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Mr. Shawn Tisdell
Alaska Department of Environmental Conservation
610 University Ave.
Fairbanks, Alaska 99709-3643

Subject:
2019 First Semi-Annual Groundwater Monitoring Report

ENVIRONMENT

Dear Mr.Tisdell,

On behalf of Chevron Environmental Management Company (CEMC), Arcadis US, Inc. (Arcadis) has prepared the attached *2019 First Semi-Annual Groundwater Monitoring Report* for the following facility:

Chevron Facility No.	**ADEC File No.**	**Hazard ID:**	**Location**
309152	100.38.206	4314	6223 Old Airport Road Fairbanks, Alaska

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

Sincerely,

Arcadis U.S., Inc.

Alex Shook
Project Manager

Copies:
Tim Bishop, CEMC (*electronic copy)*
Katrina LeMieux
Burnie Hall

Date:
December 26, 2019

Contact:
Alex Shook

Phone:
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Alex.Shook@arcadis.com

Our ref:
30015228

ARCADIS Design & Consultancy for natural and built assets

Chevron Environmental Management Company

2019 FIRST SEMI-ANNUAL GROUNDWATER MONITORING REPORT

Chevron Site No. 309152
6223 Old Airport Road
Fairbanks, Alaska

ADEC File No. 100.38.206

December 27, 2019

2019 FIRST SEMI-ANNUAL GROUNDWATER MONITORING REPORT

Former Chevron Facility 309152

6223 Old Airport Road
Fairbanks, Alaska

ADEC File No: 100.38.206
HAZARD ID No: 4314

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Prepared for:

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Our Ref.:

30015228

Date:

December 27, 2019

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SEMI-ANNUAL STATUS REPORT
FIRST HALF 2019
December 27, 2019

Facility No:	Former Chevron Facility 309152	Address:	6223 Old Airport Road Fairbanks, Alaska

Arcadis Contact Person / Phone No.:	Alex Shook / 503-785-9447
Arcadis Project No.:	30015228
Primary Agency/Regulatory Board ID No.:	Alaska Department of Environmental Conservation / Shawn Tisdell / ADEC File No. 100.38.206

WORK CONDUCTED THIS PERIOD [First Half 2019]:

1. Conducted semi-annual groundwater monitoring activities on May 22 & 23, 2019.
2. Prepared the *Semi-Annual Status Report, First Half 2019.*

WORK PROPOSED NEXT PERIOD [Second Half 2019]:

1. Conduct semi-annual groundwater monitoring activities in Second Half of 2019.
2. Conduct shallow soil excavation and air-sparge well installation in Fall 2019.
3. Prepare the *Semi-Annual Status Report, Second Half 2019*.

Current Phase of Project:	Monitoring	
Frequency of Monitoring / Sampling:	Semi-Annual (2Q/4Q)	
Is Light Non-Aqueous Phase Liquid (LNAPL) Present On-site:	Yes (MW-1, MW-2, MW-3, MW-4, MW-6, MW-9, MW-12, MW-14, MW-15, MW-17, MW-18, and RW-1)	
Cumulative LNAPL Recovered to Date:	0.00	(gallons)
Approximate Depth to Groundwater:	5.10 to 15.53	(feet below top of casing)
Approximate Groundwater Elevation:	426.31 to 461.64	(feet relative to corresponding datum)
Groundwater Flow Direction	North-East/North-West	

Groundwater Gradient	0.085	(feet per foot)
Current Remediation Techniques:	None	
Permits for Discharge:	None	
Summary of Unusual Activity:	None	
Agency Directive Requirements:	None	

1 INTRODUCTION

On behalf of Chevron Environmental Management Company (CEMC), Arcadis US, Inc. (Arcadis), has prepared this 2019 First Semi-Annual Groundwater Monitoring Report (report) for the Former Chevron Facility No. 309152 located at 6223 Old Airport Road in Fairbanks, Alaska (site). A site location map and site plan are provided as Figure 1 and Figure 2, respectively. This report presents the results of the semi-annual groundwater monitoring and sampling event, conducted May 22 and 23, 2019.

This work was conducted under the direction of a "qualified person" [18 AAC 75. 990 (100), and 18 AAC 78.995 (118)]. A summary of site history and a site description are included as Appendix A.

2 GROUNDWATER MONITORING

2.1 Groundwater Gauging Methods

The first semi-annual 2019 groundwater gauging event was conducted on May 22, 2019. Site monitoring wells were gauged with an electronic interface probe (EIP) meter capable of 0.01-foot accuracy to measure the depth to groundwater, total well depth, and to determine if light non-aqueous phase liquid (LNAPL) was present. Monitoring well caps were removed to allow groundwater levels to stabilize and equilibrate before gauging.

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

2.2 Groundwater Elevation and Flow Direction

During the first semi-annual 2019 monitoring event, monitoring wells MW-1 through MW-12, and MW-14 through MW-21 were gauged for groundwater elevations and the presence of LNAPL. The groundwater monitoring event field notes are presented in Appendix B.

The inferred groundwater flow direction for the first semi-annual 2019 monitoring event is to the northeast/northwest and is consistent with historical flow direction. Current and historical groundwater depth-to-water and elevation data are included in Table 1 and Table 2, respectively. A groundwater elevation contour map is provided as Figure 3.

2.3 Groundwater Sampling Methods

The first semi-annual 2019 groundwater sampling event was conducted on May 23, 2019. Groundwater samples were collected from monitoring wells MW-5, MW-7, MW-8, MW-10, MW-11, MW-16, MW-19, MW-20, and MW-21 using a non-purge sampling method. Monitoring wells MW-1 through MW-4, MW-6, MW-9, MW-12, MW-14, MW-15, MW-17, MW-18, and RW-1 were not sampled during this event due to the presence of LNAPL in the wells.

Sampling procedures were conducted in accordance with ADEC Field Sampling Guidance (ADEC, 2017). A bladder pump with compressor & control unit with clean/disposable Teflon lined tubing and bladders was used to purge groundwater from the wells and collect samples to minimize the risk of volatile contaminant absorption by the sampling equipment. Water table drawdown was continuously monitored during purging with an EIP meter and the flow rate of the pump was adjusted to limit drawdown to 0.1 meter. The intake of the pump was set as close as possible to the soil groundwater interface. Water quality parameters were monitored during purging with a multi-parameter water quality meter equipped with a flow through cell and Turbidity meter. Parameters were recorded every 3 to 5 minutes until a minimum of three (minimum of four if using temperature as an indicator) of the parameters listed below stabilized. The flow rate was reduced to 100-150 ml/minute and samples were collected from the discharge line into laboratory sample bottles. Water quality parameters were considered stable when three successive readings were within the following ADEC limits:

- ± 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.

Groundwater sample bottles were labeled, stored in a cooler packed with ice, and shipped under appropriate chain-of-custody protocols to Eurofins Lancaster Laboratories Environmental (Eurofins) in Lancaster, Pennsylvania. Groundwater sampling field data sheets are presented in Appendix B. Groundwater samples were analyzed for the following:

- Benzene, toluene, ethylbenzene, and total xylenes (BTEX) by United States Environmental Protection Agency (USEPA) Method 8260C
- Total petroleum hydrocarbons (TPH) in the gasoline range (GRO) by Method AK101

- TPH in the diesel range (DRO) and TPH in the residual range (RRO) by Method AK 102-SV/103mod-SV
- TPH DRO with silica gel cleanup by Method AK 102-SV
- Methyl tert-butyl ether (MTBE) by USEPA Method 8260C
- 1,2-Dibromoethane (EDB) by USEPA Method 8011
- 1,2-Dichloroethane (EDC) by USEPA Method 8260C

During this event, QA/QC sampling consisted of collecting a blind duplicate sample from monitoring well MW-8, as well as the collection of an equipment blank sample. Laboratory analytical results for the blind duplicate sample and equipment blank sample are presented alongside the results for the parent sample in Table 1.

2.4 Groundwater Analytical Results

A summary of laboratory analytical results for the first semi-annual 2019 groundwater monitoring event are presented in Table 1, and shown on Figure 4. Laboratory analytical reports are included as Appendix C.

3 LABORATORY DATA QUALITY ASSURANCE SUMMARY

As required by ADEC (Technical Memorandum, dated March 2017), Arcadis completed a laboratory data review checklist for each of the laboratory reports generated for the first semi-annual 2019 groundwater monitoring event. Data review checklists are included as Appendix D. The following quality assurance (QA) summary describes six parameters, related to the quality and usability of the data presented in this report.

3.1 Precision

The relative percent difference (RPD) for matrix spike (MS) / matrix spike duplicate (MSD), and field duplicates (FD) were within the control limits. The RPD between laboratory control sample (LCS) / laboratory control sample duplicate (LCSD) for compound ethylene dibromide was exceeded the control limit. The associated results were qualified as estimated.

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

3.2 Accuracy

The low MS and MSD recoveries were observed for compound DRO C10-C25 W/ SiGel in sample MW-5-W-190523. The low LCS recoveries were observed for compounds ethylene dibromide, DRO C10-C25 W/ SiGel and C10-<C25 DRO. The surrogate recovery exceedances were observed for compounds C10-<C25 DRO and C25-C36 RRO in sample MW-8-W-190523. The associated results were qualified as estimated.

The accuracy of the data, as measured by laboratory QC indicators, suggest that the DQOs were met with the exception of the estimated data.

3.3 Representativeness

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

3.4 Comparability

The laboratory results are presented in the same units as previous reports to allow comparison.

3.5 Completeness

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

3.6 Sensitivity

The sensitivity of the analyses was adequate for the samples as the detection limits were less than the ADEC GCLs for compounds.

4 CONCLUSIONS AND RECOMMENDATIONS

The groundwater data collected during the first semi-annual 2019 event indicates groundwater flow directions (northeast/northwest) are generally consistent with historical data. During the first semi-annual 2019 groundwater monitoring event, groundwater samples were collected for analysis from monitoring wells MW-5, MW-7, MW-8, MW-10, MW-11, MW-16, MW-19, MW-20, and MW-21. Analytical results from the monitoring wells are generally consistent with historical data with some slight seasonal fluctuations.

Groundwater monitoring will continue in accordance with the current semi-annual schedule. The second semi-annual sampling event will be conducted in the fall of 2019.

5 REFERENCES

ADEC. *Field Sampling Guidance*. Division of Spill Prevention and Response Contaminated Sites Program. August, 2017.

ADEC Technical Memorandum, March, 2017. *Data Quality Objectives, Checklists, Quality Assurance Requirements for Laboratory Data, and Sample Handling*. ADEC, Division of Spill Prevention and Response Contaminated Sites Program.

TABLES

Table 1. Current Groundwater Gauging and Analytical Results
Former Chevron Facility 309152
6223 Old Airport Road
Fairbanks, Alaska

Well ID	Sample Date	Screen Interval (ft bTOC)	TOC (ft)	Datum	DTW (ft bTOC)	LNAPL Thickness (ft)	GW Elev (ft)	TPH-g (µg/L)	TPH-d (µg/L)	TPH-d w/Si Gel (µg/L)	TPH-r (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	EDB (µg/L)	EDC (µg/L)
ADEC Groundwater Cleanup Levels[1]								**2,200**	**1,500**	**1,500**	**1,100**	**5**	**1,000**	**700**	**10,000**	**470**	**0.05**	**5.00**
MW-1	05/22/2019	--	436.19	NAVD88	15.20	**0.20**	433.76				Not sampled due to presence of LNAPL							
MW-2	05/22/2019	--	434.39	NAVD88	13.25	**0.55**	428.56				Not sampled due to presence of LNAPL							
MW-3	05/22/2019	--	434.95	NAVD88	13.98	**0.02**	434.73				Not sampled due to presence of LNAPL							
MW-4	05/22/2019	--	434.44	NAVD88	13.52	**0.17**	432.60				Not sampled due to presence of LNAPL							
MW-5	05/23/2019	--	435.18	NAVD88	14.02	0.00	435.18	**40 J**	< 260 BJ	< 50J	< 260 B	< 0.2	< 0.2	< 0.4	< 1	< 0.2	< 0.0097J	< 0.3
MW-6	05/22/2019	--	436.49	NAVD88	12.90	**0.25**	433.91				Not sampled due to presence of LNAPL							
MW-7	05/23/2019	--	433.57	NAVD88	12.48	0.00	433.57	**610**	**1,300 J**	**86 J**	**590**	**16**	**0.3 J**	**0.4 J**	**170**	**0.2 J**	< 0.0097	< 0.3
MW-8	05/23/2019	--	428.67	NAVD88	7.52	0.00	428.67	**5,100 [5,400]**	**18,000 J [18,000 J]**	**900 J [990 J]**	< 780 J [< 390]	**120 [130]**	**4 J [3 J]**	**130 [120]**	**1,400 [1,500]**	< 2 [< 1]	**0.013 J [0.013 J]**	< 3 [< 2]
MW-9	05/22/2019	--	435.58	NAVD88	14.61	**0.17**	433.59				Not sampled due to presence of LNAPL							
MW-10	05/23/2019	--	435.09	NAVD88	13.96	0.00	435.09	< 14	< 260 BJ	< 54	< 260 B	< 0.2	< 0.2	< 0.4	< 1	< 0.2	< 0.0096J	< 0.3
MW-11	05/23/2019	--	435.19	NAVD88	13.98	0.00	435.19	**18 J**	< 260 BJ	< 54	< 260 B	< 0.2	< 0.2	< 0.4	< 1	< 0.2	< 0.0097J	< 0.3
MW-12	05/22/2019	--	436.27	NAVD88	15.28	**0.24**	433.34				Not sampled due to presence of LNAPL							
MW-13	05/22/2019	--	434.40	NAVD88	--	--	--	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
MW-14	05/22/2019	--	433.06	NAVD88	12.03	**0.17**	431.42				Not sampled due to presence of LNAPL							
MW-15	05/22/2019	--	430.10	NAVD88	9.04	**0.13**	429.16				Not sampled due to presence of LNAPL							
MW-16	05/23/2019	--	429.37	NAVD88	8.22	0.00	429.37	**3,100**	**3,200 J**	**970**	< 260 B	< 1	**2 J**	**91**	**450**	< 1	< 0.016J	< 2
MW-17	05/22/2019	--	430.83	NAVD88	10.46	**0.54**	426.31				Not sampled due to presence of LNAPL							
MW-18	05/22/2019	--	421.82	NAVD88	15.10	**0.24**	418.92				Not sampled due to presence of LNAPL							
MW-19	05/23/2019	--	432.53	NAVD88	11.34	0.00	432.53	< 14	< 260 BJ	< 52	< 260 B	< 0.2	< 0.2	< 0.4	< 1	< 0.2	< 0.0097J	< 0.3
MW-20	05/23/2019	--	430.48	NAVD88	9.29	0.00	430.48	< 14	< 290 BJ	< 54	< 410 B	< 0.2	< 0.2	< 0.4	< 1	< 0.2	< 0.0097	< 0.3
MW-21	05/23/2019	--	436.76	NAVD88	15.53	0.00	436.76	**770**	**970 J**	**750**	< 280 B	**1**	< 0.2	< 0.4	< 1	**0.4 J**	< 0.0097J	< 0.3
RW-1	05/22/2019	--	435.68	NAVD88	14.83	**0.35**	431.53				Not sampled due to presence of LNAPL							
QA (EB)	05/23/2019	--	--	NAVD88	--	0.00	--	< 14	**93 J**	< 50	**98 J**	< 0.2	< 0.2	< 0.4	< 1	< 0.2	< 0.0097	< 0.3
QA (TB)	05/14/2019	--	--	NAVD88	--	0.00	--	< 14	**--**	**--**	**--**	< 0.2	< 0.2	< 0.4	< 1	< 0.2	< 0.0096	< 0.3

Notes:

MW , RW = Groundwater monitoring well
TOC = Top of casing
DTW = Depth to groundwater
ft bTOC = Feet below top of casing
ft = Feet
'-- = Not analyzed/ Not measured/ Not Available
GW Elev = Groundwater elevation
µg/L = Micrograms per liter
Bold = Value exceeds ADEC Groundwater Cleanup Level
Bold and Shaded = Value exceeds ADEC Groundwater Cleanup Level
<14 = Not detected at or above the Method Detection Limit (MDL)
NAVD 88 = North American Vertical Datum of 1988
ADEC = Alaska Department of Environmental Conservation
[ ] = Duplicate Result
QA (TB) = Quality Assurance (Trip Blank)
QA (EB) = Quality Assurance (Equipment Blank)
LNAPL = Light Non-Aqueous Phase Liquid
J = The compound was positively identified; however, the associated numerical value is an estimated concentration only.
B = Compound considered non-detect at the listed value due to associated blank contamination

TPH-g = Total petroleum hydrocarbons, gasoline range by LUFT GC/MS according to United States Environmental Protection Agency (USEPA) Method AK101
TPH-d = Total petroleum hydrocarbons, diesel range by LUFT GC/MS according to USEPA Method AK 102-SV/103mod-SV
TPH-d w/Si Gel = Total petroleum hydrocarbons, diesel range by LUFT GC/MS with Silica Gel according to USEPA Method AK 102-SV/103mod-SV
TPH-r = Total petroleum hydrocarbons, residual range organics LUFT GC/MS according to USEPA Method AK 102-SV/103mod-SV
Samples analysed by USEPA Method 8260C:
Benzene, toluene, ethylbenzene and total xylenes (collectively BTEX)
MTBE = Methyl tert-butyl ether
TBA = Tert-butanol or tertiary butyl alcohol
EDB = 1,2-Dibromoethane
EDC = 1,2-Dichloroethane
Ethanol

Table 2. Historical Groundwater Gauging and Analytical Results
Third Quarter 2007 to Current
Former Chevron Facility 309152
6223 Old Airport Road
Fairbanks, Alaska

Well ID	Sample Date	Screen Interval (ft bTOC)	TOC (ft amsl)	LNAPL thickness (ml)	DTW (ft bTOC)	GW Elev (ft amsl)	TPH-g (µg/L)	TPH-d (µg/L)	TPH-d w/Si Gel (µg/L)	TPH-r (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	EDB (µg/L)	EDC (µg/L)	Comments
ADEC Groundwater Cleanup Levels[1]							**2,200**	**1,500**	**1,500**	**1,100**	**5**	**1,000**	**700**	**10,000**	**470**	**0.05**	**5**	
MW-1	07/29/07	--	98.75	--	11.61	87.14	--	--	--	--	--	--	--	--	--	--	--	Guaged only
MW-1	08/02/07	--	--	--	--	--	**1,800**	**6,400**	--	--	**2**	**0.9**	**22**	**263**	**3**	--	<0.500	Sampled only
MW-1	11/19/07	--	--	--	14.90	83.85	--	--	--	--	--	--	--	--	--	--	--	Guaged only
MW-1	03/28/08	--	--	--	14.41	84.34	**8,830**	**64,700**	--	<728	**25.20**	**16.8**	**138**	**2320**	**12.4**	**9.45** [2]	**1.13** [3]	
MW-1	09/12/08	--	436.17	0.03	12.06	424.13	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-1	05/10/09	--	--	0.31	13.91	422.51	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-1	10/05/09	--	--	0.34	14.25	422.19	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-1	06/18/10	--	--	0.00	13.92	422.25	**3,600**	**18,000**	--	<3.4	**16**	**4**	**19**	**570**	--	--	--	
MW-1	09/27/10	--	436.60	0.06	12.66	423.99	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-1	06/14/11	--	--	0.04	13.75	422.88	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-1	08/24/11	--	--	Trace	11.64	424.96	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-1	06/14/12	--	--	Trace	13.35	423.25	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-1	10/03/12	--	436.18	0.06	13.57	422.66	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-1	06/12/13	--	--	0.00	12.51	423.67	**1,300**	**9,700**	**8,900**	--	**1.9**	**1.2**	**14.7**	**321**	<1.0	**0.23**	<1.0	
MW-1	10/15/13	--	--	0.01	13.94	422.25	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-1	06/27/14	--	436.19	0.00	13.37	422.82	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-1	08/27/14	--	--	Globules	11.12	425.07	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL Globules
MW-1	05/12/15	--	--	0.03	14.41	421.80	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-1	09/18/15	--	--	Globules	12.04	424.15	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL Globules
MW-1	05/19/16	--	--	0.40	15.08	421.43	**3,900**	**470,000 J**	**170,000 J**	<31,000	**5**	**3**	**59**	**560**	<0.5	**0.38**	**0.8 J**	
MW-1	09/28/16	--	--	--	--	--	**6,600**	**52,000**	**43,000**	<1,600	**23**	**6 J**	**64**	**1,100**	<5	**2.8**	**7 J**	
MW-1	06/17/17	--	--	--	--	--	**2,700**	**140,000 J**	**240,000 J**	<8,400	**2**	**1**	**46**	**450**	<0.5	**0.15**	**0.7 J**	
MW-1	09/19/17	--	--	--	--	--	**3,700**	**140,000 J**	**61,000 J**	<8,600 J	**4**	**2**	**62**	**610**	<1	**0.29 J**	**2**	
MW-1	06/26/18	--	--	--	12.55	423.64	**3,200 J**	**100,000 J**	**130,000 J**	<4,000 J	<3	<3	**27 J**	**250 J**	<3	**0.34 J**	<3	
MW-1	10/04/18	--	--	--	11.45	424.74	**1,700**	**120,000 J**	**160,000 J**	<4,200 J	**6**	<2	**39**	**440**	<2	**0.64 J**	<3	
MW-1	05/22/19	--	--	0.20	15.20	433.76	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-2	08/02/07	--	96.65	--	9.35	87.30	**14,000**	**8,000**	--	--	**330**	**690**	**710**	**3,380**	**3**	--	<0.500	
MW-2	03/28/08	--	--	1.34	13.58	84.14	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-2	09/12/08	--	434.08	0.02	9.92	424.18	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-2	05/10/09	--	--	0.06	11.62	422.51	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-2	10/05/09	--	--	0.26	12.10	422.19	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-2	06/18/10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Unable to locate well
MW-2	09/27/10	--	434.39	0.20	10.70	423.85	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-2	06/14/11	--	--	0.19	11.79	424.81	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-2	08/24/11	--	--	Trace	9.55	424.84	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-2	06/14/12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Not sampled abandoned vehicle obstructing well
MW-2	10/03/12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Not sampled abandoned vehicle obstructing well
MW-2	06/13/13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Not sampled abandoned vehicle obstructing well
MW-2	10/15/13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Not sampled abandoned vehicle obstructing well
MW-2	06/27/14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Not sampled abandoned vehicle obstructing well
MW-2	08/27/14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Not sampled abandoned vehicle obstructing well
MW-2	05/12/15	--	--	0.17	12.41	422.12	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-2	09/18/15	--	--	Globules	9.92	424.47	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL Globules
MW-2	05/19/16	--	--	0.48	13.03	421.74	**13,000**	**100,000 J**	**91,000 J**	<7,600	**170**	**210**	**650**	**3,100**	<3	**0.85**	**3 J**	
MW-2	09/28/16	--	--	--	--	--	**14,000**	**720,000 J**	**110,000**	<16,000 J	**240**	**380**	**720**	**3,500**	<25	**1.1 J**	<25	
MW-2	06/17/17	--	--	--	--	--	**12,000**	**380,000 J**	**100,000 J**	<9,800	**160**	**130**	**610**	**2,900**	<5	**0.73**	<5	
MW-2	09/19/17	--	--	--	--	--	**14,000**	**35,000 J**	**3,800,000 J**	<4,100 J	**220**	**300**	**610**	**3,500**	<5	**0.98 J**	**5**	
MW-2	06/26/18	--	--	0.09	10.50	423.96	**15,000 [18,000]**	**890,000 [1,400,000]**	**510,000 J [120,000 J]**	<17,000 [<41,000]	**230 [210]**	**480 [290]**	**650 [590]**	**3,900 [3,200]**	<25 [<3]	**1.1 J** [--]	<25 [--]	
MW-2	10/04/18	--	--	--	9.25	425.14	**18,000**	**32,000 J**	**2,300 J**	<890 J	**280**	**1,000**	**1,200**	**5,900**	<4	**2.2 J**	**10**	
MW-2	05/22/19	--	--	0.55	13.25	428.56	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-3	08/02/07	--	97.45	0.05	10.10	87.39	**32,000**	**120,000**	--	--	**660**	**3,000**	**1,500**	**6,600**	<3	--	<3	
MW-3	03/28/08	--	--	0.32	13.53	84.18	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-3	09/12/08	--	--	0.09	10.81	424.13	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-3	05/10/09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-3	10/05/09	--	--	0.18	12.87	422.14	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-3	06/18/10	--	--	0.06	12.70	422.22	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-3	09/27/10	--	435.51	0.02	11.37	423.52	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-3	06/14/11	--	--	0.07	12.52	423.05	--	--	--	--	--	--	--	--	--	--	--	Not sampled - well under water
MW-3	08/24/11	--	--	0.20	10.54	425.13	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-3	06/14/12	--	--	Trace	12.11	423.40	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-3	10/03/12	--	434.39	--	12.28	422.11	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL Globules
MW-3	06/13/13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Not sampled ice obstruction in well

Table 2. Historical Groundwater Gauging and Analytical Results
Third Quarter 2007 to Current
Former Chevron Facility 309152
6223 Old Airport Road
Fairbanks, Alaska

