	**0.4**	**2.4**	--	**0.00096**	--	--	
MW-6	10/31/2006	--	436.82	12.69	--	424.13	--	--	--	--	--	--	--	--	--	--	--	
MW-6	11/28/2006	--	99.79	12.80	--	86.99	--	--	--	--	--	--	--	--	--	--	--	
MW-6	12/24/2006	--	99.79	13.08	--	86.71	--	--	--	--	--	--	--	--	--	--	--	
MW-6	2/2/2007	--	99.79	13.26	--	86.53	--	--	--	--	--	--	--	--	--	--	--	
MW-6	3/6/2007	--	99.79	13.49	--	86.30	--	--	--	--	--	--	--	--	--	--	--	
MW-6	3/8/2007	--	--	--	--	--	**5.2**	**22**	--	**0.6**	**2.6**	**0.5**	**3**	--	**0.0051**	--	--	
MW-6	4/30/2007	--	99.79	13.15	--	86.64	--	--	--	--	--	--	--	--	--	--	--	
MW-6	5/18/2007	--	99.79	12.91	--	86.88	--	--	--	--	--	--	--	--	--	--	--	
MW-6	6/29/2007	--	99.79	12.79	--	87.00	--	--	--	--	--	--	--	--	--	--	--	
MW-6	7/30/2007	--	99.79	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	8/8/2007	--	99.79	12.09	--	87.70	--	--	--	--	--	--	--	--	--	--	--	
MW-6	9/8/2007	--	99.79	12.03	--	87.76	**9**	**30**	--	**0.8**	**4**	**0.6**	**4.4**	--	**0.043**	--	--	
MW-6	4/6/2008	--	99.79	13.83	--	85.96	--	--	--	--	--	--	--	--	--	--	--	
MW-6	4/7/2008	--	--	--	--	--	**8.86**	**48.3**	<0.75	**1.02**	**5.88**	**0.955**	**7.14**	--	**0.03**	--	--	
MW-6	9/15/2008	--	99.79	11.27	--	88.52	**0.66**	**1.1**	--	**0.04**	**0.02**	**0.03**	**0.08**	--	**0.0017**	--	--	
MW-6	5/7/2009	--	99.79	11.67	--	88.12	**1.5**	**2.2**	**0.2**	**0.05**	**0.022**	**0.062**	**0.093**	--	**0.0011**	--	--	
MW-6	9/9/2009	--	99.79	11.75	--	88.04	**0.57**	**0.28**	--	**0.0058**	**0.001 J**	**0.0070**	**0.014**	--	**0.0012**	--	--	
MW-6	7/28/2010	--	99.79	12.52	--	87.27	**0.28**	**0.017 J**	--	<0.0005	<0.0005	<0.0005	<0.0015	--	<0.000010	--	--	
MW-6	10/6/2010	--	99.79	13.00	--	86.79	**3.4**	**0.24**	--	**0.0032**	**0.0008 J**	**0.0042**	**0.0096**	--	--	--	--	
MW-6	6/13/2011	--	99.79	12.42	--	87.37	**7.1**	**1.7 J**	--	**0.024**	**0.0045**	**0.031**	**0.039**	--	**0.000046**	--	--	
MW-6	8/2/2011	--	99.79	11.43	--	88.36	--	--	--	--	--	--	--	--	--	--	--	
MW-6	8/3/2011	--	--	--	--	--	**2.1**	**0.92**	--	**0.012**	**0.0011 J**	**0.0024**	**0.014**	--	**0.000027 J**	--	--	
MW-6	6/18/2012	--	99.79	11.53	--	88.26	**2.2**	**2.1 J**	--	**0.021 J**	**0.0039 J**	**0.026 J**	**0.075 J**	--	**0.000028 J**	--	--	
MW-6	8/21/2012	--	99.79	12.51	--	87.28	**5.6**	**5.6**	--	**0.067**	**0.028**	**0.15**	**0.85**	--	--	--	--	
MW-6	6/6/2013	--	99.79	11.03	--	88.76	--	--	--	--	--	--	--	--	--	--	--	
MW-6	6/7/2013	--	--	--	--	--	**0.87**	**0.80**	--	**0.0040**	**0.0011**	**0.015**	**0.019**	--	**0.000014**	--	--	
MW-6	8/22/2013	--	99.79	12.49	--	87.30	**1.2 J / 1.0 J**	<0.050 / <0.050	--	<0.00024 / <0.00024	<0.00023 / <0.00023	**0.00026 J / 0.00044 J**	<0.00072 / <0.00072	--	**0.000032 J / 0.000033 J**	--	--	
MW-6	5/8/2014	--	442.33	11.33	--	431	--	--	--	--	--	--	--	--	--	--	--	
MW-6	5/9/2014	--	--	--	--	--	**2.9**	**2.0 J**	--	**0.0092**	**0.00099 J**	**0.012**	**0.093**	--	**0.000032**	--	--	
MW-6	9/26/2014	--	442.33	10.08	--	432.25	**0.95 J**	**0.77**	--	**0.0018**	**0.0025**	**0.0041**	**0.076**	--	<0.000014	--	--	
MW-6	2/4/2015	--	442.33	12.76	--	429.57	--	--	--	--	--	--	--	--	--	--	--	
MW-6	2/5/2015	--	--	--	--	--	**11.4**	**5.4 J**	--	**0.058**	**0.17**	**0.092**	**2.4**	--	**0.00016 / 0.00017**	--	--	
MW-6	9/17/2015	--	442.33	10.12	--	432.21	**2.7 / 2.0**	**3.8 / 3.8**	--	**0.011 / 0.011**	**0.013 / 0.013**	**0.045 / 0.044**	**0.33 / 0.34**	--	<0.000015 J / **0.000087 J**	--	--	
MW-6	6/1/2016	--	442.33	12.21	--	430.12	**8.4 J**	**11**	--	**0.036**	**0.15**	**0.072**	**2.1**	--	**0.00020 J / 0.00020 J**	--	--	
MW-6	7/24/2017	--	442.00	11.83	--	430.17	**6.7 / 6.4**	**18 / 11**	--	**0.089 / 0.079**	**0.48 / 0.42**	**0.12 / 0.11**	**3.9 / 3.6**	--	**0.00021 / 0.00023**	--	--	
MW-6	8/21/2018	--	442.04	10.75	--	431.29	**1.5 / 1.8**	**4.1**	<0.091	**0.026**	**0.071**	**0.042**	**0.98**	--	**0.000091**	<0.0071 / <0.0071	--	
MW-6	7/9/2019	--	441.95	12.90	0.00	429.05	**8.2**	**20**	--	**0.15 J**	**1.3**	**0.24 J**	**6.3**	--	<0.04	--	--	DTW from the recent survey notes dated 7/23/2019
MW-6	7/22/2020	--	441.95	10.09	0.00	431.86	**0.807**	**1.09**	--	**0.00426**	**0.0143**	**0.00813**	**0.139**	--	**0.0000247**	--	--	
MW-6	7/14/2021	--	441.95	11.98	0.00	429.97	**4.77 [6.36]**	**21.0 [20.6]**	--	**0.174 [0.176]**	**1.72 [1.98]**	**0.228 [0.243]**	**5.80 [6.83]**	--	**0.000424 [0.000448]**	-- [--]	--	
MW-6	7/11/2022	--	441.95	11.10	0.00	430.85	**3.74**	**1.58 J**	--	**0.00807**	**0.043**	**0.0158**	**0.475**	--	**0.0000596 J**	--	--	
MW-7	7/8/1994	--	--	--	--	--	--	--	--	**0.0011**	**0.0028**	<0.0005	**0.0024**	--	--	--	--	
MW-7	2/22/1995	--	--	--	--	--	--	--	--	**0.0015**	<0.0005	<0.0005	<0.001	--	--	--	--	
MW-7	5/9/1995	--	--	--	--	--	--	--	--	**0.066**	**0.0011**	**0.00056**	<0.001	--	--	--	--	
MW-7	8/31/1995	--	--	--	--	--	--	--	--	**0.0079**	**0.00052**	<0.0005	<0.001	--	--	--	--	
MW-7	12/18/1995	--	--	--	--	--	--	--	--	**0.0024**	<0.0005	<0.0005	<0.001	--	--	--	--	
MW-7	12/1/2000	--	--	--	--	--	--	**0.0687**	--	**0.035**	<0.001	<0.001	<0.003	--	--	--	--	
MW-7	7/30/2001	--	--	--	--	--	--	<0.05	--	**0.0133**	<0.001	<0.001	<0.002	--	--	--	--	
MW-7	8/20/2002	--	--	--	--	--	--	<0.05	--	**0.00492**	<0.001	<0.001	<0.003	--	--	--	--	
MW-7	2/4/2003	--	--	--	--	--	--	<0.05	--	**0.00306**	<0.001	<0.001	<0.003	--	--	--	--	

