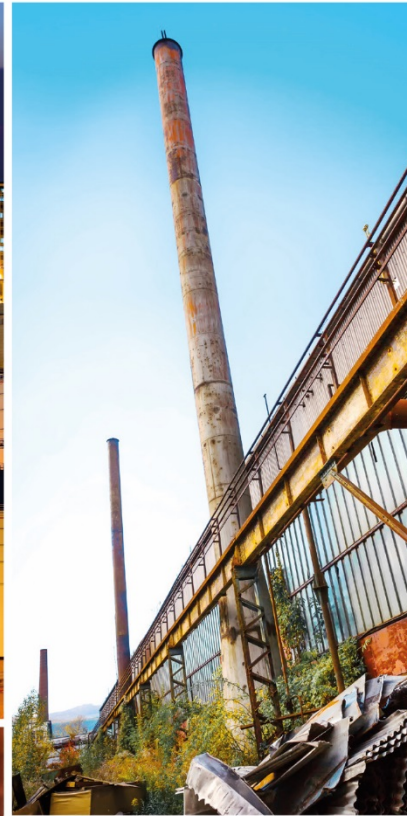
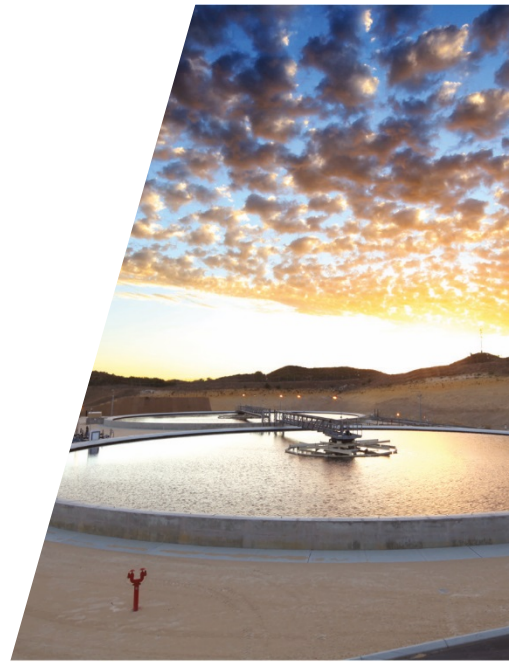




Second Semiannual 2018 Groundwater Monitoring Report

Former Chevron-Branded
Service Station 90430
6470 Debarr Road
Anchorage, Alaska
ADEC File ID: 2100.26.010
Hazard ID: 23615


Chevron Environmental
Management Company






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Acronyms and Abbreviations

AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
AS	air sparge
BTEX	benzene, toluene, ethylbenzene, and xylenes
COPCs	constituents of potential concern
CSM	conceptual site model
EDB	ethylene dibromide
EPA	Environmental Protection Agency
ft btoc	feet below top of casing
GAC	granular activated carbon
GRO	gasoline range organics
$\mu\text{S cm}^{-1}$	micro-Siemens per centimeter
mg/kg	micrograms per kilogram
mg/L	micrograms per liter
MNA	monitored natural attenuation
MTBE	methyl tertiary butyl ether
No	number
PAHs	polycyclic aromatic hydrocarbons
P.G.	Professional Geologist
SVE	soil vapor extraction
TM	trade mark
UST	underground storage tank
VOCs	volatile organic compounds

1. Introduction

GHD is submitting this *Second Semiannual 2018 Groundwater Monitoring Report* to the Alaska Department of Environmental Conservation (ADEC) on behalf of Chevron Environmental Management Company (Chevron) for former Chevron-branded service station 90430. GHD conducted groundwater monitoring and sampling in accordance with the ADEC's August 2017 *Field Sampling Guidance* and GHD's 2015 *Groundwater Monitoring and Sampling Workplan*. This report was prepared in accordance with ADEC's March 7, 2017 *Site Characterization Work Plan and Reporting Guidance for Investigation of Contaminated Sites*. Project objectives are to monitor groundwater conditions to evaluate petroleum hydrocarbon attenuation.

1.1 Site Description and Background

The site is located at 6470 Debarr Road in Anchorage, Alaska (Figure 1). The property's legal description is A B K COMMERCIAL #3 BLK 1 LT 6A. The latitude and longitude are 61.209200° north and 149.760130° west. Original station facilities included five underground storage tanks (USTs), one used oil UST, one heating oil UST, and piping until station upgrades were completed in 1995. Station facilities from 1995 to 2000 included three USTs, five dispensers, an oil/water separator, and product lines. The site was decommissioned in 2000 and is currently a secured, vacant lot with a drive-thru coffee shop located outside the fenced area. An air sparge (AS)/soil vapor extraction (SVE) remediation system utilizing 13 SVE wells and 27 AS wells was shut down in February 2013 and removed in June 2014.

Land use surrounding the site is primarily commercial and residential. Businesses are located west of the site. Residences border the site on the north, south and east.

Thirteen groundwater monitoring wells are monitored and nine are sampled semiannually (Figure 2). Site photographs are presented in Appendix A.

1.2 Hydrogeology

The site is located in south-central Alaska east of Cook Inlet. Historical static groundwater depths have ranged between 7.62 to 22.60 feet below top of casing (ft btoc) according to groundwater data from 1993 to present. Static groundwater depths ranged from 9.18 (MW-9) to 18.80 ft btoc (MW-8) on August 29, 2018. Groundwater flow was to the west-southwest with a gradient of 0.03 (Figure 2).

1.3 Conceptual Site Model

GHD completed a conceptual site model (CSM) for this site. Human health CSM scoping and graphics forms are included in Appendix B.

1.4 Constituents of Potential Concern - Cleanup Levels

Site constituents of potential concern (COPCs) are:

Table 1.1 Constituents of Potential Concern

COPCs	ADEC Cleanup Levels	
	Groundwater (mg/L)	Soil (mg/kg)
GRO	2.2	300
MTBE	0.14	0.40
Benzene	0.0046	0.022

mg/L - milligrams per liter
mg/kg - milligrams per kilogram
GRO - gasoline range organics

ADEC Table C Groundwater Cleanup Levels (Title 18 Alaska Administrative Code (AAC) 75.345) and ADEC Method Two Soil Cleanup Levels, Tables B1 and B2, under 40-inch zone, migration to groundwater (Title 18 AAC 75.341) are the default site cleanup levels for groundwater and soil.

2. Groundwater Monitoring and Sampling

On August 29, 2018, GHD gauged groundwater monitoring wells MW-3, MW-4R, MW-5R, MW-7 through MW-12, and MW-14 through MW-17. On August 29, 2018, GHD sampled groundwater monitoring wells MW-3, MW-4R, MW-5R, MW-7, MW-10, MW-11, MW-14, and MW-16. GHD's monitoring data package is presented in Appendix C.

2.1 No Purge Sampling

Prior to monitoring, each monitoring well was opened and the cap removed to allow groundwater levels to stabilize and equilibrate. Depth to groundwater and total well depth were measured and recorded with an electronic water level meter capable of 0.01 foot accuracy. An unused HydraSleeve™ sampler was deployed based on sampler length and water column height to collect volatile organic compound (VOC) samples. The sampler was deployed such that the top of the sampler was one sampler length below the soil/groundwater interface. The sampler was bottom set in wells with insufficient water column for standard deployment. HydraSleeves™ were deployed a minimum of 2 hours before sampling. HydraSleeves™ were pulled upward through the water column at an approximate rate of 1 foot per second to collect samples.

2.2 Low-Flow Sampling

Each well cap was removed to allow groundwater levels to stabilize and equilibrate prior to gauging. Depth to groundwater and total well depth were measured using a water level meter capable of 0.01 foot accuracy. A QED Sample Pro bladder pump with a self-contained compressor and control unit was used to purge groundwater from the well. The pump intake was set as close to the soil/groundwater interface as possible and caution was exercised to ensure that the water table was within the screened interval of the well. Clean disposable Teflon-lined tubing and bladders were

used to minimize the risk of volatile contaminant absorption by the sampling equipment. GHD continuously monitored water levels while purging and adjusted the pumping rate as needed to limit drawdown to 0.3 feet. Water quality parameters (listed below) were measured continuously and recorded every five minutes. Groundwater samples were collected only after a minimum of three successive readings fell within the following ADEC limits:

- pH: ± 0.1
- conductivity: $\pm 3\%$
- oxidation/reduction potential: ± 10 millivolts
- dissolved oxygen: $\pm 10\%$
- turbidity: $\pm 10\%$

2.3 Data Quality

All field instruments were calibrated prior to mobilization according to the manufacturer's specifications and calibration was verified and documented onsite on a daily basis. Calibration forms are included in Appendix C. All field staff are trained in routine maintenance and operation of instrumentation. All reusable sampling equipment was decontaminated between sample points using a stiff brush and a solution of water and laboratory grade detergent. Equipment was rinsed twice in clean water and once with distilled or deionized water.

Samples analyzed for VOCs were collected before samples for non-volatile compounds. Groundwater samples, including one duplicate per ten samples collected per day of sampling, were decanted into clean containers supplied by the analytical laboratory, placed on ice in an insulated cooler, and chilled to a temperature of approximately 4°C (+/- 2°C). The coolers were sealed for transport and shipped to Eurofins Lancaster analytical laboratory under chain of custody. Laboratory data was qualified by a GHD chemist and an ADEC lab checklist was completed.

2.4 Purged Groundwater Disposal

Approximately 8.1 gallons of groundwater not used for sampling was filtered through granular activated carbon (GAC) and purged to the ground surface in the center of the site to ensure no offsite runoff.

3. Results and Findings

3.1 Groundwater Analytical Methods

Collected groundwater samples were analyzed for one or more of the following:

- Gasoline range organics (GRO) by Alaska Series Method AK101
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX), and methyl tertiary-butyl ether (MTBE) by method SW 846 8260B
- Ethylene dibromide (EDB) by method SW 846 8011

- Lead by method SW 846 6010B

3.2 Groundwater Sampling Results

With the exception of 0.040 milligrams per liter (mg/L) benzene in MW-3, no petroleum hydrocarbons were detected above cleanup levels in collected samples from MW-3 or MW-14. No MTBE was detected above cleanup levels in any collected sample. Monitoring well MW-5R contained the highest concentrations of GRO (8.5 mg/L), benzene (3.7 mg/L) and MTBE (0.10 mg/L). MW-7 contained the highest concentrations of ethylbenzene (0.071 mg/L) and xylenes (0.87 mg/L). Current groundwater analytical results are presented in Table 1. Historical groundwater analytical results are presented in Table 2. Groundwater analytical data for PAHs are presented in Table 3. GRO and benzene concentrations are presented on Figure 2.