Well ID	Sample Date	Screen Interval (ft bTOC)	TOC (ft amsl)	LNAPL thickness (ml)	DTW (ft bTOC)	GW Elev (ft amsl)	TPH-g (µg/L)	TPH-d (µg/L)	TPH-d w/Si Gel (µg/L)	TPH-r (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	EDB (µg/L)	EDC (µg/L)	Comments
ADEC Groundwater Cleanup Levels[1]							**2,200**	**1,500**	**1,500**	**1,100**	**5**	**1,000**	**700**	**10,000**	**470**	**0.05**	**5**	
MW-3	10/15/13	--	--	0.39	13.00	421.70	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-3	06/27/14	--	434.95	0.00	12.14	422.81	**22,800**	**8,100**	**6,400**	--	**242**	**694**	**1,400**	**4,370**	<20	**0.51**	<20	
MW-3	08/27/14	--	--	1.21	10.91	425.01	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-3	05/12/15	--	--	0.06	13.21	421.79	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-3	09/18/15	--	--	0.02	10.83	424.14	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-3	05/19/16	--	--	0.40	13.86	421.41	**28,000**	**110,000**	**110,000 J**	<7,800	**200**	**1,500**	**1,700**	**6,500**	<3	**0.67**	<3	
MW-3	09/27/16	--	--	--	--	--	**33,000**	**2,200,000 J**	**1,100,000**	<79,000 J	**550**	**3,800**	**1,600**	**7,200**	<50	**1.9 J**	<50	
MW-3	06/17/17	--	--	--	--	--	**35,000**	**56,000 J**	**100,000 J**	<4,000	**310**	**3,100**	**2,000**	**7,700**	<25	**1.30**	<25	
MW-3	09/19/17	--	--	--	--	--	**32,000**	**110,000 J**	**7,400 J**	<8,200 J	**420**	**3,200**	**1,700**	**7,200**	<10	**1.6 J**	<10	
MW-3	06/27/18	--	--	0.06	11.41	423.59	**32,000 [40,000]**	**90,000 [350,000 J]**	**370,000 J [120,000 J]**	<3,600 [8,000 J]	**390 [320]**	**2,700 [2,700]**	**1,400 [1,400]**	**6,300 [6,800]**	<25 [<5]	**1.4 J [--]**	<25 [--]	
MW-3	10/04/18	--	--	--	10.38	424.57	**9,800**	**18,000 J**	**14,000 J**	<850 J	**170**	**1,000**	**170**	**1,500**	<4	**0.79 J**	<6	
MW-3	05/22/19	--	--	0.02	13.98	434.73	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-4	08/02/07	--	96.99	0.11	9.80	87.28	**28,000**	**78,000**	--	--	**490**	**1900**	**1200**	**4900**	<3	--	<3	
MW-4	03/28/08	--	--	0.01	12.84	84.16	**81,600**	**178,000**	--	**1,330**	**819**	**2,270**	**2,620**	**11,100**	**168**	**1.15 [2]**	<0.200 [3]	
MW-4	09/12/08	--	--	0.01	10.30	424.13	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-4	05/10/09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-4	06/18/10	--	--	0.11	12.31	422.20	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-4	09/27/10	--	434.89	0.19	11.02	424.02	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-4	06/14/11	--	--	--	11.98	422.91	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-4	08/24/11	--	--	--	9.89	425.00	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL Globules
MW-4	06/14/12	--	--	Trace	11.63	423.26	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-4	10/03/12	--	434.43	--	11.79	422.64	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL Globules
MW-4	06/12/13	--	--	0.00	10.77	423.66	**17,200**	**88,000**	**80,700**	--	**363**	**371**	**458**	**4,900**	<10	**0.08**	<10[8]	
MW-4	06/12/13	--	--	--	--	--	**19,000**	**45,800**	--	--	**342**	**596**	**631**	**4,810**	--	--	--	
MW-4	10/15/13	--	--	0.00	12.20	422.23	**25,600**	**14,300**	**9,300**	--	**739**	**1,330**	**952**	**5,280**	<10	**0.88**	<10	
MW-4	06/27/14	--	434.44	0.00	11.62	422.82	**25,300**	**9,700**	**6,700**	--	**555**	**980**	**987**	**5,520**	<10	**0.32**	<10	
MW-4	08/27/14	--	--	0.00	9.41	425.03	**23,400**	**107,000**	**91,800**	--	**488**	**1,260**	**636**	**3,760**	<10	**0.81**	<10	
MW-4	05/12/15	--	--	Globules	12.62	421.82	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL Globules
MW-4	09/18/15	--	--	Globules	11.07	423.37	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL Globules
MW-4	05/19/16	--	--	0.33	13.28	421.42	**23,000**	**29,000**	**15,000 J**	<1,500	**540**	**1,800**	**1,100**	**4,400**	<10	**0.64 J**	<10	
MW-4	09/27/16	--	--	--	--	--	**31,000**	**44,000 J**	**88,000**	<1,500	**610**	**2,000**	**1,200**	**5,000**	<25	**0.67**	<25	
MW-4	06/17/17	--	--	--	--	--	**25,000**	**250,000**	**180,000 J**	<8,300	**530**	**1,400**	**1,100**	**5,300**	<10	**0.26**	<10	
MW-4	09/19/17	--	--	--	--	--	**26,000**	**58,000 J**	**16,000 J**	<4,100 J	**590**	**2,000**	**1,100**	**5,000**	<5	**0.47 J**	<5	
MW-4	06/27/18	--	--	--	10.8	423.64	**24,000**	**130,000 J**	**17,000 J**	<4,100 J	**480**	**780**	**900**	**5,200**	<5	**0.13 J**	<5	
MW-4	10/04/18	--	--	--	9.81	424.63	**24,000**	**21,000 J**	**27,000 J**	<840 J	**600**	**1,900**	**1,100**	**4,900**	<10	**0.49 J**	<15	
MW-4	05/22/19	--	--	0.17	13.52	432.60	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-5	08/02/07	--	97.68	--	10.33	87.35	**300**	**170**	--	--	**14**	**4**	**4**	**15**	<0.500	--	<0.5	
MW-5	03/28/08	--	--	--	13.50	84.18	**132**	**388**	--	<758	**3.07**	<0.5	<0.5	<1.0	**1.92**	<0.010 [2]	<0.200 [3]	
MW-5	09/12/08	--	435.08	--	10.92	424.16	<50.0	**133**	--	<743	**0.382**	<0.500	<0.500	<1.00	<1.00	<0.010	<0.500 [7]	
MW-5	05/10/09	--	--	--	12.67	422.41	**248 [6]**	<400	--	<400	**7.76**	<0.500	<0.500	<1.00	**4.53**	<0.010	**NA**	
MW-5	10/05/09	--	--	--	12.89	422.19	<50.0 [<50.0]	**506 [462]**	**-- [--]**	**-- [--]**	<0.200 [<0.200]	<1.00 [<1.00]	<1.00 [<1.00]	<3.00 [<3.00]	<1.00 [<1.00]	<0.010 [<0.010]	<1.00 [<1.00]	
MW-5	06/18/10	--	--	--	12.89	422.19	**220**	**27**	--	**220**	**1.8**	<0.500	<0.500	< 1.5	--	--	--	
MW-5	09/29/10	--	435.53	--	11.50	423.58	**48**	**240**	--	**340**	<0.5	<0.5	<0.5	<1.5	--	--	--	
MW-5	06/14/11	--	--	--	12.66	422.87	**120**	**82**	--	--	<0.5	<0.5	<0.5	<1.5	<2.5	<.001	<0.5	
MW-5	08/24/11	--	--	--	10.52	425.01	**160**	**120**	--	**0.8**	<0.5	<0.5	<0.5	<1.5	--	--	--	
MW-5	06/14/12	--	--	--	12.33	423.20	**160**	**90**	<52	--	**2.8**	<0.5	<0.5	<1.5	**3.1**	<0.0095	<0.5	
MW-5	10/03/12	--	435.08	--	12.42	422.66	**51 [51]**	**200 [240]**	<47 [--]	**-- [--]**	**1.2 [0.6]**	<0.5 [<0.5]	<0.5 [<0.5]	<1.5 [<1.5]	<2.5 [<2.5]	<0.0096 [--]	<0.5 [<0.5]	
MW-5	06/12/13	--	--	0.00	11.45	423.63	<100	<520	--	--	<1.0	<1.0	<1.0	<3.0	<1.0	<0.0097	<1.0	
MW-5	10/15/13	--	--	0.00	12.87	422.21	<100 [<100]	<380 [<430]	**-- [--]**	**-- [--]**	<1.00 [<1.00]	<1.00 [<1.00]	<1.00 [<1.00]	<3.00 [<3.00]	<1.00 [<1.00]	<0.0098 [--]	<1.00 [<1.00]	
MW-5	06/27/14	--	435.18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Not sampled - well frozen
MW-5	08/28/14	--	--	0.00	10.14	425.04	<100	<400	--	--	<1.0	<1.0	<1.0	<3.0	<1.0	<0.0099	<1.0	
MW-5	05/12/15	--	--	--	--	--	<100 [<100]	<400 [<400]	**-- [--]**	<400	**1.7**	<1.00 [<1.00]	<1.00 [<1.00]	<3.00 [<3.00]	<1.00 [<1.00]	<0.0098 [<0.0098]	<1.00 [<1.00]	
MW-5	09/18/15	--	--	--	11.07	424.11	<100	<410	--	<410	<1.0	<1.0	<1.0	<3.0	<1.0	<0.0098	<1.0	
MW-5	05/19/16	--	--	--	13.86	421.32	--	--	--	--	--	--	--	--	--	--	--	Not sampled - hydrasleeve frozen to side
MW-5	09/27/16	--	--	--	--	--	**37 J**	<53	<53	**91 J**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0094	<0.5	
MW-5	06/17/17	--	--	--	--	--	**95 J**	**120 J**	**60 J**	<78	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0095	<0.5	
MW-5	09/18/17	--	--	--	--	--	**48**	**170**	<54 J	**140**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0095	<0.5	
MW-5	06/27/18	--	--	--	11.72	423.46	**100**	**71 J**	<50 J	**140 J**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0095	<0.5	
MW-5	10/03/18	--	--	--	10.62	424.56	**31 [16]**	<50 [<51 B]	<51 J [<50 J]	<82 [<82]	<0.2 [<0.2]	<0.2 [<0.2]	<0.4 [<0.4]	<1 [<1]	<0.2 [<0.2]	<0.0095 [--]	<0.3 [--]	
MW-5	05/23/19	--	--	0.00	14.02	435.18	**40 J**	< 260 BJ	< 50J	< 260 B	< 0.2	< 0.2	< 0.4	< 1	< 0.2	< 0.0097J	< 0.3	
MW-6	09/12/08	--	436.49	--	12.36	424.13	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL

Table 2. Historical Groundwater Gauging and Analytical Results
Third Quarter 2007 to Current
Former Chevron Facility 309152
6223 Old Airport Road
Fairbanks, Alaska

Well ID	Sample Date	Screen Interval (ft bTOC)	TOC (ft amsl)	LNAPL thickness (ml)	DTW (ft bTOC)	GW Elev (ft amsl)	TPH-g (µg/L)	TPH-d (µg/L)	TPH-d w/Si Gel (µg/L)	TPH-r (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	EDB (µg/L)	EDC (µg/L)	Comments
ADEC Groundwater Cleanup Levels[1]							**2,200**	**1,500**	**1,500**	**1,100**	**5**	**1,000**	**700**	**10,000**	**470**	**0.05**	**5**	
MW-6	05/10/09	--	--	0.06	14.04	422.50	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-6	10/05/09	--	--	0.37	14.60	422.19	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-6	06/18/10	--		--	13.20	423.29	**6,300**	**2,500**	--	< 6.6	**75**	**200**	**340**	**1,500**	--	--	--	
MW-6	09/27/10	--	434.02	0.30	13.50	420.76	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-6	06/14/11	--	--	0.23	14.23	419.97	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-6	08/24/11	--	--	0.13	12.08	422.04	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-6	06/14/12	--	--	0.08	13.70	420.38	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-6	10/03/12	--	436.47	0.53	14.29	422.60	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-6	06/12/13	--	--	0.00	12.79	423.68	**6,400**	**110,000**	**112,000**	--	**37.1**	**129**	**197**	**740**	<1.0	**0.32**	<1.0	
MW-6	10/15/13	--	--	0.27	14.42	422.27	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-6	06/27/14	--	436.49	0.00	18.65	417.84	**3,850**	**5,800**	**4,700**	--	**24.3**	**38.6**	**120**	**800**	<2.0	**0.091**	<2.0	
MW-6	08/27/14	--	--	0.61	11.97	425.01	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-6	05/12/15	--	--	0.08	14.75	421.80	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-6	09/18/15	--	--	0.46	12.72	424.14	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-6	05/19/16	--	--	--	14.98	421.51	**6,100**	**37,000**	**39,000 J**	<1,500	**44**	**110**	**190**	**1,300**	<3	**0.12**	<3	
MW-6	09/28/16	--	--	--	--	--	**11,000**	**20,000 J**	**56,000**	<770	**110**	**270**	**420**	**2,100**	<10	**0.38**	<10	
MW-6	06/17/17	--	--	--	--	--	**9,000**	**1,500,000 J**	**270,000 J**	<40,000 J	**63**	**260**	**490**	**2,700**	<5	**0.14**	<5	
MW-6	09/19/17	--	--	--	--	--	**10,000**	**92,000 J**	**35,000 J**	<4,300 J	**93**	**270**	**440**	**2,400**	<5	**0.19 J**	<5	
MW-6	06/27/18	--	--	--	12.85	423.64	**7,800**	**40,000**	**420,000 J**	<1,500	**37**	**130**	**240**	**1,700**	<3	**0.13**	<3	
MW-6	10/03/18	--	--	--	9.38	427.11	**11,000**	**11,000**	**2,200 J**	<420	**73**	**290**	**450**	**2,900**	<4	**0.19**	<6	
MW-6	05/22/19	--	--	0.25	12.9	433.91	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-7	09/12/08	--	433.43	--	9.33	424.10	**1,060**	**3,330 [4]**	--	**1,520 [5]**	**28.0**	**1.06**	**7.86**	**245**	<1.00	<0.010	<0.500 [7]	
MW-7	05/10/09	--	--	--	12.68	420.75	**4,260 [4,240]**	**5230 [1,450]**	**-- [--]**	915 [<413]	**167 [166]**	**3.96 [4.00]**	**39.20 [38.40]**	**1,030 [1,040]**	**6.98 [6.30]**	<0.010 [<0.010]	**-- [--]**	
MW-7	10/05/09	--	--	--	11.30	422.13	**2,040**	**5,670**	--	--	**108**	**2.05**	**23.00**	**701**	**1.45**	<0.010	<1.00	
MW-7	06/18/10	--	--	--	11.23	422.20	**3,100**	**7,100**	--	**760**	**120**	**2.80**	**24.00**	**750**	--	--	--	
MW-7	09/27/10	--	430.83	--	9.95	420.88	**3,300**	**5,400**	--	**360**	**120**	**2.90**	**28.00**	**730**	--	--	--	
MW-7	06/14/11	--	--	--	11.08	419.75	**2,600**	**5,600**	--	--	**94**	**2.10**	**1.20**	**670**	<2.5	<0.010	**0.9**	
MW-7	08/24/11	--	--	--	9.00	421.83	**3,500**	**5,000**	--	--	**130**	**2.60**	**18.00**	**950**	--	--	--	
MW-7	06/14/12	--	--	--	10.72	420.11	**1,400**	**1,700**	**190**	--	**33**	**1.10**	**4.00**	**410**	**5.60**	<0.0095	<0.5	
MW-7	10/03/12	--	433.52	--	10.92	422.60	**1,300**	**2,000**	**130**	--	**43**	**1.50**	**4.40**	**510**	**3**	<0.0096	<0.5	
MW-7	06/13/13	--	--	0.00	9.93	423.59	**2,460**	**3,300**	**660**	--	**64.9**	**1.30**	**7.50**	**677**	<1.0	<0.0094	<1.0	
MW-7	10/15/13	--	--	0.00	11.35	422.17	**2,170**	**1,900**	**480**	--	**37.7**	<2.0	<2.0	**526**	<2.0	<0.0099	<2.0	
MW-7	06/26/14	--	433.57	0.00	10.75	422.82	**1,620**	**1,500**	**510**	--	**38.3**	**2.30**	**4.70**	**504**	<2.0	<0.0099	<2.0	
MW-7	08/27/14	--	--	0.00	8.51	425.06	**386**	**910**	<400	--	<1.0	<1.0	<1.0	<3.0	<1.0	<0.0096	<1.0	
MW-7	05/12/15	--	--	0.00	11.85	421.72	**1,960**	**770**	<400	<400	**29.7**	**1.20**	**3.30**	**560**	<1.0	<0.0099	<1.0	
MW-7	09/18/15	--	--	--	9.40	424.17	**1,770**	**1,000**	**510**	<400	**31.3**	**1.40**	**3.00**	**498**	<1.0	<0.0098	<4.0	
MW-7	05/19/16	--	--	--	12.27	421.30	**990**	**850**	**190 J**	**180 J**	**11**	**0.6 J**	**0.9 J**	**270**	<0.5	<0.0097	<0.5	
MW-7	09/27/16	--	--	--	--	--	**270**	**1,100**	<51 J	**450**	**7**	**0.6 J**	<0.5	**61**	<0.5	<0.0095	<0.5	
MW-7	06/17/17	--	--	--	--	--	**570**	**1,000**	**490 J**	**540**	**11**	<0.5	**0.6 J**	**190**	<0.5	<0.0096	<0.5	
MW-7	09/18/17	--	--	--	--	--	**620**	**610**	**70 J**	**150**	**10**	**0.70**	<0.5	**160**	<0.5	<0.0095	<0.5	
MW-7	06/27/18	--	--	--	10.10	423.47	**570**	**940**	**74 J**	**230 J**	**18**	<0.5	<0.5	**130**	<0.5	<0.0095	<0.5	
MW-7	10/03/18	--	--	--	8.68	424.89	**320 [250]**	**770 [830]**	**<54 J [51 J]**	**170 [210]**	**15 [15]**	**1.00 [1.00]**	<0.4 [<0.4]	**70 [70]**	<0.2 [<0.2]	<0.0095 [--]	**0.3 [--]**	
MW-7	05/23/19	--	--	0.00	12.48	433.57	**610**	**1,300 J**	**86 J**	**590**	**16**	**0.3 J**	**0.4 J**	**170**	**0.2 J**	< 0.0097	< 0.3	
MW-8	09/12/08	--	428.65	--	4.48	424.17	**7040**	**17300**	--	<3,710	**379**	**4.42**	**45.4**	**1550**	<10.0 [8]	<0.010	<0.500 [7]	
MW-8	05/10/09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to ice at 6.78 bgs
MW-8	10/05/09	--	--	--	6.48	422.17	**3,910**	**4,560**	--	--	**240**	**2.16**	**22.6**	**1,830**	<1.00	<0.010	<1.00	
MW-8	06/18/10	--	--	--	11.15	417.50	**3,800 [2,000]**	**2,800 [2,800]**	**-- [--]**	**280 [650]**	**170 [130]**	**1.3 [0.8]**	**3.9 [1.6]**	**900 [590]**	**-- [--]**	**-- [--]**	**-- [--]**	
MW-8	09/29/10	--	426.21	--	5.09	421.12	**2,700 [2,200]**	**2,300 [--]**	**-- [--]**	**320 [--]**	**96 [92]**	**0.8 [0.7]**	**2.6 [2.3]**	**600 [520]**	**-- [--]**	**-- [--]**	**-- [--]**	
MW-8	06/14/11	--	--	--	6.10	420.11	**4,300 [4,600]**	**5,400 [--]**	**-- [--]**	**-- [--]**	**270 [280]**	<2.5 [<2.5]	**6.8 [7.2]**	**1,300 [1,400]**	<13.0 [--]	<0.010 [--]	<1.0 [--]	
MW-8	08/24/11	--	--	--	4.11	422.10	**3,900**	**2,200**	--	--	**230**	**1.30**	**5.20**	**930**	--	--	--	
MW-8	06/14/12	--	--	--	5.85	420.36	**3,200**	**1,900**	**220**	--	**160**	**1.20**	**5.80**	**730**	**16**	<0.0096	<0.5	
MW-8	10/03/12	--	428.43	--	6.00	422.43	**4,000**	**3,000**	**410**	--	**270**	**1.9**	**7.00**	**990**	**13**	<0.0096	<0.5	
MW-8	06/13/13	--	--	0.00	5.00	423.43	**884**	**3,800**	**1,200**	--	**198**	**1.2**	**6.90**	**1,100**	<1.0	<0.0094	<1.0	
MW-8	10/15/13	--	--	0.00	6.38	422.05	**5,060**	**11,900**	**5,200**	--	**321**	<5.0	**90.50**	**1,490**	<5.0	<0.0098	<5.0	
MW-8	06/27/14	--	428.67	0.00	5.83	422.84	**3,860**	**3,400**	**1,200**	--	**128**	<5.0	**13.00**	**1,100**	<5.0	<0.0097	<5.0	
MW-8	08/28/14	--	--	0.00	421.80	6.87	**3,730**	**4,600**	**780**	--	**194**	<5.0	**9.50**	**1,220**	<5	<0.0098	<5.0	
MW-8	05/12/15	--	--	0.00	6.85	420.89	**3,010**	**2,000**	**790**	<400	**89.9**	<5.0	**7.00**	**1,030**	<5.0	<0.0098	<5.0	
MW-8	09/18/15	--	--	--	4.48	424.19	**3,220**	**2,400**	**1,100**	<400	**95.3**	<5.0	**8.90**	**848**	<5.0	<0.0098	<20	
MW-8	05/19/16	--	--	--	7.21	421.46	**3,300**	**47,000 J**	**1,500 J**	<1,900 J	**24**	<10	**67**	**580**	<10	**0.017 J**	<10	
MW-8	09/27/16	--	--	--	--	--	**630**	**3,200**	**130 J**	<82	**23**	<0.5	**3**	**120**	<0.5	<0.0094	<0.5	
MW-8	06/17/17	--	--	--	--	--	**3,800**	**14,000**	**500 J**	<880 J	**80 J**	<3	**39**	**980 J**	<3	<0.0095	<3	
MW-8	09/18/17	--	--	--	--	--	**4,600**	**14,000**	**600 J**	<820	**150**	<3	**68**	**1,200**	<3	<0.021	<3	

Table 2. Historical Groundwater Gauging and Analytical Results
Third Quarter 2007 to Current
Former Chevron Facility 309152
6223 Old Airport Road
Fairbanks, Alaska

Well ID	Sample Date	Screen Interval (ft bTOC)	TOC (ft amsl)	LNAPL thickness (ml)	DTW (ft bTOC)	GW Elev (ft amsl)	TPH-g (µg/L)	TPH-d (µg/L)	TPH-d w/Si Gel (µg/L)	TPH-r (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	EDB (µg/L)	EDC (µg/L)	Comments
ADEC Groundwater Cleanup Levels[1]							**2,200**	**1,500**	**1,500**	**1,100**	**5**	**1,000**	**700**	**10,000**	**470**	**0.05**	**5**	
MW-8	06/27/18	--	--	--	5.03	423.64	**3,000**	**6,900 J**	**450 J**	<380 J	**55**	<3	**21**	**730**	<3	**0.015 J**	<3	
MW-8	10/03/18	--	--	--	3.93	424.74	**3,000**	**4,100 J**	**350 J**	**140**	**44 J**	<2	**9**	**700 J**	<2	<0.0095	<3	
MW-8	05/23/19	--	--	0.00	7.52	428.67	**5,100[5400]**	**18,000 J[18,000 J]**	**900 J[990 J]**	< 780 J[< 390]	**120[130]**	**4 J[3 J]**	**130[120]**	**1,400[1,500]**	< 2[< 1]	**0.013 J[0.013 J]**	< 3[< 2]	
MW-9	09/12/08	--	435.56	--	11.42	424.14	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-9	05/10/09	--	--	0.09	13.14	422.49	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-9	10/05/09	--	--	0.06	13.41	422.20	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-9	06/18/10	--	--	0.04	13.36	422.23	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-9	09/27/10	--	436.23	--	12.00	424.23	**36,000**	**68,000**	--	<6,900[8]	**140**	**2,200**	**1,200**	**7,700**	--	--	--	
MW-9	06/14/11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-9	08/24/11	--	--	Trace	11.03	425.20	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL Globules
MW-9	06/14/12	--	--	Trace	12.75	423.48	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-9	10/03/12	--	435.56	0.02	12.91	422.65	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-9	06/12/13	--	--	0.00	11.90	423.66	**47,100**	**31,200**	**25,000**	--	**88.2**	**2,680**	**1,880**	**8,930**	<1.0	**26.2**	<1.0	
MW-9	10/15/13	--	--	0.10	13.39	422.25	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-9	06/27/14	--	435.58	0.00	12.76	422.82	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-9	08/27/14	--	--	0.02	10.56	425.04	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-9	05/12/15	--	--	0.12	13.86	421.82	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-9	09/18/15	--	--	Globules	11.41	424.17	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL Globules
MW-9	05/18/16	--	--	0.16	14.27	421.44	**200,000**	**160,000 J**	**170,000 J**	<7,800	**120**	**3,600**	**3,600**	**17,000**	<10	**12 J**	<10	
MW-9	09/27/16	--	--	--	--	--	**57,000**	**160,000**	**25,000**	<3,900	<50	**1,500**	**3,000**	**18,000**	<50	**11 J**	<50	
MW-9	06/17/17	--	--	--	--	--	**60,000**	**800,000 J**	**110,000 J**	<40,000 J	<100	**2,900**	**2,800**	**14,000**	<100	**14 J**	<100	
MW-9	09/19/17	--	--	--	--	--	**36,000**	**220,000**	**380,000 J**	<8,300	**82**	**1,300**	**1,800**	**17,000**	<10	**13 J**	<10	
MW-9	06/27/18	--	--	--	11.95	423.63	**48,000**	**34,000**	**47,000 J**	<760	<10	**170**	**1,700**	**7,800**	<10	**8.2 J**	<10	
MW-9	10/04/18	--	--	--	10.90	424.68	**36000.00**	**12000.00**	**1,800 J**	<420	**33.00**	**630.00**	**980.00**	**11000.00**	<20	**22 J**	<30	
MW-9	05/22/19	--	--	0.17	14.61	433.59	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-10	09/12/08	--	435.06	--	10.90	424.16	<50.0	**102 [6]**	--	<743	**0.281**	<0.500	<0.500	**2.25**	<1.00	<0.010	<0.500 [7]	
MW-10	05/10/09	--	--	--	12.66	422.40	**77.0**	<400	--	**416**	**5.43**	<0.500	<0.500	<1.00	**1.57**	<0.010	**NA**	
MW-10	10/05/09	--	--	--	12.86	422.20	<50.0	<385	--	--	<2.00	<1.00	<1.00	<3.00	<1.00	<0.010	<1.00	
MW-10	06/18/10	--	--	--	20.49	414.57	**64.0**	**380**	--	**230**	**3.5**	< 0.5	< 0.5	< 1.5	--	--	--	
MW-10	09/27/10	--	435.56	--	11.48	424.08	<10	**190**	--	**240**	<0.5	<0.5	<0.5	<1.5	--	--	--	
MW-10	06/14/11	--	--	--	12.63	422.93	**15.0**	**400**	--	--	<0.5	<0.5	<0.5	<1.5	<2.5	<0.010	<0.5	
MW-10	08/24/11	--	--	--	10.53	425.03	<10	**190**	--	--	<0.5	<0.5	<0.5	<1.5	--	--	--	
MW-10	06/14/12	--	--	--	12.32	423.24	**23.0 [21.0]**	**170 [110]**	<48 [--]	**-- [--]**	**0.6 [0.6]**	<0.5 [<0.5]	<0.5 [<0.5]	<1.5 [<1.5]	<2.5 [<2.5]	<0.0096 [--]	<0.5 [--]	
MW-10	10/03/12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to vehicle obstruction
MW-10	06/13/13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to vehicle obstruction
MW-10	10/15/13	--	--	--	12.81	422.75	<100	<390	--	--	<1.0	<1.0	<1.0	<3.0	<1.0	<0.0098	<1.0	
MW-10	06/27/14	--	435.09	0.00	12.35	422.74	<100	<420	--	--	<1.0	<1.0	<1.0	<3.0	<1.0	<0.0097	<1.0	
MW-10	08/28/14	--	--	0.00	10.06	425.03	<100	<400	--	--	<1.0	<1.0	<1.0	<3.0	<1.0	<0.0099	<1.0	
MW-10	05/12/15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to pellet engine
MW-10	09/18/15	--	--	--	10.94	424.15	<100	<400	--	<400	<1.0	<1.0	<1.0	<3.0	<1.0	<0.0098	<4.0	
MW-10	05/18/16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to vehicle obstruction
MW-10	09/27/16	--	--	--	--	--	<10	<52	<53	<77	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0095	<0.5	
MW-10	06/18/17	--	--	--	--	--	<10	**57 J**	<51 J	<76	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0095	<0.5	
MW-10	09/18/17	--	--	--	--	--	<10	<57	<54 J	<85	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0094	<0.5	
MW-10	06/27/18	--	--	--	11.50	423.59	<10	**52 J**	<55 J	<76	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0095	<0.5	
MW-10	10/04/18	--	--	--	10.43	424.66	<14	<56	<53 J	<91	<0.2	<0.2	<0.4	<1	<0.2	<0.0095	<0.3	
MW-10	05/23/19	--	--	0.00	13.96	435.09	< 14	< 260 BJ	< 54	< 260 B	< 0.2	< 0.2	< 0.4	< 1	< 0.2	< 0.0096J	< 0.3	
MW-11	09/12/08	--	435.20	--	11.00	424.20	<50.0 [<50.0]	**237 [6] [231 [6]]**	**-- [--]**	<750 [<743]	<0.200 [<0.200]	<0.500 [<0.500]	<0.500 [<0.500]	<1.00 [<1.00]	**1.51 [1.43]**	<0.010 [<0.010]	<0.500 [7] [<0.500 [7]]	
MW-11	05/10/09	--	--	--	12.61	422.59	<50.0	<413	--	**568**	<0.500	<0.500	<0.500	<1.00	**2.25**	<0.010	**NA**	
MW-11	10/05/09	--	--	--	12.91	422.29	<50.0	**583**	--	--	<0.200	<1.00	<1.00	<3.00	<1.00	<0.010	<1.00	
MW-11	06/18/10	--	--	--	12.90	422.30	**12**	**220**	--	**320**	< 0.5	< 0.5	< 0.5	< 1.5	--	--	--	
MW-11	09/27/10	--	435.66	--	11.57	424.09	<10	**180**	--	**250**	<0.5	<0.5	<0.5	<1.5	--	--	--	
MW-11	06/14/11	--	--	--	12.67	422.99	**26**	**63**	--	--	<0.5	<0.5	<0.5	<1.5	<2.5	<0.010	<0.5	
MW-11	08/24/11	--	--	--	10.62	425.04	<10	**100**	--	--	<0.5	<0.5	<0.5	<1.5	--	--	--	
MW-11	06/14/12	--	--	--	12.35	423.31	<10	<52	<52	--	<0.5	<0.5	<0.5	<1.5	<2.5	<0.0095	<0.5	
MW-11	10/03/12	--	435.19	--	12.48	422.71	<10	**540**	<50	--	<0.5	<0.5	<0.5	<1.5	<2.5	<0.0096	<0.5	
MW-11	06/13/13	--	--	0.00	11.46	423.73	<100	<520	--	--	<1.0	<1.0	<1.0	<3.0	<1.0	<0.0097	<1.0	
MW-11	10/15/13	--	--	0.00	12.85	422.34	<100	<430	--	--	<1.0	<1.0	<1.0	<3.0	<1.0	<0.0097	<1.0	
MW-11	06/27/14	--	435.19	0.00	12.35	422.84	<100	<420	--	--	<1.0	<1.0	<1.0	<3.0	<1.0	<0.0097	<1.0	
MW-11	08/28/14	--	--	0.00	10.10	425.09	<100	<400	--	--	<1.0	<1.0	<1.0	<3.0	**1.7**	<0.0097	<1.0	
MW-11	05/12/15	--	--	0.00	13.33	421.86	<100	<400	--	<400	<1.0	<1.0	<1.0	<3.0	<1.0	<0.010	<1.0	