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Second Quarter 1993 through 2022
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Well ID	Sample Date	Screen Interval (ft bTOC)	TOC (ft amsl)	DTW (ft bTOC)	LNAPL Thickness (ft)	GW Elev (ft amsl)	DRO (mg/L)	GRO (mg/L)	RRO (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)	EDB (mg/L)	Lead (mg/L)	Dissolved Lead (mg/L)	Comments
ADEC Groundwater Cleanup Levels							**1.5**	**2.2**	**1.1**	**0.0046**	**1.1**	**0.015**	**0.19**	**0.14**	**0.000075**	**0.015**	**0.015**	
MW-7	9/3/2003	--	--	--	--	--	--	<0.05	--	**0.00636**	<0.001	<0.001	<0.003	--	--	--	--	
MW-7	4/20/2004	--	--	--	--	--	--	<0.05	--	**0.00689**	<0.001	<0.001	<0.003	--	--	--	--	
MW-7	4/21/2005	--	--	--	--	--	--	**0.028**	--	--	--	--	--	--	--	--	--	
MW-7	9/6/2005	--	--	--	--	--	--	**0.01**	--	--	--	--	--	--	--	--	--	
MW-7	10/7/2005	--	435.68	10.49	--	425.19	--	--	--	--	--	--	--	--	--	--	--	
MW-7	4/5/2006	--	435.68	12.52	--	423.16	--	--	--	--	--	--	--	--	--	--	--	
MW-7	4/6/2006	--	--	--	--	--	--	**0.028**	--	**0.0057**	<0.0005	<0.0005	<0.0015	<0.0025	--	--	--	
MW-7	6/23/2006	--	435.68	11.52	--	424.16	--	--	--	--	--	--	--	--	--	--	--	
MW-7	7/10/2006	--	435.68	10.18	--	425.50	--	--	--	--	--	--	--	--	--	--	--	
MW-7	8/1/2006	--	435.68	11.14	--	424.54	--	--	--	--	--	--	--	--	--	--	--	
MW-7	9/5/2006	--	435.68	10.71	--	424.97	**0.1**	**0.02**	--	**0.0054**	<0.0005	<0.0005	<0.0015	--	<0.0000096	--	--	
MW-7	10/31/2006	--	435.68	11.73	--	423.95	--	--	--	--	--	--	--	--	--	--	--	
MW-7	11/28/2006	--	98.66	11.82	--	86.84	--	--	--	--	--	--	--	--	--	--	--	
MW-7	12/24/2006	--	98.66	12.10	--	86.56	--	--	--	--	--	--	--	--	--	--	--	
MW-7	2/2/2007	--	98.66	12.28	--	86.38	--	--	--	--	--	--	--	--	--	--	--	
MW-7	3/6/2007	--	98.66	12.52	--	86.14	--	--	--	--	--	--	--	--	--	--	--	
MW-7	3/7/2007	--	--	--	--	--	**0.061**	**0.02**	--	**0.003**	<0.001	<0.001	<0.002	--	<0.0000096	--	--	
MW-7	4/30/2007	--	98.66	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	5/18/2007	--	98.66	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	6/29/2007	--	98.66	11.78	--	86.88	--	--	--	--	--	--	--	--	--	--	--	
MW-7	7/30/2007	--	98.66	11.56	--	87.10	--	--	--	--	--	--	--	--	--	--	--	
MW-7	8/8/2007	--	98.66	11.55	--	87.11	--	--	--	--	--	--	--	--	--	--	--	
MW-7	9/8/2007	--	98.66	11.05	--	87.61	**0.15**	<0.01	--	**0.003**	<0.001	<0.001	<0.002	--	<0.0000099	--	--	
MW-7	4/6/2008	--	98.66	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	9/15/2008	--	98.66	10.38	--	88.28	**0.089**	**0.01**	--	**0.003**	<0.001	<0.001	<0.002	--	--	--	--	
MW-7	5/7/2009	--	98.66	10.22	--	88.44	**0.18**	**0.016**	**0.19**	<0.005	<0.005	<0.005	<0.0015	--	--	--	--	
MW-7	9/8/2009	--	98.66	10.74	--	87.92	**0.64**	**0.012 J**	--	**0.0039**	<0.0005	<0.0005	<0.0015	--	--	--	--	
MW-7	7/27/2010	--	98.66	11.52	--	87.14	**0.056 J**	**0.015 J**	--	**0.0039**	<0.0005	<0.0005	<0.0015	--	--	--	--	
MW-7	10/6/2010	--	98.66	12.04	--	86.62	**0.065 J**	**0.012 J**	--	**0.0014 J**	<0.0005	<0.0005	<0.0015	--	--	--	--	
MW-7	6/13/2011	--	98.66	11.49	--	87.17	--	--	--	--	--	--	--	--	--	--	--	
MW-7	6/14/2011	--	--	--	--	--	<0.051	**0.012 J**	--	**0.0016 J**	<0.0005	<0.0005	<0.0015	--	--	--	--	
MW-7	8/2/2011	--	98.66	10.46	--	88.20	**0.068 J**	<0.010	--	**0.0012 J**	<0.0005	<0.0005	<0.0015	--	--	--	--	
MW-7	6/18/2012	--	98.66	10.50	--	88.16	**0.065 J**	<0.010	--	**0.0016 J**	<0.0005	<0.0005	<0.0015	--	--	--	--	
MW-7	8/21/2012	--	98.66	11.60	--	87.06	<0.052	<0.010	--	**0.0011 J**	<0.0005	<0.0005	<0.0015	--	--	--	--	
MW-7	6/6/2013	--	98.66	10.03	--	88.63	**0.26 J**	<0.050	--	**0.0021**	<0.00023	<0.00024	<0.00072	--	--	--	--	
MW-7	8/21/2013	--	98.66	11.39	--	87.27	**0.29 J**	<0.050	--	**0.0020**	<0.00023	<0.00024	<0.00072	--	--	--	--	
MW-7	5/8/2014	--	441.23	10.22	--	431.01	**0.34 J**	<0.050	--	**0.0030**	<0.00011	<0.00016	<0.00040	--	--	--	--	
MW-7	9/26/2014	--	441.23	9.36	--	431.87	<0.060 J	<0.050	--	<0.00015	<0.00011	<0.00016	<0.00040	--	--	--	--	
MW-7	2/4/2015	--	441.23	11.90	--	429.33	--	--	--	--	--	--	--	--	--	--	--	
MW-7	2/5/2015	--	--	--	--	--	**0.11 J**	<0.050	--	<0.00015	<0.00011	<0.00016	<0.00040	--	--	--	--	
MW-7	9/17/2015	--	441.23	9.09	--	432.14	**0.15 J**	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--	--	
MW-7	6/1/2016	--	441.23	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	7/24/2017	--	440.85	10.87	--	429.98	<0.050	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--	--	
MW-7	8/21/2018	--	440.90	9.81	--	431.09	<0.16 J	<0.014	--	**0.0006 J**	<0.0002	<0.0002	<0.0005	-	-	-	-	
MW-7	7/9/2019	--	440.79	12.89	0.00	427.90	**0.12**	<0.1	--	<0.00053	<0.00039	<0.00050	<0.00114	--	--	--	--	DTW from the recent survey notes dated 7/23/2019
MW-7	7/21/2020	--	440.79	9.17	0.00	431.62	<0.84	**0.0168 J**	--	**0.000237 J**	<0.00100	**0.000152 J**	**0.00139 J**	--	--	--	--	
MW-7	7/14/2021	--	440.79	11.01	0.00	429.78	<0.800 B	<0.100	--	<0.00100	<0.00100	<0.00100	**0.000619 J**	--	--	--	--	
MW-7	7/11/2022	--	440.79	10.13	0.00	430.66	--	--	--	--	--	--	--	--	--	--	--	
MW-8	7/8/1994	--	--	--	--	--	--	--	--	**0.075**	**0.0033**	**0.024**	**0.021**	--	--	--	--	
MW-8	2/22/1995	--	--	--	--	--	--	--	--	**1.4**	<0.02	**0.17**	**0.11**	--	--	--	--	
MW-8	5/9/1995	--	--	--	--	--	--	--	--	**0.084 / 0.087**	0.00058 / <0.0005	**0.019 / 0.019**	**0.0015 / 0.0015**	--	--	--	--	
MW-8	8/31/1995	--	--	--	--	--	--	--	--	**1.2**	**0.0082**	**0.13**	**0.048**	--	--	--	--	
MW-8	12/18/1995	--	--	--	--	--	--	--	--	**4**	**0.19**	**0.35**	**0.68**	--	--	--	--	
MW-8	6/7/2000	--	--	--	--	--	--	--	--	**0.186**	**0.00246**	**0.0258**	**0.03157**	--	--	--	--	
MW-8	12/1/2000	--	--	--	--	--	--	**1.58**	--	**0.326**	**0.0013**	**0.0335**	**0.02214**	--	--	--	--	
MW-8	7/30/2001	--	--	--	--	--	--	<0.05	--	**0.00351**	<0.001	<0.001	<0.002	--	--	--	--	
MW-8	8/20/2002	--	--	--	--	--	--	<0.05	--	**0.00114**	<0.001	<0.001	<0.003	--	--	--	--	
MW-8	2/4/2003	--	--	--	--	--	--	**0.121**	--	**0.0307**	<0.001	<0.001	<0.003	--	--	--	--	
MW-8	9/3/2003	--	--	--	--	--	--	<0.05	--	**0.0116**	<0.001	<0.001	<0.003	--	--	--	--	
MW-8	4/20/2004	--	--	--	--	--	--	<0.05	--	**0.00929**	<0.001	<0.001	<0.003	--	--	--	--	
MW-8	4/21/2005	--	--	--	--	--	--	**0.03**	--	--	--	--	--	--	<0.0000093	--	--	
MW-8	9/6/2005	--	--	--	--	--	--	<0.01	--	--	--	--	--	--	<0.0000093	--	--	
MW-8	10/7/2005	--	439.22	14.01	--	425.21	--	--	--	--	--	--	--	--	--	--	--	
MW-8	4/5/2006	--	439.22	15.96	--	423.26	--	--	--	--	--	--	--	--	--	--	--	
MW-8	4/6/2006	--	--	--	--	--	--	**0.025**	--	**0.004**	<0.0005	<0.0005	<0.0015	<0.0025	<0.0000096	--	--	
MW-8	6/23/2006	--	439.22	14.95	--	424.28	--	--	--	--	--	--	--	--	--	--	--	
MW-8	7/10/2006	--	439.22	13.61	--	425.61	--	--	--	--	--	--	--	--	--	--	--	
MW-8	8/1/2006	--	439.22	14.56	--	424.66	--	--	--	--	--	--	--	--	--	--	--	
MW-8	9/5/2006	--	439.22	14.12	--	425.10	**0.066**	**0.016**	--	**0.0039**	<0.0005	<0.0005	<0.0015	--	<0.0000097	--	--	
MW-8	10/31/2006	--	439.22	15.15	--	424.08	--	--	--	--	--	--	--	--	--	--	--	
MW-8	11/28/2006	--	102.20	15.24	--	86.96	--	--	--	--	--	--	--	--	--	--	--	
MW-8	12/24/2006	--	102.20	15.53	--	86.67	--	--	--	--	--	--	--	--	--	--	--	
MW-8	2/2/2007	--	102.20	15.71	--	86.49	--	--	--	--	--	--	--	--	--	--	--	
MW-8	3/6/2007	--	102.20	15.94	--	86.26	--	--	--	--	--	--	--	--	--	--	--	
MW-8	3/7/2007	--	--	--	--	--	**0.084**	**0.01**	--	**0.002**	<0.001	<0.001	<0.002	--	<0.0000099	--	--	
MW-8	4/30/2007	--	102.20	15.60	--	86.60	--	--	--	--	--	--	--	--	--	--	--	
MW-8	5/18/2007	--	102.20	15.32	--	86.88	--	--	--	--	--	--	--	--	--	--	--	