The laboratory analytical report is presented in Appendix D. Petroleum hydrocarbon concentration graphs are presented in Appendix E.

Laboratory data was qualified by a senior GHD chemist. Based on the quality assurance / quality control review, the data submitted were judged to be acceptable for use with the qualifications noted. Sample temperature at the time of laboratory receipt was 22.0°C; therefore non-detect values for VOC, GRO and EDB were rejected due to elevated temperature. The ADEC Laboratory Data Review Checklist and memorandum are presented in Appendix F.

4. Conclusions and Recommendations

Petroleum hydrocarbon concentrations in groundwater are consistent with historical data. GHD will continue semiannual groundwater monitoring and sampling in 2019.



about GHD

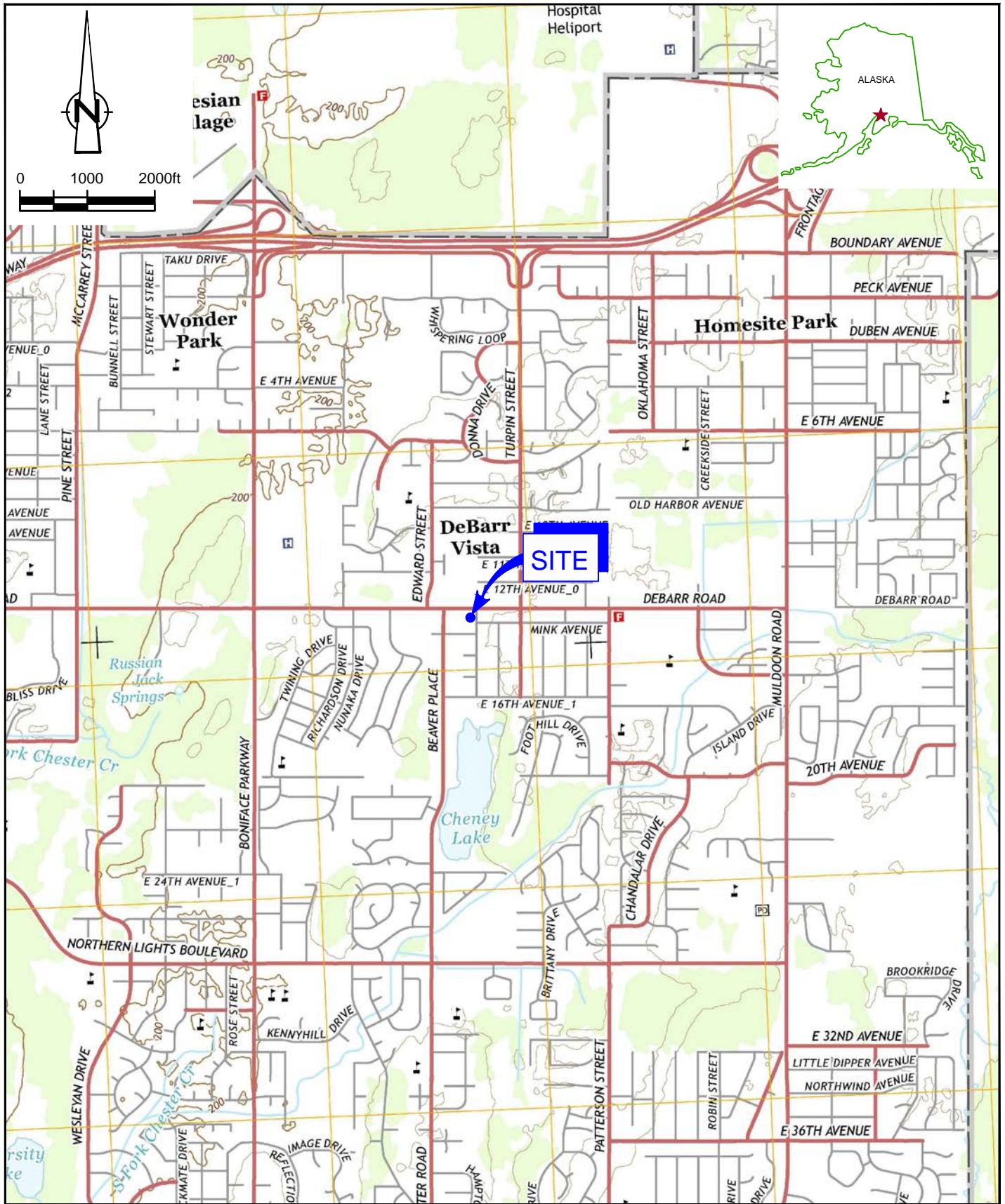
GHD is one of the world's leading professional services companies operating in the global markets of water, energy and resources, environment, property and buildings, and transportation. We provide engineering, environmental, and construction services to private and public sector clients.

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Figures



SOURCE: USGS QUAD MAP; ANCHORAGE, AK A-8 NE, 2015.



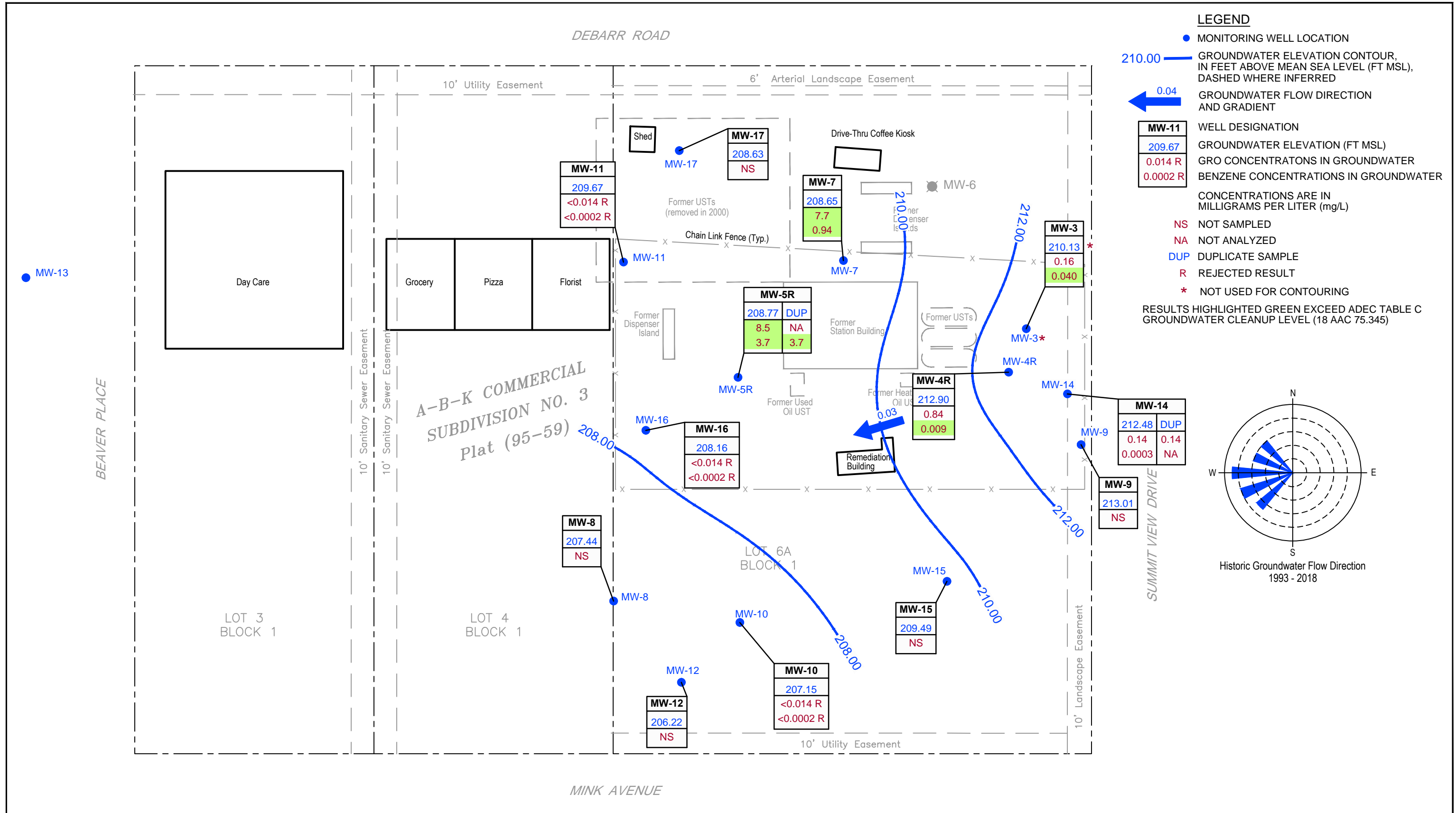
FORMER CHEVRON-BRANDED STATION 90430
 6470 DEBARR ROAD
 ANCHORAGE, ALASKA

65001-940418

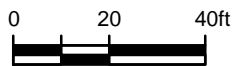
Oct 3, 2018

VICINITY MAP

FIGURE 1



Source: Basemap provided by Arcadis



FORMER CHEVRON-BRANDED STATION 90430
 6470 DEBARR ROAD
 ANCHORAGE, ALASKA

65001-940418

Nov 8, 2018

GROUNDWATER ELEVATION CONTOUR AND HYDROCARBON
 CONCENTRATION MAP - AUGUST 29, 2018

FIGURE 2

Tables

Table 1
Current Groundwater Analytical Results
Former Chevron-Branded Service Station 90430
6470 DeBarr Road
Anchorage, Alaska