Table 2. Historical Groundwater Gauging and Analytical Results
Third Quarter 2007 to Current
Former Chevron Facility 309152
6223 Old Airport Road
Fairbanks, Alaska

Well ID	Sample Date	Screen Interval (ft bTOC)	TOC (ft amsl)	LNAPL thickness (ml)	DTW (ft bTOC)	GW Elev (ft amsl)	TPH-g (µg/L)	TPH-d (µg/L)	TPH-d w/Si Gel (µg/L)	TPH-r (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	EDB (µg/L)	EDC (µg/L)	Comments
ADEC Groundwater Cleanup Levels[1]							**2,200**	**1,500**	**1,500**	**1,100**	**5**	**1,000**	**700**	**10,000**	**470**	**0.05**	**5**	
MW-11	09/18/15	--	--	--	11.00	424.19	<100	<400	--	<400	<1.0	<1.0	<1.0	<3.0	<1.0	<0.0099	<4.0	
MW-11	05/19/16	--	--	--	13.68	421.51	**19 J [19 J]**	**130 J [88J]**	<52 J **[120 J]**	<78 [<77]	<0.5 [<0.5]	<0.5 [<0.5]	<0.5 [<0.5]	<0.5 [<0.5]	<0.5 [<0.5]	<0.0096 [--]	<0.5 [<0.5]	
MW-11	09/27/16	--	--	--	--	--	<10	<55	<52	<83	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0095	<0.5	
MW-11	06/18/17	--	--	--	--	--	**12 J**	**94 J**	<55 J	**120 J**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0095	<0.5	
MW-11	09/18/17	--	--	--	--	--	<10	**110**	<59 J	<82	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0094	<0.5	
MW-11	06/27/18	--	--	--	13.50	421.69	**12 J**	<51	<50 J	<77	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0094	<0.5	
MW-11	10/04/18	--	--	--	10.41	424.78	<14	**59 J**	<53 J	**88 J**	<0.2	<0.2	<0.4	<1	<0.2	<0.0095	<0.3	
MW-11	05/23/19	--	--	0.00	13.98	435.19	**18 J**	< 260 BJ	< 54	< 260 B	< 0.2	< 0.2	< 0.4	< 1	< 0.2	< 0.0097J	< 0.3	
MW-12	09/27/10	--	436.46	0.04	12.49	424.00	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-12	06/14/11	--	--	--	13.64	422.82	**23,000**	**88,000**	--	--	<100[8]	**500**	**1,500**	**6,900**	--	--	--	
MW-12	08/24/11	--	--	--	11.55	424.91	**16,000**	**45,000**		--	<50[8]	**380**	**1,200**	**4,700**	--	--	--	
MW-12	08/24/11	--	--	--	--	--	**17,000**	--		--	<50[8]	**400**	**1,300**	**4,900**	--	--	--	
MW-12	06/14/12	--	--	0.08	13.39	423.13	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-12	10/03/12	--	436.16	0.01	13.49	422.68	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-12	06/12/13	--	--	0.00	12.55	423.61	**43,300**	**10,800**	**8,200**	--	<0.5	**714**	**370**	**2,670**	<0.5	--	--	
MW-12	10/15/13	--	--	0.02	13.96	422.22	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-12	06/27/14	--	436.27	0.02	13.47	422.82	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-12	08/27/14	--	--	0.00	11.22	425.05	**13,900 [13.200]**	**44,800 [52,400]**	**34,800 [41,100]**	**-- [--]**	**1.8** [<10]	**55.3 [53.5]**	**712 [710]**	**3,110 [3,020]**	<1.0 [<10]	**-- [--]**	<1.0 [<10]	
MW-12	05/12/15	--	--	0.16	14.62	421.78	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to pellet engine
MW-12	09/18/15	--	--	Globules	12.13	424.14	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL Globules
MW-12	05/19/16	--	--	0.43	15.23	421.38	**51,000 J [71,000 J]**	**570,000 J [150,000 J]**	**610,000 J [420,000 J]**	<19,000 [<7,900]	<10 [<5]	**860 [820]**	**3,600 [3,100]**	**17,000 [14,000]**	<10 [<5]	**-- [--]**	<10 [<5]	
MW-12	09/27/16	--	--	--	--	--	**35,000**	**140,000 J**	**76,000**	<4,000	<10	**170**	**1,700**	**8,100**	<10	--	<10	
MW-12	06/18/17	--	--	--	--	--	**81,000**	**290,000 J**	**120,000 J**	<8,000 J	<10	**170**	**2,600**	**12,000**	<10	--	--	
MW-12	09/19/17	--	--	--	--	--	**38,000**	**79,000 J**	**100,000 J**	<4,100 J	<10	**220**	**2,100**	**10,000**	<10	--	--	
MW-12	06/27/18	--	--	--	12.57	423.70	**40,000**	**210,000 J**	**38,000 J**	<8,100 J	<10	**170**	**1,800**	**8,000**	<10	--	--	
MW-12	10/04/18	--	--	--	11.47	424.80	**25,000**	**57,000 J**	**21,000 J**	<1,700 J	<20	**160**	**1,500**	**6,900**	<20	--	--	
MW-12	05/22/19	--	--	0.24	15.28	433.33624	--	--	--	--	--	--	--	--	--	--	--	
MW-13	09/29/10	--	434.65	--	9.76	424.89	<10	**96**	--	**220**	<0.5	<0.5	<0.5	<1.5	--	--	--	
MW-13	06/14/11	--	--	--	11.87	422.78	<10 [<10]	<4.8 [--]	**-- [--]**	**-- [--]**	<0.5 [<0.5]	<0.5 [<0.5]	<0.5 [<0.5]	<1.5 [<1.5]	**-- [--]**	**-- [--]**	**-- [--]**	
MW-13	08/24/11	--	--	--	9.80	424.85	<10	**78**	--	--	<0.5	<0.5	<0.5	<1.5	--	--	--	
MW-13	06/14/12	--	--	--	12.64	422.01	<10	<52	<52	--	<0.5	<0.5	<0.5	<1.5	<2.5	--	--	
MW-13	10/03/12	--	434.39	--	11.67	-11.67	<10	<52	<52	--	<0.5	<0.5	<0.5	<1.5	<2.5	--	--	
MW-13	06/13/13	--	--	0.00	10.65	423.74	<100	<500	--	--	<1.0	<1.0	<1.0	<3.0	<1.0	--	--	
MW-13	10/15/13	--	--	0.00	12.05	422.34	<100	<430	--	--	<1.0	<1.0	<1.0	<3.0	<1.0	--	--	
MW-13	06/26/14	--	434.40	0.00	11.53	422.87	<100 [<100]	<420 [<400]	**-- [--]**	**-- [--]**	<1.0 [<1.0]	<1.0 [<1.0]	<1.0 [<1.0]	<3.0 [<3.0]	<1.0 [--]	**-- [--]**	**-- [--]**	
MW-13	08/28/14	--	--	0.00	10.30	424.10	<100 [<100]	<400 [<400]	**-- [--]**	**-- [--]**	<1.0 [<1.0]	<1.0 [<1.0]	<1.0 [<1.0]	<3.0 [<3.0]	<1.0 [<1.0]	**-- [--]**	<1.0 [<1.0]	
MW-13	05/12/15	--	--	0.00	12.50	421.90	<100	<400	--	<400	<1.0	<1.0	<1.0	<3.0	<1.0	--	<1.0	
MW-13	09/18/15	--	--	--	10.15	424.25	<100	<400	--	<400	<1.0	<1.0	<1.0	<3.0	<1.0	--	--	
MW-13	05/19/16	--	--	--	12.87	421.53	<10	<52	<52 J	<78	<0.5	<0.5	<0.5	<0.5	<0.5	--	<0.5	
MW-13	09/27/16	--	--	--	--	--	<10	<52	<51	<78	<0.5	<0.5	<0.5	<0.5	<0.5	--	<0.5	
MW-13	06/18/17	--	--	--	--	--	<10	**61 J**	<54 J	<82	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	
MW-13	09/18/17	--	--	--	--	--	<10	<57	<56 J	**140 J**	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	
MW-13	06/27/18	--	--	--	10.70	423.70	**12 J**	<50	<50 J	<76	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	
MW-13	10/04/18	--	--	--	9.58	424.82	<14	<52	<54 J	**100 J**	<0.2	<0.2	<0.4	<1	<0.2	--	--	
MW-13	05/22/19	--	--	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-14	06/12/13	--	433.04	0.00	9.39	423.65	**5,980**	**35,500**	**31,000**	--	**15.9**	**50.6**	**300**	**1390**	<5.0	**0.092**	<5.0	
MW-14	10/15/13	--	--	0.11	10.91	422.22	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-14	06/26/14	--	433.06	0.00	10.21	422.85	**4,820**	**25,900**	**17,300**	--	**15.4**	**6**	**132**	**863**	<5.0	**0.064**	<5.0	
MW-14	08/28/14	--	--	0.00	8.04	425.02	**3,600**	**70,700**	**60,100**	--	**19.3**	**25.1**	**87.6**	**620**	<5.0	**0.033**	<5.0	
MW-14	05/12/15	--	--	0.00	11.24	421.82	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL Globules
MW-14	09/18/15	--	--	Globules	8.92	424.14	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL Globules
MW-14	05/19/16	--	--	0.18	11.78	421.42	**19,000**	**1,100,000 J**	**1,100,000 J**	<150,000	**34**	**29**	**390**	**2,100**	<10	**0.15**	<10	
MW-14	09/28/16	--	--	--	--	--	**22,000**	**6,000**	**670,000**	<180	**7**	**8**	**53**	**460**	<3	**0.059**	<3	
MW-14	06/18/17	--	--	--	--	--	**6,500**	**740,000 J**	**420,000 J**	<17,000 J	**26**	**20**	**150**	**1,100**	<5	**0.079**	<5	
MW-14	09/19/17	--	--	--	--	--	**4,600**	**100,000 J**	**96,000 J**	<7,700 J	**34**	**25**	**130**	**800**	<1	**0.078 J**	<1	
MW-14	06/27/18	--	--	--	9.42	423.64	**3,900**	**330,000 J**	**430,000 J**	<7,800 J	**9**	**15**	**120**	**720**	<3	**0.035**	<3	
MW-14	10/04/18	--	--	--	8.32	424.74	**2,500**	**110,000 J**	**17,000 J**	<4,500 J	**5**	**14**	**94**	**750**	<2	<0.0096	<3	
MW-14	05/22/19	--	--	0.17	12.03	431.42	--	--	--	--	--	--	--	--	--	--	--	
MW-15	10/15/13	--	430.08	0.01	7.09	423.00	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-15	06/26/14	--	430.10	0.00	7.24	422.86	**6,860**	**40,100**	**27,900**		**19.7**	**106**	**277**	**395**	<1.0	**0.073**	<1.0	

Table 2. Historical Groundwater Gauging and Analytical Results
Third Quarter 2007 to Current
Former Chevron Facility 309152
6223 Old Airport Road
Fairbanks, Alaska

Well ID	Sample Date	Screen Interval (ft bTOC)	TOC (ft amsl)	LNAPL thickness (ml)	DTW (ft bTOC)	GW Elev (ft amsl)	TPH-g (µg/L)	TPH-d (µg/L)	TPH-d w/Si Gel (µg/L)	TPH-r (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	EDB (µg/L)	EDC (µg/L)	Comments
ADEC Groundwater Cleanup Levels[1]							**2,200**	**1,500**	**1,500**	**1,100**	**5**	**1,000**	**700**	**10,000**	**470**	**0.05**	**5**	
MW-15	08/27/14	--	--	0.01	5.07	425.04	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-15	05/12/15	--	--	Globules	8.27	421.83	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL Globules
MW-15	09/18/15	--	--	Globules	5.95	424.15	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL Globules
MW-15	05/19/16	--	--	0.12	8.75	421.45	**8,500**	**170,000 J**	**350,000 J**	<30,000	<10	**42**	**200**	**1,200**	<10	**0.032**	<10	
MW-15	09/28/16	--	--	--	--	--	**5,800**	**820,000 J**	**730,000**	<39,000 J	**6 J**	**56**	**210**	**1,100**	<5	**0.01 J**	<5	
MW-15	06/18/17	--	--	--	--	--	**5,800**	**910,000 J**	**310,000 J**	<40,000 J	**3 J**	**25**	**150**	**860**	<3	<0.0094	<3	
MW-15	09/19/17	--	--	--	--	--	**4,500**	**110,000 J**	**62,000 J**	<8,100 J	**2**	**24**	**180**	**850**	<1	<0.0095	<1	
MW-15	06/27/18	--	--	--	6.42	423.68	**4,300**	**68,000 J**	**42,000 J**	<1,900 J	**4 J**	**28**	**140**	**770**	<3	**0.023 J**	<3	
MW-15	10/04/18	--	--	--	5.35	424.75	**3,500**	**29,000 J**	**29,000 J**	<850 J	**2**	**30**	**180**	**950**	<2	**0.0095**	<3	
MW-15	05/22/19	--	--	0.13	9.04	429.16	--	--	--	--	--	--	--	--	--	--	--	
MW-16	10/15/13	--	429.36	0.00	7.15	422.21	**958.00**	**6700.00**	**2400.00**	--	<1.0	<1.0	**6.20**	**27.10**	<1.0	**0.01**	<1.0	
MW-16	06/26/14	--	429.37	0.00	6.50	422.87	**4,660**	**6,500**	**4,200**	--	**18.2**	**4.7**	**227**	**297**	<1.0	**0.077**	<1.0	
MW-16	08/28/14	--	--	0.00	4.36	425.01	**2,000**	**4,100**	**1,800**	--	**8.7**	<1.0	**127**	**460**	**1.5**	**0.047**	<1.0	
MW-16	05/12/15	--	--	0.00	7.56	421.81	**5,120**	**4,700**	**2,500**	--	**7.5**	**15.8**	**267**	**1,210**	<1.0	**0.027**	<1.0	
MW-16	09/18/15	--	--	--	5.22	424.15	**954 [973]**	**3,200 [3,600]**	**1,200 [--]**	**640 [660]**	<5.0 [<1.0]	<5.0 [<1.0]	**39.4 [41.8]**	**82.1 [90.0]**	<5.0 [<1.0]	**0.016 [--]**	<20.0 [--]	
MW-16	05/19/16	--	--	--	8.92	420.45	**3,200**	**8,900**	**3,500 J**	<760	**3**	**0.7 J**	**150**	**510**	<0.5	<0.027	<0.5	
MW-16	09/28/16	--	--	--	--	--	**450**	**360,000 J**	**1,000**	<16,000 J	<0.5	<0.5	**6**	**21**	<0.5	<0.0094	<0.5	
MW-16	06/18/17	--	--	--	--	--	**3,800**	**3,500**	**2,300 J**	**270 J**	<3	<3	**120**	**290**	<3	<0.0094	<3	
MW-16	09/18/17	--	--	--	--	--	**400**	**3,200**	**910 J**	**230**	<0.5	<0.5	**3**	**20**	<0.5	<0.0095	<0.5	
MW-16	06/27/18	--	--	--	5.71	423.66	**2,700**	**4,100**	**1,200 J**	<150	**2**	**0.8 J**	**110**	**420**	<0.5	**0.089**	<0.5	
MW-16	10/04/18	--	--	--	4.62	424.75	**110**	**2,600**	**490 J**	**270**	<0.2	<0.2	**1**	**6**	<0.2	<0.0096	<0.3	
MW-16	05/23/19	--	--	0.00	8.22	429.37	**3100**	**3,200 J**	**970**	< 260 B	< 1	**2 J**	**91**	**450**	< 1	< 0.016J	< 2	
MW-17	10/15/13	--	430.82	1.30	9.65	422.21	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-17	06/27/14	--	430.83	0.00	8.95	421.88	**2,450 [2,440]**	**76,000 [21,300]**	**56,200** [--]	**-- [--]**	<2.0 [<5.0]	**3.9 [5.6]**	**133 [126]**	**339 [331]**	<2.0 [--]	**0.013 [--]**	<2.0 [--]	
MW-17	08/27/14	--	--	0.42	6.15	425.02	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-17	05/12/15	--	--	0.42	9.42	421.75	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-17	09/18/15	--	--	Globules	6.74	424.09	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL Globules
MW-17	05/19/16	--	--	0.58	9.92	421.37	**6,500**	**78,000**	**76,000 J**	<3,900	<0.5	**1**	**110**	**240**	<0.5	**0.029**	<0.5	
MW-17	09/28/16	--	--	--	--	--	**31,000**	**2,300,000 J**	**1,200,000 J**	<80,000 J	<0.5	**1**	**150**	**410**	<0.5	<0.025	<0.5	
MW-17	06/18/17	--	--	--	--	--	**730**	**590,000 J**	**720,000 J**	<16,000 J	<0.5	<0.5	**3**	**73**	<0.5	<0.02	<0.5	
MW-17	09/19/17	--	--	--	--	--	**3,000**	**160,000 J**	**18,000 J**	<8,000 J	<0.5	**0.7**	**99**	**250**	<0.5	<0.011	<0.5	
MW-17	06/27/18	--	--	0.03	7.45	423.40	**2,800**	**410,000 J**	**1,000,000 J**	<9,800 J	<0.5	**1 J**	**120**	**290**	<0.5	**0.02 J**	<0.5	
MW-17	09/30/18	--	--	0.30	6.60	424.46	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-17	05/22/19	--	--	0.54	10.46	426.31128	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-18	06/26/14	--	436.07	0.00	13.22	422.85	**2,700**	**16,800**	**14,700**	--	**7.4**	**36.7**	**130**	**337**	**1.1**	**0.036**	<1.0	
MW-18	08/28/14	--	--	0.00	11.04	425.03	**1,640**	**14,400**	**12,100**	--	<1.0	**2.1**	**22.6**	**102**	**1.4**	<0.0099	<1.0	
MW-18	05/12/15	--	421.82	0.00	14.27	421.80	**2,210**	**143,000**	**139,000**	**1,100**	**1.6**	**15.1**	**62.9**	**270**	<1.0	<0.010	<1.0	
MW-18	09/18/15	--	--	--	11.90	424.17	--	--	--	--	--	--	--	--	--	--	--	Not sampled
MW-18	05/19/16	--	--	--	14.64	407.18	**5,800**	**220,000**	**210,000 J**	<7,600	<3	**8**	**76**	**360**	<3	<0.0097	<3	
MW-18	09/28/16	--	--	--	--	--	**3,100**	**140,000 J**	**97,000**	<8,300 J	<3	<3	**9**	**44**	<3	<0.0095	<3	
MW-18	06/18/17	--	--	--	--	--	**3,000**	**240,000**	**230,000 J**	<8,900	<3	**21**	**130**	**720**	<3	<0.0095	<3	
MW-18	09/18/17	--	--	--	--	--	**4,400**	**57,000 J**	**170,000 J**	<4,100 J	<0.5	**0.7**	**7**	**36**	<0.5	<0.0094	<0.5	
MW-18	06/27/18	--	--	--	12.41	409.41	**2,900**	**97,000 J**	**56,000 J**	<7,700 J	**0.9 J**	**18**	**120**	**530 J**	<0.5	**0.021 J**	<0.5	
MW-18	10/04/18	--	--	--	11.32	410.50	**890**	**36,000 J**	**30,000 J**	<830 J	<0.2	**2**	**19**	**92**	<0.2	<0.0095	<0.3	
MW-18	05/22/19	--	--	-9.76	15.10	461.64	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
MW-19	06/26/14	--	432.53	0.00	9.91	422.62	<100	<420	--	--	<1.0	<1.0	<1.0	<3.0	<1.0	<0.0099	<1.0	
MW-19	08/28/14	--	--	0.00	7.49	425.04	<100	<400	--	--	<1.0	<1.0	<1.0	<3.0	<1.0	<0.0098	<1.0	
MW-19	05/12/15	--	--	0.00	8.64	423.89	<100 [<100]	<400 [<400]	**-- [--]**	<400 [<400]	<1.0 [<1.0]	<1.0 [<1.0]	<1.0 [<1.0]	<3.0 [<3.0]	<1.0 [<1.0]	<0.0098 [<0.0098]	<1.0 [<1.0]	
MW-19	09/18/15	--	--	--	8.36	424.17	<100	<410	--	<410	<1.0	<1.0	<1.0	<3.0	<1.0	<0.0097	<4.0	
MW-19	05/19/16	--	--	--	11.03	421.50	<10	**78 J**	<51 J	<77	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0096	<0.5	
MW-19	09/28/16	--	--	--	--	--	<10	<56	<54 J	<84	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0094	<0.5	
MW-19	06/18/17	--	--	--	--	--	<10	**130 J**	<55 J	**200 J**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0094	<0.5	
MW-19	09/18/17	--	--	--	--	--	<10	<54	<53 J	<81	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0095	<0.5	
MW-19	07/24/18	--	--	--	--	--	<10 [<10]	**-- [--]**	<52 [<51]	**-- [--]**	<0.5 [<0.5]	<0.5 [<0.5]	<0.5 [<0.5]	<0.5 [<0.5]	<0.5 [<0.5]	<0.0092 [--]	**-- [--]**	
MW-19	10/04/18	--	--	--	8.63	423.9	<14	<55 J	<50 J	<90 J	<0.2	<0.2	<0.4	<1	<0.2	<0.0096	<0.3	
MW-19	05/23/19	--	--	0.00	11.34	432.53	< 14	< 260 BJ	< 52	< 260 B	< 0.2	< 0.2	< 0.4	< 1	< 0.2	< 0.0097J	< 0.3	
MW-20	06/26/14	--	430.48	0.00	7.57	422.91	<100	<400	--	--	<1.0	<1.0	<1.0	<3.0	<1.0	<0.0098	<1.0	
MW-20	08/28/14	--	--	0.00	5.48	425.00	<100	<400	--	--	<1.0	<1.0	<1.0	<3.0	<1.0	<0.0098	<1.0	
MW-20	05/12/15	--	--	0.00	9.67	420.81	<100	<400	--	<400	<1.0	<1.0	<1.0	<3.0	<1.0	<0.0098	<1.0	

Table 2. Historical Groundwater Gauging and Analytical Results
Third Quarter 2007 to Current
Former Chevron Facility 309152
6223 Old Airport Road
Fairbanks, Alaska

Well ID	Sample Date	Screen Interval (ft bTOC)	TOC (ft amsl)	LNAPL thickness (ml)	DTW (ft bTOC)	GW Elev (ft amsl)	TPH-g (µg/L)	TPH-d (µg/L)	TPH-d w/Si Gel (µg/L)	TPH-r (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	EDB (µg/L)	EDC (µg/L)	Comments
ADEC Groundwater Cleanup Levels[1]							**2,200**	**1,500**	**1,500**	**1,100**	**5**	**1,000**	**700**	**10,000**	**470**	**0.05**	**5**	
MW-20	09/18/15	--	--	--	6.32	424.16	<100	<420	--	<420	<1.0	<1.0	<1.0	<3.0	<1.0	<0.0097	<4.0	
MW-20	05/19/16	--	--	--	9.02	421.46	<10	<52	<52 J	<78	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0097	<0.5	
MW-20	09/28/16	--	--	--	--	--	<10	<52	<51	<78	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0096	<0.5	
MW-20	06/18/17	--	--	--	--	--	<10	**89 J**	<57 J	**140 J**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0094	<0.5	
MW-20	09/18/17	--	--	--	--	--	<10	<54 J	<58 J	<81 J	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0095	<0.5	
MW-20	07/24/18	--	--	--	--	--	<10	--	<53	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0093	--	
MW-20	10/04/18	--	--	--	5.71	424.77	<14	**76**	<50 J	**140**	<0.2	<0.2	<0.4	<1	<0.2	<0.0095	<0.3	
MW-20	05/23/19	--	--	0.00	9.29	430.48	< 14	< 290 BJ	< 54	< 410 B	< 0.2	< 0.2	< 0.4	< 1	< 0.2	< 0.0097	< 0.3	
MW-21	06/26/14	--	436.76	0.00	13.9	422.86	**630**	**1000**	**950**	--	<1.0	<1.0	<1.0	<3.0	<1.0	<0.0099	<1.0	
MW-21	08/28/14	--	--	0.00	11.68	425.08	**576**	**1,500**	**1,200**	--	<1.0	<1.0	<1.0	<3.0	**2**	<0.0099	<1.0	
MW-21	05/12/15	--	--	0.00	14.91	421.85	**672**	**1,300**	**1,000**	<400	**1.7**	<1.0	<1.0	<3.0	<1.0	<0.0099	<1.0	
MW-21	09/17/15	--	--	--	12.55	424.21	**601**	**2,400**	**1,900**	<400	<1.0	<1.0	<1.0	<3.0	<1.0	<0.0098	<4.0	
MW-21	05/19/16	--	--	--	15.25	421.51	**960**	**1,800**	**1,200 J**	<78	<0.5	<0.5	<0.5	<0.5	**0.7 J**	<0.0097	<0.5	
MW-21	09/28/16	--	--	--	--	--	**900**	**3,300**	**5,300**	<81	<0.5	<0.5	<0.5	<0.5	**0.8 J**	<0.0095	<0.5	
MW-21	06/18/17	--	--	--	--	--	**1000**	**3,600**	**2,200 J**	<81	<0.5	<0.5	<0.5	<0.5	**0.8 J**	<0.0095	<0.5	
MW-21	09/18/17	--	--	--	--	--	**600**	**4,300**	**5,600 J**	<85	<0.5	<0.5	<0.5	<0.5	**0.6**	<0.0095	<0.5	
MW-21	06/27/18	--	--	--	13.08	423.68	**870**	**3,000 J**	**2,300 J**	<76 J	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0094	<0.5	
MW-21	10/04/18	--	--	--	11.94	424.82	**410**	**1800**	**1,400 J**	**180**	<0.2	<0.2	<0.4	<1	**0.5**	<0.0095	<0.3	
MW-21	43608	--	--	0.00	15.53	436.76	**770**	**970 J**	**750**	< 280 B	**1**	< 0.2	< 0.4	< 1	**0.4 J**	< 0.0097J	< 0.3	
PZ-1	40450	--	424.49	--	2.85	421.64	**120**	**5800**	--	**670**	**15**	**6.2**	**2.4**	**17**	--	--	--	
PZ-1	06/14/11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Well destroyed
PZ-2	09/29/10	--	425.07	--	2.59	422.48	**400**	**7,900**	--	<750	**63**	<0.5	**15**	**29**	--	--	--	
PZ-2	06/14/11	--	--	--	3.80	421.27	--	--	--	--	--	--	--	--	--	--	--	not sampled due to lack of recharge
PZ-2	08/24/11	--	--	--	1.65	423.42	--	--	--	--	--	--	--	--	--	--	--	not sampled due to lack of recharge
PZ-2	06/14/12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Well destroyed
RW-1	10/05/09	--	--	--	13.48	422.20	**12,100**	**3,820**	--	--	**107**	**368**	**576**	**3,087**	<1.00	**2.76**	**1.77**	
RW-1	06/18/10	--	--	0.01	13.45	422.24			--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
RW-1	09/29/10	--	436.04	--	12.13	423.91	**8,000 [7,700]**	**15,000**	--	<720	**130**	**190**	**290**	**1,500**	--	--	--	
RW-1	06/14/11	--	--	--	13.23	422.81	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
RW-1	08/24/11	--	--	Trace	11.16	424.88	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL Globules
RW-1	06/14/12	--	--	Trace	12.86	423.18	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
RW-1	10/03/12	--	435.69	Trace	13.05	422.64	**7,500**	**19,000**	**10,000**	--	**270**	**520**	**320**	**1,800**	**13**	**3.4**	**4**	
RW-1	06/12/13	--	--	0.00	12.00	423.69	**6,120**	**21,100**	**18,400**	--	**82.4**	**100**	**174**	**1,440**	<1.0	**2.3**	**3.2**	
RW-1	10/15/13	--	--	0.02	13.45	422.26	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
RW-1	06/26/14	--	435.70	0.00	12.86	422.84	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
RW-1	08/27/14	--	--	0.00	10.64	425.06	**12,100**	**4,200**	**1,500**	--	**50**	**113**	**132**	**1,920**	**9.3**	**4.5**	<5.0	
RW-1	05/12/15	--	--	0.02	13.92	421.80	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
RW-1	09/17/15	--	--	Globules	11.52	424.18	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL Globules
RW-1	05/19/16	--	--	--	14.23	421.47	**19,000**	**49,000**	**45,000 J**	<2,000	**89**	**350**	**380**	**2,500**	<5	**2.3 J**	<5	
RW-1	09/28/16	--	--	--	--	--	**14,000**	**81,000**	**26,000**	<4,100	**180**	**250**	**160**	**1,900**	<10	**3.4 J**	<10	
RW-1	06/18/17	--	--	--	--	--	**16,000**	**69,000 J**	**18,000 J**	<4,000	**96**	**1,000**	**650**	**3,500**	<5	**1.2**	<5	
RW-1	09/19/17	--	--	--	--	--	**15,000**	**41,000 J**	**14,000 J**	<1,600 J	**180**	**680**	**390**	**2,500**	<3	**2.1 J**	**4**	
RW-1	06/27/18	--	--	--	12.04	423.66	**14,000 [16,000]**	**150,000 J [51,000 J]**	**69,000 J [100,000 J]**	<4,200 J [<1,600 J]	**100 [100]**	**490 [490]**	**460 [460]**	**3,100 [2,800]**	<3 [<3]	**1.5 J [--]**	<3 [--]	
RW-1	09/30/18	--	--	0.30	11.20	424.74	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to presence of LNAPL
RW-1	05/22/19	--	--	0.35	14.83	431.53	--	--	--	--	--	--	--	--	--	--	--	
BD-1	09/27/16	--	--	--	--	--	<10	<54	<52	<80	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0095	<0.5	
BD-1	06/17/17	--	--	--	--	--	**3,500**	**190,000 J**	**66,000 J**	<3,900	<3	<3	**40**	**560**	<3	**0.21**	<3	
BD-1	09/18/17	--	--	--	--	--	**640**	**6,000**	**3,000 J**	<160	<0.5	<0.5	<0.5	<0.5	**0.6**	<0.0095	<0.5	
BD-2	09/28/16	--	--	--	--	--	**960**	**6,100**	**4,000**	<160	<0.5	<0.5	<0.5	<0.5	**0.8 J**	<0.0094	<0.5	
BD-2	06/18/17	--	--	--	--	--	**16 J**	**100 J**	<53 J	**140 J**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0095	<0.5	
BD-2	09/18/17	--	--	--	--	--	**360**	**3,800**	**1,400 J**	**190**	<0.5	<0.5	**4**	**21**	<0.5	<0.0095	<0.5	
BD-3	09/28/16	--	--	--	--	--	**18,000**	**1,200,000 J**	**890,000 J**	<81,000 J	**210**	**320**	**590**	**2,900**	<25	**1.3**	<25	
BD-3	06/18/17	--	--	--	--	--	**1,100**	**3,000**	**1,800 J**	<79	<0.5	<0.5	<0.5	<0.5	**0.8 J**	<0.0095	<0.5	
BD-3	09/19/17	--	--	--	--	--	**6,000**	**180,000 J**	**75,000 J**	<8,800 J	**4**	<3	**58**	**550**	<3	**0.35 J**	<3	