Table 1. Historical Groundwater Gauging and Analytical Results
Second Quarter 1993 through 2022
Former Texaco Service Station 211083
230 Old Steese Highway
Fairbanks, Alaska

Well ID	Sample Date	Screen Interval (ft bTOC)	TOC (ft amsl)	DTW (ft bTOC)	LNAPL Thickness (ft)	GW Elev (ft amsl)	DRO (mg/L)	GRO (mg/L)	RRO (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)	EDB (mg/L)	Lead (mg/L)	Dissolved Lead (mg/L)	Comments
ADEC Groundwater Cleanup Levels							**1.5**	**2.2**	**1.1**	**0.0046**	**1.1**	**0.015**	**0.19**	**0.14**	**0.000075**	**0.015**	**0.015**	
MW-8	6/29/2007	--	102.20	15.21	--	86.99	--	--	--	--	--	--	--	--	--	--	--	
MW-8	7/30/2007	--	102.20	15.00	--	87.20	--	--	--	--	--	--	--	--	--	--	--	
MW-8	8/8/2007	--	102.20	14.97	--	87.23	--	--	--	--	--	--	--	--	--	--	--	
MW-8	9/8/2007	--	102.20	14.49	--	87.71	**0.14**	<0.01	--	**0.001**	<0.001	<0.001	<0.002	--	<0.0000098	--	--	
MW-8	4/6/2008	--	102.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	9/15/2008	--	102.20	13.85	--	88.35	**0.077**	**0.03**	--	**0.006**	<0.001	<0.001	<0.002	--	--	--	--	
MW-8	5/7/2009	--	102.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	9/8/2009	--	102.20	14.27	--	87.93	**0.11 J**	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0015	--	--	--	--	
MW-8	10/5/2010	--	102.20	15.49	--	86.71	**0.076 J**	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0015	--	--	--	--	
MW-8	6/13/2011	--	102.20	14.95	--	87.25	--	--	--	--	--	--	--	--	--	--	--	
MW-8	6/14/2011	--	--	--	--	--	<0.053	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0015	--	--	--	--	
MW-8	8/2/2011	--	102.20	13.96	--	88.24	--	--	--	--	--	--	--	--	--	--	--	
MW-8	8/3/2011	--	--	--	--	--	**0.054 J**	<0.010	--	**0.0021**	<0.0005	<0.0005	<0.0015	--	--	--	--	
MW-8	6/18/2012	--	102.20	13.99	--	88.21	<0.048	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0015	--	--	--	--	
MW-8	8/21/2012	--	102.20	15.04	--	87.16	<0.051	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0015	--	--	--	--	
MW-8	6/6/2013	--	102.20	13.54	--	88.66	--	--	--	--	--	--	--	--	--	--	--	
MW-8	6/7/2013	--	--	--	--	--	**0.12 J**	<0.050 J	--	**0.00025 J**	<0.00023	<0.00024	<0.00072	--	--	--	--	
MW-8	8/21/2013	--	102.20	14.91	--	87.29	**0.43 J**	<0.050	--	<0.00024	<0.00023	<0.00024	<0.00072	--	--	--	--	
MW-8	5/8/2014	--	444.71	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	9/26/2014	--	444.71	13.04	--	431.67	<0.060 J	**0.051 J**	--	**0.0037**	**0.00027 J**	<0.00016	<0.00040	--	--	--	--	
MW-8	2/4/2015	--	444.71	15.35	--	429.36	--	--	--	--	--	--	--	--	--	--	--	
MW-8	2/5/2015	--	--	--	--	--	**0.11 J**	<0.050 J	--	**0.00028 J**	<0.00011	<0.00016	<0.00040	--	--	--	--	
MW-8	9/17/2015	--	444.71	12.62	--	432.09	<0.052	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--	--	
MW-8	6/1/2016	--	444.71	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	7/24/2017	--	444.41	14.29	--	430.12	<0.051	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--	--	
MW-8	8/21/2018	--	444.46	13.30	--	431.16	<0.15 J	<0.014	--	**0.0002 J**	<0.0002	<0.0002	<0.0005	-	-	-	-	
MW-8	7/9/2019	--	444.36*	15.34	0.00	429.02	**0.14 [0.12]**	<0.1 [<0.1]	--	<0.00053 [<0.00053]	<0.00039 [<0.00039]	<0.00050 [<0.00050]	<0.00114 [<0.00114]	**-- [--]**	**-- [--]**	**-- [--]**	**-- [--]**	DTW from the recent survey notes dated 7/23/2019
MW-8	7/21/2020	--	444.36	12.60	0.00	431.76	**0.298 J**	**0.299**	--	**0.00163**	**0.000702 J**	**0.00133**	**0.0108**	--	--	--	--	
MW-8	7/14/2021	--	444.36	14.42	0.00	429.94	<0.800 B	<0.100 B	--	<0.00100	<0.00100	**0.000472 J**	**0.00342 J**	--	--	--	--	
MW-8	7/11/2022	--	444.36	13.54	0.00	430.82	--	--	--	--	--	--	--	--	--	--	--	
MW-9	5/28/2002	--	--	--	--	--	--	**1.52**	--	**0.385**	<0.001	**0.0303**	<0.003	--	--	--	--	
MW-9	8/20/2002	--	--	--	--	--	--	**1.09**	--	**0.28**	<0.001	**0.0196**	**0.00343**	--	--	--	--	
MW-9	2/4/2003	--	--	--	--	--	--	**0.631**	--	**0.0945**	<0.001	**0.00183**	<0.003	--	--	--	--	
MW-9	9/3/2003	--	--	--	--	--	--	**0.315**	--	**0.0922**	<0.001	**0.00209**	<0.003	--	--	--	--	
MW-9	4/20/2004	--	--	--	--	--	--	**0.368**	--	**0.114**	<0.004	<0.004	<0.012	--	--	--	--	
MW-9	9/6/2005	--	--	--	--	--	--	**0.36**	--	--	--	--	--	--	--	--	--	
MW-9	10/7/2005	--	438.10	12.79	--	425.31	--	--	--	--	--	--	--	--	--	--	--	
MW-9	4/5/2006	--	438.10	14.85	--	423.25	--	--	--	--	--	--	--	--	--	--	--	
MW-9	4/6/2006	--	--	--	--	--	--	**0.38**	--	**0.06**	<0.0005	<0.0005	<0.0015	**0.006**	--	--	--	
MW-9	6/23/2006	--	438.10	13.86	--	424.24	--	--	--	--	--	--	--	--	--	--	--	
MW-9	7/10/2006	--	438.10	12.60	--	425.50	--	--	--	--	--	--	--	--	--	--	--	
MW-9	8/1/2006	--	438.10	13.47	--	424.63	--	--	--	--	--	--	--	--	--	--	--	
MW-9	9/5/2006	--	438.10	13.04	--	425.06	**0.35**	**0.49**	--	**0.076**	**0.0005**	**0.0008**	<0.0015	--	<0.0000098	--	--	
MW-9	10/31/2006	--	438.10	14.07	--	424.03	--	--	--	--	--	--	--	--	--	--	--	
MW-9	11/28/2006	--	101.09	14.13	--	86.96	--	--	--	--	--	--	--	--	--	--	--	
MW-9	12/24/2006	--	101.09	14.42	--	86.67	--	--	--	--	--	--	--	--	--	--	--	
MW-9	2/2/2007	--	101.09	14.60	--	86.49	--	--	--	--	--	--	--	--	--	--	--	
MW-9	3/6/2007	--	101.09	14.83	--	86.26	--	--	--	--	--	--	--	--	--	--	--	
MW-9	3/7/2007	--	--	--	--	--	**0.23**	**0.2**	--	**0.04**	<0.001	<0.001	<0.002	--	<0.0000096	--	--	
MW-9	4/30/2007	--	101.09	14.48	--	86.61	--	--	--	--	--	--	--	--	--	--	--	
MW-9	5/18/2007	--	101.09	14.24	--	86.85	--	--	--	--	--	--	--	--	--	--	--	
MW-9	6/29/2007	--	101.09	14.13	--	86.96	--	--	--	--	--	--	--	--	--	--	--	
MW-9	7/30/2007	--	101.09	13.93	--	87.16	--	--	--	--	--	--	--	--	--	--	--	
MW-9	8/8/2007	--	101.09	13.95	--	87.14	--	--	--	--	--	--	--	--	--	--	--	
MW-9	9/8/2007	--	101.09	13.39	--	87.70	**0.26**	**0.3**	--	**0.06**	<0.001	<0.001	<0.005	--	<0.0000098	--	--	
MW-9	4/6/2008	--	101.09	15.18	--	85.91	--	--	--	--	--	--	--	--	--	--	--	
MW-9	4/7/2008	--	--	--	--	--	**0.268**	**0.178**	<0.743	**0.0201**	<0.0005	<0.0005	<0.001	--	--	--	--	
MW-9	9/15/2008	--	101.09	12.66	--	88.43	**0.11**	**0.2**	--	**0.03**	<0.001	<0.001	<0.002	--	--	--	--	
MW-9	5/7/2009	--	101.09	12.94	--	88.15	**0.17**	**0.21**	**0.094**	**0.024**	<0.005	<0.005	<0.0015	--	--	--	--	
MW-9	9/8/2009	--	101.09	13.11	--	87.98	**0.052 J**	**0.21**	--	**0.025**	<0.0005	<0.0005	<0.0015	--	--	--	--	
MW-9	7/27/2010	--	101.09	13.88	--	87.21	**0.16 J**	**0.25**	--	**0.027**	<0.0005	<0.0005	<0.0015	--	--	--	--	
MW-9	10/6/2010	--	101.09	14.38	--	86.71	**0.064 J**	**0.050 J**	--	**0.0037**	<0.0005	<0.0005	<0.0015	--	--	--	--	
MW-9	6/13/2011	--	101.09	13.84	--	87.25	--	--	--	--	--	--	--	--	--	--	--	
MW-9	6/14/2011	--	--	--	--	--	**0.075 J**	**0.13**	--	**0.016**	<0.0005	<0.0005	<0.0015	--	--	--	--	
MW-9	8/2/2011	--	101.09	12.77	--	88.32	**0.14 J**	**0.13**	--	**0.013**	<0.0005	<0.0005	<0.0015	--	--	--	--	
MW-9	6/18/2012	--	101.09	13.89	--	87.20	**0.21 J**	**0.20**	--	**0.018**	<0.0005	<0.0005	<0.0015	--	--	--	--	
MW-9	8/21/2012	--	101.09	13.93	--	87.16	<0.048	**0.026 J**	--	**0.0024**	<0.0005	<0.0005	<0.0015	--	--	--	--	
MW-9	6/6/2013	--	101.09	12.37	--	88.72	**0.33 J**	**0.17 J**	--	**0.014**	<0.00023	<0.00024	<0.00072	--	--	--	--	
MW-9	8/21/2013	--	101.09	13.83	--	87.26	**0.22 J**	<0.050	--	**0.0016**	<0.00023	<0.00024	<0.00072	--	--	--	--	
MW-9	5/8/2014	--	443.65	12.71	--	430.94	**0.32 J**	**0.15**	--	**0.0067**	<0.00011	<0.00016	<0.00040	--	--	--	--	
MW-9	9/26/2014	--	443.65	11.62	--	432.03	**0.19 J**	**0.19**	--	**0.0059**	<0.00011	<0.00016	<0.00040	--	--	--	--	
MW-9	2/4/2015	--	443.65	14.23	--	429.42	--	--	--	--	--	--	--	--	--	--	--	
MW-9	2/5/2015	--	--	--	--	--	**0.30 J**	<0.050	--	**0.00075 J**	<0.00011	<0.00016	<0.00040	--	--	--	--	
MW-9	9/17/2015	--	443.65	12.28	--	431.37	<0.052	**0.078 J**	--	**0.002**	<0.0005	<0.0005	<0.0005	--	--	--	--	
MW-9	6/1/2016	--	443.65	13.55	--	430.10	**0.090 J**	**0.012 J**	--	**0.001**	<0.0005	<0.0005	<0.0005	--	--	--	--	
MW-9	7/24/2017	--	443.28	13.19	--	430.09	<0.051	**0.027 J**	--	**0.0007 J**	<0.0005	<0.0005	<0.0005	--	--	--	--	
MW-9	8/21/2018	--	443.33	12.11	--	431.22	<0.15 J	**0.051 J**	--	**0.002**	<0.0002	<0.0002	<0.0005	-	-	-	-	