Location	Date	TOC	DTW	GWE	HYDROCARBONS		PRIMARY VOCS					ADDITIONAL ANALYTES		
					TPH	GRO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	1,2-DCA	EDB	Lead
	Units	ft msl	ft btoc	ft msl	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
ADEC Groundwater Cleanup Levels					1.5	2.2	0.0046	1.1	0.015	0.19	0.14	0.0017	0.000075	0.015
MW-3	8/29/2018	221.47*	11.34	210.13	--	0.16	0.04	0.0004 J	0.002	0.004 J	--	--	--	--
MW-4R	8/29/2018	223.21	10.31	212.90	--	0.84	0.009	0.11	0.041	0.18	--	--	<0.0000096 R / <0.0000097 R	<0.0071 / <0.0071
MW-5R	8/29/2018	224.73	15.96	208.77	--	8.5	3.7 / 3.7	<0.002 R / <0.002 R	<0.002 / 0.003 J	0.007 J / <0.002 R	0.10 / 0.11	--	--	--
MW-7	8/29/2018	224.52	15.87	208.65	--	7.7	0.94	0.1	0.71	0.87	<0.002 R	--	--	--
MW-8	8/29/2018 ¹	226.24	18.80	207.44	--	--	--	--	--	--	--	--	--	--
MW-9	8/29/2018 ¹	222.19	9.18	213.01	--	--	--	--	--	--	--	--	--	--
MW-10	8/29/2018	222.57	15.42	207.15	--	<0.014 R	<0.0002 R	<0.0002 R	<0.0002 R	<0.0005 R	0.0007 J	--	--	--
MW-11	8/29/2018	225.73	16.06	209.67	--	<0.014 R	<0.0002 R	<0.0002 R	<0.0002 R	<0.0005 R	--	--	--	--
MW-12	8/29/2018 ¹	222.27	16.05	206.22	--	--	--	--	--	--	--	--	--	--
MW-14	8/29/2018	222.16	9.68	212.48	--	0.14 / 0.14	0.0003 J	0.014	0.006	0.024	--	--	--	--
MW-15	8/29/2018 ¹	226.12	16.63	209.49	--	--	--	--	--	--	--	--	--	--
MW-16	8/29/2018	223.57	15.41	208.16	--	<0.014 R	<0.0002 R	<0.0002 R	<0.0002 R	<0.0005 R	--	--	--	--
MW-17	8/29/2018 ¹	223.07	14.44	208.63	--	--	--	--	--	--	--	--	--	--
Trip Blank	8/29/2018	--	--	--	--	<0.014 R	<0.0002 R	<0.0002 R	<0.0002 R	<0.0005 R	--	--	<0.0000098 R	--

Table 1

**Current Groundwater Analytical Results
Former Chevron-Branded Service Station 90430
6470 DeBarr Road
Anchorage, Alaska**

Notes and Abbreviations

TOC = top of casing

DTW = depth to water

GWE = groundwater elevation

TPH = total petroleum hydrocarbons

GRO = gasoline range organics by Alaska Series Method AK101

Benzene, toluene, ethylbenzene, and total xylenes by Environmental Protection Agency (EPA) Method 8021B or 8260B

Total Xylenes = Sum of m-, o-, and p-xylenes

MTBE = methyl tertiary-butyl ether

1,2-DCA - 1,2-dichloroethane

EDB - 1,2-dibromoethane

ADEC = Alaska Department of Environmental Conservation

^a = Levels established in ADEC Table C Groundwater Cleanup Levels (18 AAC 75.345)**BOLD** = Indicates concentration above the ADEC Table C Groundwater Cleanup Level

ft msl = feet above mean sea level

ft btoc = feet below top of casing

mg/L = milligrams per liter

-- = Not measured / not analyzed

<x = Constituent not detected above x milligrams per liter

x / y = Sample results / blind duplicate results

R = Rejected result due to elevated sample temperature

* TOC adjusted by 1.05 ft cut.

¹ Gauge only

Table 2
Historical Groundwater Analytical Results
Former Chevron-Branded Service Station 90430
6470 DeBarr Road
Anchorage, Alaska

Location	Date	TOC	DTW	GWE	HYDROCARBONS		PRIMARY VOCS				ADDITIONAL ANALYTES			
					TPH	GRO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	1,2-DCA	EDB	Lead
	Units	ft msl	ft btoc	ft msl	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
ADEC Groundwater Cleanup Levels					1.5	2.2	0.0046	1.1	0.015	0.19	0.14	0.0017	0.000075	0.015
MW-3	08/26/1992	99.08	13.52	85.56	ND	0.023	0.017	0.026	ND	0.027	--	--	--	--
MW-3	08/24/1993	99.08	15.33	83.75	--	--	--	--	--	--	--	--	--	--
MW-3	11/08/1993	99.08	14.31	84.77	--	--	--	--	--	--	--	--	--	--
MW-3	12/12/1994	99.08	15.81	84.11	--	--	--	--	--	--	--	--	--	--
MW-3	03/20/1995	99.08	16.20	83.69	--	--	--	--	--	--	--	--	--	--
MW-3	06/16/1995	99.08	13.40	86.24	--	--	--	--	--	--	--	--	--	--
MW-3	08/25/1995	99.08							INACCESSIBLE					
MW-3	11/14/1995	98.89	14.26	86.21	--	--	--	--	--	--	--	--	--	--
MW-3	02/13/1996	98.89	15.98	84.49	--	--	--	--	--	--	--	--	--	--
MW-3	05/30/1996	98.89	14.14	86.29	--	--	--	--	--	--	--	--	--	--
MW-3	08/23/1996	98.89	15.75	84.59	--	--	--	--	--	--	--	--	--	--
MW-3	10/22/1996	98.89	15.80	83.63	--	--	--	--	--	--	--	--	--	--
MW-3	04/27/1997	98.89	14.14	84.81	--	--	--	--	--	--	--	--	--	--
MW-3	09/08/1997	98.89	11.61	87.28	--	155	7.99	45.4	5.94	32.6	--	--	--	--
MW-3	04/16/1998	98.89							INACCESSIBLE					
MW-3	09/17/1998	98.89							INACCESSIBLE					
MW-3	04/26/1999	98.89	14.79	84.24					NOT SAMPLED DUE TO THE PRESENCE OF LNAPL					
MW-3	10/04/1999	223.31	11.62	211.69	--	--	--	--	--	--	--	--	--	--
MW-3	05/24/2000	223.31	11.55	211.76	--	366	57.5	82	4.76	27.1	<1 / 0.0795	--	--	--
MW-3	09/28/2000	223.31	11.88	211.43	--	192	19.3	49	3.96	24	<2.5	--	--	--
MW-3	05/09/2001	223.31							NOT ABLE TO LOCATE					
MW-3	09/30/2001	223.31							NOT ABLE TO LOCATE					
MW-3	05/03/2002	223.31							INACCESSIBLE					
MW-3	10/01/2002	223.31							NOT ABLE TO LOCATE					
MW-3	06/03/2003	223.10	12.07	211.03	--	160	10	31	2.7	20	0.035	--	--	--
MW-3	10/05/2003	223.10	7.71	215.39	--	16	0.37	1.9	0.25	2.8	<0.002	--	--	--
MW-3	06/09/2004	223.10	11.24	211.86	--	24	1.3	3.5	0.43	3.8	0.016	--	--	--
MW-3	09/27/2004	223.10	7.23	215.87	--	11	0.23	2.1	0.5	5	<0.003	--	--	--
MW-3	05/15/2005	223.10	9.83	213.27	--	5.4	0.23	0.68	0.081	0.59	0.003	--	--	--
MW-3	09/26/2005	223.10	8.52	214.58	--	<0.01	<0.0005	<0.0005	<0.0005	0.0006	<0.002	--	--	--
MW-3	05/12/2006	223.10	10.84	212.26	--	75 / 70	2.9 / 2.9	14 / 12	1.9 / 1.5	9.8 / 7.8	0.029 / 0.03	--	--	--
MW-3	09/27/2006	222.52	9.65	212.87	--	180 / 150	3.4 / 3.2	25 / 25	4.3 / 3.8	22 / 20	<0.025 / <0.025	--	--	--
MW-3	05/23/2007	222.52	10.49	212.03	--	170 / 420	2.2 / 3.3	11 / 12	4.5 / 2.5	37 / 29	0.029 / 0.055	--	--	--
MW-3	09/20/2007	222.52	9.69	212.83	--	41 / 35	0.46 / 0.17	2.7 / 0.98	0.44 / 0.18	13 / 10	<0.003 / <0.003	--	--	--
MW-3	05/20/2008	222.52	9.30	213.22	--	5.3 / 5.1	0.19 / 0.21	0.78 / 0.91	0.17 / 0.18	1.5 / 1.5	0.003 / 0.003	--	--	--
MW-3	09/13/2008	222.52	12.10	210.42	--	120	11	19	1.6	27	0.013	--	--	--
MW-3	05/21/2009	222.52	10.46	212.06	--	100	2	26	2.1	13	<0.25	--	--	--
MW-3	09/15/2009	222.52	12.40	210.12	--	87	4.5	9.8	1.3	24	--	--	--	--
MW-3	06/22/2010	222.52	12.49	210.03	--	23	1.8	2.6	0.13	5.3	--	--	--	--
MW-3	10/03/2010	222.52	11.10	211.42	--	23	2.6	1.8	0.080	4.6	--	--	--	--
MW-3	04/18/2011	222.52	8.61	213.91	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0015	--	--	--	--
MW-3	10/05/2011	222.52	14.90	207.62	--	47	5.0	8.0	0.59	10	--	--	--	--
MW-3	05/24/2012	222.52	12.70	209.82	--	8.2	0.31	0.50	0.076	1.6	--	--	--	--
MW-3	08/02/2012	222.52							WELL DRY					
MW-3	05/14/2013	222.52	9.70	212.82	--	--	--	--	--	--	--	--	--	--
MW-3	05/15/2013	--	--	--	--	<0.050	<0.00024	0.00059 J	<0.00024	0.0011 J	--	--	--	--
MW-3 ^{HS}	05/15/2013	--	--	--	--	<0.050	<0.00024	<0.00023	<0.00024	0.00086 J	--	--	--	--
MW-3	09/17/2013	222.52	9.68	212.84	--	0.17	0.024	0.0012	<0.00024	0.018	--	--	--	--
MW-3	04/29/2014	222.52	10.20	212.32	--	--	--	--	--	--	--	--	--	--
MW-3	05/01/2014	--	--	--	--	<0.050	<0.00015	0.00076 J	0.00024 J	<0.00040	--	--	--	--
MW-3 ^{HS}	05/01/2014	--	--	--	--	<0.050	<0.00015	<0.00011	<0.00016	<0.00040	--	--	--	--
MW-3	10/03/2014	222.52	10.95	211.57	--	<0.050	0.0056	0.0011	0.0012	0.0049	--	--	--	--

Table 2
Historical Groundwater Analytical Results
Former Chevron-Branded Service Station 90430
6470 DeBarr Road
Anchorage, Alaska