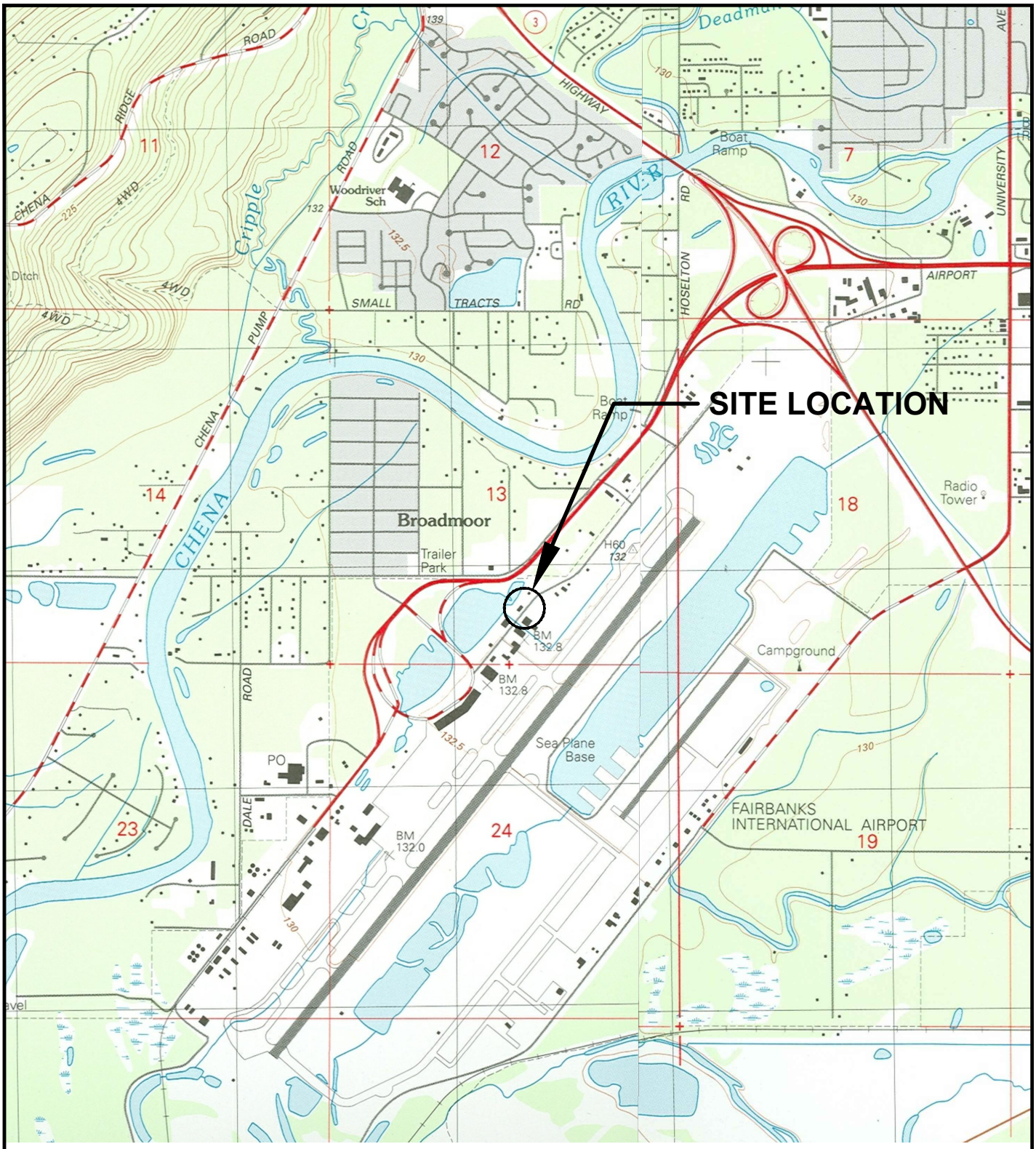
Table 2. Historical Groundwater Gauging and Analytical Results
Third Quarter 2007 to Current
Former Chevron Facility 309152
6223 Old Airport Road
Fairbanks, Alaska

Well ID	Sample Date	Screen Interval (ft bTOC)	TOC (ft amsl)	LNAPL thickness (ml)	DTW (ft bTOC)	GW Elev (ft amsl)	TPH-g (µg/L)	TPH-d (µg/L)	TPH-d w/Si Gel (µg/L)	TPH-r (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	EDB (µg/L)	EDC (µg/L)	Comments
ADEC Groundwater Cleanup Levels[1]							**2,200**	**1,500**	**1,500**	**1,100**	**5**	**1,000**	**700**	**10,000**	**470**	**0.05**	**5**	

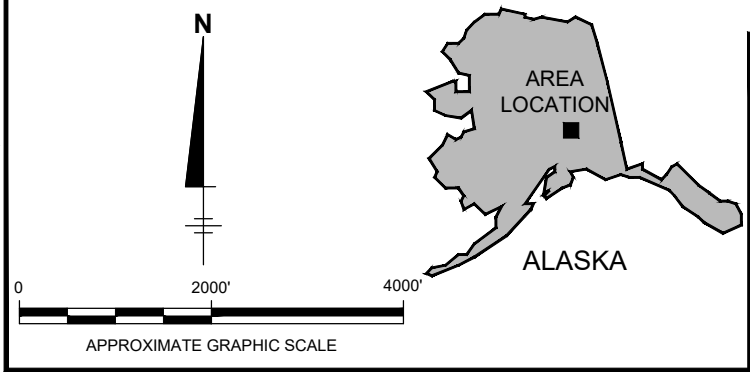
Notes:

MW , RW = Groundwater monitoring well
TOC = Top of casing
DTW = Depth to groundwater
ft bTOC = Feet below top of casing
ft = Feet
'-- = Not analyzed/ Not measured/ Not Available
GW Elev = Groundwater elevation
µg/L = Micrograms per liter
Bold = Value exceeds ADEC Groundwater Cleanup Level
Bold and Shaded = Value exceeds ADEC Groundwater Cleanup Level
<14 = Not detected at or above the Method Detection Limit (MDL)
NAVD 88 = North American Vertical Datum of 1988
ADEC = Alaska Department of Environmental Conservation
[BD] = Duplicate Result
QA (TB) = Quality Assurance (Trip Blank)
QA (EB) = Quality Assurance (Equipment Blank)
LNAPL = Light Non-Aqueous Phase Liquid
TPH-g = Total petroleum hydrocarbons, gasoline range by LUFT GC/MS according to United States Environmental Protection Agency (USEPA) Method AK101
TPH-d = Total petroleum hydrocarbons, diesel range by LUFT GC/MS according to USEPA Method AK 102-SV/103mod-SV
TPH-d w/Si Gel = Total petroleum hydrocarbons, diesel range by LUFT GC/MS with Silica Gel according to USEPA Method AK 102-SV/103mod-SV
TPH-r = Total petroleum hydrocarbons, residual range organics LUFT GC/MS according to USEPA Method AK 102-SV/103mod-SV
Samples analyzed by USEPA Method 8260C:
Benzene, toluene, ethylbenzene and total xylenes (collectively BTEX)
MTBE = Methyl tert-butyl ether
TBA = Tert-butanol or tertiary butyl alcohol
EDB = 1,2-Dibromoethane
EDC = 1,2-Dichloroethane
J = The compound was positively identified; however, the associated numerical value is an estimated concentration only.
B = Compound considered non-detect at the listed value due to associated blank contamination

FIGURES



SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLE: FAIRBANKS (D-2) SW, AK, 2013, FAIRBANKS NORTH STAR BOROUGH.

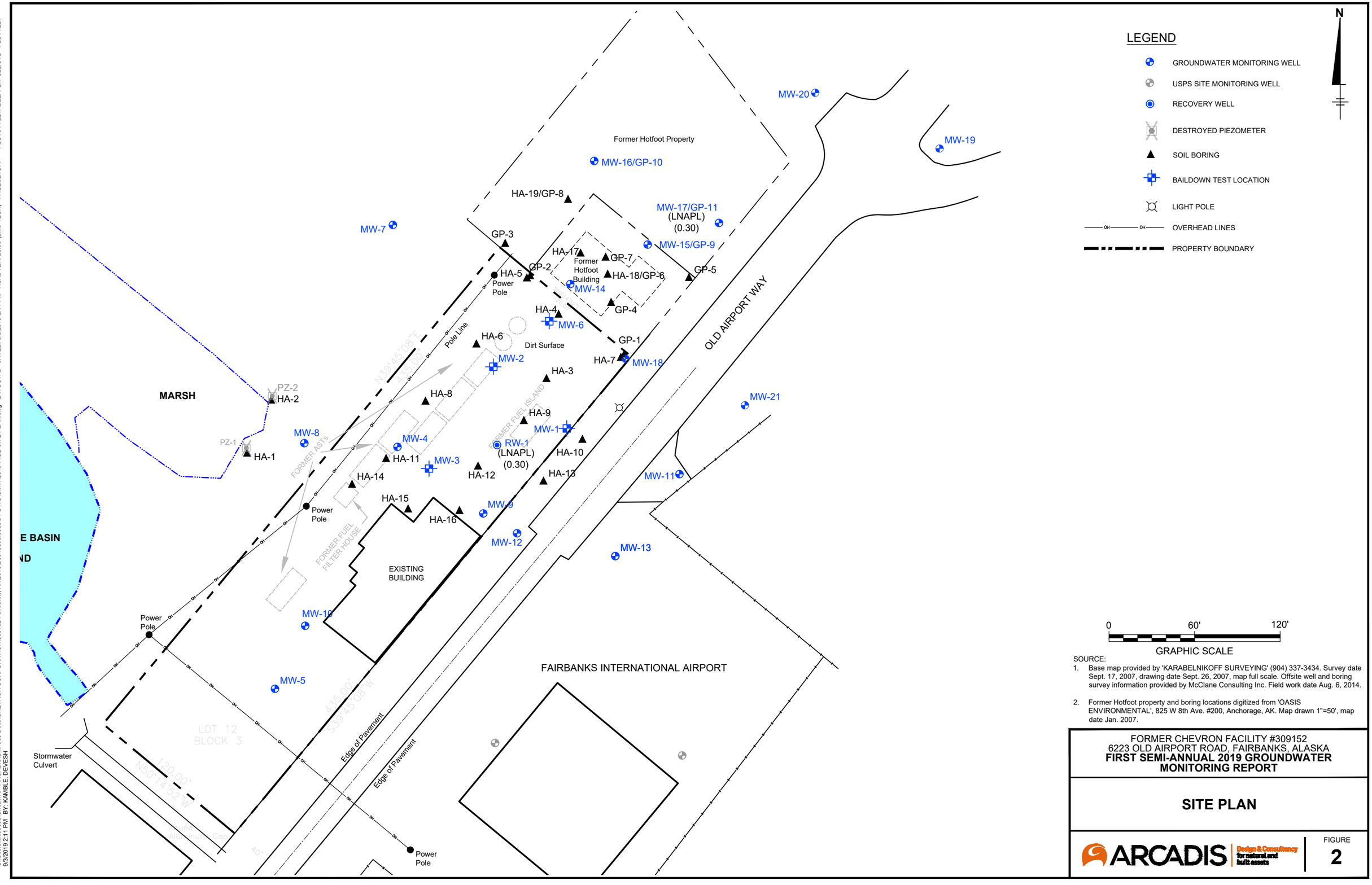


FORMER CHEVRON FACILITY #309152
6223 OLD AIRPORT ROAD, FAIRBANKS, ALASKA
FIRST SEMI-ANNUAL 2019 GROUNDWATER MONITORING REPORT

SITE LOCATION MAP

ARCADIS Design & Consultancy for natural and built assets

FIGURE
1



SOURCE:

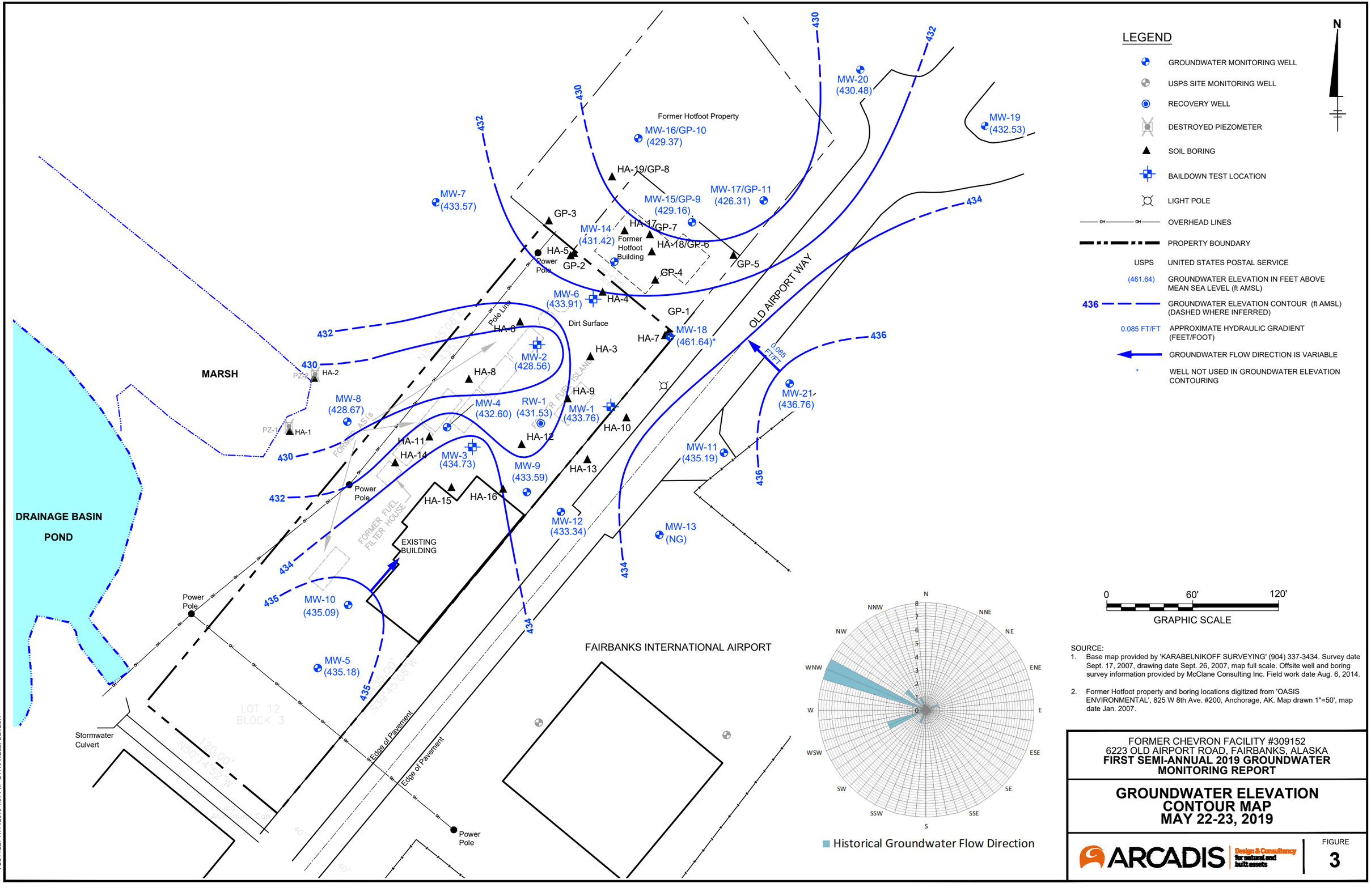
1. Base map provided by 'KARABELNIKOFF SURVEYING' (904) 337-3434. Survey date Sept. 17, 2007, drawing date Sept. 26, 2007, map full scale. Offsite well and boring survey information provided by McClane Consulting Inc. Field work date Aug. 6, 2014.
2. Former Hotfoot property and boring locations digitized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

FORMER CHEVRON FACILITY #309152
6223 OLD AIRPORT ROAD, FAIRBANKS, ALASKA
FIRST SEMI-ANNUAL 2019 GROUNDWATER MONITORING REPORT

SITE PLAN

ARCADIS Design & Consultancy for natural and built assets

FIGURE
2



LEGEND

- GROUNDWATER MONITORING WELL
- USPS SITE MONITORING WELL
- RECOVERY WELL
- DESTROYED PIEZOMETER
- SOIL BORING
- BAILDOWN TEST LOCATION
- LIGHT POLE
- OVERHEAD LINES
- PROPERTY BOUNDARY
- USPS — UNITED STATES POSTAL SERVICE
- (461.64) — GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL (ft AMSL)
- 436 — GROUNDWATER ELEVATION CONTOUR (ft AMSL) (DASHED WHERE INFERRED)
- 0.085 FT/FT — APPROXIMATE HYDRAULIC GRADIENT (FEET/FOOT)
- GROUNDWATER FLOW DIRECTION IS VARIABLE
- * — WELL NOT USED IN GROUNDWATER ELEVATION CONTOURING

N

Historical Groundwater Flow Direction

0 60' 120'

GRAPHIC SCALE

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

FORMER CHEVRON FACILITY #309152
6223 OLD AIRPORT ROAD, FAIRBANKS, ALASKA
FIRST SEMI-ANNUAL 2019 GROUNDWATER MONITORING REPORT

GROUNDWATER ELEVATION CONTOUR MAP MAY 22-23, 2019

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FIGURE 3

MW-7	
Date	05/23/2019
GRO	**610**
DRO	**1,300 J**
DRO SGC	**86 J**
RRO	**590**
B	**16**
T	**0.3 J**
E	**0.4 J**
X	**170**
MTBE	**0.2 J**
EDB	<0.0097
EDC	<0.3

MW-16	
Date	05/23/2019
GRO	**3,100**
DRO	**3,200 J**
DRO SGC	970
RRO	<260 B
B	<1
T	**2 J**
E	**91**
X	**450**
MTBE	<1
EDB	<0.016J
EDC	<2

MW-20	
Date	05/23/2019
GRO	<14
DRO	<290 BJ
DRO SGC	<54
RRO	<410 B
B	<0.2
T	<0.2
E	<0.4
X	<1
MTBE	<0.2
EDB	<0.0097
EDC	<0.3

MW-19	
Date	05/23/2019
GRO	<14
DRO	<260 BJ
DRO SGC	<52
RRO	<260 B
B	<0.2
T	<0.2
E	<0.4
X	<1
MTBE	<0.2
EDB	<0.0097 J
EDC	<0.3

MW-8	
Date	05/23/2019
GRO	**5,100 [5400]**
DRO	**18,000 J [18,000 J]**
DRO SGC	**900 J [990 J]**
RRO	<780 J [<390]
B	**120 [130]**
T	**4 J [3 J]**
E	**130 [120]**
X	**1,400 [1,500]**
MTBE	<2 [<1]
EDB	**0.013 J [0.013 J]**
EDC	<3 [<2]

MW-10	
Date	05/23/2019
GRO	<14
DRO	<260 BJ
DRO SGC	<54
RRO	<260 B
B	<0.2
T	<0.2
E	<0.4
X	<1
MTBE	<0.2
EDB	<0.0096 J
EDC	<0.3

MW-5	
Date	05/23/2019
GRO	**40 J**
DRO	<260 BJ
DRO SGC	<50 J
RRO	<260 B
B	<0.2
T	<0.2
E	<0.4
X	<1
MTBE	<0.2
EDB	<0.0097 J
EDC	<0.3

MW-21	
Date	05/23/2019
GRO	**770**
DRO	**970 J**
DRO SGC	**750**
RRO	<280 B
B	**1**
T	<0.2
E	<0.4
X	<1
MTBE	**0.4 J**
EDB	<0.0097 J
EDC	<0.3

MW-11	
Date	05/23/2019
GRO	**18 J**
DRO	<260 BJ
DRO SGC	<54
RRO	<260 B
B	<0.2
T	<0.2
E	<0.4
X	<1
MTBE	<0.2
EDB	<0.0097 J
EDC	<0.3

Former Hotfoot Property
MW-16/GP-10
MW-7
MW-20
MW-19
HA-19/GP-8
MW-17/GP-11 [0.54]
MW-15/GP-9 [0.13]
GP-3
HA-17
GP-7
GP-2
Former Hotfoot Building
HA-18/GP-6
HA-5
Power Pole
MW-14 [0.17]
GP-4
GP-5
HA-4
MW-6 [0.25]
HA-6
Dirt Surface
MW-2 [0.55]
GP-1
HA-7
MW-18 [0.24]
HA-3
OLD AIRPORT WAY
MW-21
PZ-2
HA-2
MARSH
HA-8
HA-9
MW-1 [0.20]
RW-1 [0.35]
HA-10
PZ-1
MW-8
HA-1
MW-4 [0.17]
HA-11
MW-3 [0.02]
HA-12
HA-13
MW-11
HA-14
HA-15
HA-16
MW-9 [0.17]
MW-12 [0.24]
Power Pole
EXISTING BUILDING
MW-13 (NS)
MW-10
Power Pole
MW-5
FAIRBANKS INTERNATIONAL AIRPORT
LOT 12
BLOCK 3
Edge of Pavement
Edge of Pavement
Power Pole
N39°45'08"E 435.00'
S39°45'08"W 435.00'
N50°14'52"W 120.00'
Pole Line
FORMER ASTs
FORMER FUEL ISLAND
FORMER FUEL FILTER HOUSE
Round Aluminum Post

LEGEND

- PROPERTY BOUNDARY
- MW-7 GROUNDWATER MONITORING WELL
- RW-1 RECOVERY WELL
- PZ-2 DESTROYED PIEZOMETER
- GP-5 SOIL BORING
- MW-2 BAILDOWN TEST LOCATION
- USPS SITE MONITORING WELL
- LIGHT POLE
- OH OVERHEAD LINES

N

SAMPLE LOCATION		
DATE	SAMPLE DATE	ADEC GCL
GRO	TOTAL PETROLEUM HYDROCARBONS AS GASOLINE	2,200
DRO	DIESEL RANGE ORGANICS	1,500
DRO SGC	DIESEL RANGE ORGANICS SILICA GEL	1,500
RRO	RESIDUAL RANGE ORGANICS 1,100	1,100
B	BENZENE	5
T	TOLUENE	1,000
E	ETHYLBENZENE	700
X	TOTAL XYLENES	10,000
MTBE	METHYL TERT-BUTYL ETHER	470
EDB	1.2-DIBROMOETHANE	0.05
EDC	1.2-DICHLOROETHANE	5

RESULTS REPORTED IN MICROGRAMS PER LITER (µg/L)

BOLD ABOVE MDL

BOLD VALUE EXCEEDS ADEC GROUNDWATER CLEANUP LEVEL

[2,600] DUPLICATE SAMPLE RESUTS

-- NOT ANALYZED

< 0.4 NOT DETECTED AT THE SPECIFIED DETECTION LIMIT

ADEC ALASKA GROUNDWATER CLEANUP LEVELS

[0.60] LIGHT NON -AQUEOUS PHASE LIQUID (LNAPL) THICKNESS IN FEET

J THE COMPOUND WAS POSITIVELY IDENTIFIED; HOWEVER, THE ASSOCIATED NUMERICAL VALUE IS AN ESTIMATED CONCENTRATION ONLY

B SAMLE CONSIDERED NON-DECTECT AT LISTED VALUE DUE TO ASSOCIATED METHOD BLANK CONTAMINATION

0 60' 120'

GRAPHIC SCALE

SOURCE:

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

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GROUNDWATER ANALYTICAL MAP MAY 22-23, 2019

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FIGURE 4

APPENDIX A

Site Background and History

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Chevron Environmental Management Company

Appendix A:

Site History and Description

Former Chevron Facility 309152
6223 Old Airport Road, Fairbanks International Airport Fairbanks, Alaska
ADEC File No: 100.38.206
HAZARD ID No: 4314

April 16, 2019

309152 SITE HISTORY AND DESCRIPTION

Site History

According to lease information provided by the Fairbanks International Airport (FIA), Standard Oil leased the site from 1962 until 1972. Eight aboveground storage tanks and a fueling island were located on site for the storage and distribution of petroleum products. The tank farm was dismantled in approximately 1973; the site has been used as warehouse space since that time.

GEOLOGY AND HYDROGEOLOGY

Regional Geology

Fairbanks is located in the central Tanana Valley, straddling the Chena River near its confluence with the Tanana River. Immediately north of the city is a chain of hills that rises gradually until it reaches the White Mountains and the Yukon River. The Fairbanks region is typically underlain by 330 to 600 feet of Quaternary fluvial and glaciofluvial sediment (sand and gravel covered by fine sediment and organic matter) based on seismic interpretations originating from the Alaska Range (Natural Resources Conservation Service and U.S. Department of Agriculture 2004).

Site Geology

Previous onsite assessments have observed well-graded sandy gravel to poorly-graded sandy silt from the ground surface to approximately 5 to 8 feet below ground surface (bgs), followed by gravels, sands, and silts to approximately 20 feet bgs. The site is generally flat with a sloping surface along the western side. A pond is located approximately 150 feet southwest of the site. The subsurface lithology at the site is indicative of fluvial deposits with channeling.

Site Hydrogeology

According to a survey conducted by the USGS in 1995, the site is located in the floodplain of the Tanana and Chena rivers. The Tanana Lowland consists of a wide, sediment-filled trough in which alluvial fans extending from the Alaska Range to the south have pushed northwest, forcing the Tanana River against the bedrock hills of the Yukon-Tanana Upland (Hawkins 1995). Historically, groundwater levels in the monitoring wells have ranged from approximately 3 to 16 feet below top of casing (btoc). Groundwater elevations generally range from 424.10 feet above mean sea level (amsl) to 425.06 feet amsl.