Table 1. Historical Groundwater Gauging and Analytical Results
Second Quarter 1993 through 2022
Former Texaco Service Station 211083
230 Old Steese Highway
Fairbanks, Alaska

Well ID	Sample Date	Screen Interval (ft bTOC)	TOC (ft amsl)	DTW (ft bTOC)	LNAPL Thickness (ft)	GW Elev (ft amsl)	DRO (mg/L)	GRO (mg/L)	RRO (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)	EDB (mg/L)	Lead (mg/L)	Dissolved Lead (mg/L)	Comments
ADEC Groundwater Cleanup Levels							**1.5**	**2.2**	**1.1**	**0.0046**	**1.1**	**0.015**	**0.19**	**0.14**	**0.000075**	**0.015**	**0.015**	
MW-9	7/9/2019	--	443.22	14.22	0.00	429.00	**0.12**	<0.1	--	<0.00053	<0.00039	<0.00050	<0.00114	--	--	--	--	DTW from the recent survey notes dated 7/23/2019
MW-9	7/21/2020	--	443.22	11.46	0.00	431.76	<0.800	**0.0225 J**	--	**0.000365 J**	<0.00100	<0.00100	**0.000443 J**	--	--	--	--	
MW-9	7/14/2021	--	443.22	13.33	0.00	429.89	<0.800 B	<0.100 B	--	**0.000311 J**	<0.00100	**0.000667 J**	**0.00446**	--	--	--	--	
MW-9	7/11/2022	--	443.22	12.46	0.00	430.76	--	--	--	--	--	--	--	--	--	--	--	
MW-10	5/28/2002	--	--	--	--	--	--	<0.09 / <0.09	--	**0.00491 / 0.00497**	<0.001 / <0.001	<0.001 / <0.001	<0.003 / <0.003	--	--	--	--	
MW-10	8/19/2002	--	--	--	--	--	--	<0.05	--	<0.001	<0.001	<0.001	<0.003	--	--	--	--	
MW-10	2/6/2003	--	--	--	--	--	--	**0.0881**	--	**0.0265**	<0.001	<0.001	<0.003	--	--	--	--	
MW-10	9/3/2003	--	--	--	--	--	--	<0.05	--	**0.00711**	<0.001	<0.001	<0.003	--	--	--	--	
MW-10	4/20/2004	--	--	--	--	--	--	<0.05	--	**0.00167**	<0.001	<0.001	<0.003	--	--	--	--	
MW-10	4/21/2005	--	--	--	--	--	--	<0.01	--	--	--	--	--	--	--	--	--	
MW-10	9/6/2005	--	--	--	--	--	--	**0.041**	--	--	--	--	--	--	--	--	--	
MW-10	10/7/2005	--	438.93	13.65	--	425.28	--	--	--	--	--	--	--	--	--	--	--	
MW-10	4/5/2006	--	438.93	15.67	--	423.26	--	--	--	--	--	--	--	--	--	--	--	
MW-10	4/6/2006	--	--	--	--	--	--	<0.01	--	<0.0005	<0.0005	<0.0005	<0.0015	<0.0025	--	--	--	
MW-10	6/23/2006	--	438.93	14.68	--	424.25	--	--	--	--	--	--	--	--	--	--	--	
MW-10	7/10/2006	--	438.93	13.38	--	425.55	--	--	--	--	--	--	--	--	--	--	--	
MW-10	8/1/2006	--	438.93	14.30	--	424.63	--	--	--	--	--	--	--	--	--	--	--	
MW-10	9/5/2006	--	438.93	13.87	--	425.06	**0.047**	<0.01	--	**0.001**	<0.0005	<0.0005	<0.0015	--	<0.0000097	--	--	
MW-10	10/31/2006	--	438.93	14.87	--	424.06	--	--	--	--	--	--	--	--	--	--	--	
MW-10	11/28/2006	--	101.92	14.96	--	86.96	--	--	--	--	--	--	--	--	--	--	--	
MW-10	12/24/2006	--	101.92	15.24	--	86.68	--	--	--	--	--	--	--	--	--	--	--	
MW-10	2/2/2007	--	101.92	15.42	--	86.50	--	--	--	--	--	--	--	--	--	--	--	
MW-10	3/6/2007	--	101.92	15.66	--	86.26	--	--	--	--	--	--	--	--	--	--	--	
MW-10	3/7/2007	--	--	--	--	--	**0.07**	<0.01	--	<0.001	<0.001	<0.001	<0.002	--	<0.0000097	--	--	
MW-10	4/30/2007	--	101.92	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	5/18/2007	--	101.92	15.06	--	86.86	--	--	--	--	--	--	--	--	--	--	--	
MW-10	6/29/2007	--	101.92	14.95	--	86.97	--	--	--	--	--	--	--	--	--	--	--	
MW-10	7/30/2007	--	101.92	14.74	--	87.18	--	--	--	--	--	--	--	--	--	--	--	
MW-10	8/8/2007	--	101.92	14.73	--	87.19	--	--	--	--	--	--	--	--	--	--	--	
MW-10	9/8/2007	--	101.92	14.21	--	87.71	**0.091**	<0.01	--	<0.001	<0.001	<0.001	<0.002	--	<0.0000098	--	--	
MW-10	4/6/2008	--	101.92	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	9/15/2008	--	101.92	13.51	--	88.41	**0.15**	**0.1**	--	**0.007**	<0.001	**0.003**	**0.003**	--	--	--	--	
MW-10	5/7/2009	--	101.92	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	9/8/2009	--	101.92	13.95	--	87.97	**0.091 J**	<0.010	--	**0.0006 J**	<0.0005	<0.0005	<0.0015	--	--	--	--	
MW-10	7/27/2010	--	101.92	14.70	--	87.22	<0.049	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0015	--	--	--	--	
MW-10	10/4/2010	--	101.92	15.16	--	86.76	<0.052	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0015	--	--	--	--	
MW-10	6/13/2011	--	101.92	14.67	--	87.25	--	--	--	--	--	--	--	--	--	--	--	
MW-10	6/14/2011	--	--	--	--	--	<0.053	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0015	--	--	--	--	
MW-10	8/2/2011	--	101.92	13.62	--	88.30	**0.092 J**	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0015	--	--	--	--	
MW-10	6/18/2012	--	101.92	13.70	--	88.22	<0.047	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0015	--	--	--	--	
MW-10	8/21/2012	--	101.92	14.74	--	87.18	<0.047	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0015	--	--	--	--	
MW-10	6/6/2013	--	101.92	13.20	--	88.72	**0.13 J**	<0.050	--	**0.00038 J**	<0.00023	<0.00024	<0.00072	--	--	--	--	
MW-10	8/21/2013	--	101.92	14.63	--	87.29	**0.20 J**	<0.050	--	<0.00024	<0.00023	<0.00024	<0.00072	--	--	--	--	
MW-10	5/8/2014	--	444.57	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	9/26/2014	--	444.57	12.65	--	431.92	**0.21 J**	**0.20**	--	**0.0075**	**0.00021 J**	<0.00016	<0.00040	--	--	--	--	
MW-10	2/4/2015	--	444.57	15.04	--	429.53	--	--	--	--	--	--	--	--	--	--	--	
MW-10	2/5/2015	--	--	--	--	--	**0.29 J**	<0.050	--	**0.0012**	<0.00011	<0.00016	<0.00040	--	--	--	--	
MW-10	9/17/2015	--	444.57	11.45	--	433.12	<0.051	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--	--	
MW-10	6/1/2016	--	444.57	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	7/24/2017	--	444.10	13.99	--	430.11	<0.051	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--	--	
MW-10	8/21/2018	--	444.16	12.96	--	431.20	<0.14 J	<0.014	--	<0.0002	<0.0002	<0.0002	<0.0005	--	--	--	--	
MW-10	7/9/2019	--	444.04	15.04	0.00	429.00	**0.41**	<0.1	--	<0.00053 J	<0.00039 J	<0.00050 J	<0.00114 J	--	--	--	--	DTW from the recent survey notes dated 7/23/2019
MW-10	7/21/2020	--	444.04	12.34	0.00	431.70	<0.800	**0.109**	--	**0.00258**	<0.00100	**0.000850 J**	**0.00138 J**	--	--	--	--	