Location	Date	TOC	DTW	GWE	HYDROCARBONS		PRIMARY VOCS				ADDITIONAL ANALYTES			
					TPH	GRO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	1,2-DCA	EDB	Lead
	Units	ft msl	ft btoc	ft msl	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
ADEC Groundwater Cleanup Levels					1.5	2.2	0.0046	1.1	0.015	0.19	0.14	0.0017	0.000075	0.015
MW-3	05/05/2015	222.52	12.85	209.67	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0015	--	--	--	--
MW-3	11/05/2015	222.52	10.28	212.24	--	<0.010	<0.0005	<0.0005	<0.0005	0.0006 J	--	--	--	--
MW-3	04/18/2016 ¹	222.52	12.31	210.21	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--	--
MW-3	09/26/2016 ¹	222.52	10.44	212.08	--	<0.010	<0.0005	<0.0005	<0.0005	0.0006 J	--	--	<0.0000095	<0.0062
MW-3	04/25/2017 ¹	222.52	10.15	212.37	--	0.77	0.002	0.035	0.013	0.20	--	--	--	--
MW-3	10/05/2017 ¹	222.52	11.09	211.43	--	0.11	0.023	0.0005 J	0.007	0.010	--	--	--	--
MW-3	04/23/2018	222.52	10.54	211.98	--	0.067 J	<0.0005	0.002	<0.0005	0.017	--	--	--	--
MW-3	08/29/2018	221.47*	11.34	210.13	--	0.16	0.04	0.0004 J	0.002	0.004 J	--	--	--	--
MW-4	08/26/1992	99.63	15.35	84.28	ND	ND	0.0033	0.005	ND	ND	--	--	--	--
MW-4	05/17/1993	99.63	13.49	86.14	ND	0.085	0.004	0.005	ND	ND	--	--	--	--
MW-4	08/24/1993	99.63	16.08	83.55	--	--	--	--	--	--	--	--	--	--
MW-4	11/08/1993	99.63	15.60	84.03	--	--	--	--	--	--	--	--	--	--
MW-4	12/12/1994	99.63	16.95	82.69	--	--	--	--	--	--	--	--	--	--
MW-4	03/20/1995	99.63	15.20	84.56	--	--	--	--	--	--	--	--	--	--
MW-4	06/16/1995	99.63	15.25	84.62	--	--	--	--	--	--	--	--	--	--
MW-4	08/25/1995	99.63							INACCESSIBLE					
MW-4	11/14/1995	99.93	15.95	84.27	--	--	--	--	--	--	--	--	--	--
MW-4	02/13/1996	99.93	17.37	82.62	--	--	--	--	--	--	--	--	--	--
MW-4	05/30/1996	99.93	18.68	82.65	--	--	--	--	--	--	--	--	--	--
MW-4	08/23/1996	99.93	21.22	81.16	--	--	--	--	--	--	--	--	--	--
MW-4	10/22/1996	99.93	18.31	81.99	--	--	--	--	--	--	--	--	--	--
MW-4	04/27/1997	99.93	20.70	81.12	--	--	--	--	--	--	--	--	--	--
MW-4	09/08/1997	99.93	16.29	83.64	--	482	43.5	89.7	10.1	50.6	--	--	--	--
MW-4	04/16/1998	99.93	17.60	82.33	--	522 / 254	43.9 / 21.6	79.5 / 43.6	10.8 / 6.03	56.1 / 31.8	--	--	--	--
MW-4	09/17/1998	99.93	16.85	83.08	--	323 / 312	41 / 40.9	57.4 / 57.2	6.6 / 6.46	34.6 / 33.9	--	--	--	--
MW-4	04/26/1999	99.93	19.92	80.66					NOT SAMPLED DUE TO THE PRESENCE OF LNAPL					
MW-4	10/04/1999	224.41	12.81	211.60	--	--	--	--	--	--	--	--	--	--
MW-4	05/24/2000	224.41	15.50	209.08					NOT SAMPLED DUE TO THE PRESENCE OF LNAPL (SKIMMER PRESENT IN WELL)					
MW-4	09/28/2000	224.41	15.74	208.72					NOT SAMPLED DUE TO THE PRESENCE OF LNAPL (SKIMMER PRESENT IN WELL)					
MW-4	05/09/2001	224.41	18.00	206.59					NOT SAMPLED DUE TO THE PRESENCE OF LNAPL (SKIMMER PRESENT IN WELL)					
MW-4	09/30/2001	224.41	18.39	206.23					NOT SAMPLED DUE TO THE PRESENCE OF LNAPL (SKIMMER PRESENT IN WELL)					
MW-4	05/03/2002	224.41	16.05	208.57					NOT SAMPLED DUE TO THE PRESENCE OF LNAPL (SKIMMER PRESENT IN WELL)					
MW-4	10/01/2002	224.41	14.60	210.03					NOT SAMPLED DUE TO THE PRESENCE OF LNAPL (SKIMMER PRESENT IN WELL)					
MW-4	06/03/2003	224.46	15.85	208.76					NOT SAMPLED DUE TO THE PRESENCE OF LNAPL (SKIMMER PRESENT IN WELL)					
MW-4	10/05/2003	224.46	15.13	209.34	--	310	9.3	33	6.5	36	10	--	--	--
MW-4	06/09/2004	224.46	13.93	210.67	--	370	12	69	11	66	3.8	--	--	--
MW-4	09/27/2004	224.46	13.75	210.71	--	130	21	14	3.7	16	5.1	--	--	--
MW-4	05/15/2005	224.46	12.11	212.35	--	430	19	66	9.1	57	0.67	--	--	--
MW-4	09/26/2005	224.46	13.63	210.83	--	1.7	0.34	0.27	0.022	0.13	0.004	--	--	--
MW-4	05/12/2006	224.46	13.56	210.90	--	97	9.8	7.7	3	12	3.6	<0.002	<0.002	--
MW-4R	09/27/2006	223.21	10.35	212.86	--	72	7.8	12	0.67	4.6	<0.01	<0.01	<0.0000098	--
MW-4R	05/23/2007	223.21	10.55	212.66	--	31	2	3.4	0.37	3.1	<0.005	<0.005	<0.0000097	--
MW-4R	09/20/2007	223.21	9.89	213.32	--	2.2	0.2	0.35	0.048	0.29	<0.0005	<0.0005	<0.0000097	--
MW-4R	05/20/2008	223.21	9.11	214.10	--	1 / 0.9	0.008 / 0.007	0.11 / 0.09	0.025 / 0.022	0.18 / 0.15	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0000094 / <0.0000093	--
MW-4R	09/13/2008	223.21	12.46	210.75	--	110	27	27	0.8	7.8	<0.025	<0.025	<0.0000098	--
MW-4R	05/21/2009	223.21	10.55	212.66	--	0.84 / 2.7	0.075 / 0.23	0.13 / 0.37	0.023 / 0.064	0.11 / 0.32	<0.0025 / <0.0025	<0.0005 / <0.0005	<0.0000097 / <0.0000096	--
MW-4R	09/15/2009	223.21	12.77	210.44	--	1.2 / 1.2	0.19 / 0.18	0.13 / 0.13	0.013 / 0.013	0.15 / 0.14	--	--	<0.0000098 / <0.000010	0.0069 J/0.0069 J
MW-4R	06/22/2010	223.21	12.63	210.58	--	7.0	1.5	1.4	0.024	0.38	--	--	<0.000018	0.0069 J
MW-4R	10/03/2010	223.21	11.65	211.56	--	2.1	0.39	0.29	0.029	0.17	--	--	<0.0000098	<0.0069
MW-4R	04/18/2011	223.21	10.29	212.92	--	<0.010 / <0.010	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0015 / <0.0015	--	--	<0.0000095 / <0.0000094	0.0185 / 0.0209

Table 2

Historical Groundwater Analytical Results
Former Chevron-Branded Service Station 90430
6470 DeBarr Road
Anchorage, Alaska