SITE CHARACTERIZATIONS

Investigation activities were conducted between 2006 and 2014. During these investigations, 22 monitoring wells (MW-1 through MW-21 and RW-1), two piezometers (PZ-1 and PZ-1), two soil vapor probes (SV-1 and SV-2), and 30 soil borings/hand augers (SB-1, SB-2, SB-10, HA-1 through HA-19, and GP-1 through GP- 8) were installed or advanced. In addition, 10 test borings (TB-1 through TB-6, TB-19, TB-20, TB-37, and TB-37) were analyzed using a membrane interface probe (MIP). In August 2012, two soil vapor points (SV-1 and SV-2) and one monitoring well (MW-14) were completed. The concentrations of petroleum hydrocarbons (GRO, DRO, and BTEX constituents) exceeded their respective ADEC SCLs for one or more of the constituents in select intervals. On May 12 through 15, 2014, additional site assessment activities were conducted to further delineate and define the extent of the petroleum hydrocarbon-related impacts and LNAPL cross-gradient of the site. One soil boring (SB-10) and four monitoring wells (MW-18 through MW-21) were advanced to approximately 21 to 22 feet bgs. One or more of the constituents of potential concern (COPCs) exceeded their respective ADEC SCLs in monitoring wells MW-18, MW-19, and MW-21.

CURRENT SITE MONITORING ACTIVITIES

Twenty-two monitoring wells (MW-1 through MW-21 and RW-1) are part of the current groundwater monitoring network for the site. The monitoring well network is gauged and sampled on a semi-annual basis.

REFERENCES

Alaska Department of Environmental Conservation. 2010. Draft Field Sampling Guidance. ADEC Division of Spill Prevention and Response Contaminated Sites Program. May 2010.

ARCADIS. *Bailer-Grab Groundwater Sampling*. March 10. 2009.

ARCADIS 2011. Groundwater sampling with HydraSleeves – Standard Operating Procedure. February 2011.

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

APPENDIX B

Field Data Sheets

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Daily Log

Project Name 309152 **Project Number** 309152 **Page** 1 **of** 2

Site Location 6223 Old Airport Rd Fairbanks, AK **Date** 5/22/19

Field Personnel David Beaubien, Evan Wojcik

Time	Description of Activities
	Weather: Temp Barometric press. wind direction/speed
	humidity Degree of cloud cover
	Surface soil conditions: no standing water, dry soil, no irrigation activities
0930	Arrive on site review Soil vapor sampling workplan and set up,
	contact PM for start work, Lead Scavenger Field data collection workplan
	reviewed.
1000.	Begin building soil vapor probe and preparing equipment
1200	Soil vapor sampling event
1500	Start gauging and sampling wells

	notes	PID	DTP	DTW	TD	notes
	MW-12	0.2	15.04	15.28		frost jacked up, needs cut down
	MW-9	502	14.44	14.61		needs new monument
	MW-3	922	13.96	13.98		needs new monument
	MW-4	847	13.35	13.52		no lock needs monument
	RW-1	799	14.48	14.83		good
	MW-1	1295	15.00	15.20		good
	MW-2	971	12.70	13.25		good no lock
	MW-6	740	12.65	12.90		no lock good
	MW-16	420	14.86	5.10		no lock good

notes cont.

ID	PID	DTP	DTW	TD	notes
MW-15	848	8.91	9.04		no lock good
MW-4	472	11.86	12.03		stick up
MW-16	8.0	—	9.22	12.95	good no lock
MW-17	58	9.92	10.46		good no lock
MW-20	6.0		9.29	13.1	good, no lock
MW-7	0.0		12.46	21.6	stick up
MW-8	0.0		7[illegible].52	21.95	stick up
MW-19	0.0		11.34	17.7	no lock, good, bentonite high
MW-21	5.0		15.53	21.4	no lock, good
MW-11	0.0		13.98	18.4	good
MW-13	—		—	-	hornet nest in monument
MW-16	0.0		13.96	20.2	needs new monument
MW-5	0.0		14.20	19.1	no lock, good

1800	Mobilize off site to Hydrosleeve sample other site
5/22/18 0730	Arrive on site, contact PM for start work
0800	start sampling
	see sampling forms for details
1400	sampled last well
1430	De con equipment, load vehicle, contact PM for clye work
1530	Depart site

GROUNDWATER SAMPLING FORM

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Project No. 30152 Well ID MW-8 Date 5/23/19

Project Name/Location 6223 Old Airport Rd Fairbanks, AK Weather 55°

Measuring Pt. Description TOC Screen Setting (ft-bmp) — Casing Diameter (in.) 2 Well Material X PVC ___ SS

Static Water Level (ft-bmp) 7.52 Total Depth (ft-bmp) 21.95 Water Column (ft) 14.5 Gallons in Well 2.32

MP Elevation — Pump Intake (ft-bmp) ~2 Purge Method: Low Flow Centrifugal Submersible Other Bladder Sample Method Low Flow

Pump On/Off 0800/0830 Volumes Purged —

Sample Time: Label 0815 Purge Start 0803 Purge End 0817 Gallons Purged 0.864

Replicate/ Code No. —

Sampled by EW

Time	Minutes Elapsed	Rate (gpm)/(mL/min) 200mL/min +	Depth to Water (ft) -0.3	Gallons Purged (mL)	pH ±0.1	Cond. (µMhos)/(mS/cm) ±3%	Turbidity (NTU) ±10%	DO (mg/L) ±10%	Temp. (°C)/(°F) ±3%	Redox (mV) ±10mV	Appearance Color	Appearance Odor
0803	3	300	7.50	900	6.53	833.3		7.51	3.4	-55.8		
0806	6	300	7.48	1800	6.38	834		7.63	4.1	-58.3		
0809	9	300	7.50	2700	6.40	842		8.18	5.0	-66.9		
0817	12	300	7.51	3600	6.48	849		7.44	5.0	-72.8		
					✓	✓				✓		
Stabilization Calculations (±)												
Stabilization Criteria					± 0.1 s.u.	±3%	± 10% or within 1 NTU (1)	± 10%	±3%	±10 mV		

(1) Turbidity < 50 NTU and ±10% or within 1 NTU of a previous reading when <10 NTU

Constituents Sampled	Container	Number	Preservative
GRO AK 101	40 mL VOA	3	HCl
BTEX MTBE, EDC 8260	40 mL VOA	3	HCl
EDB 8011	40mL VOA	2	HCl
DRO, DRO w/ SGC, RRO	250mL Amber	3	HCl

Comments BD-1-W-190523 sampled at MW-8

Well Casing Volumes

Gallons/Foot 1" = 0.04 1.25" = 0.06 1.5" = 0.09 2" = 0.16 2.5" = 0.26 3" = 0.37 3.5" = 0.50 4" = 0.65 6" = 1.47

Well Information

Well Location: Back by pond

Condition of Well: good, needs new lock

Well Completion: Flush Mount / (Stick Up)

Well Locked at Arrival: (Yes) / No

Well Locked at Departure: (Yes) / No

Key Number To Well: —

10/15/2018

GROUNDWATER SAMPLING FORM

ARCADIS

Page 1 of 1

Project No. 309152 | Well ID MW-5 | Date 5/23/19

Project Name/Location 6223 Old Airport Rd Fairbanks, AK | Weather 55°

Measuring Pt. Description TOC | Screen Setting (ft-bmp) — | Casing Diameter (in.) 2 | Well Material X PVC ___ SS

Static Water Level (ft-bmp) 14.20 | Total Depth (ft-bmp) 19.1 | Water Column (ft) 4.9 | Gallons in Well 0.78

MP Elevation — | Pump Intake (ft-bmp) ~2 | Purge Method: Low Flow Centrifugal Submersible Other Bladder | Sample Method Low Flow

Pump On/Off 0835 / 0900 | Volumes Purged — | Gallons Purged 0.864

Sample Time: Label 0850 | Purge Start 0838 | Purge End 0847

Replicate/ Code No. —

Sampled by EW

Time	Minutes Elapsed	Rate (gpm)/(mL/min) 200mL/min +	Depth to Water (ft) -0.3	Gallons Purged (mL)	pH ±0.1	Cond. (µMhos)/(mS/cm) ±3%	Turbidity (NTU) ±10%	DO (mg/L) ±10%	Temp. (°C)/(°F) ±3%	Redox (mV) ±10mV	Appearance Color	Appearance Odor
0838	3	300	14.12	900	6.78	634.1		0.93	5.9	-13.8		
0841	6	300	14.15	1800	6.75	634.3		0.71	5.4	-24.7		
0844	9	300	14.15	2700	6.75	633.7		0.86	5.3	-29.0		
0847	12	300	14.15	3600	6.75	633.5		0.66	5.3	-31.7		
					✓	✓				✓		
Stabilization Calculations (±)												
Stabilization Criteria					±0.1 s.u.	±3%	±10% or within 1 NTU (1)	±10%	±3%	±10 mV		

(1) Turbidity < 50 NTU and ±10% or within 1 NTU of a previous reading when <10 NTU

Constituents Sampled	Container	Number	Preservative
GRO AK 101	40 mL VOA	3	HCl
BTEX, MTBE, EDC 8260	40 mL VOA	3	HCl
EDB 8011	40 mL VOA	2	HCl
DRO, DRO w/ SGC, RRO	250mL Amber	3	HCl

Comments MW-9-MS-W-190523, MW-5-MSD-W-190523 sampled at MW-5

Well Casing Volumes

Gallons/Foot: 1" = 0.04 | 1.25" = 0.06 | 1.5" = 0.09 | 2" = 0.16 | 2.5" = 0.26 | 3" = 0.37 | 3.5" = 0.50 | 4" = 0.65 | 6" = 1.47

Well Information

Well Location: side of garage

Condition of Well: good, no lock

Well Completion: Flush Mount / Stick Up

Well Locked at Arrival: Yes / No

Well Locked at Departure: Yes / No

Key Number To Well: —

10/15/2018

GROUNDWATER SAMPLING FORM

ARCADIS

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Project No. 30151 Well ID MW-10 Date 5/23/19

Project Name/Location 6223 Old Airport Rd Fairbanks AK Weather 55°

Measuring Pt. Description TOC Screen Setting (ft-bmp) — Casing Diameter (in.) 2 Well Material X PVC ___ SS

Static Water Level (ft-bmp) 13.96 Total Depth (ft-bmp) 20.2 Water Column (ft) 6.2 Gallons in Well 0.99

MP Elevation — Pump Intake (ft-bmp) ~2 Purge Method: Low Flow Centrifugal Submersible Other Bladder Sample Method Low Flow

Pump On/Off 0935 / 1000 Volumes Purged —

Sample Time: Label 0950 Purge Start 0939 Purge End 0947 Gallons Purged 0.864 mL

Replicate/ Code No. — Sampled by EW

Time	Minutes Elapsed	Rate (gpm)/(mL/min) 200mL/min +	Depth to Water (ft) -0.3	Gallons Purged	pH ± 0.1	Cond. (µMhos)/(mS/cm) ± 3%	Turbidity (NTU) ± 10%	DO (mg/L) ± 10%	Temp. (°C)/(°F) ± 3%	Redox (mV) ± 10mV	Appearance Color	Appearance Odor
0936	3	300	13.90	900	6.77	584.4		6.63	6.4	74.4		
0941	6	300	13.96	1800	6.74	584.6	3.0	6.57	5.9	74.4		
0944	9	300	13.92	2700	6.71	583.4		2.31	6.0	73.2		
0947	12	300	13.93	3600	6.70	583.0		2.18	6.0	72.2		
					✓	✓			✓	✓		
Stabilization Calculations (±)												
Stabilization Criteria					± 0.1 s.u.	±3%	±10% or within 1 NTU (1)	± 10%	±3%	±10 mV		

(1) Turbidity < 50 NTU and ±10% or within 1 NTU of a previous reading when <10 NTU

Constituents Sampled	Container	Number	Preservative
CRO AK 101	40 mL VOA	3	HCl
BTEX, MTBE, EDC 8260	40 mL VOA	3	HCl
EDB 8011	40 mL VOA	2	HCl
DRO, DRO w/ SGC, RRO	250 mL Amber	3	HCl

Comments —

Well Casing Volumes

Gallons/Foot: 1" = 0.04; 1.25" = 0.06; 1.5" = 0.09; 2" = 0.16; 2.5" = 0.26; 3" = 0.37; 3.5" = 0.50; 4" = 0.65; 6" = 1.47

Well Information

Well Location: Corner of building

Condition of Well: needs new vault

Well Completion: Flush Mount / Stick Up

Well Locked at Arrival: Yes / No

Well Locked at Departure: Yes / No

Key Number To Well: —

10/15/2018

GROUNDWATER SAMPLING FORM

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Page 1 of 1

Project No. 309152 Well ID MW-19 Date 5/23/19

Project Name/Location 6223 Old Airport Rd Fairbanks, AK Weather 50°

Measuring Pt. Description TOC Screen Setting (ft-bmp) — Casing Diameter (in.) 2 Well Material X PVC ___ SS

Static Water Level (ft-bmp) 11.34 Total Depth (ft-bmp) 17.7 Water Column (ft) 6.4 Gallons in Well 1.02

MP Elevation — Pump Intake (ft-bmp) ~2 Purge Method: Low Flow Centrifugal Submersible Other Bladder Sample Method Low Flow

Pump On/Off 1035 / 1100 Volumes Purged —

Sample Time: Label 1050 Purge Start 1034 Purge End 1047 Gallons Purged 0.864

Replicate/ Code No. Sampled by EW

Time	Minutes Elapsed	Rate (gpm)/(mL/min) 200mL/min +	Depth to Water (ft) -0.3	Gallons Purged (mL)	pH ±0.1	Cond. (µMhos)/(mS/cm) ±3%	Turbidity (NTU) ±10%	DO (mg/L) ±10%	Temp. (°C)/(°F) ±3%	Redox (mV) ±10mV	Appearance Color	Appearance Odor
1038	3	300	11.30	900	6.94	644.6		7.48	5.7	110.8		
1041	6	300	11.30	1800	6.85	644.0		3.30	5.2	104.3		
1044	9	300	11.29	2700	6.82	641.5		2.46	5.5	96.2		
1047	12	300	11.31	3600	6.80	642.0		2.04	5.6	88.6		
					✓	✓				✓		
Stabilization Calculations (±)												
Stabilization Criteria					± 0.1 s.u.	±3%	± 10% or within 1 NTU (1)	± 10%	±3%	±10 mV		

(1) Turbidity ≤ 50 NTU and ±10% or within 1 NTU of a previous reading when <10 NTU

Constituents Sampled	Container	Number	Preservative
GRO AK 101	40 mL VOA	3	HCl
BTEX, MTBE, EDC 8260	40 mL VOA	3	HCl
EDB 8011	40 mL VOA	2	HCl
DRO, DRO w/ SGC, RRO	250 mL Amber	3	HCl

Comments

Well Casing Volumes

Gallons/Foot 1" = 0.04 1.25" = 0.06 1.5" = 0.09 2" = 0.16 2.5" = 0.26 3" = 0.37 3.5" = 0.50 4" = 0.65 6" = 1.47

Well Information

Well Location:

Condition of Well: no lock

Well Completion: Flush Mount / Stick Up

Well Locked at Arrival: Yes / No

Well Locked at Departure: Yes / No

Key Number To Well: —

10/15/2018

GROUNDWATER SAMPLING FORM

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Project No. 309152 | Well ID MW-21 | Date 5/23/19

Project Name/Location 6223 Old Airport Rd Fairbanks AK | Weather 550

Measuring Pt. Description TOC | Screen Setting (ft-bmp) — | Casing Diameter (in.) 2 | Well Material X PVC ___ SS

Static Water Level (ft-bmp) 15.53 | Total Depth (ft-bmp) 21.4 | Water Column (ft) 5.9 | Gallons in Well 0.94

MP Elevation — | Pump Intake (ft-bmp) ~2 | Purge Method: Low Flow (Centrifugal / Submersible / Other Bladder) | Sample Method Low Flow

Pump On/Off 1110 / 1145 | Volumes Purged — | Gallons Purged 0.864

Sample Time: Label 1130 | Purge Start 1113 | Purge End 1122

Replicate/ Code No. —

Sampled by EW

Time	Minutes Elapsed	Rate (gpm)/(mL/min) 200mL/min +	Depth to Water (ft) -0.3	Gallons Purged (mL)	pH ±0.1	Cond. (µMhos)/(mS/cm) ±3%	Turbidity (NTU) ±10%	DO (mg/L) ±10%	Temp. (°C)/(°F) ±3%	Redox (mV) ±10mV	Appearance Color	Appearance Odor
1113	3	300	15.48	900	6.77	0.444		4.08	5.4	-27.9		
1116	6	300	15.50	1800	6.75	0.442		2.41	5.2	-33.9		
1119	9	300	15.50	2700	6.73	0.440		1.76	5.1	-35.7		
1122	12	300	15.50	3600	6.72	0.440		1.61	5.0	-36.8		
					✓				✓	✓		
Stabilization Calculations (±)												
Stabilization Criteria					±0.1 s.u.	±3%	≤10% or within 1 NTU (1)	±10%	±3%	±10 mV		

(1) Turbidity < 50 NTU and ±10% or within 1 NTU of a previous reading when <10 NTU

Constituents Sampled	Container	Number	Preservative
GRO AK 101	40 mL VOA	3	HCl
BTEX, MTBE, EDC 8260	40 mL VOA	3	HCl
EDB 8011	40 mL VOA	2	HCl
DRO; DRO w/ SGC, RRO	250mL Amber	3	HCl

Comments —

Well Casing Volumes

Gallons/Foot: 1" = 0.04 | 1.25" = 0.06 | 1.5" = 0.09 | 2" = 0.16 | 2.5" = 0.26 | 3" = 0.37 | 3.5" = 0.50 | 4" = 0.65 | 6" = 1.47

Well Information

Well Location: —

Condition of Well: no lock

Well Completion: Flush Mount / Stick Up

Well Locked at Arrival: Yes / No

Well Locked at Departure: Yes / No

Key Number To Well: —

10/15/2018

GROUNDWATER SAMPLING FORM

ARCADIS

Page 1 of 1

Project No. 30152 Well ID MW-11 Date 5/23/19

Project Name/Location 6223 Old Airport Rd Fairbanks, AK Weather 55°

Measuring Pt. Description TOC Screen Setting (ft-bmp) — Casing Diameter (in.) 2 Well Material X PVC ___ SS

Static Water Level (ft-bmp) 13.98 Total Depth (ft-bmp) 20.2 Water Column (ft) 6.2 Gallons in Well 0.99

MP Elevation — Pump Intake (ft-bmp) ~2 Purge Method: Low Flow Centrifugal Submersible Other Bladder Sample Method Low Flow

Pump On/Off 1135/1200 Volumes Purged —

Sample Time: Label 1150 Gallons Purged 0.864

Purge Start 1138

Purge End 1147

Replicate/ Code No. ___ Sampled by EW

Time	Minutes Elapsed	Rate (gpm)/(mL/min) 200mL/min +	Depth to Water (ft) -0.3	Gallons Purged	pH ± 0.1	Cond. (µMhos)/(mS/cm) ± 3%	Turbidity (NTU) ± 10%	DO (mg/L) ± 10%	Temp. (°C)/(°F) ± 3%	Redox (mV) ± 10mV	Appearance Color	Appearance Odor
1138	3	300	13.90	900	6.86	690.0		1.61	5.2	-23.0		
1141	6	300	13.92	1800	6.81	671.8		0.92	4.9	-26.9		
1144	9	300	13.94	2700	6.78	681.3		0.87	4.9	-29.2		
1147	12	300	13.94	3600	6.75	651.1		0.85	4.9	-33.3		
					✓	✓			✓	✓		
Stabilization Calculations (±)												
Stabilization Criteria					± 0.1 s.u.	±3%	± 10% or within 1 NTU (1)	± 10%	±3%	±10 mV		

(1) Turbidity < 50 NTU and ±10% or within 1 NTU of a previous reading when <10 NTU

Constituents Sampled	Container	Number	Preservative
GRO AK 101	40mL VOA	3	HCl
BTEX, MTBE, EDC 8260	40mL VOA	3	HCl
EDB Soil	40mL VOA	2	HCl
DRO, DRO w/ SGC, RRO	250mL Amber	3	HCl

Comments

Well Casing Volumes

Gallons/Foot 1" = 0.04 1.25" = 0.06 1.5" = 0.09 2" = 0.16 2.5" = 0.26 3" = 0.37 3.5" = 0.50 4" = 0.65 6" = 1.47

Well Information

Well Location:

Condition of Well: good

Well Completion: Flush Mount / Stick Up

Well Locked at Arrival: Yes / No

Well Locked at Departure: Yes / No

Key Number To Well: —

10/15/2018

GROUNDWATER SAMPLING FORM

ARCADIS

Project No. 30152 | Well ID MW-16 | Date 5/23/19

Project Name/Location 6223 Old Airport Rd Fairbanks, AK | Weather 55°

Measuring Pt. Description TOC | Screen Setting (ft-bmp) — | Casing Diameter (in.) — | Well Material X PVC ___ SS

Static Water Level (ft-bmp) 8.22 | Total Depth (ft-bmp) 12.95 | Water Column (ft) 4.8 | Gallons in Well 0.77

MP Elevation — | Pump Intake (ft-bmp) ~2 | Purge Method: Low Flow Centrifugal Submersible Other Bladder | Sample Method Low Flow

Pump On/Off 1210 | Volumes Purged — | Gallons Purged 0.864

Sample Time: Label 1230 | Purge Start 1213 | Purge End 1222 | Replicate/ Code No. — | Sampled by EW

Time	Minutes Elapsed	Rate (gpm)/(mL/min) 200mL/min +	Depth to Water (ft) -0.3	Gallons Purged (mL)	pH ±0.1	Cond. (µMhos)/(mS/cm) ±3%	Turbidity (NTU) ±10%	DO (mg/L) ±10%	Temp. (°C)/(°F) ±3%	Redox (mV) ±10mV	Appearance Color	Appearance Odor
1213	3	300	8.15	900	6.79	0.59		4.26	4.6	15.0		
1216	6	300	8.20	1800	6.72	0.58		0.99	4.1	-21.5		
1219	9	300	8.26	2700	6.70	0.57		0.78	4.1	-25.2		
1222	12	300	8.26	3600	6.65	0.53		0.59	4.1	-28.7		
					✓				✓	✓		
Stabilization Calculations (±)												
Stabilization Criteria					±0.1 s.u.	±3%	±10% or within 1 NTU (1)	±10%	±3%	±10 mV		

(1) Turbidity <50 NTU and ±10% or within 1 NTU of a previous reading when <10 NTU

Constituents Sampled	Container	Number	Preservative
GRO AK 101	40 mL VOA	3	HCl
BTEX, MTBE, ETC 8260	40 mL VOA	3	HCl
EDB 8011	40 mL VOA	2	HCl
DRO, DRO w/ SGC, RRO	250 mL Amber	3	HCl

Comments —

Well Casing Volumes

Gallons/Foot: 1" = 0.04 | 1.25" = 0.06 | ~~1.5" = 0.09~~ 2" = 0.16 | 2.5" = 0.26 | 3" = 0.37 | 3.5" = 0.50 | 4" = 0.65 | 6" = 1.47

Well Information

Well Location: —

Condition of Well: no lock

Well Completion: Flush Mount / Stick Up

Well Locked at Arrival: Yes / (No)

Well Locked at Departure: Yes / (No)

Key Number To Well: —

10/15/2018

GROUNDWATER SAMPLING FORM

ARCADIS

Page 1 of 1

Project No. 30152 Well ID MW-20 Date 5/23/19

Project Name/Location 6223 Old Airport Rd Fairbanks AK Weather 55°

Measuring Pt. Description TOC Screen Setting (ft-bmp) — Casing Diameter (in.) 2 Well Material X PVC ___ SS

Static Water Level (ft-bmp) 9.29 Total Depth (ft-bmp) 13.1 Water Column (ft) 3.8 Gallons in Well 0.61

MP Elevation — Pump Intake (ft-bmp) ~2 Purge Method: Low Flow Centrifugal Submersible Other Bladder Sample Method Low Flow

Pump On/Off 1250 / 1328 Volumes Purged —

Sample Time: Label 1310 Purge Start 1253 Purge End 1302 Gallons Purged 0.864 mL

Replicate/ Code No. Sampled by ECW

Time	Minutes Elapsed	Rate (gpm)/(mL/min) 200mL/min +	Depth to Water (ft) -0.3	Gallons Purged	pH ± 0.1	Cond. (µMhos)/(mS/cm) ± 3%	Turbidity (NTU) ± 10%	DO (mg/L) ± 10%	Temp. (°C)/(°F) ± 3%	Redox (mV) ± 10mV	Appearance Color	Appearance Odor
1253	3	300	9.26	900	6.83	846		1.90	5.1	53.8		
1256	6	300	9.28	1800	6.80	846		1.32	4.9	57.4		
1259	9	300	9.25	2700	6.77	847		0.96	4.9	60.7		
1302	12	300	9.25	3601	6.76	846		0.82	4.9	63.7		
						✓			✓	✓		
Stabilization Calculations (±)												
Stabilization Criteria					± 0.1 s.u.	±3%	±10% or within 1 NTU (1)	±10%	±3%	±10 mV		

(1) Turbidity ≤ 50 NTU and ±10% or within 1 NTU of a previous reading when <10 NTU

Constituents Sampled	Container	Number	Preservative
GRO AK 101	40 mL VOA	3	HCl
BTEX, MTBE, EDC 8260	40 mL VOA	3	HCl
EDB 8011	40 mL VOA	2	HCl
DRO, DRO w/ SGC, RRO	250mL Amber	3	HCl

Comments

Well Casing Volumes

Gallons/Foot 1" = 0.04 1.25" = 0.06 1.5" = 0.09 2" = 0.16 2.5" = 0.26 3" = 0.37 3.5" = 0.50 4" = 0.65 6" = 1.47

Well Information

Well Location:

Condition of Well: good lock

Well Completion: Flush Mount / Stick Up

Well Locked at Arrival: Yes / No

Well Locked at Departure: Yes / No

Key Number To Well: ~

GW Sample Form

10/15/2018

GROUNDWATER SAMPLING FORM

ARCADIS

Page 1 of 1

Project No. 309152 Well ID MW-7 Date 5/23/19

Project Name/Location 6223 Old Airport Rd Fairbanks AK Weather 55°

Measuring Pt. Description TOC Screen Setting (ft-bmp) — Casing Diameter (in.) 2 Well Material X PVC ___ SS

Static Water Level (ft-bmp) 12.48 Total Depth (ft-bmp) 21.0 Water Column (ft) 8.5 Gallons in Well 1.36

MP Elevation — Pump Intake (ft-bmp) ~2 Purge Method: Low Flow Centrifugal Submersible Other Bladder Sample Method Low Flow

Pump On/Off 1330 / 1410 Volumes Purged —

Sample Time: Label 1400 Purge Start 1332 Purge End 1342 Gallons Purged 0.864

Replicate/ Code No. Sampled by EW

Time	Minutes Elapsed	Rate (gpm)/(mL/min) 200mL/min +	Depth to Water (ft) -0.3	Gallons / mL Purged	pH ±0.1	Cond. (µMhos)/(mS/cm) ±3%	Turbidity (NTU) ±10%	DO (mg/L) ±10%	Temp. (°C)/(°F) ±3%	Redox (mV) ±10mV	Appearance Color	Appearance Odor
1333	3	300	12.40	900	6.87	1241		0.83	6.6	-87.1		
1336	6	300	12.45	1800	6.87	1243		0.58	5.8	-90.1		
1339	9	300	12.45	2700	6.87	1249		0.48	5.5	-92.6		
1342	12	300	12.46	3600	6.87	1252		0.39	5.5	-97.3		
					✓	✓				✓		
Stabilization Calculations (±)												
Stabilization Criteria					± 0.1 s.u.	±3%	±10% or within 1 NTU (1)	±10%	±3%	±10 mV		

(1) Turbidity < 50 NTU and ±10% or within 1 NTU of a previous reading when <10 NTU

Constituents Sampled	Container	Number	Preservative
GRO AK 101	40 mL VOA	3	HCl
BTEX, MTBE, EDC 8260	40 mL VOA	3	HCl
EDB 8011	40 mL VOA	2	HCl
DRO, DRO w/ SGC, RRO	250 mL Amber	3	HCl

Comments

Well Casing Volumes

Gallons/Foot 1" = 0.04 1.25" = 0.06 1.5" = 0.09 2" = 0.16 2.5" = 0.26 3" = 0.37 3.5" = 0.50 4" = 0.65 6" = 1.47

Well Information

Well Location:

Condition of Well: good

Well Completion: Flush Mount / Stick Up

Well Locked at Arrival: Yes / No

Well Locked at Departure: Yes / No

Key Number To Well: —

10/15/2018

Chevron Generic Analysis Request/Chain of Custody

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Acct. # _____ Group # _____ Sample # _____

SCR #: _____

Client Information

Facility # Chevron 309158 WBS 07.09 Groundwater monitoring - supply
Site Address 6233 Old Airport Rd Fairbanks, AK
Chevron PM Erick Nelson Lead Consultant Arcadis
Consultant/Office 111 SW Columbia St Suite 670 Portland OR
Consultant Project Mgr. Nicole Morris
Sampler David Brandon, Cam Wojcik
State where samples were collected: AK For Compliance: Yes ☒ No ☐