MW-10	7/14/2021	--	444.04	14.13	0.00	429.91	<0.800 B	<0.100	--	<0.00100	<0.00100	**0.000573 J**	**0.00398**	--	--	--	--	
MW-10	7/11/2022	--	444.04	13.25	0.00	430.79	--	--	--	--	--	--	--	--	--	--	--	
Noyes Slough	6/23/2006	--	446.20	22.54	--	423.66	--	--	--	--	--	--	--	--	--	--	--	
Noyes Slough	7/10/2006	--	446.20	20.10	--	426.10	--	--	--	--	--	--	--	--	--	--	--	
Noyes Slough	8/1/2006	--	446.20	21.57	--	424.63	--	--	--	--	--	--	--	--	--	--	--	
Noyes Slough	9/5/2006	--	446.20	21.44	--	424.76	--	--	--	--	--	--	--	--	--	--	--	
Noyes Slough	10/31/2006	--	446.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Noyes Slough	11/28/2006	--	446.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Noyes Slough	12/24/2006	--	446.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Noyes Slough	2/2/2007	--	446.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Noyes Slough	3/6/2007	--	446.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Noyes Slough	4/30/2007	--	446.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Noyes Slough	5/18/2007	--	446.20	21.52	--	424.68	--	--	--	--	--	--	--	--	--	--	--	
Noyes Slough	6/29/2007	--	446.20	22.20	--	424.00	--	--	--	--	--	--	--	--	--	--	--	
Noyes Slough	7/30/2007	--	446.20	21.80	--	424.40	--	--	--	--	--	--	--	--	--	--	--	
Noyes Slough	8/8/2007	--	446.20	21.36	--	424.84	--	--	--	--	--	--	--	--	--	--	--	
Noyes Slough	9/8/2007	--	446.20	21.59	--	424.61	--	--	--	--	--	--	--	--	--	--	--	
Noyes Slough	4/6/2008	--	446.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Noyes Slough	9/15/2008	--	446.20	21.33	--	424.87	--	--	--	--	--	--	--	--	--	--	--	
Noyes Slough	5/7/2009	--	446.20	19.01	--	427.19	--	--	--	--	--	--	--	--	--	--	--	
TRIP BLANK	4/21/2005	--	--	--	--	--	--	<0.01	--	--	--	--	--	--	--	--	--	
TRIP BLANK	9/6/2005	--	--	--	--	--	--	<0.01	--	<0.0005	<0.0005	<0.0015	<0.0000093	--	<0.0000093	--	--	

Table 1. Historical Groundwater Gauging and Analytical Results
Second Quarter 1993 through 2022
Former Texaco Service Station 211083
230 Old Steese Highway
Fairbanks, Alaska

Well ID	Sample Date	Screen Interval (ft bTOC)	TOC (ft amsl)	DTW (ft bTOC)	LNAPL Thickness (ft)	GW Elev (ft amsl)	DRO (mg/L)	GRO (mg/L)	RRO (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)	EDB (mg/L)	Lead (mg/L)	Dissolved Lead (mg/L)	Comments
ADEC Groundwater Cleanup Levels							**1.5**	**2.2**	**1.1**	**0.0046**	**1.1**	**0.015**	**0.19**	**0.14**	**0.000075**	**0.015**	**0.015**	
TRIP BLANK	4/6/2006	--	--	--	--	--	--	<0.01	--	<0.0005	<0.0005	<0.0005	<0.0015	<0.0025	<0.0000095	--	--	
TRIP BLANK	9/5/2006	--	--	--	--	--	--	<0.01	--	<0.0005	<0.0005	<0.0005	<0.0015	--	<0.0000098	--	--	
TRIP BLANK	3/7/2007	--	--	--	--	--	--	**0.01**	--	<0.001	<0.001	<0.001	<0.002	<0.003	<0.0000098	--	--	
TRIP BLANK	9/8/2007	--	--	--	--	--	--	<0.01	--	<0.001	<0.001	<0.001	<0.002	<0.003	<0.0000099	--	--	
TRIP BLANK	4/7/2008	--	--	--	--	--	--	<0.05	--	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	--	--	
TRIP BLANK	9/15/2008	--	--	--	--	--	--	<0.01	--	<0.001	<0.001	<0.001	<0.002	--	--	--	--	
TRIP BLANK	5/7/2009	--	--	--	--	--	--	<0.01	--	<0.005	<0.005	<0.005	<0.0015	--	--	--	--	
TRIP BLANK	9/2/2009	--	--	--	--	--	--	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0000098	--	--	
TRIP BLANK	7/28/2010	--	--	--	--	--	--	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0015	--	<0.0000098	--	--	
TRIP BLANK	9/27/2010	--	--	--	--	--	--	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0015	--	--	--	--	
TRIP BLANK	6/13/2011	--	--	--	--	--	--	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0015	--	<0.0000098	--	--	
TRIP BLANK	8/2/2011	--	--	--	--	--	--	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0015	--	<0.000010	--	--	
TRIP BLANK	6/18/2012	--	--	--	--	--	--	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0015	--	<0.0000095	--	--	
TRIP BLANK	8/21/2012	--	--	--	--	--	--	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0015	--	<0.000010	--	--	
TRIP BLANK	6/7/2013	--	--	--	--	--	--	<0.050	--	<0.00024	<0.00023	<0.00024	<0.00072	--	<0.0000027	--	--	
TRIP BLANK	8/22/2013	--	--	--	--	--	--	<0.050	--	<0.00024	**0.00051 J**	<0.00024	<0.00072	--	<0.0000027 J	--	--	
TRIP BLANK	5/9/2014	--	--	--	--	--	--	<0.050	--	<0.00015	<0.00011	<0.00016	<0.00040	--	<0.0000045	--	--	
TRIP BLANK	9/26/2014	--	--	--	--	--	--	<0.050	--	<0.00015	<0.00011	<0.00016	<0.00040	--	--	--	--	
TRIP BLANK	2/5/2015	--	--	--	--	--	--	<0.050	--	<0.00015	**0.00033 J**	<0.00016	<0.00040	--	--	--	--	
TRIP BLANK	9/17/2015	--	--	--	--	--	--	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0005	--	<0.0000096	--	--	
TRIP BLANK	6/1/2016	--	--	--	--	--	--	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0005	--	<0.0000096	--	--	
TRIP BLANK	7/24/2017	--	--	--	--	--	--	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0005	--	<0.0000099	--	--	
TRIP BLANK	8/21/2018	--	--	--	--	--	--	<0.014	--	<0.0002	<0.0002	<0.0002	<0.0005	--	<0.0000096	--	--	
TRIP BLANK	7/9/2019	--	--	--	--	--	--	<0.1	--	<0.00053	<0.00039	<0.00050	<0.00114	--	--	--	--	
TRIP BLANK	7/21/2020	--	--	--	--	--	--	<0.100	--	<0.00100	<0.00100	<0.00100	<0.00300	--	--	--	--	
TRIP BLANK	7/14/2021	--	--	--	--	--	--	**0.0413 J**	--	<0.00100	<0.00100	<0.00100	<0.00300	--	--	--	--	
TRIP BLANK	7/11/2022	--	--	--	--	--	--	<0.100	--	<0.00100	<0.00100	<0.00100	<0.00300	--	--	--	--	
EQB	7/22/2020	--	--	--	--	--	<0.800	<0.100	--	<0.00100	<0.00100	<0.00100	<0.00300	--	<0.0000200	<0.00600	--	
EQB	7/14/2021	--	--	--	--	--	**0.296 J**	<0.100	--	<0.00100	<0.00100	<0.00100	<0.00300	--	<0.0000200	<0.00600	--	
EQB	7/11/2022	--	--	--	--	--	<0.840	<0.100	--	<0.00100	<0.00100	<0.00100	<0.00300	--	<0.0000202	<0.00600	--	