Location	Date	TOC	DTW	GWE	HYDROCARBONS		PRIMARY VOCS				ADDITIONAL ANALYTES			
					TPH	GRO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	1,2-DCA	EDB	Lead
	Units	ft msl	ft btoc	ft msl	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
ADEC Groundwater Cleanup Levels					1.5	2.2	0.0046	1.1	0.015	0.19	0.14	0.0017	0.000075	0.015
MW-4R	10/05/2011	223.21	15.05	208.16	--	63 / 64	11 / 11	15 / 15	0.63 / 0.62	5.4 / 5.4	--	--	<0.0000099 / <0.0000097	0.0063 J / 0.0064 J
MW-4R	05/24/2012	223.21	12.72	210.49	--	21 J / 150 J	1.9 J / 18 J	3.5 J / 32 J	0.19 J / 1.6 J	1.8 J / 11 J	--	--	<0.0000096 / <0.0000096	<0.0022 / <0.0022
MW-4R	08/02/2012	223.21	17.99	205.22	--	--	--	--	NOT SAMPLED DUE TO INSUFFICIENT WATER					
MW-4R	05/14/2013	223.21	10.03	213.18	--	--	--	--	--	--	--	--	--	--
MW-4R	05/15/2013	--	--	--	--	58.3	3.3	7.6	0.88	6.3	--	--	0.000016	<0.0019
MW-4R ^{HS}	05/15/2013	--	--	--	--	0.13	0.0059	0.078	0.0051	0.051	--	--	<0.0000027	<0.0019
MW-4R	09/17/2013	223.21	10.21	213.00	--	0.66 J / 4.8 J	0.013 J / 0.050 J	0.15 J / 0.38 J	0.033 J / 0.13 J	0.22 J / 0.55 J	-- / --	--	<0.0000026 / <0.0000026	<0.0012 / <0.0024 J
MW-4R	04/29/2014	223.21	10.56	212.65	--	--	--	--	--	--	--	--	--	--
MW-4R	05/01/2014	--	--	--	--	66.9	3.1	11.6	1.7	8.7	--	--	<0.0000044 / <0.0000044	0.00032 / 0.00037
MW-4R ^{HS}	05/01/2014	--	--	--	--	0.44	0.0042	0.037	0.0049	0.16	--	--	<0.0000044 / <0.0000044	0.0023 J / 0.00096 J
MW-4R	10/03/2014	223.21	9.25	213.96	--	10.6 J/14.6	0.14 J/0.49 J	0.69 J/2.5 J	0.21 J/0.46 J	1.2 J/2.5 J	--	--	<0.000014/<0.000014	0.00021/0.00013
MW-4R	05/05/2015	223.21	11.82	211.39	--	82 / 93	2.7 / 3.0	15 / 20	2.4 / 2.6	11 / 12	--	--	<0.0000097 / <0.0000097	<0.0047 / <0.0047
MW-4R	04/18/2016 ¹	223.21	11.36	211.85	--	28 J / 14 J	0.25 / 0.25	1.2 / 1.1	0.74 / 0.61	3.4 / 2.7	--	--	<0.0000095 / 0.000053	0.0067 J / --
MW-4R	09/26/2016 ¹	223.21	9.84	213.37	--	77 / 76	3.8 / 4.3	15 / 17	1.8 / 2.1	8.9 / 9.5	--	--	<0.000017 / <0.000017	<0.0062 / <0.0062
MW-4R	04/26/2017	223.21	8.98	214.23	--	46 / 56	2.9 / 2.9	12 / 13	1.7 / 1.7	9.0 / 8.9	--	--	<0.0000096 / <0.0000097	<0.0062 / <0.0062
MW-4R	10/04/2017	223.21	9.95	213.26	--	17 / 22	0.77 / 0.83	3.9 / 4.8	0.73 / 0.79	3.3 / 3.6	--- / <0.005	--	<0.0000098 / <0.0000097	<0.0060 / <0.0060
MW-4R	04/23/2018	223.21	9.30	213.91	--	1.3 / 1.9	0.093 / 0.064	0.37 / 0.31	0.18 / 0.14	0.65 / 0.50	--	--	<0.0000094 / <0.0000095	<0.0060 / <0.0060
MW-4R	08/29/2018	223.21	10.31	212.90	--	0.84	0.009	0.11	0.041	0.18	--	--	<0.0000096 R / <0.0000097 R	<0.0071 / <0.0071
MW-5	08/26/1992	100.01	16.75	83.26	ND	ND	ND	ND	ND	ND	--	--	--	--
MW-5	05/17/1993	100.01	16.49	83.52	ND	0.076	0.0005	ND	ND	ND	--	--	--	--
MW-5	08/24/1993	100.01	17.16	82.85	ND	ND	0.002	ND	ND	ND	--	--	--	--
MW-5	11/08/1993	100.01	16.80	83.21	ND	ND	0.001	ND	ND	ND	--	--	--	--
MW-5	03/20/1994	100.01	17.69	82.32	ND	ND	0.0006	ND	ND	ND	--	--	--	--
MW-5	06/04/1994	100.01	16.87	83.14	ND	ND	0.0009	ND	ND	ND	--	--	--	--
MW-5	08/18/1994	100.01	17.23	82.78	ND	ND	ND	ND	ND	ND	--	--	--	--
MW-5	08/25/1995	100.01	17.23	--	ND	0.88	0.65	0.0018	ND	ND	--	--	--	--
MW-5	11/14/1995	100.18	16.93	83.25	ND	0.71	0.25	ND	ND	ND	--	--	--	--
MW-5	02/13/1996	100.18	17.78	82.40	ND	27	5.5	0.12	ND	ND	--	--	--	--
MW-5	05/30/1996	100.18	18.26	81.92	--	7.85	2.79	<0.0005	0.00223	<0.0005	--	--	--	--
MW-5	08/23/1996	100.18	18.40	81.78	--	0.239	0.0926	<0.0005	<0.0005	<0.001	--	--	--	--
MW-5	10/22/1996	100.18	18.80	81.38	--	7.01 / 7.46	0.758 / 0.893	<0.0005 / <0.0005	<0.0005 / 0.000566	<0.001 / <0.001	--	--	--	--
MW-5	04/27/1997	100.18	17.96	82.22	--	0.348	<0.0005	<0.0005	<0.0005	<0.001	--	--	--	--
MW-5	09/08/1997	100.18	16.85	83.33	--	0.52 / 0.733	<0.0005 / 0.00225	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.001 / <0.001	--	--	--	--
MW-5	04/16/1998	100.18	16.85	83.33	--	1.55	0.251	<0.0005	<0.0005	<0.001	--	--	--	--
MW-5	09/17/1998	100.18	17.15	83.03	--	1.87	0.0249	<0.0005	<0.0005	<0.001	--	--	--	--
MW-5	04/26/1999	100.18	17.04	83.14	--	4.32 / 4.78	2.18 / 2.14	<0.05 / <0.05	<0.05 / <0.05	<0.05 / <0.05	53.7 / 69.7 / 53.4	--	--	--
MW-5	10/04/1999	100.18	17.11	--	--	0.309	0.141	<0.0005	<0.0005	<0.0005	38.5	--	--	--
MW-5	05/24/2000	100.18	16.80	83.38	--	16.8	8.63	<0.1	<0.1	<0.2	72.1 / 38.4	--	--	--
MW-5	09/28/2000	100.18	16.97	83.21	--	<12.5	0.71	<0.125	<0.125	<0.25	10.3	--	--	--
MW-5	05/09/2001	100.18	--	--	--	--	--	--	UNABLE TO LOCATE					
MW-5	09/30/2001	100.18	17.37	82.81	--	1.05	0.52	<0.005	<0.005	<0.01	9.58 / 18.5 / 15.5	--	--	--
MW-5	05/03/2002	100.18	16.30	83.88	--	<0.05	0.0082	0.000539	<0.0005	<0.001	0.366 / 0.365 / 0.311	--	--	--
MW-5	10/01/2002	100.18	16.36	83.82	--	--	--	--	--	--	--	--	--	--
MW-5	12/05/2002	224.60	16.74	207.86	--	44 / 43	19 / 17	0.42 / 0.23	0.42 / 0.41	0.013 / 0.034	58 / 52	--	--	--
MW-5	06/03/2003	224.60	16.96	207.64	--	23	57	<0.01	0.53	<0.01	70	--	--	--
MW-5	10/05/2003	224.60	16.38	208.22	--	23	9.9	<0.025	0.37	<0.025	29	--	--	--
MW-5	06/09/2004	224.60	16.71	207.89	--	30	13	<0.005	0.48	0.019	36	--	--	--
MW-5	09/27/2004	224.60	16.29	208.31	--	23	9.5	0.11	0.45	<0.01	17	--	--	--
MW-5	05/15/2005	224.60	--	--	--	--	--	INACCESSIBLE -- DIRT PILE OVER WELL						
MW-5	09/26/2005	224.60	--	--	--	--	--	INACCESSIBLE -- POSSIBLY DESTROYED						

Table 2
Historical Groundwater Analytical Results
Former Chevron-Branded Service Station 90430
6470 DeBarr Road
Anchorage, Alaska

Location	Date	TOC	DTW	GWE	HYDROCARBONS		PRIMARY VOCS				ADDITIONAL ANALYTES			
					TPH	GRO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	1,2-DCA	EDB	Lead
	Units	ft msl	ft btoc	ft msl	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
ADEC Groundwater Cleanup Levels					1.5	2.2	0.0046	1.1	0.015	0.19	0.14	0.0017	0.000075	0.015
MW-5R	09/27/2006	224.73	16.17	208.56	--	30	11	0.29	0.43	0.02	4.4	--	--	--
MW-5R	05/23/2007	224.73	16.17	208.56	--	27	7.6	0.13	0.36	0.089	7.7	--	--	--
MW-5R	09/20/2007	224.73	16.15	208.58	--	28	10	<0.0005	0.42	0.011	12	--	--	--
MW-5R	05/20/2008	224.73	16.12	208.61	--	1.7	0.56	<0.0005	0.022	<0.0005	0.94	--	--	--
MW-5R	09/13/2008	224.73	16.38	208.35	--	3.8 / 3.2	1.4 / 1.2	<0.001 / <0.001	0.017 / 0.006	<0.001 / <0.001	1.6 / 1.5	--	--	--
MW-5R	05/21/2009	224.73	16.55	208.18	--	4.6	2	<0.0025	0.0042	<0.0075	0.91	--	--	--
MW-5R	09/15/2009	224.73	16.74	207.99	--	<0.010	0.0010 J	<0.0005	<0.0005	<0.0015	--	--	--	--
MW-5R	06/22/2010	224.73	17.07	207.66	--	<0.010	0.0010 J	<0.0005	<0.0005	<0.0005	0.20	--	--	--
MW-5R	10/03/2010	224.73	16.50	208.23	--	0.012 J	<0.0005	<0.0005	<0.0005	<0.0015	0.60	--	--	--
MW-5R	04/18/2011	224.73	16.35	208.38	--	0.019 J	<0.0005	<0.0005	<0.0005	<0.0005	0.14	--	--	--
MW-5R	10/05/2011	224.73	16.80	207.93	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0015	0.38	--	--	--
MW-5R	05/24/2012	224.73	16.11	208.62	--	0.090 J	<0.0005	<0.0005	<0.0005	<0.0005	1.2	--	--	--
MW-5R	08/02/2012	224.73	15.98	208.75	--	0.014 J	<0.0005	<0.0005	<0.0005	<0.0015	1.2	--	--	--
MW-5R	05/14/2013	224.73	15.48	209.25	--	--	--	--	--	--	--	--	--	--
MW-5R	05/15/2013	--	--	--	--	<0.050	0.00049 J	<0.00023	<0.00024	<0.00072	0.98	--	--	--
MW-5R ^{HS}	05/15/2013	--	--	--	--	0.075 J	<0.0060	<0.0058	<0.0059	<0.018	1.6	--	--	--
MW-5R	09/17/2013	224.73	13.48	211.25	--	0.54	2.0	0.0075 J	0.0043 J	<0.0072	1.1	--	--	--
MW-5R	04/29/2014	224.73	15.28	209.45	--	--	--	--	--	--	--	--	--	--
MW-5R	05/01/2014	--	--	--	--	<0.050 / <0.050	<0.0015 / <0.0015	0.0049 J / <0.0028	<0.0016 / <0.0016	<0.0040 / <0.0040	1.4 / 1.5	--	--	--
MW-5R ^{HS}	05/01/2014	--	--	--	--	<0.050 / <0.050	<0.0038 / <0.0038	<0.0028 / <0.0084	<0.0041 / <0.0041	<0.010 / <0.010	3.0 / 3.2	--	--	--
MW-5R	10/03/2014	224.73	15.85	208.88	--	0.13	0.030 J	<0.0055	<0.0082	<0.020	2.0	--	--	--
MW-5R	05/05/2015	224.73	16.38	208.35	--	0.070 J / --	0.013 / 0.011	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	0.93 / 0.93	--	--	--
MW-5R	11/05/2015	224.73	16.15	208.58	--	8.9	2.9	<0.005	<0.005	<0.005	0.36	--	--	--
MW-5R	04/18/2016 ¹	224.73	16.21	208.52	--	15	5.8	<0.005	<0.005	<0.005	0.29	--	--	--
MW-5R	09/26/2016 ¹	224.73	15.87	208.86	--	8.2	4.3	<0.003	<0.003	<0.003	--	--	<0.0000096	0.0698
MW-5R	04/25/2017 ¹	224.73	15.12	209.61	--	3.1 / 3.2	1.3 / 1.3	<0.003 / 0.006	<0.003 / <0.003	<0.003 / 0.003 J	--	--	--	--
MW-5R	10/05/2017 ¹	224.73	16.28	208.45	--	13 / 13	5.8 / 5.6	<0.010 / <0.013	<0.010 / <0.013	<0.010 / <0.013	0.16 / ----	--	--	--
MW-5R	04/23/2018	224.73	15.74	208.99	--	8.7	4.4 / 4.2	<0.005 / <0.005	<0.005 / <0.005	<0.005 / <0.005	0.20 / 0.20	--	--	--
MW-5R	08/29/2018	224.73	15.96	208.77	--	8.5	3.7 / 3.7	<0.002 R / <0.002 R	<0.002 / 0.003 J	0.007 J / <0.002 R	0.10 / 0.11	--	--	--
MW-6	08/26/1992	98.33	12.96	85.37	ND	ND	ND	ND	ND	ND	--	--	--	--
MW-6	05/17/1993	98.33	12.44	85.89	ND	0.09	0.01	0.002	ND	ND	--	--	--	--
MW-6	08/24/1993	98.33	13.18	85.15	ND	ND	ND	ND	ND	ND	--	--	--	--
MW-6	11/08/1993	98.33	12.64	85.69	ND	ND	ND	ND	ND	ND	--	--	--	--
MW-6	11/14/1995	99.02	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	02/13/1996	99.02	14.51	84.51	--	--	--	--	--	--	--	--	--	--
MW-6	05/30/1996	99.02	13.66	85.36	--	--	--	--	--	--	--	--	--	--
MW-6	08/23/1996	99.02	14.41	84.61	--	--	--	--	--	--	--	--	--	--
MW-6	10/22/1996	99.02	14.86	84.16	--	--	--	--	--	--	--	--	--	--
MW-6	04/27/1997	99.02	13.95	85.07	--	--	--	--	--	--	--	--	--	--
MW-6	09/08/1997	99.02	12.38	86.64	--	--	--	--	--	--	--	--	--	--
MW-6	04/16/1998	99.02	13.45	85.57	--	--	--	--	--	--	--	--	--	--
MW-6	09/17/1998	99.02	13.65	85.37	--	--	--	--	--	--	--	--	--	--
MW-6	04/26/1999	99.02	14.19	84.83	--	--	--	--	--	--	--	--	--	--
MW-6	10/04/1999	223.38	11.72	211.66	--	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.01	--	--	--
MW-6	05/24/2000	223.38	12.85	210.53	--	--	--	--	--	--	--	--	--	--
MW-6	09/28/2000	223.38	12.31	211.07	--	--	--	--	--	--	--	--	--	--
MW-6	05/09/2001	223.38	13.84	209.54	--	--	--	--	--	--	--	--	--	--
MW-6	09/30/2001	223.38	14.01	209.37	--	--	--	--	--	--	--	--	--	--
MW-6	05/03/2002	223.38	11.55	211.83	--	--	--	--	--	--	--	--	--	--
MW-6	10/01/2002	223.38	10.76	212.62	--	--	--	--	--	--	--	--	--	--
MW-6	06/03/2003	223.42	13.45	209.97	--	--	--	--	--	--	--	--	--	--