Matrix

Soil ☐ Sediment ☐ Potable ☐ Ground ☒ NPDES ☐ Surface ☐ Oil ☐ Air ☐

Analyses Requested

Preservation and Filtration Codes

Total Number of Containers | BTEX + MTBE 8021 ☐ 8260 ☒ Naphth | 8260 full scan | Oxygenates ___ | TPH-GRO AK101 8015 ☐ 8260 ☐ | TPH-DRO without Silica Gel Cleanup ☐ | TPH-DRO with Silica Gel Cleanup AK102 ☐ | VPH ☐ EPH ☐ Method ___ | Lead Total ☐ Diss. ☐ Method ___ | EDC 8260 | EDB 8011 | AK 101 AK 103

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total Number of Containers	BTEX + MTBE 8021 / 8260 Naphth	8260 full scan	Oxygenates	TPH-GRO AK101 8015 / 8260	TPH-DRO without Silica Gel Cleanup	TPH-DRO with Silica Gel Cleanup AK102	VPH / EPH / Method	Lead Total / Diss. / Method	EDC 8260	EDB 8011	AK 101 AK 103
EMB-1-W-190523	5.23.19	0900	X		11	X			X	X	X			X	X	X
MW-8-W-190523	5.23.19	0915	X		11	X			X	X	X			X	X	X
MW-5-W-190523	5.23.19	0930	X		11	X			X	X	X			X	X	X
MW-5-MS-W-190523	5.23.19	0930	X		11	X			X	X	X			X	X	X
MW-5-MSD-W-190523	5.23.19	0930	X		11	X			X	X	X			X	X	X
MW-10-W-190523	5.23.19	0950	X		11	X			X	X	X			X	X	X
MW-19-W-190523	5.23.19	1050	X		11	X			X	X	X			X	X	X
MW-21-W-190523	5.23.19	1130	X		11	X			X	X	X			X	X	X
MW-11-W-190523	5.23.19	1150	X		11	X			X	X	X			X	X	X
MW-16-W-190523	5.23.19	1230	X		11	X			X	X	X			X	X	X

Preservation Codes

H = HCl (circled) T = Thiosulfate
N = HNO_3 B = NaOH
S = H_2SO_4 P = H_3PO_4
F = Field Filtered O = Other

☐ Results in Dry Weight
☐ J value reporting needed
☐ Must meet lowest detection limits possible for 8260 compounds

Remarks

Turnaround Time Requested (TAT) (please circle)
(Standard) 5 day 4 day
72 hour 48 hour 24 hour

Data Package (circle if required)
Type I - Full (Type III) Type VI (Raw Data)

EDD (circle if required)
(CVX-RTBU-FI_05 (default)) Other: _____

Relinquished by	Date	Time	Received by	Date	Time
[signature]	5/23/19	1600	Arcadis cold storage		
[signature]	5/24/19	0850	FedEx		

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____
Temperature Upon Receipt _____ °C
Received by
Custody Seals Intact? Yes No

Chevron Generic Analysis Request/Chain of Custody

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Acct. # _____ Group # _____ Sample # _____

Client Information

Facility # 309152 WBS 03.09 Groundwater monitoring - sampling
Site Address 6273 Old Airport Rd Fairbanks AK
Chevron PM Erick Melick
Lead Consultant Arcadis
Consultant/Office 111 SW Columbia St Suite 630 Portland, OR
Consultant Project Mgr. Nicole Monroe
Sampler David Braudoin, Evan Wujcik
State where samples were collected: AK
For Compliance: Yes ☒ No ☐

SCR #: _____

Matrix

Soil ☐ Sediment ☐ Ground ☒ Potable ☐ Surface ☐ NPDES ☐ Air ☐ Oil ☐

Analyses Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total Number of Containers	BTEX + MTBE 8021 ☐ 8260 ☒ Naphth ☐	8260 full scan	Oxygenates ___	TPH-GRO AK101 8015 ☐ 8260 ☐	TPH-DRO without Silica Gel Cleanup ☐ AK102	TPH-DRO with Silica Gel Cleanup ☐ AK102	VPH ☐ EPH ☐ Method ___	Lead Total ☐ Diss. ☐ Method ___	EDC 8260	EDB 8011	RRO AK 103
MW-20-W-190523	5.23.19	1310	X		11	X			X	X	X			X	X	X
MW-7-W-190523	5.23.19	1400	X		11	X			X	X	X			X	X	X
BD-1-W-190523	5.23.19	—	X		11	X			X	X	X			X	X	X
Trip Blank	5.14.19	—	X		4	X			X	X	X			X	X	

Preservation Codes

H = HCl T = Thiosulfate
N = HNO_3 B = NaOH
S = H_2SO_4 P = H_3PO_4
F = Field Filtered O = Other

☐ Results in Dry Weight
☐ J value reporting needed
☐ Must meet lowest detection limits possible for 8260 compounds

Remarks

Turnaround Time Requested (TAT) (please circle)
Standard 5 day 4 day
72 hour 48 hour 24 hour

Data Package (circle if required)
Type I - Full Type III Type VI (Raw Data)

EDD (circle if required)
CVX-RTBU-FI_05 (default) Other: _____

Relinquished by	Date	Time	Received by	Date	Time
[signature]	5/23/19	1500	Arcadis cold storage		
[signature]	5/24/19	0800	Fedex		
Relinquished by Commercial Carrier: UPS ___ FedEx X Other ___					

Temperature Upon Receipt _____ °C

Custody Seals Intact? Yes No

APPENDIX C

Laboratory Analytical Results

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

Report Date: June 14, 2019 10:26

Project: 309152

Account #: 11964
Group Number: 2045875
SDG: LSV60
PO Number: 0015302401
Release Number: HETRICK
State of Sample Origin: AK

Electronic Copy To	Arcadis	Attn: Melissa Blanchette
Electronic Copy To	Arcadis	Attn: Arti Patel
Electronic Copy To	Arcadis	Attn: Nicole Monroe

Respectfully Submitted,

Amek Carter
Specialist

(717) 556-7252

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
QA-O-190523 Grab Water	05/23/2019 08:00	1067116
MW-8-W-190523 Grab Groundwater	05/23/2019 08:15	1067117
MW-5-W-190523 Grab Groundwater	05/23/2019 08:50	1067118
MW-5-W-190523 MS Grab Groundwater	05/23/2019 08:50	1067119
MW-5-W-190523 MSD Grab Groundwater	05/23/2019 08:50	1067120
MW-10-W-190523 Grab Groundwater	05/23/2019 09:50	1067121
MW-19-W-190523 Grab Groundwater	05/23/2019 10:50	1067122
MW-21-W-190523 Grab Groundwater	05/23/2019 11:30	1067123
MW-11-W-190523 Grab Groundwater	05/23/2019 11:50	1067124
MW-16-W-190523 Grab Groundwater	05/23/2019 12:30	1067125
MW-20-W-190523 Grab Groundwater	05/23/2019 13:10	1067126
MW-7-W-190523 Grab Groundwater	05/23/2019 14:00	1067127
BD-1-WD-190523 Grab Groundwater	05/23/2019	1067128
QA-T-190514 NA Water	05/14/2019	1067129

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **QA-O-190523 Grab Water**
Facility# 309152
6201 Old Airport Rd - Fairbanks, AK

Project Name: **309152**

Submittal Date/Time: 05/25/2019 09:45
Collection Date/Time: 05/23/2019 08:00
SDG#: LSV60-01EB

Chevron
ELLE Sample #: GW 1067116
ELLE Group #: 2045875
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/l**	**mg/l**	**mg/l**	
13130	Benzene	71-43-2	N.D.	0.0002	0.001	1
13130	1,2-Dichloroethane	107-06-2	N.D.	0.0003	0.001	1
13130	Ethylbenzene	100-41-4	N.D.	0.0004	0.001	1
13130	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0002	0.001	1
13130	Toluene	108-88-3	N.D.	0.0002	0.001	1
13130	Xylene (Total)	1330-20-7	N.D.	0.001	0.005	1
GC Volatiles	**AK 101**		**mg/l**	**mg/l**	**mg/l**	
01438	TPH-GRO AK water C6-C10	n.a.	N.D.	0.014	0.10	1
Volatiles by Extraction	**SW-846 8011**		**mg/l**	**mg/l**	**mg/l**	
10398	Ethylene dibromide	106-93-4	N.D. D1	0.0000097	0.000029	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.

GC Petroleum Hydrocarbons	**AK 102-SV/103mod-SV 04/08/02**		**mg/l**	**mg/l**	**mg/l**	
13222	C10-<C25 DRO	n.a.	0.093 J	0.052	0.26	1
13222	C25-C36 RRO	n.a.	0.098 J	0.077	0.26	1

Target analytes were detected in the method blank associated with the samples as noted on the QC summary. However, the observed sample pattern in the method blank is not typical of #2 fuel/diesel. The reported detection in this sample matches the pattern in the method blank.

GC Petroleum Hydrocarbons w/Si	**AK 102-SV 4/8/02**		**mg/l**	**mg/l**	**mg/l**	
13028	DRO C10-C25 W/ SiGel	n.a.	N.D.	0.050	0.25	1

The recovery for the LCS is outside the method acceptance limits as noted on the QC Summary. Since the recovery is within our statistically derived limits the data is reported.

Sample Comments

State of Alaska Lab Certification No. UST-061

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13130	BTEX/MTBE/EDC	SW-846 8260C	1	F191511AA	05/31/2019 21:18	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	F191511AA	05/31/2019 21:17	Hu Yang	1
01438	TPH-GRO AK water C6-C10	AK 101	1	19148A94A	05/28/2019 19:37	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030C	1	19148A94A	05/28/2019 19:36	Marie D Beamenderfer	1

*=This limit was used in the evaluation of the final result

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Sample Description: **QA-O-190523 Grab Water**
Facility# 309152
6201 Old Airport Rd - Fairbanks, AK

Project Name: **309152**

Submittal Date/Time: 05/25/2019 09:45
Collection Date/Time: 05/23/2019 08:00
SDG#: LSV60-01EB

Chevron
ELLE Sample #: **GW 1067116**
ELLE Group #: **2045875**
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10398	EDB by 8011	SW-846 8011	1	191510011A	06/05/2019 07:56	Jason Brumbaugh	1
07786	EDB Extraction (8011)	SW-846 8011	1	191510011A	06/01/2019 02:00	Mathias Okpo	1
13222	AK 102/103-SV	AK 102-SV/103mod-SV 04/08/02	1	191490029A	05/31/2019 06:05	Heather E Williams	1
13028	AK 102-SV DRO, Column SiGel	AK 102-SV 4/8/02	1	191540013A	06/06/2019 18:53	Nicholas R Rossi	1
13225	Mini-Ext. AK 102/103SV,DRO/RRO	AK 102-SV 4/8/02	1	191490029A	05/30/2019 10:00	Kailah L Ortiz	1
13030	Mini-Ext AK102-SV Column SiGel	AK 102/AK 103 04/08/02	1	191540013A	06/03/2019 16:50	Osvaldo R Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **MW-8-W-190523 Grab Groundwater**
Facility# 309152
6201 Old Airport Rd - Fairbanks, AK

Chevron
ELLE Sample #: GW 1067117
ELLE Group #: 2045875
Matrix: Groundwater

Project Name: **309152**

Submittal Date/Time: 05/25/2019 09:45
Collection Date/Time: 05/23/2019 08:15
SDG#: LSV60-02

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/l**	**mg/l**	**mg/l**	
13130	Benzene	71-43-2	0.12	0.002	0.010	10
13130	1,2-Dichloroethane	107-06-2	N.D.	0.003	0.010	10
13130	Ethylbenzene	100-41-4	0.13	0.004	0.010	10
13130	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.002	0.010	10
13130	Toluene	108-88-3	0.004 J	0.002	0.010	10
13130	Xylene (Total)	1330-20-7	1.4	0.010	0.050	10
GC Volatiles	**AK 101**		**mg/l**	**mg/l**	**mg/l**	
01438	TPH-GRO AK water C6-C10	n.a.	5.1	0.070	0.50	5
Volatiles by Extraction	**SW-846 8011**		**mg/l**	**mg/l**	**mg/l**	
10398	Ethylene dibromide	106-93-4	0.000013 JD1	0.0000096	0.000029	1
	The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.					
GC Petroleum Hydrocarbons	**AK 102-SV/103mod-SV 04/08/02**		**mg/l**	**mg/l**	**mg/l**	
13222	C10-<C25 DRO	n.a.	18	0.52	2.6	10
13222	C25-C36 RRO	n.a.	N.D.	0.78	2.6	10
GC Petroleum Hydrocarbons w/Si	**AK 102-SV 4/8/02**		**mg/l**	**mg/l**	**mg/l**	
13028	DRO C10-C25 W/ SiGel	n.a.	0.90	0.051	0.26	1
	The recovery for the LCS is outside the method acceptance limits as noted on the QC Summary. Since the recovery is within our statistically derived limits the data is reported.					

Sample Comments

State of Alaska Lab Certification No. UST-061

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13130	BTEX/MTBE/EDC	SW-846 8260C	1	F191511AA	06/01/2019 03:55	Hu Yang	10
01163	GC/MS VOA Water Prep	SW-846 5030C	1	F191511AA	06/01/2019 03:54	Hu Yang	10
01438	TPH-GRO AK water C6-C10	AK 101	1	19148A94A	05/29/2019 13:07	Marie D Beamenderfer	5
01146	GC VOA Water Prep	SW-846 5030C	1	19148A94A	05/29/2019 13:06	Marie D Beamenderfer	5
10398	EDB by 8011	SW-846 8011	1	191510011A	06/07/2019 03:39	Jason Brumbaugh	1
07786	EDB Extraction (8011)	SW-846 8011	1	191510011A	06/01/2019 02:00	Mathias Okpo	1

*=This limit was used in the evaluation of the final result

Sample Description: **MW-8-W-190523 Grab Groundwater**
Facility# 309152
6201 Old Airport Rd - Fairbanks, AK

Project Name: **309152**

Submittal Date/Time: 05/25/2019 09:45
Collection Date/Time: 05/23/2019 08:15
SDG#: LSV60-02

Chevron
ELLE Sample #: GW 1067117
ELLE Group #: 2045875
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13222	AK 102/103-SV	AK 102-SV/103mod-SV 04/08/02	1	191490029A	05/31/2019 17:27	Heather E Williams	10
13028	AK 102-SV DRO, Column SiGel	AK 102-SV 4/8/02	1	191540013A	06/06/2019 19:21	Nicholas R Rossi	1
13225	Mini-Ext. AK 102/103SV,DRO/RRO	AK 102-SV 4/8/02	1	191490029A	05/30/2019 10:00	Kailah L Ortiz	1
13030	Mini-Ext AK102-SV Column SiGel	AK 102/AK 103 04/08/02	1	191540013A	06/03/2019 16:50	Osvaldo R Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **MW-5-W-190523 Grab Groundwater**
Facility# 309152
6201 Old Airport Rd - Fairbanks, AK

Chevron
ELLE Sample #: GW 1067118
ELLE Group #: 2045875
Matrix: Groundwater

Project Name: **309152**

Submittal Date/Time: 05/25/2019 09:45
Collection Date/Time: 05/23/2019 08:50
SDG#: LSV60-03BKG

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/l**	**mg/l**	**mg/l**	
13130	Benzene	71-43-2	N.D.	0.0002	0.001	1
13130	1,2-Dichloroethane	107-06-2	N.D.	0.0003	0.001	1
13130	Ethylbenzene	100-41-4	N.D.	0.0004	0.001	1
13130	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0002	0.001	1
13130	Toluene	108-88-3	N.D.	0.0002	0.001	1
13130	Xylene (Total)	1330-20-7	N.D.	0.001	0.005	1
GC Volatiles	**AK 101**		**mg/l**	**mg/l**	**mg/l**	
01438	TPH-GRO AK water C6-C10	n.a.	0.040 J	0.014	0.10	1
Volatiles by Extraction	**SW-846 8011**		**mg/l**	**mg/l**	**mg/l**	
10398	Ethylene dibromide	106-93-4	N.D. D1	0.0000097	0.000029	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.

GC Petroleum Hydrocarbons	**AK 102-SV/103mod-SV 04/08/02**		**mg/l**	**mg/l**	**mg/l**	
13222	C10-<C25 DRO	n.a.	0.17 J	0.052	0.26	1
13222	C25-C36 RRO	n.a.	0.18 J	0.078	0.26	1

The recovery for the method blank surrogate(s) is outside the QC acceptance limits as noted on the QC Summary.
The recovery for a target analyte(s) and surrogate(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.

Target analytes were detected in the method blank associated with the samples as noted on the QC summary. However, the observed sample pattern in the method blank is not typical of #2 fuel/diesel. The reported detection in this sample matches the pattern in the method blank.

GC Petroleum Hydrocarbons w/Si	**AK 102-SV 4/8/02**		**mg/l**	**mg/l**	**mg/l**	
13028	DRO C10-C25 W/ SiGel	n.a.	N.D.	0.050	0.25	1

The recovery for the LCS is outside the method acceptance limits as noted on the QC Summary. Since the recovery is within our statistically derived limits the data is reported.

Sample Comments

State of Alaska Lab Certification No. UST-061

*=This limit was used in the evaluation of the final result

Sample Description: **MW-5-W-190523 Grab Groundwater**
Facility# 309152
6201 Old Airport Rd - Fairbanks, AK

Project Name: **309152**

Submittal Date/Time: 05/25/2019 09:45
Collection Date/Time: 05/23/2019 08:50
SDG#: LSV60-03BKG

Chevron
ELLE Sample #: GW 1067118
ELLE Group #: 2045875
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13130	BTEX/MTBE/EDC	SW-846 8260C	1	F191511AA	05/31/2019 22:02	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	F191511AA	05/31/2019 22:01	Hu Yang	1
01438	TPH-GRO AK water C6-C10	AK 101	1	19148A94A	05/29/2019 12:41	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030C	1	19148A94A	05/29/2019 12:40	Marie D Beamenderfer	1
10398	EDB by 8011	SW-846 8011	1	191510011A	06/05/2019 03:31	Jason Brumbaugh	1
07786	EDB Extraction (8011)	SW-846 8011	1	191510011A	06/01/2019 02:00	Mathias Okpo	1
13222	AK 102/103-SV	AK 102-SV/103mod-SV 04/08/02	1	191500038A	05/31/2019 19:45	Nicholas R Rossi	1
13028	AK 102-SV DRO, Column SiGel	AK 102-SV 4/8/02	1	191540013A	06/06/2019 19:49	Nicholas R Rossi	1
13225	Mini-Ext. AK 102/103SV,DRO/RRO	AK 102-SV 4/8/02	1	191500038A	05/31/2019 10:00	Kailah L Ortiz	1
13030	Mini-Ext AK102-SV Column SiGel	AK 102/AK 103 04/08/02	1	191540013A	06/03/2019 16:50	Osvaldo R Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **MW-5-W-190523 MS Grab Groundwater**
Facility# 309152
6201 Old Airport Rd - Fairbanks, AK

Project Name: **309152**

Submittal Date/Time: 05/25/2019 09:45
Collection Date/Time: 05/23/2019 08:50
SDG#: LSV60-03MS

Chevron
ELLE Sample #: GW 1067119
ELLE Group #: 2045875
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/l**	**mg/l**	**mg/l**	
13130	Benzene	71-43-2	0.022	0.0002	0.001	1
13130	1,2-Dichloroethane	107-06-2	0.019	0.0003	0.001	1
13130	Ethylbenzene	100-41-4	0.021	0.0004	0.001	1
13130	Methyl Tertiary Butyl Ether	1634-04-4	0.019	0.0002	0.001	1
13130	Toluene	108-88-3	0.021	0.0002	0.001	1
13130	Xylene (Total)	1330-20-7	0.062	0.001	0.005	1
GC Volatiles	**AK 101**		**mg/l**	**mg/l**	**mg/l**	
01438	TPH-GRO AK water C6-C10	n.a.	1.2	0.014	0.10	1
Volatiles by Extraction	**SW-846 8011**		**mg/l**	**mg/l**	**mg/l**	
10398	Ethylene dibromide	106-93-4	0.00011 D1	0.0000097	0.000029	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.

GC Petroleum Hydrocarbons	**AK 102-SV/103mod-SV 04/08/02**		**mg/l**	**mg/l**	**mg/l**	
13222	C10-<C25 DRO	n.a.	0.97	0.052	0.26	1
13222	C25-C36 RRO	n.a.	2.4	0.078	0.26	1

The recovery for the method blank surrogate(s) is outside the QC acceptance limits as noted on the QC Summary.
The recovery for a target analyte(s) and surrogate(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.

GC Petroleum Hydrocarbons w/Si	**AK 102-SV 4/8/02**		**mg/l**	**mg/l**	**mg/l**	
13028	DRO C10-C25 W/ SiGel	n.a.	2.2	0.052	0.26	1

The recovery for the LCS is outside the method acceptance limits as noted on the QC Summary. Since the recovery is within our statistically derived limits the data is reported.

Sample Comments

State of Alaska Lab Certification No. UST-061

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13130	BTEX/MTBE/EDC	SW-846 8260C	1	F191511AA	05/31/2019 22:24	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	F191511AA	05/31/2019 22:23	Hu Yang	1
01438	TPH-GRO AK water C6-C10	AK 101	1	19148A94A	05/28/2019 20:53	Marie D Beamenderfer	1

*=This limit was used in the evaluation of the final result

Sample Description: **MW-5-W-190523 MS Grab Groundwater**
Facility# 309152
6201 Old Airport Rd - Fairbanks, AK

Project Name: **309152**

Submittal Date/Time: 05/25/2019 09:45
Collection Date/Time: 05/23/2019 08:50
SDG#: LSV60-03MS

Chevron
ELLE Sample #: GW 1067119
ELLE Group #: 2045875
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01146	GC VOA Water Prep	SW-846 5030C	1	19148A94A	05/28/2019 20:52	Marie D Beamenderfer	1
10398	EDB by 8011	SW-846 8011	1	191510011A	06/05/2019 03:47	Jason Brumbaugh	1
07786	EDB Extraction (8011)	SW-846 8011	1	191510011A	06/01/2019 02:00	Mathias Okpo	1
13222	AK 102/103-SV	AK 102-SV/103mod-SV 04/08/02	1	191500038A	05/31/2019 20:13	Nicholas R Rossi	1
13028	AK 102-SV DRO, Column SiGel	AK 102-SV 4/8/02	1	191540013A	06/06/2019 20:17	Nicholas R Rossi	1
13225	Mini-Ext. AK 102/103SV,DRO/RRO	AK 102-SV 4/8/02	1	191500038A	05/31/2019 10:00	Kailah L Ortiz	1
13030	Mini-Ext AK102-SV Column SiGel	AK 102/AK 103 04/08/02	1	191540013A	06/03/2019 16:50	Osvaldo R Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **MW-5-W-190523 MSD Grab Groundwater**
Facility# 309152
6201 Old Airport Rd - Fairbanks, AK

Chevron
ELLE Sample #: GW 1067120
ELLE Group #: 2045875
Matrix: Groundwater

Project Name: **309152**

Submittal Date/Time: 05/25/2019 09:45
Collection Date/Time: 05/23/2019 08:50
SDG#: LSV60-03MSD

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/l**	**mg/l**	**mg/l**	
13130	Benzene	71-43-2	0.022	0.0002	0.001	1
13130	1,2-Dichloroethane	107-06-2	0.019	0.0003	0.001	1
13130	Ethylbenzene	100-41-4	0.021	0.0004	0.001	1
13130	Methyl Tertiary Butyl Ether	1634-04-4	0.020	0.0002	0.001	1
13130	Toluene	108-88-3	0.022	0.0002	0.001	1
13130	Xylene (Total)	1330-20-7	0.064	0.001	0.005	1
GC Volatiles	**AK 101**		**mg/l**	**mg/l**	**mg/l**	
01438	TPH-GRO AK water C6-C10	n.a.	1.2	0.014	0.10	1
Volatiles by Extraction	**SW-846 8011**		**mg/l**	**mg/l**	**mg/l**	
10398	Ethylene dibromide	106-93-4	0.00011 D1	0.0000097	0.000029	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.

GC Petroleum Hydrocarbons	**AK 102-SV/103mod-SV 04/08/02**		**mg/l**	**mg/l**	**mg/l**	
13222	C10-<C25 DRO	n.a.	0.99	0.054	0.27	1
13222	C25-C36 RRO	n.a.	2.6	0.081	0.27	1

The recovery for the method blank surrogate(s) is outside the QC acceptance limits as noted on the QC Summary.
The recovery for a target analyte(s) and surrogate(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.

GC Petroleum Hydrocarbons w/Si	**AK 102-SV 4/8/02**		**mg/l**	**mg/l**	**mg/l**	
13028	DRO C10-C25 W/ SiGel	n.a.	2.2	0.051	0.25	1

The recovery for the LCS is outside the method acceptance limits as noted on the QC Summary. Since the recovery is within our statistically derived limits the data is reported.

Sample Comments

State of Alaska Lab Certification No. UST-061

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13130	BTEX/MTBE/EDC	SW-846 8260C	1	F191511AA	05/31/2019 22:46	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	F191511AA	05/31/2019 22:45	Hu Yang	1
01438	TPH-GRO AK water C6-C10	AK 101	1	19148A94A	05/28/2019 21:19	Marie D Beamenderfer	1

*=This limit was used in the evaluation of the final result

Sample Description: **MW-5-W-190523 MSD Grab Groundwater**
Facility# 309152
6201 Old Airport Rd - Fairbanks, AK

Project Name: **309152**

Submittal Date/Time: 05/25/2019 09:45
Collection Date/Time: 05/23/2019 08:50
SDG#: LSV60-03MSD

Chevron
ELLE Sample #: GW 1067120
ELLE Group #: 2045875
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01146	GC VOA Water Prep	SW-846 5030C	1	19148A94A	05/28/2019 21:18	Marie D Beamenderfer	1
10398	EDB by 8011	SW-846 8011	1	191510011A	06/05/2019 04:02	Jason Brumbaugh	1
07786	EDB Extraction (8011)	SW-846 8011	1	191510011A	06/01/2019 02:00	Mathias Okpo	1
13222	AK 102/103-SV	AK 102-SV/103mod-SV 04/08/02	1	191500038A	05/31/2019 20:45	Nicholas R Rossi	1
13028	AK 102-SV DRO, Column SiGel	AK 102-SV 4/8/02	1	191540013A	06/06/2019 20:45	Nicholas R Rossi	1
13225	Mini-Ext. AK 102/103SV,DRO/RRO	AK 102-SV 4/8/02	1	191500038A	05/31/2019 10:00	Kailah L Ortiz	1
13030	Mini-Ext AK102-SV Column SiGel	AK 102/AK 103 04/08/02	1	191540013A	06/03/2019 16:50	Osvaldo R Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **MW-10-W-190523 Grab Groundwater**
Facility# 309152
6201 Old Airport Rd - Fairbanks, AK

Project Name: **309152**

Submittal Date/Time: 05/25/2019 09:45
Collection Date/Time: 05/23/2019 09:50
SDG#: LSV60-04

Chevron
ELLE Sample #: GW 1067121
ELLE Group #: 2045875
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/l**	**mg/l**	**mg/l**	
13130	Benzene	71-43-2	N.D.	0.0002	0.001	1
13130	1,2-Dichloroethane	107-06-2	N.D.	0.0003	0.001	1
13130	Ethylbenzene	100-41-4	N.D.	0.0004	0.001	1
13130	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0002	0.001	1
13130	Toluene	108-88-3	N.D.	0.0002	0.001	1
13130	Xylene (Total)	1330-20-7	N.D.	0.001	0.005	1
GC Volatiles	**AK 101**		**mg/l**	**mg/l**	**mg/l**	
01438	TPH-GRO AK water C6-C10	n.a.	N.D.	0.014	0.10	1
Volatiles by Extraction	**SW-846 8011**		**mg/l**	**mg/l**	**mg/l**	
10398	Ethylene dibromide	106-93-4	N.D. D1	0.0000096	0.000029	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.

GC Petroleum Hydrocarbons	**AK 102-SV/103mod-SV 04/08/02**		**mg/l**	**mg/l**	**mg/l**	
13222	C10-<C25 DRO	n.a.	0.17 J	0.052	0.26	1
13222	C25-C36 RRO	n.a.	0.18 J	0.077	0.26	1

The recovery for the method blank surrogate(s) is outside the QC acceptance limits as noted on the QC Summary.
The recovery for a target analyte(s) and surrogate(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.

Target analytes were detected in the method blank associated with the samples as noted on the QC summary. However, the observed sample pattern in the method blank is not typical of #2 fuel/diesel. The reported detection in this sample matches the pattern in the method blank.