Notes:

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
mg/L = Milligrams per liter
LNAPL = Light Non-Aqueous Phase Liquid
<0.100 = Not detected at or above the reported detection limit (RDL)
Bold = Value exceeds method detection limit (MDL)
Bold and Shaded = Value exceeds ADEC Groundwater Cleanup Level
J = The associated numerical value is an estimated concentration only
B = Compound considered non-detect at the listed value due to associated blank contamination

DRO = Total petroleum hydrocarbons, diesel range organics by Alaska Series Method AK102
GRO = Total petroleum hydrocarbons, gasoline range organicsby Alaska Series Method AK101
RRO = Total petroleum hydrocarbons, residual range organicsby Alaska Series Method AK102
Analytes analyzed by United States Environmental Protection Agency (USEPA) Method 8260D:
Benzene, toluene, ethylbenzene, and total xylenes (collectively BTEX)
EDB (1,2-dibromoethane) by USEPA method 8011
Lead by USEPA method 6010D
ADEC = Alaska Department of Environmental Conservation
EQB = Equipment Blank
[ ] = Duplicate sample result
NAVD88 = North American Vertical Datum of 1988
-- = Not sampled/not measured

Attachment E

ADEC Data Review Checklist

Laboratory Data Review Checklist

Completed By:

Dilip Kumar H S

Title:

Project Chemist

Date:

September 15, 2023

Consultant Firm:

ARCADIS U.S., Inc

Laboratory Name:

Pace Analytical

Laboratory Report Number:

L1640207

Laboratory Report Date:

7/28/2023

CS Site Name:

Semi Annual 2023 Groundwater Monitoring Report

ADEC File Number:

102.26.046

Hazard Identification Number:

24310

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

1. Laboratory

a. Did an ADEC Contaminated Sites Laboratory Approval Program (CS-LAP) approved laboratory receive and perform all of the submitted sample analyses?

Yes☒ No☐ N/A☐ Comments:

Yes.

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

Yes☐ No☐ N/A☒ Comments:

Not applicable.

2. Chain of Custody (CoC)

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

Yes☒ No☐ N/A☐ Comments:

Yes.

b. Were the correct analyses requested?

Yes☒ No☐ N/A☐ Comments:

Yes.

3. Laboratory Sample Receipt Documentation

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

Yes☒ No☐ N/A☐ Comments:

Yes.

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

Yes☒ No☐ N/A☐ Comments:

Yes.

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

Yes☒ No☐ N/A☐ Comments:

Yes.

d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, canister not holding a vacuum, etc.?

Yes☒ No☐ N/A☐ Comments:

Yes. no discrepancies.

e. Is the data quality or usability affected?

Comments:

Data quality or usability was not affected.

4. Case Narrative

a. Is the case narrative present and understandable?

Yes☒ No☐ N/A☐ Comments:

Yes.

b. Are there discrepancies, errors, or QC failures identified by the lab?

Yes☐ No☒ N/A☐ Comments:

Method AK 101: pH exceedance was observed in sample IDs Blind duplicate (BD-1), Trip blanks (TRIP BLANK 1 and TRIP BLANK 2). The 5x dilution of the sample BD-1, and trip blanks TRIP BLANK1 and TRIP BLANK 2 were analyzed beyond the 7 day recommended holding time for unpreserved samples. Target compound result from the 5x dilution in the associated sample location BD-1, and trip blanks TRIP BLANK1 and TRIP BLANK 2 were qualified as estimated (UJ/J)

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:

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

5. Samples Results

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

Yes☒ No☐ N/A☐ Comments:

Yes.

b. Are all applicable holding times met?

Yes☐ No☒ N/A☐ Comments:

Method AK 101: 5x dilution of the sample BD-1, and trip blanks TRIP BLANK1 and TRIP BLANK 2 were analyzed outside of the holding time for unpreserved samples.

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

Yes☐ No☒ N/A☐ Comments:

No soil samples were submitted for analysis.

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

Yes☒ No☐ N/A☐ Comments:

Yes.

e. Is the data quality or usability affected?

Data quality or usability was not affected.

6. QC Samples

a. Method Blank

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

Yes☒ No☐ N/A☐ Comments:

Yes.

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

Yes☐ No☒ N/A☐ Comments:

No.

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

Comments:

Sample Locations	Method	Compounds	Sample Result	Qualification
MW-6-W-20230726	AK 101	TPHGAK C6 to C10	Detected sample results >RL and <BAL	"UB" at the detected sample concentration
MW-1-W-20230726 MW-3-W-20230726 MW-6-W-20230726	AK 102	AK102 DRO C10-C25	Detected sample results <RL and <BAL	"UB" at the RL

Note:
RL 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 is considered 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 – Are one LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)

Yes☒ No☐ N/A☐ Comments:

Yes.

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

Yes☒ No☐ N/A☐ Comments:

Yes.

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

Yes☒ No☐ N/A☐ Comments:

Yes.

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

Yes☒ No☐ N/A☐ Comments:

Yes.

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

Yes☒ No☐ N/A☐ Comments:

Yes.

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

Comments:

Data quality or usability was not affected.

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

Note: Leave blank if not required for project

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

Yes☒ No☐ N/A☐ Comments:

The MS/MSD analysis was performed on sample ID MW-6-W-20230726.

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

Yes☒ No☐ N/A☐ Comments:

The MS/MSD analysis was performed on sample ID MW-6-W-20230726.

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

Yes☐ No☒ N/A☐ Comments:

Sample locations associated with the MS/MSD exhibiting recoveries outside of the control limits are presented in the following table.

Sample Locations	Method	Compounds	MS Recovery	MSD Recovery
MW-6-W-20230726	AK 101	TPHGAK C6 to C10	AC	< LL but > 10%
	8260 D	Toluene	< 10%	AC
		1,2,4-Trimethylbenzene	< 10%	AC
		m&p-Xylene	< 10%	AC
	AK 102	AK102 DRO C10-C25	< LL but > 10%	AC

Note:
LL – Lower control limit
AC - Acceptable

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

Control Limit	Sample Result	Qualification
> the upper control limit (UL)	Non-detect	No Action
	Detect	J
< the lower control limit (LL) but > 10%	Non-detect	UJ
	Detect	J
< 10%	Non-detect	R
	Detect	J
Parent sample concentration > four times the MS/MSD spiking solution concentration.	Detect	No Action
	Non-detect	

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

Yes☐ No☒ N/A☐ Comments:

No

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

Sample Locations	Compounds
MW-6-W-20230726	TPHGAK C6 to C10
	Benzene
	1,2-Dichloroethane
	Ethylbenzene
	Isopropylbenzene
	Methylene Chloride
	1,1,2-Trichloroethane
	1,3,5-Trimethylbenzene
	Vinyl chloride

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

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

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

Comments:

Recovery:
Method 8260 D: MS recovery for toluene, 1,2,4-trimethylbenzene and m&p-Xylene was less than 10% the control limit in sample MW-6-W-20230726. Target compound result in associated sample was qualified as estimated (J/UJ).
Method AK 101: MSD recovery for TPHGAK C6 to C10 was less than the control limit in sample MW-6-W-20230726. Target compound result in associated sample was qualified as estimated (J).
Method AK102: MS/MSD recovery for AK102 DRO C10-C25 was less than the control limit in sample MW-6-W-20230726. Target compound result in associated sample was qualified as estimated (J).
RPD:
Method AK 101: Compound TPHGAK C6 to C10 result in sample ID MW-6-W-20230726 was qualified as estimated (J).
Method 8260 D: Compounds benzene, 1,2-dichloroethane, ethylbenzene, isopropylbenzene, methylene chloride, 1,1,2-trichloroethane, 1,3,5-trimethylbenzene and vinyl chloride result in sample ID MW-6-W-20230726 was qualified as estimated (UJ/J).