Table 2
Historical Groundwater Analytical Results
Former Chevron-Branded Service Station 90430
6470 DeBarr Road
Anchorage, Alaska

Location	Date	TOC	DTW	GWE	HYDROCARBONS		PRIMARY VOCS				ADDITIONAL ANALYTES			
					TPH	GRO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	1,2-DCA	EDB	Lead
	Units	ft msl	ft btoc	ft msl	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
ADEC Groundwater Cleanup Levels					1.5	2.2	0.0046	1.1	0.015	0.19	0.14	0.0017	0.000075	0.015
MW-6	10/05/2003	223.42	10.93	212.49	--	--	--	--	--	--	--	--	--	--
MW-6	06/09/2004	223.42	12.98	210.44	--	--	--	--	--	--	--	--	--	--
MW-6	09/27/2004	223.42	10.81	212.61	--	--	--	--	--	--	--	--	--	--
MW-6	05/15/2005	223.42												
MW-6	09/26/2005	223.42												
MW-6	05/12/2006	223.42	16.65	206.77										
MW-7	08/26/1992	99.81	16.24	83.57	16	150	4.8	20	1.4	38	--	--	--	--
MW-7	05/17/1993	99.81	16.24	83.57	7	62	2.3	8.4	0.9	20	--	--	--	--
MW-7	08/24/1993	99.81	16.57	83.24	ND	78	1.7	6.9	0.88	20	--	--	--	--
MW-7	11/08/1993	99.81	16.35	83.46	1.4	52	1.4	5.5	0.63	18	--	--	--	--
MW-7	03/20/1994	99.81	17.07	82.74	6.9	55	1.3	6	0.88	15	--	--	--	--
MW-7	06/04/1994	99.81	16.46	83.35	7.5	76	0.63	3.8	0.49	21	--	--	--	--
MW-7	08/18/1994	99.81	16.60	83.21	10	56	0.6	3.4	0.47	19	--	--	--	--
MW-7	12/12/1994	99.81	16.88	82.93	9	65	0.82	4.1	0.54	16	--	--	--	--
MW-7	03/20/1995	99.81	16.35	83.46	12	38	0.11	0.59	0.12	10	--	--	--	--
MW-7	06/16/1995	99.81	16.95	82.86	--	45	0.26	1.5	0.25	10	--	--	--	--
MW-7	07/13/1995	99.81	--	--	18	--	--	--	--	--	--	--	--	--
MW-7	08/25/1995	99.81	16.09	--	40	38	0.35	1.9	0.32	7.6	--	--	--	--
MW-7	11/14/1995	99.87	16.20	83.67	16	37	0.43	2	0.3	9.5	--	--	--	--
MW-7	02/13/1996	99.87	16.81	83.06	14	53 / 45	0.44 / 0.43	2.5 / 2.6	0.42 / 0.4	13 / 13	--	--	--	--
MW-7	05/30/1996	99.87	17.23	82.64										
MW-7	08/23/1996	99.87	17.27	82.60										
MW-7	10/22/1996	99.87												
MW-7	04/27/1997	99.87	17.00	82.87	--	6.75	<0.01	<0.01	<0.01	0.672	--	--	--	--
MW-7	09/08/1997	99.87	16.62	83.25	--	2.11	0.00552	0.00737	0.00698	0.0621	--	--	--	--
MW-7	04/16/1998	99.87	16.80	83.07										
MW-7	09/17/1998	99.87	16.35	83.52	--	0.31	0.00147	0.000969	<0.0005	0.00791	--	--	--	--
MW-7	04/26/1999	99.87	16.17	83.70	--	<0.05	<0.0025	<0.0025	<0.0025	0.0027	1.2	--	--	--
MW-7	10/04/1999	224.26	16.41	207.85	--	<0.05	<0.0005	<0.0005	<0.0005	0.00075	2.31	--	--	--
MW-7	05/24/2000	224.26	16.68	207.58	--	0.0684	<0.00165	0.00408	<0.0011	0.00893	11.7 / 9.92	--	--	--
MW-7	09/28/2000	224.26	16.26	208.00	--	<10	<0.04	<0.1	<0.1	<0.2	5.99	--	--	--
MW-7	05/09/2001	224.26												
MW-7	09/30/2001	224.26												
MW-7	05/03/2002	224.26	15.81	208.45	--	<0.05	<0.0002	<0.0005	<0.0005	<0.001	0.0586 / 0.0785	--	--	--
MW-7	10/01/2002	224.26	16.80	207.46										
MW-7	12/05/2002	224.30	16.49	207.81	--	21	1.8	1.8	0.53	3.4	6.4	--	--	--
MW-7	06/03/2003	224.30	16.65	207.65	--	8.3	1.3	0.079	0.39	1.2	3.8	--	--	--
MW-7	10/05/2003	224.30	16.22	208.08	--	4.7	0.31	0.37	0.14	0.79	1	--	--	--
MW-7	06/09/2004	224.30	16.61	207.69	--	4.2	0.26	0.037	0.12	1.1	0.92	--	--	--
MW-7	09/27/2004	224.30	16.08	208.22	--	1.8	0.31	0.25	0.15	0.59	0.34	--	--	--
MW-7	05/15/2005	224.30												
MW-7	09/26/2005	224.30												
MW-7	05/12/2006	224.30												
MW-7	09/27/2006	224.52	16.48	208.04	--	26	1.1	2.4	0.81	3.4	0.23	--	--	--
MW-7	05/23/2007	224.52	16.50	208.02	--	42	3.7	4.6	1.3	5.2	0.72	--	--	--
MW-7	09/20/2007	224.52	16.36	208.16	--	63	11	10	2.2	7.7	1.7	--	--	--
MW-7	05/20/2008	224.52	16.37	208.15	--	7.8	0.44	0.99	0.27	1.8	0.096	--	--	--
MW-7	09/13/2008	224.52	16.49	208.03	--	64	4.1	11	2.4	9.4	0.35	--	--	--
MW-7	05/21/2009	224.52	16.76	207.76	--	48	6.1	7.5	1.4	5.1	0.21	--	--	--
MW-7	09/15/2009	224.52	16.92	207.60	--	75	9.2	15	2.6	9.1	--	--	--	--
MW-7	06/22/2010	224.52	17.36	207.16	--	19 / 21	0.70 / 0.75	2.5 / 2.9	0.57 / 0.59	3.2 / 3.3	0.040 / 0.039	--	--	--

Table 2
Historical Groundwater Analytical Results
Former Chevron-Branded Service Station 90430
6470 DeBarr Road
Anchorage, Alaska