GC Petroleum Hydrocarbons w/Si	**AK 102-SV 4/8/02**		**mg/l**	**mg/l**	**mg/l**	
13028	DRO C10-C25 W/ SiGel	n.a.	N.D.	0.054	0.27	1

Sample Comments

State of Alaska Lab Certification No. UST-061

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor

*=This limit was used in the evaluation of the final result

Sample Description: **MW-10-W-190523 Grab Groundwater**
Facility# 309152
6201 Old Airport Rd - Fairbanks, AK

Project Name: **309152**

Submittal Date/Time: 05/25/2019 09:45
Collection Date/Time: 05/23/2019 09:50
SDG#: LSV60-04

Chevron
ELLE Sample #: GW 1067121
ELLE Group #: 2045875
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13130	BTEX/MTBE/EDC	SW-846 8260C	1	F191511AA	05/31/2019 23:08	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	F191511AA	05/31/2019 23:07	Hu Yang	1
01438	TPH-GRO AK water C6-C10	AK 101	1	19148A94A	05/28/2019 22:10	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030C	1	19148A94A	05/28/2019 22:09	Marie D Beamenderfer	1
10398	EDB by 8011	SW-846 8011	1	191510011A	06/05/2019 08:27	Jason Brumbaugh	1
07786	EDB Extraction (8011)	SW-846 8011	1	191510011A	06/01/2019 02:00	Mathias Okpo	1
13222	AK 102/103-SV	AK 102-SV/103mod-SV 04/08/02	1	191500038A	05/31/2019 21:13	Nicholas R Rossi	1
13028	AK 102-SV DRO, Column SiGel	AK 102-SV 4/8/02	1	191510039A	06/05/2019 01:21	Nicholas R Rossi	1
13225	Mini-Ext. AK 102/103SV,DRO/RRO	AK 102-SV 4/8/02	1	191500038A	05/31/2019 10:00	Kailah L Ortiz	1
13030	Mini-Ext AK102-SV Column SiGel	AK 102/AK 103 04/08/02	1	191510039A	06/03/2019 08:00	David S Schrum	1

*=This limit was used in the evaluation of the final result

Sample Description: **MW-19-W-190523 Grab Groundwater**
Facility# 309152
6201 Old Airport Rd - Fairbanks, AK

Chevron
ELLE Sample #: GW 1067122
ELLE Group #: 2045875
Matrix: Groundwater

Project Name: **309152**

Submittal Date/Time: 05/25/2019 09:45
Collection Date/Time: 05/23/2019 10:50
SDG#: LSV60-05

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/l**	**mg/l**	**mg/l**	
13130	Benzene	71-43-2	N.D.	0.0002	0.001	1
13130	1,2-Dichloroethane	107-06-2	N.D.	0.0003	0.001	1
13130	Ethylbenzene	100-41-4	N.D.	0.0004	0.001	1
13130	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0002	0.001	1
13130	Toluene	108-88-3	N.D.	0.0002	0.001	1
13130	Xylene (Total)	1330-20-7	N.D.	0.001	0.005	1
GC Volatiles	**AK 101**		**mg/l**	**mg/l**	**mg/l**	
01438	TPH-GRO AK water C6-C10	n.a.	N.D.	0.014	0.10	1
Volatiles by Extraction	**SW-846 8011**		**mg/l**	**mg/l**	**mg/l**	
10398	Ethylene dibromide	106-93-4	N.D. D1	0.0000097	0.000029	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.

GC Petroleum Hydrocarbons	**AK 102-SV/103mod-SV 04/08/02**		**mg/l**	**mg/l**	**mg/l**	
13222	C10-<C25 DRO	n.a.	0.15 J	0.051	0.26	1
13222	C25-C36 RRO	n.a.	0.19 J	0.077	0.26	1

The recovery for the method blank surrogate(s) is outside the QC acceptance limits as noted on the QC Summary.
The recovery for a target analyte(s) and surrogate(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.

Target analytes were detected in the method blank associated with the samples as noted on the QC summary. However, the observed sample pattern in the method blank is not typical of #2 fuel/diesel. The reported detection in this sample matches the pattern in the method blank.

GC Petroleum Hydrocarbons w/Si	**AK 102-SV 4/8/02**		**mg/l**	**mg/l**	**mg/l**	
13028	DRO C10-C25 W/ SiGel	n.a.	N.D.	0.052	0.26	1

Sample Comments

State of Alaska Lab Certification No. UST-061

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor

*=This limit was used in the evaluation of the final result

Sample Description: **MW-19-W-190523 Grab Groundwater**
Facility# 309152
6201 Old Airport Rd - Fairbanks, AK

Project Name: **309152**

Submittal Date/Time: 05/25/2019 09:45
Collection Date/Time: 05/23/2019 10:50
SDG#: LSV60-05

Chevron
ELLE Sample #: GW 1067122
ELLE Group #: 2045875
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13130	BTEX/MTBE/EDC	SW-846 8260C	1	F191511AA	05/31/2019 23:30	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	F191511AA	05/31/2019 23:29	Hu Yang	1
01438	TPH-GRO AK water C6-C10	AK 101	1	19148A94A	05/28/2019 22:35	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030C	1	19148A94A	05/28/2019 22:34	Marie D Beamenderfer	1
10398	EDB by 8011	SW-846 8011	1	191510011A	06/05/2019 08:42	Jason Brumbaugh	1
07786	EDB Extraction (8011)	SW-846 8011	1	191510011A	06/01/2019 02:00	Mathias Okpo	1
13222	AK 102/103-SV	AK 102-SV/103mod-SV 04/08/02	1	191500038A	05/31/2019 21:40	Nicholas R Rossi	1
13028	AK 102-SV DRO, Column SiGel	AK 102-SV 4/8/02	1	191510039A	06/05/2019 01:49	Nicholas R Rossi	1
13225	Mini-Ext. AK 102/103SV,DRO/RRO	AK 102-SV 4/8/02	1	191500038A	05/31/2019 10:00	Kailah L Ortiz	1
13030	Mini-Ext AK102-SV Column SiGel	AK 102/AK 103 04/08/02	1	191510039A	06/03/2019 08:00	David S Schrum	1

*=This limit was used in the evaluation of the final result

Sample Description: **MW-21-W-190523 Grab Groundwater**
Facility# 309152
6201 Old Airport Rd - Fairbanks, AK

Chevron
ELLE Sample #: GW 1067123
ELLE Group #: 2045875
Matrix: Groundwater

Project Name: **309152**

Submittal Date/Time: 05/25/2019 09:45
Collection Date/Time: 05/23/2019 11:30
SDG#: LSV60-06

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/l**	**mg/l**	**mg/l**	
13130	Benzene	71-43-2	0.001	0.0002	0.001	1
13130	1,2-Dichloroethane	107-06-2	N.D.	0.0003	0.001	1
13130	Ethylbenzene	100-41-4	N.D.	0.0004	0.001	1
13130	Methyl Tertiary Butyl Ether	1634-04-4	0.0004 J	0.0002	0.001	1
13130	Toluene	108-88-3	N.D.	0.0002	0.001	1
13130	Xylene (Total)	1330-20-7	N.D.	0.001	0.005	1
GC Volatiles	**AK 101**		**mg/l**	**mg/l**	**mg/l**	
01438	TPH-GRO AK water C6-C10	n.a.	0.77	0.014	0.10	1
Volatiles by Extraction	**SW-846 8011**		**mg/l**	**mg/l**	**mg/l**	
10398	Ethylene dibromide	106-93-4	N.D. D1	0.0000097	0.000029	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.

GC Petroleum Hydrocarbons	**AK 102-SV/103mod-SV 04/08/02**		**mg/l**	**mg/l**	**mg/l**	
13222	C10-<C25 DRO	n.a.	0.97	0.055	0.28	1
13222	C25-C36 RRO	n.a.	0.14 J	0.083	0.28	1

The recovery for the method blank surrogate(s) is outside the QC acceptance limits as noted on the QC Summary.
The recovery for a target analyte(s) and surrogate(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.

Target analytes were detected in the method blank associated with the samples as noted on the QC summary. However, the observed sample pattern in the method blank is not typical of #2 fuel/diesel.

GC Petroleum Hydrocarbons w/Si	**AK 102-SV 4/8/02**		**mg/l**	**mg/l**	**mg/l**	
13028	DRO C10-C25 W/ SiGel	n.a.	0.75	0.052	0.26	1

Sample Comments

State of Alaska Lab Certification No. UST-061

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13130	BTEX/MTBE/EDC	SW-846 8260C	1	F191511AA	05/31/2019 23:52	Hu Yang	1

*=This limit was used in the evaluation of the final result

Sample Description: **MW-21-W-190523 Grab Groundwater**
Facility# 309152
6201 Old Airport Rd - Fairbanks, AK

Project Name: **309152**

Submittal Date/Time: 05/25/2019 09:45
Collection Date/Time: 05/23/2019 11:30
SDG#: LSV60-06

Chevron
ELLE Sample #: GW 1067123
ELLE Group #: 2045875
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030C	1	F191511AA	05/31/2019 23:51	Hu Yang	1
01438	TPH-GRO AK water C6-C10	AK 101	1	19148A94A	05/28/2019 23:01	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030C	1	19148A94A	05/28/2019 23:00	Marie D Beamenderfer	1
10398	EDB by 8011	SW-846 8011	1	191510011A	06/05/2019 08:58	Jason Brumbaugh	1
07786	EDB Extraction (8011)	SW-846 8011	1	191510011A	06/01/2019 02:00	Mathias Okpo	1
13222	AK 102/103-SV	AK 102-SV/103mod-SV 04/08/02	1	191500038A	05/31/2019 22:08	Nicholas R Rossi	1
13028	AK 102-SV DRO, Column SiGel	AK 102-SV 4/8/02	1	191510039A	06/05/2019 02:17	Nicholas R Rossi	1
13225	Mini-Ext. AK 102/103SV,DRO/RRO	AK 102-SV 4/8/02	1	191500038A	05/31/2019 10:00	Kailah L Ortiz	1
13030	Mini-Ext AK102-SV Column SiGel	AK 102/AK 103 04/08/02	1	191510039A	06/03/2019 08:00	David S Schrum	1

*=This limit was used in the evaluation of the final result

Sample Description: **MW-11-W-190523 Grab Groundwater**
Facility# 309152
6201 Old Airport Rd - Fairbanks, AK

Project Name: **309152**

Submittal Date/Time: 05/25/2019 09:45
Collection Date/Time: 05/23/2019 11:50
SDG#: LSV60-07

Chevron
ELLE Sample #: GW 1067124
ELLE Group #: 2045875
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/l**	**mg/l**	**mg/l**	
13130	Benzene	71-43-2	N.D.	0.0002	0.001	1
13130	1,2-Dichloroethane	107-06-2	N.D.	0.0003	0.001	1
13130	Ethylbenzene	100-41-4	N.D.	0.0004	0.001	1
13130	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0002	0.001	1
13130	Toluene	108-88-3	N.D.	0.0002	0.001	1
13130	Xylene (Total)	1330-20-7	N.D.	0.001	0.005	1
GC Volatiles	**AK 101**		**mg/l**	**mg/l**	**mg/l**	
01438	TPH-GRO AK water C6-C10	n.a.	0.018 J	0.014	0.10	1
Volatiles by Extraction	**SW-846 8011**		**mg/l**	**mg/l**	**mg/l**	
10398	Ethylene dibromide	106-93-4	N.D. D1	0.0000097	0.000029	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.

GC Petroleum Hydrocarbons	**AK 102-SV/103mod-SV 04/08/02**		**mg/l**	**mg/l**	**mg/l**	
13222	C10-<C25 DRO	n.a.	0.21 J	0.052	0.26	1
13222	C25-C36 RRO	n.a.	0.14 J	0.078	0.26	1

The recovery for the method blank surrogate(s) is outside the QC acceptance limits as noted on the QC Summary.
The recovery for a target analyte(s) and surrogate(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.

The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.

Target analytes were detected in the method blank associated with the samples as noted on the QC summary. However, the observed sample pattern in the method blank is not typical of #2 fuel/diesel.

GC Petroleum Hydrocarbons w/Si	**AK 102-SV 4/8/02**		**mg/l**	**mg/l**	**mg/l**	
13028	DRO C10-C25 W/ SiGel	n.a.	N.D.	0.054	0.27	1

Sample Comments

State of Alaska Lab Certification No. UST-061

*=This limit was used in the evaluation of the final result

Sample Description: **MW-11-W-190523 Grab Groundwater**
Facility# 309152
6201 Old Airport Rd - Fairbanks, AK

Project Name: **309152**

Submittal Date/Time: 05/25/2019 09:45
Collection Date/Time: 05/23/2019 11:50
SDG#: LSV60-07

Chevron
ELLE Sample #: GW 1067124
ELLE Group #: 2045875
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13130	BTEX/MTBE/EDC	SW-846 8260C	1	F191511AA	06/01/2019 00:14	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	F191511AA	06/01/2019 00:13	Hu Yang	1
01438	TPH-GRO AK water C6-C10	AK 101	1	19148A94A	05/28/2019 23:26	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030C	1	19148A94A	05/28/2019 23:25	Marie D Beamenderfer	1
10398	EDB by 8011	SW-846 8011	1	191510011A	06/05/2019 09:45	Jason Brumbaugh	1
07786	EDB Extraction (8011)	SW-846 8011	1	191510011A	06/01/2019 02:00	Mathias Okpo	1
13222	AK 102/103-SV	AK 102-SV/103mod-SV 04/08/02	1	191500038A	05/31/2019 22:35	Nicholas R Rossi	1
13028	AK 102-SV DRO, Column SiGel	AK 102-SV 4/8/02	1	191510039A	06/05/2019 02:45	Nicholas R Rossi	1
13225	Mini-Ext. AK 102/103SV,DRO/RRO	AK 102-SV 4/8/02	1	191500038A	05/31/2019 10:00	Kailah L Ortiz	1
13030	Mini-Ext AK102-SV Column SiGel	AK 102/AK 103 04/08/02	1	191510039A	06/03/2019 08:00	David S Schrum	1

*=This limit was used in the evaluation of the final result

Sample Description: **MW-16-W-190523 Grab Groundwater**
Facility# 309152
6201 Old Airport Rd - Fairbanks, AK

Chevron
ELLE Sample #: GW 1067125
ELLE Group #: 2045875
Matrix: Groundwater

Project Name: **309152**

Submittal Date/Time: 05/25/2019 09:45
Collection Date/Time: 05/23/2019 12:30
SDG#: LSV60-08

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/l**	**mg/l**	**mg/l**	
13130	Benzene	71-43-2	N.D.	0.001	0.005	5
13130	1,2-Dichloroethane	107-06-2	N.D.	0.002	0.005	5
13130	Ethylbenzene	100-41-4	0.091	0.002	0.005	5
13130	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.001	0.005	5
13130	Toluene	108-88-3	0.002 J	0.001	0.005	5
13130	Xylene (Total)	1330-20-7	0.45	0.005	0.025	5
GC Volatiles	**AK 101**		**mg/l**	**mg/l**	**mg/l**	
01438	TPH-GRO AK water C6-C10	n.a.	3.1	0.014	0.10	1
Volatiles by Extraction	**SW-846 8011**		**mg/l**	**mg/l**	**mg/l**	
10398	Ethylene dibromide	106-93-4	N.D. D2	0.000016	0.000029	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.

Reporting limits were raised due to interference from the sample matrix.

GC Petroleum Hydrocarbons	**AK 102-SV/103mod-SV 04/08/02**		**mg/l**	**mg/l**	**mg/l**	
13222	C10-<C25 DRO	n.a.	3.2	0.052	0.26	1
13222	C25-C36 RRO	n.a.	0.22 J	0.078	0.26	1

The recovery for the method blank surrogate(s) is outside the QC acceptance limits as noted on the QC Summary.
The recovery for a target analyte(s) and surrogate(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.

The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.

Target analytes were detected in the method blank associated with the samples as noted on the QC summary. However, the observed sample pattern in the method blank is not typical of #2 fuel/diesel.

GC Petroleum Hydrocarbons w/Si	**AK 102-SV 4/8/02**		**mg/l**	**mg/l**	**mg/l**	
13028	DRO C10-C25 W/ SiGel	n.a.	0.97	0.052	0.26	1

Sample Comments

State of Alaska Lab Certification No. UST-061

*=This limit was used in the evaluation of the final result

Sample Description: **MW-16-W-190523 Grab Groundwater**
Facility# 309152
6201 Old Airport Rd - Fairbanks, AK

Project Name: **309152**

Submittal Date/Time: 05/25/2019 09:45
Collection Date/Time: 05/23/2019 12:30
SDG#: LSV60-08

Chevron
ELLE Sample #: GW 1067125
ELLE Group #: 2045875
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13130	BTEX/MTBE/EDC	SW-846 8260C	1	F191511AA	06/01/2019 04:17	Hu Yang	5
01163	GC/MS VOA Water Prep	SW-846 5030C	1	F191511AA	06/01/2019 04:16	Hu Yang	5
01438	TPH-GRO AK water C6-C10	AK 101	1	19148A94A	05/28/2019 23:52	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030C	1	19148A94A	05/28/2019 23:51	Marie D Beamenderfer	1
10398	EDB by 8011	SW-846 8011	1	191510011A	06/05/2019 10:00	Rachel Umberger	1
07786	EDB Extraction (8011)	SW-846 8011	1	191510011A	06/01/2019 02:00	Mathias Okpo	1
13222	AK 102/103-SV	AK 102-SV/103mod-SV 04/08/02	1	191500038A	05/31/2019 23:03	Nicholas R Rossi	1
13028	AK 102-SV DRO, Column SiGel	AK 102-SV 4/8/02	1	191510039A	06/05/2019 03:13	Nicholas R Rossi	1
13225	Mini-Ext. AK 102/103SV,DRO/RRO	AK 102-SV 4/8/02	1	191500038A	05/31/2019 10:00	Kailah L Ortiz	1
13030	Mini-Ext AK102-SV Column SiGel	AK 102/AK 103 04/08/02	1	191510039A	06/03/2019 08:00	David S Schrum	1

*=This limit was used in the evaluation of the final result

Sample Description: **MW-20-W-190523 Grab Groundwater**
Facility# 309152
6201 Old Airport Rd - Fairbanks, AK

Chevron
ELLE Sample #: GW 1067126
ELLE Group #: 2045875
Matrix: Groundwater

Project Name: **309152**

Submittal Date/Time: 05/25/2019 09:45
Collection Date/Time: 05/23/2019 13:10
SDG#: LSV60-09

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/l**	**mg/l**	**mg/l**	
13130	Benzene	71-43-2	N.D.	0.0002	0.001	1
13130	1,2-Dichloroethane	107-06-2	N.D.	0.0003	0.001	1
13130	Ethylbenzene	100-41-4	N.D.	0.0004	0.001	1
13130	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0002	0.001	1
13130	Toluene	108-88-3	N.D.	0.0002	0.001	1
13130	Xylene (Total)	1330-20-7	N.D.	0.001	0.005	1
GC Volatiles	**AK 101**		**mg/l**	**mg/l**	**mg/l**	
01438	TPH-GRO AK water C6-C10	n.a.	N.D.	0.014	0.10	1
Volatiles by Extraction	**SW-846 8011**		**mg/l**	**mg/l**	**mg/l**	
10398	Ethylene dibromide	106-93-4	N.D. D2	0.0000097	0.000029	1
GC Petroleum Hydrocarbons	**AK 102-SV/103mod-SV 04/08/02**		**mg/l**	**mg/l**	**mg/l**	
13222	C10-<C25 DRO	n.a.	0.29	0.054	0.27	1
13222	C25-C36 RRO	n.a.	0.41	0.081	0.27	1

The recovery for the method blank surrogate(s) is outside the QC acceptance limits as noted on the QC Summary.
The recovery for a target analyte(s) and surrogate(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.

Target analytes were detected in the method blank associated with the samples as noted on the QC summary. However, the observed sample pattern in the method blank is not typical of #2 fuel/diesel.

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC Petroleum Hydrocarbons w/Si	**AK 102-SV 4/8/02**		**mg/l**	**mg/l**	**mg/l**	
13028	DRO C10-C25 W/ SiGel	n.a.	N.D.	0.054	0.27	1

Sample Comments

State of Alaska Lab Certification No. UST-061

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13130	BTEX/MTBE/EDC	SW-846 8260C	1	F191511AA	06/01/2019 00:36	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	F191511AA	06/01/2019 00:35	Hu Yang	1
01438	TPH-GRO AK water C6-C10	AK 101	1	19148A94A	05/29/2019 00:17	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030C	1	19148A94A	05/29/2019 00:16	Marie D Beamenderfer	1

*=This limit was used in the evaluation of the final result

Sample Description: **MW-20-W-190523 Grab Groundwater**
Facility# 309152
6201 Old Airport Rd - Fairbanks, AK

Project Name: **309152**

Submittal Date/Time: 05/25/2019 09:45
Collection Date/Time: 05/23/2019 13:10
SDG#: LSV60-09

Chevron
ELLE Sample #: GW 1067126
ELLE Group #: 2045875
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10398	EDB by 8011	SW-846 8011	1	191510012A	06/07/2019 05:28	Jason Brumbaugh	1
07786	EDB Extraction (8011)	SW-846 8011	1	191510012A	06/01/2019 02:00	Mathias Okpo	1
13222	AK 102/103-SV	AK 102-SV/103mod-SV 04/08/02	1	191500038A	05/31/2019 23:30	Nicholas R Rossi	1
13028	AK 102-SV DRO, Column SiGel	AK 102-SV 4/8/02	1	191510039A	06/05/2019 03:41	Nicholas R Rossi	1
13225	Mini-Ext. AK 102/103SV,DRO/RRO	AK 102-SV 4/8/02	1	191500038A	05/31/2019 10:00	Kailah L Ortiz	1
13030	Mini-Ext AK102-SV Column SiGel	AK 102/AK 103 04/08/02	1	191510039A	06/03/2019 08:00	David S Schrum	1

*=This limit was used in the evaluation of the final result

Sample Description: **MW-7-W-190523 Grab Groundwater**
Facility# 309152
6201 Old Airport Rd - Fairbanks, AK

Chevron
ELLE Sample #: GW 1067127
ELLE Group #: 2045875
Matrix: Groundwater

Project Name: **309152**

Submittal Date/Time: 05/25/2019 09:45
Collection Date/Time: 05/23/2019 14:00
SDG#: LSV60-10

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/l**	**mg/l**	**mg/l**	
13130	Benzene	71-43-2	0.016	0.0002	0.001	1
13130	1,2-Dichloroethane	107-06-2	N.D.	0.0003	0.001	1
13130	Ethylbenzene	100-41-4	0.0004 J	0.0004	0.001	1
13130	Methyl Tertiary Butyl Ether	1634-04-4	0.0002 J	0.0002	0.001	1
13130	Toluene	108-88-3	0.0003 J	0.0002	0.001	1
13130	Xylene (Total)	1330-20-7	0.17	0.001	0.005	1
GC Volatiles	**AK 101**		**mg/l**	**mg/l**	**mg/l**	
01438	TPH-GRO AK water C6-C10	n.a.	0.61	0.014	0.10	1
Volatiles by Extraction	**SW-846 8011**		**mg/l**	**mg/l**	**mg/l**	
10398	Ethylene dibromide	106-93-4	N.D. D2	0.0000097	0.000029	1
GC Petroleum Hydrocarbons	**AK 102-SV/103mod-SV 04/08/02**		**mg/l**	**mg/l**	**mg/l**	
13222	C10-<C25 DRO	n.a.	1.3	0.051	0.26	1
13222	C25-C36 RRO	n.a.	0.59	0.077	0.26	1

The recovery for the method blank surrogate(s) is outside the QC acceptance limits as noted on the QC Summary.
The recovery for a target analyte(s) and surrogate(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.

The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.

Target analytes were detected in the method blank associated with the samples as noted on the QC summary. However, the observed sample pattern in the method blank is not typical of #2 fuel/diesel.

GC Petroleum Hydrocarbons w/Si	**AK 102-SV 4/8/02**		**mg/l**	**mg/l**	**mg/l**	
13028	DRO C10-C25 W/ SiGel	n.a.	0.086 J	0.051	0.25	1

Sample Comments

State of Alaska Lab Certification No. UST-061

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor

*=This limit was used in the evaluation of the final result

Sample Description: **MW-7-W-190523 Grab Groundwater**
Facility# 309152
6201 Old Airport Rd - Fairbanks, AK

Project Name: **309152**

Submittal Date/Time: 05/25/2019 09:45
Collection Date/Time: 05/23/2019 14:00
SDG#: LSV60-10

Chevron
ELLE Sample #: GW 1067127
ELLE Group #: 2045875
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13130	BTEX/MTBE/EDC	SW-846 8260C	1	F191511AA	06/01/2019 00:58	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	F191511AA	06/01/2019 00:57	Hu Yang	1
01438	TPH-GRO AK water C6-C10	AK 101	1	19148A94A	05/29/2019 00:43	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030C	1	19148A94A	05/29/2019 00:42	Marie D Beamenderfer	1
10398	EDB by 8011	SW-846 8011	1	191510012A	06/07/2019 05:44	Jason Brumbaugh	1
07786	EDB Extraction (8011)	SW-846 8011	1	191510012A	06/01/2019 02:00	Mathias Okpo	1
13222	AK 102/103-SV	AK 102-SV/103mod-SV 04/08/02	1	191500038A	05/31/2019 23:58	Nicholas R Rossi	1
13028	AK 102-SV DRO, Column SiGel	AK 102-SV 4/8/02	1	191510039A	06/05/2019 04:09	Nicholas R Rossi	1
13225	Mini-Ext. AK 102/103SV,DRO/RRO	AK 102-SV 4/8/02	1	191500038A	05/31/2019 10:00	Kailah L Ortiz	1
13030	Mini-Ext AK102-SV Column SiGel	AK 102/AK 103 04/08/02	1	191510039A	06/03/2019 08:00	David S Schrum	1

*=This limit was used in the evaluation of the final result

Sample Description: **BD-1-WD-190523 Grab Groundwater**
Facility# 309152
6201 Old Airport Rd - Fairbanks, AK

Chevron
ELLE Sample #: GW 1067128
ELLE Group #: 2045875
Matrix: Groundwater

Project Name: **309152**

Submittal Date/Time: 05/25/2019 09:45
Collection Date/Time: 05/23/2019
SDG#: LSV60-11FD

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/l**	**mg/l**	**mg/l**	
13130	Benzene	71-43-2	0.13	0.001	0.005	5
13130	1,2-Dichloroethane	107-06-2	N.D.	0.002	0.005	5
13130	Ethylbenzene	100-41-4	0.12	0.002	0.005	5
13130	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.001	0.005	5
13130	Toluene	108-88-3	0.003 J	0.001	0.005	5
13130	Xylene (Total)	1330-20-7	1.5	0.005	0.025	5
GC Volatiles	**AK 101**		**mg/l**	**mg/l**	**mg/l**	
01438	TPH-GRO AK water C6-C10	n.a.	5.4	0.070	0.50	5
Volatiles by Extraction	**SW-846 8011**		**mg/l**	**mg/l**	**mg/l**	
10398	Ethylene dibromide	106-93-4	0.000013 JD1	0.0000097	0.000029	1
GC Petroleum Hydrocarbons	**AK 102-SV/103mod-SV 04/08/02**		**mg/l**	**mg/l**	**mg/l**	
13222	C10-<C25 DRO	n.a.	18	0.26	1.3	5
13222	C25-C36 RRO	n.a.	N.D.	0.39	1.3	5

The recovery for the method blank surrogate(s) is outside the QC acceptance limits as noted on the QC Summary.
The recovery for a target analyte(s) and surrogate(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.

The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC Petroleum Hydrocarbons w/Si	**AK 102-SV 4/8/02**		**mg/l**	**mg/l**	**mg/l**	
13028	DRO C10-C25 W/ SiGel	n.a.	0.99	0.051	0.26	1

The recovery for the LCS is outside the method acceptance limits as noted on the QC Summary. Since the recovery is within our statistically derived limits the data is reported.