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

Yes☒ No☐ N/A☐ Comments:

Yes.

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

Comments:

MS/MSD recovery and RPD exceedance are considered minor and would result in the estimation of the associated data. The 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 – Are all percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK Petroleum methods 50-150 %R for field samples 60-120% R for QC samples ; all other analyses see the laboratory report pages)

Yes☒ No☐ N/A☐ Comments:

Yes.

iii. Do the sample results with failed surrogate/IDA recoveries have data flags? If so, are the data flags clearly defined?

Yes☒ No☐ N/A☐ Comments:

Not applicable.

iv. Is the data quality or usability affected?

Comments:

Data quality or usability was not affected.

e. Trip Blanks

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

Yes☒ No☐ N/A☐ Comments:

Trip blank samples were collected as TRIP BLANK 1-20230726 and TRIP BLANK 2-20230726.

ii. Are all results less than LOQ or RL?

Yes☐ No☒ N/A☐ Comments:

No.

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

Comments:

Sample Locations	Method	Compounds	Sample Result	Qualification
MW-6-W-20230726	AK 101	TPHGAK C6 to C10	Detected sample results >RL and <BAL	"UB" at the detected sample concentration

Note:
RL Reporting limit

iv. Is data quality or usability affected?

Comments:

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

f. Field Duplicate

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

Yes☒ No☐ N/A☐ Comments:

Yes.

ii. Was the duplicate submitted blind to lab?

Yes☒ No☐ N/A☐ Comments:

Yes.

iii. Precision – All relative percent differences (RPD) less than specified project objectives? (Recommended: 30% water, 50% soil)

RPD (%) = Absolute value of: $\frac{(R_1-R_2)}{((R_1+R_2)/2)} \times 100$

Where R_1 = Sample Concentration
R_2 = Field Duplicate Concentration

Yes☒ No☐ N/A☐ Comments:

Results for duplicate samples are summarized in the following table.

Sample ID / Duplicate ID	Method	Compounds / Analytes	Sample Result	Duplicate Result	RPD
MW-2-W-20230726/ BD-1-W-20230726	6010D	Arsenic	53.4	48.9	AC
		Lead	4.19 J	6 U	AC
	AK 101	TPHGAK C6 to C10	7700	8510	10%
	8260D	Benzene	0.984 J	1.21	AC
		Ethylbenzene	196	200	2.0%
		Isopropylbenzene	50.9	51	0.2%
		Naphthalene	139	136	2.2%
		Toluene	8.52	9.08	6.4%
		1,2,4-Trimethylbenzene	2160	2460	13%
		1,3,5-Trimethylbenzene	716	851	17.2%
		Xylenes, Total	1160	1180	1.7%
		o-Xylene	288	279	3.2%
		m&p-Xylene	874	896	2.5%
	AK 102/103	AK102 DRO C10-C25	4320	4400	1.9%

Notes:
AC - Acceptable

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

Comments:

Data quality or usability was not affected.

g. Decontamination or Equipment Blank

i. Were decontamination or equipment blanks collected?

Yes☒ No☐ N/A☐ Comments:

Equipment blank sample was collected as EQB-1-W-20230726.

ii. Are all results less than LOQ or RL?

Yes☒ No☐ N/A☐ Comments:

Yes.

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

Comments:

Sample Locations	Method	Compounds	Sample Result	Qualification
MW-1-W-20230726 MW-3-W-20230726 MW-6-W-20230726	AK 102	AK102 DRO C10-C25	Detected sample results <RL and <BAL	"UB" at the RL

Note:
RL Reporting limit

iv. Are data quality or usability affected?

Comments:

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

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

a. Are they defined and appropriate?

Yes☒ No☐ N/A☐ Comments:

Yes.

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

Sample Locations	Initial/Continuing	Compounds	Recovery
MW-1-W-20230726 MW-3-W-20230726 MW-4-W-20230726 MW-6-W-20230726 MW-2-W-20230726 BD-1-W-20230726 EQB-1-W-20230726 TRIP BLANK 1-20230726 TRIP BLANK 2-20230726	CCV %D	Naphthalene	Low

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

Laboratory Data Review Checklist

Completed By:

Dilip Kumar H S

Title:

Project Chemist

Date:

September 21, 2023

Consultant Firm:

ARCADIS U.S., Inc

Laboratory Name:

Pace Analytical

Laboratory Report Number:

L1645570

Laboratory Report Date:

08/12/2023

CS Site Name:

Semi Annual 2023 Groundwater Monitoring Report

ADEC File Number:

102.26.046

Hazard Identification Number:

24310

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

1. Laboratory

   a. Did an ADEC Contaminated Sites Laboratory Approval Program (CS-LAP) approved laboratory receive and perform all of the submitted sample analyses?

   Yes☒ No☐ N/A☐ Comments:

Yes.

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

   Yes☐ No☐ N/A☒ Comments:

Not applicable.

2. Chain of Custody (CoC)

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

   Yes☒ No☐ N/A☐ Comments:

Yes.

   b. Were the correct analyses requested?

   Yes☒ No☐ N/A☐ Comments:

Yes.

3. Laboratory Sample Receipt Documentation

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

   Yes☒ No☐ N/A☐ Comments:

Yes.

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

   Yes☒ No☐ N/A☐ Comments:

Yes.

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

   Yes☒ No☐ N/A☐ Comments:

Yes.

   d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, canister not holding a vacuum, etc.?

   Yes☒ No☐ N/A☐ Comments:

Yes. no discrepancies.

e. Is the data quality or usability affected?

Comments:

Data quality or usability was not affected.

4. Case Narrative

a. Is the case narrative present and understandable?

Yes☒ No☐ N/A☐ Comments:

Yes.

b. Are there discrepancies, errors, or QC failures identified by the lab?

Yes☒ No☐ N/A☐ Comments:

Yes.

c. Were all corrective actions documented?

Yes☒ No☐ N/A☐ Comments:

Yes.

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

Comments:

Data quality or usability was not affected.

5. Samples Results

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

Yes☒ No☐ N/A☐ Comments:

Yes.

b. Are all applicable holding times met?

Yes☒ No☐ N/A☐ Comments:

Yes.

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

Yes☐ No☒ N/A☐ Comments:

No soil samples were submitted for analysis.

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

Yes☒ No☐ N/A☐ Comments:

Yes.

e. Is the data quality or usability affected?

Data quality or usability was not affected.

6. QC Samples

a. Method Blank

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

Yes☒ No☐ N/A☐ Comments:

Yes.

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

Yes☐ No☐ N/A☐ Comments:

Yes.

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

Comments:

None of the samples are affected.

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:

Data quality or usability was not affected.

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

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

Yes☒ No☐ N/A☐ Comments:

Yes.

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

Yes☒ No☐ N/A☐ Comments:

Yes.

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

Yes☒ No☐ N/A☐ Comments:

Yes.

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

Yes☒ No☐ N/A☐ Comments:

Yes.

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

Yes☒ No☐ N/A☐ Comments:

Yes.

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

Comments:

Data quality or usability was not affected.

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

Note: Leave blank if not required for project

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

Yes☐ No☐ N/A☒ Comments:

The MS/MSD analysis was not performed on this SDG.

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

Yes☐ No☐ N/A☒ Comments:

The MS/MSD analysis was not performed on this SDG.

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

Yes☐ No☐ N/A☒ Comments:

Not applicable.

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

Yes☐ No☐ N/A☒ Comments:

Not applicable.

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

Comments:

None of the samples are affected.

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

Yes☐ No☐ N/A☒ Comments:

Not applicable.

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

Comments:

Data quality or usability was not affected.

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

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

Yes☒ No☐ N/A☐ Comments:

Yes.

ii. Accuracy – Are all percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK Petroleum methods 50-150 %R for field samples 60-120% R for QC samples ; all other analyses see the laboratory report pages)

Yes☒ No☐ N/A☐ Comments:

Yes.

iii. Do the sample results with failed surrogate/IDA recoveries have data flags? If so, are the data flags clearly defined?

Yes☒ No☐ N/A☐ Comments:

Not applicable.

iv. Is the data quality or usability affected?

Comments:

Data quality or usability was not affected.

e. Trip Blanks

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

Yes☒ No☐ N/A☐ Comments:

Trip blank samples were collected as TB-1-20230810.

ii. Are all results less than LOQ or RL?

Yes☒ No☐ N/A☐ Comments:

Yes.

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

Comments:

None of the samples are affected.

iv. Is data quality or usability affected?