Location	Date	TOC	DTW	GWE	HYDROCARBONS		PRIMARY VOCS				ADDITIONAL ANALYTES			
					TPH	GRO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	1,2-DCA	EDB	Lead
	Units	ft msl	ft btoc	ft msl	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
ADEC Groundwater Cleanup Levels					1.5	2.2	0.0046	1.1	0.015	0.19	0.14	0.0017	0.000075	0.015
MW-7	10/03/2010	224.52	17.03	207.49	--	23 / 19	1.9 / 1.6	3.3 / 2.8	0.62 / 0.58	3.0 / 2.7	0.061 / 0.054	--	--	--
MW-7	04/18/2011	224.52	16.89	207.63	--	4.7	0.40	1.4	0.27	1.6	0.016	--	--	--
MW-7	10/05/2011	224.52	17.20	207.32	--	38	0.94	7.9	1.2	7.3	0.019	--	--	--
MW-7	05/24/2012	224.52	16.31	208.21	--	--	--	--	--	--	--	--	--	--
MW-7	05/25/2012	--	--	--	--	13	0.35	1.9	0.37	2.1	0.006	--	--	--
MW-7	08/02/2012	224.52	16.04	208.48	--	29	1.8	4.0	0.92	4.1	0.015	--	--	--
MW-7	05/14/2013	224.52	15.50	209.02	--	--	--	--	--	--	--	--	--	--
MW-7	05/15/2013	--	--	--	--	14.4	1.0	1.1	0.40	1.8	0.0062	--	--	--
MW-7 ^{HS}	05/15/2013	--	--	--	--	17.0	1.1	1.3	0.46	2.0	0.0082	--	--	--
MW-7	09/17/2013	224.52	15.42	209.10	--	9.1 J	0.57	1.0	0.31	2.3	0.016	--	--	--
MW-7	04/29/2014	224.52	15.30	209.22	--	--	--	--	--	--	--	--	--	--
MW-7	05/01/2014	--	--	--	--	2.5	0.26	0.19	0.084	0.33	0.011	--	--	--
MW-7 ^{HS}	05/01/2014	--	--	--	--	11.7	1.5	1.7	0.43	1.6	0.0045 J	--	--	--
MW-7	10/03/2014	224.52	15.94	208.58	--	11.2	0.87	0.71	0.28	1.3	<0.0017	--	--	--
MW-7	05/05/2015	224.52	16.50	208.02	--	18	2.1	0.89	0.65	2.9	0.005 J	--	--	--
MW-7	11/05/2015	224.52	16.24	208.28	--	2.2	0.20	0.037	0.082	0.25	<0.005	--	--	--
MW-7	04/18/2016 ¹	224.52	16.17	208.35	--	6.4	0.64	0.17	0.36	0.98	<0.003	--	--	--
MW-7	09/26/2016 ¹	224.52	15.80	208.72	--	4.8	0.68	0.026	0.42	0.56	--	--	0.000038	0.029
MW-7	4/25/2017 ¹	224.52	15.02	209.50	--	1.1	0.096	0.087	0.051	0.17	--	--	--	--
MW-7	10/05/2017	224.52	16.09	208.43	--	3.0	0.31	0.013	0.20	0.30	0.001 J	--	--	--
MW-7	04/23/2018	224.52	15.60	208.92	--	4.2	0.54	0.13	0.34	0.46	<0.005	--	--	--
MW-7	08/29/2018	224.52	15.87	208.65	--	7.7	0.94	0.1	0.71	0.87	<0.002 R	--	--	--
MW-8	10/06/1994	101.00	20.51	80.49	--	ND	ND	ND	ND	ND	--	--	--	--
MW-8	12/12/1994	101.00	20.96	80.04	--	--	--	--	--	--	--	--	--	--
MW-8	03/20/1995	101.00	17.05	83.95	--	ND	ND	0.001	ND	0.003	--	--	--	--
MW-8	06/16/1995	101.00	18.94	82.06	--	ND	ND	ND	ND	ND	--	--	--	--
MW-8	08/25/1995	101.00	19.84	81.16	--	ND	ND	ND	ND	ND	--	--	--	--
MW-8	11/14/1995	101.32	19.64	81.68	--	ND	ND	ND	ND	ND	--	--	--	--
MW-8	02/13/1996	101.32	21.55	79.77	--	ND	ND	ND	ND	ND	--	--	--	--
MW-8	05/30/1996	101.32	22.53	78.79	--	<0.05 / <0.05	0.00116 / <0.0005	0.00109 / 0.000502	0.000618 / <0.0005	0.00204 / <0.0005	--	--	--	--
MW-8	08/23/1996	101.32	22.48	78.84	--	<0.05 / <0.05	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.001 / <0.001	--	--	--	--
MW-8	10/22/1996	101.32	22.60	78.72	--	<0.05	<0.0005	<0.0005	<0.0005	<0.001	--	--	--	--
MW-8	04/27/1997	101.32	21.93	79.39	--	<0.05 / <0.05	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.001 / <0.001	--	--	--	--
MW-8	09/08/1997	101.32	20.38	80.94	--	<0.05	<0.0005	<0.0005	<0.0005	<0.001	--	--	--	--
MW-8	04/16/1998	101.32	19.98	81.34	--	<0.05	<0.0005	0.000633	<0.0005	<0.001	--	--	--	--
MW-8	09/17/1998	101.32	20.23	81.09	--	<0.05	<0.0005	<0.0005	<0.0005	<0.001	--	--	--	--
MW-8	04/26/1999	101.32	22.60	78.72	--	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	--	--	--
MW-8	10/04/1999	225.69	21.01	204.68	--	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.01	--	--	--
MW-8	05/24/2000	225.69	18.40	207.29	--	<0.05	<0.0005	<0.0005	<0.0005	<0.001	<0.001 / <0.002	--	--	--
MW-8	09/28/2000	225.69	20.78	204.91	--	<0.05	<0.0002	<0.0005	<0.0005	<0.001	0.00125	--	--	--
MW-8	05/09/2001	225.69	21.11	204.58	--	<0.05	<0.0002	<0.0005	<0.0005	<0.001	<0.001	--	--	--
MW-8	09/30/2001	225.69	21.14	204.55	--	<0.05	<0.0002	<0.0005	<0.0005	<0.001	<0.001	--	--	--
MW-8	05/03/2002	225.69	21.31	204.38	--	<0.05	0.000216	<0.0005	<0.0005	<0.001	<0.001	--	--	--
MW-8	10/01/2002	225.69	22.58	203.11	--	--	--	--	NOT SAMPLED DUE TO INSUFFICIENT WATER			--	--	--
MW-8	12/05/2002	225.72	17.83	207.89	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--
MW-8	06/03/2003	225.72	18.72	207.00	--	<0.01 / <0.01	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.002 / <0.002	--	--	--
MW-8	10/05/2003	225.72	19.94	205.78	--	<0.01 / <0.01	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.002 / <0.002	--	--	--
MW-8	06/09/2004	225.72	17.58	208.14	--	<0.01 / <0.01	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.002 / <0.002	--	--	--
MW-8	09/27/2004	225.72	19.92	205.80	--	<0.01 / <0.01	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.002 / <0.002	--	--	--
MW-8	05/15/2005	225.72	16.36	209.36	--	<0.012 / <0.01	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.002 / <0.002	--	--	--
MW-8	09/26/2005	225.72	18.84	206.88	--	<0.01 / <0.01	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.002 / <0.002	--	--	--

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Location	Date	TOC	DTW	GWE	HYDROCARBONS		PRIMARY VOCS				ADDITIONAL ANALYTES			
					TPH	GRO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	1,2-DCA	EDB	Lead
	Units	ft msl	ft btoc	ft msl	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
ADEC Groundwater Cleanup Levels					1.5	2.2	0.0046	1.1	0.015	0.19	0.14	0.0017	0.000075	0.015
MW-8	05/12/2006	225.72	18.68	207.04	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	--	--
MW-8	09/27/2006	226.24	17.63	208.61	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	--	--
MW-8	05/23/2007	226.24	17.61	208.63	--	<0.01	<0.0005	<0.0005	<0.0005	0.002	<0.0005	<0.0005	--	--
MW-8	09/20/2007	226.24	19.19	207.05	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	--	--
MW-8	05/20/2008	226.24	16.80	209.44	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	--	--
MW-8	09/13/2008	226.24	18.85	207.39	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	--	--
MW-8	05/21/2009	226.24	18.75	207.49	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0015	<0.0025	--	--	--
MW-8	06/22/2010	226.24	18.76	207.48	--	--	--	--	--	--	--	--	--	--
MW-8	10/03/2010	226.24	18.73	207.51	--	--	--	--	--	--	--	--	--	--
MW-8	04/18/2011	226.24	19.87	206.37	--	--	--	--	--	--	--	--	--	--
MW-8	10/05/2011	226.24	19.49	206.75	--	--	--	--	--	--	--	--	--	--
MW-8	05/24/2012	226.24	16.32	209.92	--	--	--	--	--	--	--	--	--	--
MW-8	08/02/2012	226.24	18.15	208.09	--	--	--	--	--	--	--	--	--	--
MW-8	05/14/2013	226.24	16.56	209.68	--	--	--	--	--	--	--	--	--	--
MW-8	09/17/2013	226.24	12.79	213.45	--	--	--	--	--	--	--	--	--	--
MW-8	04/29/2014	226.24	15.36	210.88	--	--	--	--	--	--	--	--	--	--
MW-8	10/03/2014	226.24	16.05	210.19	--	--	--	--	--	--	--	--	--	--
MW-8	05/05/2015	226.24	18.59	207.65	--	--	--	--	--	--	--	--	--	--
MW-8	11/05/2015	226.24	17.41	208.83	--	--	--	--	--	--	--	--	--	--
MW-8	04/18/2016 ²	226.24	19.05	207.19	--	--	--	--	--	--	--	--	--	--
MW-8	09/26/2016 ²	226.24	18.51	207.73	--	--	--	--	--	--	--	--	--	--
MW-8	04/25/2017 ²	226.24	18.18	208.06	--	--	--	--	--	--	--	--	--	--
MW-8	10/04/2017 ²	226.24	18.18	208.06	--	--	--	--	--	--	--	--	--	--
MW-8	04/23/2018 ²	226.24	18.18	208.06	--	--	--	--	--	--	--	--	--	--
MW-8	08/29/2018 ²	226.24	18.80	207.44	--	--	--	--	--	--	--	--	--	--
MW-9	10/04/1999	222.20	10.79	211.41	--	12.6	<0.012	2.49	0.204	3.14	<0.25 / <0.01	--	--	--
MW-9	05/24/2000	222.20	9.32	212.88	--	7.58	0.0806	2.38	<0.05	1.81	<0.1 / <0.002	--	--	--
MW-9	09/28/2000	222.20	10.43	211.77	--	5.27 / 6.11	0.0206 / 0.0246	1.11 / 1.37	0.177 / 0.216	1.5 / 1.79	<0.025 / <0.02	--	--	--
MW-9	05/09/2001	222.20	11.70	210.50	--	2.6	0.00934	0.482	0.114	0.604	0.00531 / <0.005	--	--	--
MW-9	09/30/2001	222.20							UNABLE TO LOCATE					
MW-9	05/03/2002	222.20							UNABLE TO LOCATE					
MW-9	10/01/2002	222.20							UNABLE TO LOCATE					
MW-9	12/05/2002	222.24	9.99	212.25	--	2.1	0.006	0.36	0.062	0.4	<0.0005	--	--	--
MW-9	06/03/2003	222.24	10.67	211.57	--	0.86	0.002	0.13	0.02	0.17	<0.002	--	--	--
MW-9	10/05/2003	222.24	9.87	212.37	--	0.42	0.001	0.079	0.018	0.064	<0.002	--	--	--
MW-9	06/09/2004	222.24	9.59	212.65	--	3.6	0.007	0.73	0.11	0.53	<0.002	--	--	--
MW-9	09/27/2004	222.24	9.16	213.08	--	3.6	0.011	1.1	0.17	0.87	<0.002	--	--	--
MW-9	05/15/2005	222.24	8.28	213.96	--	8.4	0.012	1.5	0.22	1.2	<0.002	--	--	--
MW-9	09/26/2005	222.24	8.48	213.76	--	<0.01	<0.0005	0.002	<0.0005	0.004	<0.002	--	--	--
MW-9	05/12/2006	222.24	9.27	212.97	--	2.6	0.003	0.3	0.091	0.46	<0.002	<0.002	<0.002	--
MW-9	09/27/2006	222.19	8.56	213.63	--	1.5	0.002	0.19	0.056	0.32	<0.002	<0.002	<0.000097	--
MW-9	05/23/2007	222.19	8.87	213.32	--	0.2	<0.0005	0.014	0.005	0.046	<0.0005	<0.0005	<0.000098	--
MW-9	09/20/2007	222.19	9.49	212.70	--	0.07	<0.0005	0.003	0.004	0.017	<0.0005	<0.0005	<0.000098	--
MW-9	05/20/2008	222.19	8.02	214.17	--	0.1	<0.0005	0.002	0.009	0.026	<0.0005	<0.0005	<0.000092	--
MW-9	09/13/2008	222.19	10.56	211.63	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.000097	--
MW-9	05/21/2009	222.19	9.14	213.05	--	0.23	<0.0005	0.0034	0.029	0.07	<0.0025	<0.0005	<0.000098	--
MW-9	09/15/2009	222.19	10.71	211.48	--	0.039 J	<0.0005	<0.0005	0.0070	0.010	--	--	<0.000096	<0.0069
MW-9	06/22/2010	222.19	10.44	211.75	--	--	--	--	--	--	--	--	--	--
MW-9	10/03/2010	222.19	10.05	212.14	--	--	--	--	--	--	--	--	--	--
MW-9	04/18/2011	222.19	9.05	213.14	--	--	--	--	--	--	--	--	--	--
MW-9	10/05/2011	222.19	11.00	211.19	--	--	--	--	--	--	--	--	--	--