Sample Comments

State of Alaska Lab Certification No. UST-061

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13130	BTEX/MTBE/EDC	SW-846 8260C	1	F191511AA	06/01/2019 04:39	Hu Yang	5
01163	GC/MS VOA Water Prep	SW-846 5030C	1	F191511AA	06/01/2019 04:38	Hu Yang	5

*=This limit was used in the evaluation of the final result

Sample Description: **BD-1-WD-190523 Grab Groundwater**
Facility# 309152
6201 Old Airport Rd - Fairbanks, AK

Project Name: **309152**

Submittal Date/Time: 05/25/2019 09:45
Collection Date/Time: 05/23/2019
SDG#: LSV60-11FD

Chevron
ELLE Sample #: GW 1067128
ELLE Group #: 2045875
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01438	TPH-GRO AK water C6-C10	AK 101	1	19148A94A	05/29/2019 13:32	Marie D Beamenderfer	5
01146	GC VOA Water Prep	SW-846 5030C	1	19148A94A	05/29/2019 13:31	Marie D Beamenderfer	5
10398	EDB by 8011	SW-846 8011	1	191510012A	06/08/2019 10:35	Jason Brumbaugh	1
07786	EDB Extraction (8011)	SW-846 8011	1	191510012A	06/01/2019 02:00	Mathias Okpo	1
13222	AK 102/103-SV	AK 102-SV/103mod-SV 04/08/02	1	191500038A	06/07/2019 14:38	Nicholas R Rossi	5
13028	AK 102-SV DRO, Column SiGel	AK 102-SV 4/8/02	1	191540013A	06/06/2019 21:13	Nicholas R Rossi	1
13225	Mini-Ext. AK 102/103SV,DRO/RRO	AK 102-SV 4/8/02	1	191500038A	05/31/2019 10:00	Kailah L Ortiz	1
13030	Mini-Ext AK102-SV Column SiGel	AK 102/AK 103 04/08/02	1	191540013A	06/03/2019 16:50	Osvaldo R Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **QA-T-190514 NA Water**
Facility# 309152
6201 Old Airport Rd - Fairbanks, AK

Project Name: **309152**

Submittal Date/Time: 05/25/2019 09:45
Collection Date/Time: 05/14/2019
SDG#: LSV60-12TB

Chevron
ELLE Sample #: GW 1067129
ELLE Group #: 2045875
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/l**	**mg/l**	**mg/l**	
13130	Benzene	71-43-2	N.D.	0.0002	0.001	1
13130	1,2-Dichloroethane	107-06-2	N.D.	0.0003	0.001	1
13130	Ethylbenzene	100-41-4	N.D.	0.0004	0.001	1
13130	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0002	0.001	1
13130	Toluene	108-88-3	N.D.	0.0002	0.001	1
13130	Xylene (Total)	1330-20-7	N.D.	0.001	0.005	1
GC Volatiles	**AK 101**		**mg/l**	**mg/l**	**mg/l**	
01438	TPH-GRO AK water C6-C10	n.a.	N.D.	0.014	0.10	1
Volatiles by Extraction	**SW-846 8011**		**mg/l**	**mg/l**	**mg/l**	
10398	Ethylene dibromide	106-93-4	N.D. D1	0.0000096	0.000029	1

Sample Comments

State of Alaska Lab Certification No. UST-061

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13130	BTEX/MTBE/EDC	SW-846 8260C	1	F191511AA	05/31/2019 21:40	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	F191511AA	05/31/2019 21:39	Hu Yang	1
01438	TPH-GRO AK water C6-C10	AK 101	1	19148A94A	05/28/2019 19:11	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030C	1	19148A94A	05/28/2019 19:10	Marie D Beamenderfer	1
10398	EDB by 8011	SW-846 8011	1	191480012A	06/04/2019 23:38	Rachel Umberger	1
07786	EDB Extraction (8011)	SW-846 8011	1	191480012A	05/28/2019 23:40	Bradley W VanLeuven	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: Chevron
Reported: 06/14/2019 10:26

Group Number: 2045875

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	mg/l	mg/l	mg/l
Batch number: F191511AA	Sample number(s): 1067116-1067129		
Benzene	N.D.	0.0002	0.001
1,2-Dichloroethane	N.D.	0.0003	0.001
Ethylbenzene	N.D.	0.0004	0.001
Methyl Tertiary Butyl Ether	N.D.	0.0002	0.001
Toluene	N.D.	0.0002	0.001
Xylene (Total)	N.D.	0.001	0.003
Batch number: 19148A94A	Sample number(s): 1067116-1067129		
TPH-GRO AK water C6-C10	N.D.	0.014	0.10
Batch number: 191480012A	Sample number(s): 1067129		
Ethylene dibromide	N.D.	0.000010	0.000030
Batch number: 191510011A	Sample number(s): 1067116-1067125		
Ethylene dibromide	N.D.	0.000010	0.000030
Batch number: 191510012A	Sample number(s): 1067126-1067128		
Ethylene dibromide	N.D.	0.000010	0.000030
Batch number: 191490029A	Sample number(s): 1067116-1067117		
C10-<C25 DRO	0.089 J	0.050	0.25
C25-C36 RRO	0.096 J	0.081	0.25
Batch number: 191500038A	Sample number(s): 1067118-1067128		
C10-<C25 DRO	0.095 J	0.050	0.25
C25-C36 RRO	0.11 J	0.081	0.25
Batch number: 191510039A	Sample number(s): 1067121-1067127		
DRO C10-C25 W/ SiGel	N.D.	0.050	0.25
Batch number: 191540013A	Sample number(s): 1067116-1067120,1067128		
DRO C10-C25 W/ SiGel	N.D.	0.050	0.25

LCS/LCSD

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: F191511AA	Sample number(s): 1067116-1067129								

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

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Quality Control Summary

Client Name: Chevron
Reported: 06/14/2019 10:26

Group Number: 2045875

LCS/LCSD

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Benzene	0.0200	0.0204			102		80-120		
1,2-Dichloroethane	0.0200	0.0178			89		73-124		
Ethylbenzene	0.0200	0.0192			96		80-120		
Methyl Tertiary Butyl Ether	0.0200	0.0188			94		69-122		
Toluene	0.0200	0.0204			102		80-120		
Xylene (Total)	0.0600	0.0586			98		80-120		
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 19148A94A	Sample number(s): 1067116-1067129								
TPH-GRO AK water C6-C10	1.10	1.06			97		60-120		
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 191480012A	Sample number(s): 1067129								
Ethylene dibromide	0.000128	0.000134	0.000128	0.000134	105	105	60-140	0	20
Batch number: 191510011A	Sample number(s): 1067116-1067125								
Ethylene dibromide	0.000128	0.0000649	0.000128	0.000106	51*	83	60-140	49*	20
Batch number: 191510012A	Sample number(s): 1067126-1067128								
Ethylene dibromide	0.000128	0.000106	0.000128	0.000123	83	96	60-140	15	20
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 191490029A	Sample number(s): 1067116-1067117								
C10-<C25 DRO	1.00	0.787	1.00	0.777	79	78	75-125	1	20
C25-C36 RRO	1.80	2.03	1.80	2.24	113	125	75-125	10	20
Batch number: 191500038A	Sample number(s): 1067118-1067128								
C10-<C25 DRO	1.00	0.736			74*		75-125		
C25-C36 RRO	1.80	1.85			103		75-125		
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 191510039A	Sample number(s): 1067121-1067127								
DRO C10-C25 W/ SiGel	4.01	3.18			79		75-125		
Batch number: 191540013A	Sample number(s): 1067116-1067120,1067128								
DRO C10-C25 W/ SiGel	4.01	1.56			39*		75-125		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc	MS Spike Added	MS Conc	MSD Spike Added	MSD Conc	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 06/14/2019 10:26

Group Number: 2045875

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: F191511AA	Sample number(s): 1067116-1067129 UNSPK: 1067118									
Benzene	N.D.	0.0200	0.0217	0.0200	0.0222	109	111	80-120	2	30
1,2-Dichloroethane	N.D.	0.0200	0.0189	0.0200	0.0192	94	96	73-124	2	30
Ethylbenzene	N.D.	0.0200	0.0207	0.0200	0.0208	103	104	80-120	1	30
Methyl Tertiary Butyl Ether	N.D.	0.0200	0.0194	0.0200	0.0199	97	99	69-122	3	30
Toluene	N.D.	0.0200	0.0214	0.0200	0.0219	107	110	80-120	2	30
Xylene (Total)	N.D.	0.0600	0.0623	0.0600	0.0640	104	107	80-120	3	30
	mg/l	**mg/l**	**mg/l**	**mg/l**	**mg/l**					
Batch number: 19148A94A	Sample number(s): 1067116-1067129 UNSPK: 1067118									
TPH-GRO AK water C6-C10	0.0400	1.10	1.20	1.10	1.20	106	106	60-120	0	20
	mg/l	**mg/l**	**mg/l**	**mg/l**	**mg/l**					
Batch number: 191510011A	Sample number(s): 1067116-1067125 UNSPK: 1067118									
Ethylene dibromide	N.D.	0.000124	0.000109	0.000124	0.000110	88	88	60-140	0	20
Batch number: 191510012A	Sample number(s): 1067126-1067128 UNSPK: 1067128									
Ethylene dibromide	0.0000133	0.000123	0.000115			82		60-140		
	mg/l	**mg/l**	**mg/l**	**mg/l**	**mg/l**					
Batch number: 191500038A	Sample number(s): 1067118-1067128 UNSPK: 1067118									
C10-<C25 DRO	0.166	1.05	0.967	1.08	0.993	76	76	75-125	3	30
C25-C36 RRO	0.185	1.88	2.40	1.95	2.56	117	122	75-125	7	30
	mg/l	**mg/l**	**mg/l**	**mg/l**	**mg/l**					
Batch number: 191540013A	Sample number(s): 1067116-1067120,1067128 UNSPK: 1067118									
DRO C10-C25 W/ SiGel	N.D.	4.19	2.15	4.06	2.20	51*	54*	75-125	2	30

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTEX/MTBE/EDC
Batch number: F191511AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1067116	97	98	101	93
1067117	93	93	102	98
1067118	95	97	102	93
1067119	95	104	101	95

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 06/14/2019 10:26

Group Number: 2045875

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTEX/MTBE/EDC
Batch number: F191511AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1067120	94	93	102	94
1067121	97	97	99	89
1067122	94	98	100	91
1067123	92	91	101	98
1067124	96	99	101	90
1067125	95	95	100	95
1067126	98	94	103	93
1067127	95	97	99	97
1067128	95	101	99	94
1067129	96	97	100	93
Blank	94	90	102	93
LCS	93	98	99	92
MS	95	104	101	95
MSD	94	93	102	94
Limits:	80-120	80-120	80-120	80-120

Analysis Name: TPH-GRO AK water C6-C10
Batch number: 19148A94A

	Trifluorotoluene-F
1067116	77
1067117	74
1067118	73
1067119	85
1067120	84
1067121	74
1067122	74
1067123	72
1067124	73
1067125	73
1067126	74
1067127	72
1067128	74
1067129	77
Blank	79
LCS	87
MS	85
MSD	84
Limits:	60-120

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 06/14/2019 10:26

Group Number: 2045875

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: EDB by 8011
Batch number: 191480012A

	1,1,2,2-Tetrachloroethane-D1	1,1,2,2-Tetrachloroethane-D2
1067129	77	85
Blank	69	74
LCS	74	83
LCSD	89	82
Limits:	46-136	46-136

Analysis Name: EDB by 8011
Batch number: 191510011A

	1,1,2,2-Tetrachloroethane-D1	1,1,2,2-Tetrachloroethane-D2
1067116	94	83
1067117	128	99
1067118	90	80
1067119	115	87
1067120	75	85
1067121	86	63
1067122	86	75
1067123	76	81
1067124	92	77
1067125	90	119
Blank	86	54
LCS	61	54
LCSD	73	80
MS	115	87
MSD	75	85
Limits:	46-136	46-136

Analysis Name: EDB by 8011
Batch number: 191510012A

	1,1,2,2-Tetrachloroethane-D1	1,1,2,2-Tetrachloroethane-D2
1067126	102	79
1067127	72	90
1067128	119	102
Blank	72	56
LCS	91	78
LCSD	97	82
MS	114	99
Limits:	46-136	46-136

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 06/14/2019 10:26

Group Number: 2045875

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: AK 102/103-SV
Batch number: 191490029A

	Orthoterphenyl	n-Triacontane-d62
1067116	104	70
1067117	281*	48*
Limits:	50-150	50-150

	Orthoterphenyl	n-Triacontane-d62
Blank	109	69
LCS	93	36*
LCSD	96	43*
Limits:	60-120	60-120

Analysis Name: AK 102/103-SV
Batch number: 191500038A

	Orthoterphenyl	n-Triacontane-d62
1067118	96	60
1067119	96	53
1067120	89	65
1067121	96	59
1067122	86	59
1067123	98	61
1067124	92	40*
1067125	51	49*
1067126	88	51
1067127	94	43*
1067128	56	42*
MS	96	53
MSD	89	65
Limits:	50-150	50-150

	Orthoterphenyl	n-Triacontane-d62
Blank	98	56*
LCS	81	40*
Limits:	60-120	60-120

Analysis Name: AK 102-SV DRO, Column SiGel
Batch number: 191510039A

	Capric Acid	Orthoterphenyl
1067121	0	92
1067122	0	61

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 06/14/2019 10:26

Group Number: 2045875

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: AK 102-SV DRO, Column SiGel
Batch number: 191510039A

	Capric Acid	Orthoterphenyl
1067123	0	87
1067124	0	85
1067125	0	82
1067126	0	86
1067127	0	82
Limits:	0-1	50-150

	Capric Acid	Orthoterphenyl
Blank	0	97
LCS	0	98
Limits:	0-1	60-120

Analysis Name: AK 102-SV DRO, Column SiGel
Batch number: 191540013A

	Capric Acid	Orthoterphenyl
1067116	0	75
1067117	0	71
1067118	0	72
1067119	0	92
1067120	0	102
1067128	0	79
MS	0	92
MSD	0	102
Limits:	0-1	50-150

	Capric Acid	Orthoterphenyl
Blank	0	83
LCS	0	78
Limits:	0-1	60-120

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Chevron Generic Analysis Request/Chain of Custody

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Acct. # 11964 For Eurofins Lancaster Laboratories Environmental use only Group # 245875 Sample # 146716-29

SCR #:

Client Information

Facility # Chevron 309152 WBS 07.09 Groundwater monitoring - sampling

Site Address 6223 Old Airport Rd Fairbanks, AK

Chevron PM Erick Hetrick Lead Consultant Arcadis

Consultant/Office 111 SW Columbia St Suite 670 Portland OR

Consultant Project Mgr. Nicole Monroe

Sampler David Beaudoin, Evan Wojcik

State where samples were collected: AK For Compliance: Yes ☒ No ☐

Matrix

Soil ☐ Sediment ☐ Water: Potable ☐ Ground ☒ NPDES ☐ Surface ☐ Oil ☐ Air ☐

Analyses Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total Number of Containers	BTEX + MTBE 8021 ☐ 8260 ☒ Naphth ☐	8260 full scan	Oxygenates ____	TPH-GRO AK101 8015 ☐ 8260 ☐	TPH-DRO without Silica Gel Cleanup AK102 ☐	TPH-DRO with Silica Gel Cleanup AK102 ☐	VPH ☐ EPH ☐ Method ____	Lead Total ☐ Diss. ☐ Method ____	EDC 8260	EDB 8011	RRO AK 103
EQB-1-W-190523	5.23.19	0900	X		11	X			X	X	X			X	X	X
MW-8-W-190523	5.23.19	0815	X		11	X			X	X	X			X	X	X
MW-5-W-190523	5.23.19	0850	X		11	X			X	X	X			X	X	X
MW-5-MS-W-190523	5.23.19	0850	X		11	X			X	X	X			X	X	X
MW-5-MSD-W-190523	5.23.19	0850	X		11	X			X	X	X			X	X	X
MW-10-W-190523	5.23.19	0950	X		11	X			X	X	X			X	X	X
MW-19-W-190523	5.23.19	1050	X		11	X			X	X	X			X	X	X
MW-21-W-190523	5.23.19	1130	X		11	X			X	X	X			X	X	X
MW-11-W-190523	5.23.19	1150	X		11	X			X	X	X			X	X	X
MW-16-W-190523	5.23.19	1230	X		11	X			X	X	X			X	X	X

Preservation Codes

H = HCl (circled) T = Thiosulfate
N = HNO_3 B = NaOH
S = H_2SO_4 P = H_3PO_4
F = Field Filtered O = Other

☐ Results in Dry Weight

☐ J value reporting needed

☐ Must meet lowest detection limits possible for 8260 compounds

Remarks

Turnaround Time Requested (TAT) (please circle)

(Standard) 5 day 4 day

72 hour 48 hour 24 hour

Data Package (circle if required)

Type I - Full (Type III) Type VI (Raw Data)

EDD (circle if required)

(CVX-RTBU-FI_05 (default)) Other: ____

Relinquished by	Date	Time	Received by	Date	Time
Evan Wojcik	5/23/19	1500	Arcadis cold storage		
Evan Wojcik	5/24/19	0900	Fedex		
Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____			Received by	5/25/19	945

Temperature Upon Receipt 0.7-1.0 °C

Custody Seals Intact? (Yes) No

Chevron Generic Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

Acct. # 11964 For Eurofins Lancaster Laboratories Environmental use only Group # 240875 Sample # 106116-29

SCR #:

Client Information

Facility # Chevron 300152 WBS 07.09 Groundwater monitoring - sampling

Site Address 6723 Old Airport Rd Fairbanks, AK

Chevron PM: Erick Hetrick

Lead Consultant: Arcadis

Consultant/Office: 111 SW Columbia St Suite 630 Portland, OR

Consultant Project Mgr.: Nicole Monroe

Sampler: David Beaudoin, Evan Wojcik

State where samples were collected: AK

For Compliance: Yes ☒ No ☐

Matrix

Soil ☐ Sediment ☐ Water ☒ Ground ☐ Potable ☐ NPDES ☐ Surface ☐ Oil ☐ Air ☐

Analyses Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total Number of Containers	BTEX + MTBE 8021 ☐ 8260 ☒ Naphth ☒	8260 full scan	Oxygenates ____	TPH-GRO AK 101 8015 ☐ 8260 ☐	TPH-DRO without Silica Gel Cleanup AK 102 ☐	TPH-DRO with Silica Gel Cleanup AK 102 ☐	VPH ☐ EPH ☐ Method ____	Lead Total ☐ Diss. ☐ Method ____	EDC 8260	EDB 8011	RRO AK 103
MW-20-W-190523	5.23.19	1310	X		11	X			X	X	X			X	X	X
MW-7-W-190523	5.23.19	1400	X		11	X			X	X	X			X	X	X
BD-1-W-190523	5.23.19	—	X		11	X			X	X	X			X	X	X
Trip Blank	5.14.19	—	X		4	X			X	X	X			X	X	

Preservation Codes

H = HCl, T = Thiosulfate, N = HNO_3, B = NaOH, S = H_2SO_4, P = H_3PO_4, F = Field Filtered, O = Other

☐ Results in Dry Weight

☐ J value reporting needed

☐ Must meet lowest detection limits possible for 8260 compounds

Remarks

Turnaround Time Requested (TAT) (please circle)

(Standard) 5 day 4 day

72 hour 48 hour 24 hour

Data Package (circle if required)

Type I - Full (Type III) Type VI (Raw Data)

EDD (circle if required)

(CVX-RTBU-FI_05 (default)) Other: ____

Relinquished by	Date	Time	Received by	Date	Time
Evan Wojcik	5/23/19	1500	Arcadis cold Storage		
Evan Wojcik	5/24/19	0800	Fedex		

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____

Received by: Date 5/25/19 Time 945

Temperature Upon Receipt 07-1.0 °C

Custody Seals Intact? (Yes) No

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Sample Administration Receipt Documentation Log

Doc Log ID: 250000

Group Number(s): 2405875

Client: Chevron

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	05/25/2019 9:45
Number of Packages:	3	Number of Projects:	2
State/Province of Origin:	AK		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	4
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Simon Nies (25112) at 12:12 on 05/25/2019

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT131	1.0	DT	Wet	Y	Bagged	N
2	DT131	0.7	DT	Wet	Y	Bagged	N
3	DT131	0.9	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T : 717-656-2300
F : 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

APPENDIX D

ADEC Data Review Checklist

Laboratory Data Review Checklist

Completed By:

Suresh PR

Title:

Project Chemist

Date:

August 6, 2019

CS Report Name:

First Semiannual 2019 Groundwater Monitoring Report

Report Date:

June 14, 2019

Consultant Firm:

ARCADIS U.S., Inc

Laboratory Name:

Eurofins Lancaster Laboratory, Lancaster, Pennsylvania

Laboratory Report Number:

2045875 – LSV60

ADEC File Number:

100.38.206

Hazard Identification Number:

4314

1. Laboratory

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

   ☑ Yes ☐ No Comments:

Yes.

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

   ☐ Yes ☑ No Comments:

Samples were not transferred to another lab.

2. Chain of Custody (CoC)

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

   ☑ Yes ☐ No Comments:

Yes.

   b. Correct Analyses requested?

   ☑ Yes ☐ No Comments:

Yes.

3. Laboratory Sample Receipt Documentation

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

   ☑ Yes ☐ No Comments:

Yes.

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

   ☑ Yes ☐ No Comments:

Yes.

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

   ☑ Yes ☐ No Comments:

Yes.

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

   ☐ Yes ☑ No Comments:

No discrepancies.

e. Data quality or usability affected?

☐ Yes ☒ No Comments:

Data quality/usability was not affected.

4. Case Narrative

a. Present and understandable?

☒ Yes ☐ No Comments:

Yes.

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

☒ Yes ☐ No Comments:

Yes.

c. Were all corrective actions documented?

☒ Yes ☐ No Comments:

Yes

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

☐ Yes ☒ No Comments:

Data quality/usability was not affected.

5. Samples Results

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

☒ Yes ☐ No Comments:

Yes.

b. All applicable holding times met?

☒ Yes ☐ No Comments:

Yes.

c. All soils reported on a dry weight basis?

☐ Yes ☒ No Comments:

No soil samples were submitted for analysis.

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

☒ Yes ☐ No Comments:

Yes.

e. Data quality or usability affected?

☐ Yes ☒ No Comments:

Data quality/usability was not affected.

6. QC Samples

a. Method Blank

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

☒ Yes ☐ No Comments:

Yes.

ii. All method blank results less than Method Detection Limit (MDL)?

☐ Yes ☒ No Comments:

The compounds C10-<C25 DRO (0.089J and 0.095J mg/l) and C25-C36 RRO (0.096J and 0.11J mg/l) were detected below the reporting limit in method blank batches 191490029A and 191500038A respectively. A blank action level was established at five times of the detected blank concentrations. The compounds C10-<C25 DRO and C25-C36 RRO result in samples MW-5-W-190523, MW-10-W-190523, MW-19-W-190523 and MW-11-W-190523 were reported less than the reporting limit and qualified as non-detect (UB) at the reporting limit. These compound results in sample MW-20-W-190523 was reported greater than the reporting limit but less than the blank action level and qualified as non-detect (UB) at the detected concentration. In addition, the compound C25-C36 RRO result in samples MW-21-W-19052 and MW-16-W-190523 were reported less than the reporting limit and qualified as non-detect (UB) at the reporting limit.

iii. If above MDL, what samples are affected?

☒ Yes ☐ No Comments:

MW-5-W-190523, MW-10-W-190523, MW-19-W-190523, MW-21-W-190523, MW-11-W-190523, MW-16-W-190523 and MW-20-W-190523

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

☒ Yes ☐ No Comments:

Yes.

v. Data quality or usability affected?

☒ Yes ☐ No Comments:

The compounds C10-<C25 DRO and C25-C36 RRO result in few samples were qualified as non-detect. The reported data should still be considered as usable.

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

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

☑ Yes ☐ No Comments:

Yes.

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

☐ Yes ☑ No Comments:

Metals/Inorganic analysis was not requested for submitted samples.

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

☐ Yes ☑ No Comments:

The LCS recovery (51%) for ethylene dibromide was less than the control limit in batch 191510011A. The associated detected (J) and non-detected (J) results were qualified as estimated.

The LCS recovery (74%) for C10-<C25 DRO was less than the control limit in batch 191500038A. The associated detected (J) and non-detected (J) results were qualified as estimated.

The LCS recovery (39%) for DRO C10-C25 W/ SiGel was less than the control limit in batch 191540013A. The associated detected (J) and non-detected (J) results were qualified as estimated.

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

☐ Yes ☑ No Comments:

The RPD between LCS/LCSD for ethylene dibromide was greater than the control limit in batch 191510011A. The associated results were qualified as estimated.

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

☑ Yes ☐ No Comments:

Ethylene bromide result in samples MW-8-W-190523, MW-5-W-190523, MW-10-W-190523, MW-19-W-190523, MW-21-W-190523, MW-11-W-190523 and MW-16-W-190523; C10-<C25 DRO result in samples MW-5-W-190523, MW-10-W-190523, MW-19-W-190523, MW-21-W-190523, MW-11-W-190523, MW-16-W-190523, MW-20-W-190523, MW-7-W-190523 and BD-1-WD-190523; DRO C10-C25 W/SiGel result in samples MW-8-W-190523, MW-5-W-190523 and BD-1-WD-190523 were qualified as estimated.

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

☑ Yes ☐ No Comments:

Yes.

vii. Data quality or usability affected?

☒ Yes ☐ No Comments:

The low LCS recovery and RPD exceedance considered minor and would result in the estimation of the associated data. The reported data should still be considered as usable.

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

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

☐ Yes ☐ No Comments:

Sample MW-5-W-190523 was used as the MS/MSD analysis.

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

☒ Yes ☐ No Comments:

The MS (51%) and MSD (54%) recoveries for DRO C10-C25 W/ SiGel was less than the control limit in sample MW-5-W-190523. The compound DRO C10-C25 W/ SiGel result in sample MW-5-W-190523 was non-detect and qualified as estimated (UJ).

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

☒ Yes ☐ No Comments:

Yes

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

☒ Yes ☐ No Comments:

DRO C10-C25 W/ SiGel forMW-5-W-190523 was qualified as estimated.

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

☒ Yes ☐ No Comments:

Yes.

vi. Data quality or usability affected? (use comment box to explain)

☒ Yes ☐ No Comments:

The low MS/MSD recoveries considered minor and would result in the estimation of the associated data. The reported data should still be considered as usable.

d. Surrogates – Organics Only

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

☑ Yes ☐ No Comments:

Yes

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

☐ Yes ☑ No Comments:

The surrogates orthhoterphenyl (281%) and n-Triacontane-d62 (48%) were high and/or low recoveries in sample MW-8-W-190523 for method AK102/103. The associated results were qualified as estimated.

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

☑ Yes ☐ No Comments:

Yes.

iv. Data quality or usability affected? (use comment box to explain)

☑ Yes ☐ No Comments:

The low and/or high surrogate recovery considered minor and would result in the estimation of associated data. The reported data should still be considered as usable.

e. Trip blank – Volatile analyses only (GRO, BTEX, etc): Water and Soil

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

☑ Yes ☐ No Comments:

Yes.

ii. All results less than MDL?

☒ Yes ☐ No Comments:

Yes.

iii. If above MDL, what samples are affected?

☐ Yes ☒ No Comments:

None of the data affected.

iv. Data quality or usability affected?

☐ Yes ☒ No Comments:

Data quality/usability was not affected.

f. Field Duplicate

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

☒ Yes ☐ No Comments:

Yes.

ii. Submitted blind to lab?

☒ Yes ☐ No Comments:

BD-1-WD-190523 was collected from MW-8-W-190523.

iii. Precision – All relative percent differences (RPD) less than specified DQOs?
(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 Comments:

The RPDs between parent and duplicate samples were acceptable.

iv. Data quality or usability affected?

☐ Yes ☒ No Comments:

Data quality/usability was not affected.

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

☒ Yes ☐ No

Equipment blank sample was collected as QA-O-190523.

i. If above MDL, what samples are affected?

☒ Yes ☐ No Comments:

The compound DRO C10-C25 was detected (0.093 J mg/l) below the reporting limit in an equipment blank sample QA-O-190523 for method AK-102. A blank action level was established at five times of the detected blank concentration. The compound C10-<C25 DRO result in samples MW-5-W-190523, MW-10-W-190523, MW-19-W-190523 and MW-11-W-190523 were reported less than the reporting limit and qualified as non-detect (UB) at the reporting limit. The result for compound C10-<C25 DRO in sample MW-20-W-190523 was reported less than the action level and qualified as non-detect (UB) at the detected concentration.
The compound C25-C36 RRO was detected (0.098 J mg/l) below the reporting limit in an equipment blank sample QA-O-190523 for method AK-102. A blank action level was established at five times of the detected blank concentration. The compound RRO C25-C36 result in samples MW-5-W-190523, MW-10-W-190523, MW-19-W-190523, MW-21-W-190523, MW-11-W-190523, MW-16-W-190523were reported less than the reporting limit and qualified as non-detect (UB) at the reporting limit. The result for compound C25-C36 RRO in sample MW-20-W-190523 was reported less than the action level and qualified as non-detect (UB) at the detected concentration.

ii. Data quality or usability affected?

The compounds DRO C10-C25 and RRO C25-C36 results in few samples were qualified as non-detect. The reported data should still be considered as usable.

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

a. Defined and appropriate?

☒ Yes ☐ No Comments:

Yes.