Comments:

Data quality or usability was not affected.

f. Field Duplicate

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

Yes☒ No☐ N/A☐ Comments:

Yes.

ii. Was the duplicate submitted blind to lab?

Yes☒ No☐ N/A☐ Comments:

Yes.

iii. Precision – All relative percent differences (RPD) less than specified project objectives? (Recommended: 30% water, 50% soil)

$$RPD\ (\%) = \text{Absolute value of: } \frac{(R_1-R_2)}{((R_1+R_2)/2)} \times 100$$

Where R_1 = Sample Concentration
R_2 = Field Duplicate Concentration

Yes☒ No☐ N/A☐ Comments:

Results for duplicate samples are summarized in the following table.

Sample ID / Duplicate ID	Method	Compounds / Analytes	Sample Result	Duplicate Result	RPD
MW-13-W-20230810/BD-1-W-20230810	6010D	Lead	20.7 J	19.5	AC
	AK 101	TPHGAK C6 to C10	2550	1870	30.8%
	8260D	Benzene	4.13	3.65 J	AC
		Ethylbenzene	38.6	35.8	AC
		Isopropylbenzene	14.1	14.3	AC
		Naphthalene	14.1 J	50 U	AC
		1,2,4-Trimethylbenzene	103	96.9	6.1%
		1,3,5-Trimethylbenzene	21	18.8	AC
		Xylenes, Total	39.7	35.4	AC
		o-Xylene	2.2 J	2.44 J	AC
		m&p-Xylene	37.5	33	AC
	AK 102	AK102 DRO C10-C25	1040	1020	AC

Notes:
AC – Acceptable
Method AK 101: The compound TPHGAK C6 to C10 associated with sample locations MW-13-W-20230810 and BD-1-W-20230810 exhibited a field duplicate RPD greater than the control limit. The associated sample results from sample locations for the listed analyte were qualified as estimated (J).

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

Field duplicate RPD exceedance are considered minor and would result in the estimation of the associated data. The reported data should still consider as usable.

g. Decontamination or Equipment Blank

i. Were decontamination or equipment blanks collected?

Yes☒ No☐ N/A☐ Comments:

Equipment blank sample was collected as EQB-1-W-20230810.

ii. Are all results less than LOQ or RL?

Yes☒ No☐ N/A☐ Comments:

Yes.

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

Comments:

None of the samples are affected.

iv. Are data quality or usability affected?

Comments:

Data quality or usability was not affected.

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

a. Are they defined and appropriate?

Yes☒ No☐ N/A☐ Comments:

Yes.

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

Sample Locations	Initial/Continuing	Compounds	Recovery
MW-11-W-20230810 MW-12-W-20230810 MW-13-W-20230810 BD-1-W-20230810	CCV %D	Naphthalene	Low

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

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

Sample ID	Compound	Original Analysis	Diluted Analysis	Reported Analysis
MW-14-W-20230810	1,2,4-Trimethylbenzene	--	2280	2280 D
	Xylenes, Total	--	7370	7370 D
	o-Xylene	--	2070	2070 D
	m&p-Xylene	--	5300	5300 D
MW-15-W-20230810	Xylenes, Total	--	16800	16800 D
	o-Xylene	--	5210	5210 D

Sample ID	Compound	Original Analysis	Diluted Analysis	Reported Analysis
	m&p-Xylene	--	11600	11600 D

Laboratory Data Review Checklist

Completed By:

Dilip Kumar H S

Title:

Project Chemist

Date:

September 21, 2023

Consultant Firm:

ARCADIS U.S., Inc

Laboratory Name:

Pace Analytical

Laboratory Report Number:

L1650606

Laboratory Report Date:

08/12/2023

CS Site Name:

Semi Annual 2023 Groundwater Monitoring Report

ADEC File Number:

102.26.046

Hazard Identification Number:

24310

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

1. Laboratory

   a. Did an ADEC Contaminated Sites Laboratory Approval Program (CS-LAP) approved laboratory receive and perform all of the submitted sample analyses?

   Yes☒ No☐ N/A☐ Comments:

Yes.

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

   Yes☐ No☐ N/A☒ Comments:

Not applicable.

2. Chain of Custody (CoC)

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

   Yes☒ No☐ N/A☐ Comments:

Yes.

   b. Were the correct analyses requested?

   Yes☒ No☐ N/A☐ Comments:

Yes.

3. Laboratory Sample Receipt Documentation

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

   Yes☒ No☐ N/A☐ Comments:

Yes.

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

   Yes☒ No☐ N/A☐ Comments:

Yes.

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

   Yes☒ No☐ N/A☐ Comments:

Yes.

   d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, canister not holding a vacuum, etc.?

   Yes☒ No☐ N/A☐ Comments:

Yes. no discrepancies.

e. Is the data quality or usability affected?

Comments:

Data quality or usability was not affected.

4. Case Narrative

a. Is the case narrative present and understandable?

Yes☒ No☐ N/A☐ Comments:

Yes.

b. Are there discrepancies, errors, or QC failures identified by the lab?

Yes☒ No☐ N/A☐ Comments:

Yes.

c. Were all corrective actions documented?

Yes☒ No☐ N/A☐ Comments:

Yes.

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

Comments:

Data quality or usability was not affected.

5. Samples Results

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

Yes☒ No☐ N/A☐ Comments:

Yes.

b. Are all applicable holding times met?

Yes☒ No☐ N/A☐ Comments:

Yes.

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

Yes☐ No☒ N/A☐ Comments:

No soil samples were submitted for analysis.

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

Yes☒ No☐ N/A☐ Comments:

Yes.

e. Is the data quality or usability affected?

Data quality or usability was not affected.

6. QC Samples

a. Method Blank

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

Yes☒ No☐ N/A☐ Comments:

Yes.

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

Yes☐ No☒ N/A☐ Comments:

No.

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

Comments:

Sample Locations	Method	Compounds	Sample Result	Qualification
MW-11-W-20230810 MW-13-W-20230810 BD-1-W-20230810	6010 D	Arsenic	Detected sample results >RL and <BAL	"UB" at the detected sample concentration

Note:
RL 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 is considered 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 – Are one LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)

Yes☐ No☐ N/A☒ Comments:

The Organic analysis was not performed on this SDG.

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

Yes☒ No☐ N/A☐ Comments:

Yes.

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

Yes☒ No☐ N/A☐ Comments:

Yes.

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

Yes☒ No☐ N/A☐ Comments:

Yes.

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

Yes☒ No☐ N/A☐ Comments:

Yes.

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

Comments:

Data quality or usability was not affected.

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

Note: Leave blank if not required for project

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

Yes☐ No☐ N/A☒ Comments:

The Organic analysis was not performed on this SDG.

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

Yes☒ No☐ N/A☐ Comments:

The MS/MSD analysis was not performed on this SDG.

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

Yes☐ No☐ N/A☒ Comments:

Not applicable.

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

Yes☐ No☐ N/A☒ Comments:

Not applicable.

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

Comments:

None of the samples were affected.

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

Yes☒ No☐ N/A☐ Comments:

Yes.

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

Comments:

Data quality or usability was not affected.

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

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

Yes☐ No☐ N/A☒ Comments:

Not applicable.

ii. Accuracy – Are all percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK Petroleum methods 50-150 %R for field samples 60-120% R for QC samples ; all other analyses see the laboratory report pages)

Yes☐ No☐ N/A☒ Comments:

Not applicable.

iii. Do the sample results with failed surrogate/IDA recoveries have data flags? If so, are the data flags clearly defined?

Yes☐ No☐ N/A☒ Comments:

Not applicable.

iv. Is the data quality or usability affected?

Comments:

Data quality or usability was not affected.

e. Trip Blanks

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

Yes☒ No☐ N/A☐ Comments:

Trip blank samples were not collected.

ii. Are all results less than LOQ or RL?

Yes☐ No☐ N/A☒ Comments:

Not applicable.

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

Comments:

None of the samples are affected.

iv. Is data quality or usability affected?

Comments:

Data quality or usability was not affected.

f. Field Duplicate

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

Yes☒ No☐ N/A☐ Comments:

Yes.

ii. Was the duplicate submitted blind to lab?

Yes☒ No☐ N/A☐ Comments:

Yes.

iii. Precision – All relative percent differences (RPD) less than specified project objectives?
(Recommended: 30% water, 50% soil)

$$\text{RPD (\%)} = \text{Absolute value of: } \frac{(R_1-R_2)}{((R_1+R_2)/2)} \times 100$$

Where R_1 = Sample Concentration
R_2 = Field Duplicate Concentration

Yes☒ No☐ N/A☐ Comments:

Results for duplicate samples are summarized in the following table.

Sample ID / Duplicate ID	Method	Analytes	Sample Result	Duplicate Result	RPD
MW-13-W-20230810/ BD-1-W-20230810	6010D	Arsenic	26.1	21	21.7%

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

Comments:

Data quality or usability was not affected.

g. Decontamination or Equipment Blank

i. Were decontamination or equipment blanks collected?

Yes☒ No☐ N/A☐ Comments:

Equipment blank sample was collected as EQB-1-W-20230810.

ii. Are all results less than LOQ or RL?

Yes☒ No☐ N/A☐ Comments:

Yes.

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

Comments:

None of the samples were affected.

iv. Are data quality or usability affected?

Comments:

Data quality or usability was not affected.

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

a. Are they defined and appropriate?

Yes☒ No☐ N/A☐ Comments:

Yes.