Table 2
Historical Groundwater Analytical Results
Former Chevron-Branded Service Station 90430
6470 DeBarr Road
Anchorage, Alaska

Location	Date	TOC	DTW	GWE	HYDROCARBONS		PRIMARY VOCS				ADDITIONAL ANALYTES			
					TPH	GRO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	1,2-DCA	EDB	Lead
	Units	ft msl	ft btoc	ft msl	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
ADEC Groundwater Cleanup Levels					1.5	2.2	0.0046	1.1	0.015	0.19	0.14	0.0017	0.000075	0.015
MW-9	05/24/2012	222.19	9.02	213.17	--	--	--	--	--	--	--	--	--	--
MW-9	08/02/2012	222.19	12.65	209.54	--	--	--	--	--	--	--	--	--	--
MW-9	05/14/2013	222.19	7.35	214.84	--	--	--	--	--	--	--	--	--	--
MW-9	09/17/2013	222.19	7.27	214.92	--	--	--	--	--	--	--	--	--	--
MW-9	04/29/2014	222.19	7.52	214.67	--	--	--	--	--	--	--	--	--	--
MW-9	10/03/2014	222.19	8.42	213.77	--	--	--	--	--	--	--	--	--	--
MW-9	05/05/2015	222.19	10.34	211.85	--	--	--	--	--	--	--	--	--	--
MW-9	11/05/2015	222.19	8.41	213.78	--	--	--	--	--	--	--	--	--	--
MW-9	04/18/2016 ²	222.19	9.91	212.28	--	--	--	--	--	--	--	--	--	--
MW-9	09/26/2016 ²	222.19	8.75	213.44	--	--	--	--	--	--	--	--	--	--
MW-9	04/25/2017 ²	222.19	7.54	214.65	--	--	--	--	--	--	--	--	--	--
MW-9	10/04/2017 ²	222.19	8.71	213.48	--	--	--	--	--	--	--	--	--	--
MW-9	04/23/2018 ²	222.19	7.62	214.57	--	--	--	--	--	--	--	--	--	--
MW-9	08/29/2018 ²	222.19	9.18	213.01	--	--	--	--	--	--	--	--	--	--
MW-10	10/04/1999	222.58	16.82	205.76	--	0.085	<0.0005	0.00515	0.00105	0.00185	0.0242 / 0.0272	--	--	--
MW-10	05/24/2000	222.58	12.37	210.21	--	<0.05 / <0.05	<0.0005 / <0.0005	<0.0005 / 0.00073	<0.0005 / <0.0005	<0.001 / <0.001	<0.001 / <0.002 / <0.001 / <0.002	--	--	--
MW-10	09/28/2000	222.58	16.55	206.03	--	<0.05	<0.0002	0.00098	<0.0005	0.00133	0.00336	--	--	--
MW-10	05/09/2001	222.58	16.93	205.65	--	<0.05	<0.0002	<0.0005	<0.0005	<0.001	0.0526 / 0.0675	--	--	--
MW-10	09/30/2001	222.58	18.67	203.91	--	<0.05 / <0.05	<0.0002 / <0.0002	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.001 / <0.001	0.0342 / 0.0386 / 0.0339 / 0.0387	--	--	--
MW-10	05/03/2002	222.58	14.64	207.94	--	<0.05	0.000317	0.000612	<0.0005	<0.001	<0.001	--	--	--
MW-10	10/01/2002	222.58							INACCESSIBLE -- DUE TO FLOODING					
MW-10	12/05/2002	222.61	13.82	208.79	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	0.067	--	--	--
MW-10	06/03/2003	222.61	14.78	207.83	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	0.005	--	--	--
MW-10	10/05/2003	222.61	16.31	206.30	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	0.13	--	--	--
MW-10	06/09/2004	222.61	13.09	209.52	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	--	--	--
MW-10	09/27/2004	222.61	16.12	206.49	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	0.058	--	--	--
MW-10	05/15/2005	222.61	11.26	211.35	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	--	--	--
MW-10	09/26/2005	222.61	14.82	207.79	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	--	--	--
MW-10	05/12/2006	222.61	14.41	208.20	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	0.32	--	--	--
MW-10	09/27/2006	222.57	13.71	208.86	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	--	--	--
MW-10	05/23/2007	222.57	13.15	209.42	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0007	--	--	--
MW-10	09/20/2007	222.57	15.50	207.07	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	0.028	--	--	--
MW-10	05/20/2008	222.57	11.56	211.01	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--
MW-10	09/13/2008	222.57	15.22	207.35	--	<0.01 / <0.01	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	0.0006 / 0.0007	--	--	--
MW-10	05/21/2009	222.57	14.32	208.25	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0015	0.32	--	--	--
MW-10	09/15/2009	222.57	16.11	206.46	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0015	--	--	--	--
MW-10	06/22/2010	222.57	14.75	207.82	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	0.001	--	--	--
MW-10	10/03/2010	222.57	15.03	207.54	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0015	0.001	--	--	--
MW-10	04/18/2011	222.57	16.06	206.51	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--
MW-10	10/05/2011	222.57	15.88	206.69	--	0.018 J	0.0006 J	0.0022	<0.0005	0.0045 J	0.0009 J	--	--	--
MW-10	05/24/2012	222.57	10.84	211.73	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--
MW-10	08/02/2012	222.57	14.65	207.92	--	0.076 J / 0.076 J	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	0.0016 J / <0.0015	<0.0005 / <0.0005	--	--	--
MW-10	05/14/2013	222.57	10.20	212.37	--	--	--	--	--	--	--	--	--	--
MW-10	05/16/2013	--	--	--	--	<0.050 / <0.050	<0.00024 / <0.00024	<0.00023 / <0.00023	<0.00024 / <0.00024	<0.00072 / <0.00072	<0.00050 / <0.00050	--	--	--
MW-10 ^{HS}	05/16/2013	--	--	--	--	<0.050 / <0.050	<0.00024 / <0.00024	<0.00023 / <0.00023	<0.00024 / <0.00024	<0.00072 / <0.00072	<0.00050 / <0.00050	--	--	--
MW-10	09/17/2013	222.57	16.98	205.59	--	<0.050 / <0.050	<0.00024 / <0.00024	<0.00023 / 0.00036 J	<0.00024 / <0.00024	<0.00072 / <0.00072	<0.00050 / <0.00050	--	--	--
MW-10	04/29/2014	222.57	10.14	212.43	--	--	--	--	--	--	--	--	--	--
MW-10	04/30/2014	--	--	--	--	<0.050	<0.00015	<0.00011	<0.00016	<0.00040	<0.00017	--	--	--
MW-10 ^{HS}	04/30/2014	--	--	--	--	<0.050	<0.00015	<0.00011	<0.00016	<0.00040	<0.00017	--	--	--
MW-10	10/03/2014	222.57	9.93	212.64	--	<0.050	0.00026 J	<0.00011	0.00023 J	<0.00040	<0.00017	--	--	--
MW-10	05/05/2015	222.57	14.57	208.00	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--

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Former Chevron-Branded Service Station 90430
6470 DeBarr Road
Anchorage, Alaska

Location	Date	TOC	DTW	GWE	HYDROCARBONS		PRIMARY VOCS				ADDITIONAL ANALYTES			
					TPH	GRO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	1,2-DCA	EDB	Lead
	Units	ft msl	ft btoc	ft msl	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
ADEC Groundwater Cleanup Levels					1.5	2.2	0.0046	1.1	0.015	0.19	0.14	0.0017	0.000075	0.015
MW-10	11/05/2015	222.57	13.36	209.21	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--
MW-10	04/18/2016 ⁴	222.57	15.24	207.33	--	--	--	--	--	--	--	--	--	--
MW-10	09/26/2016 ⁵	222.57	15.03	207.54	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	--	<0.0000095	<0.0062	--
MW-10	04/25/2017 ¹	222.57	14.32	208.25	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--	--
MW-10	10/05/2017 ¹	222.57	14.61	207.96	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	0.001	--	--	--
MW-10	04/23/2018	222.57	14.21	208.36	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	0.0008 J	--	--	--
MW-10	08/29/2018	222.57	15.42	207.15	--	<0.014 R	<0.0002 R	<0.0002 R	<0.0002 R	<0.0005 R	0.0007 J	--	--	--
MW-11	10/04/1999	224.49	17.44	207.05	--	<0.05	<0.0005	0.00094	<0.0005	0.00069	0.335 / 0.318	--	--	--
MW-11	05/24/2000	224.49	17.25	207.24	--	<0.05	<0.0005	<0.0005	<0.0005	<0.001	0.175 / 0.127	--	--	--
MW-11	09/28/2000	224.49	16.80	207.69	--	<0.05	<0.0002	<0.0005	<0.0005	<0.001	0.0591	--	--	--
MW-11	05/09/2001	224.49							UNABLE TO LOCATE					
MW-11	09/30/2001	224.49	17.30	207.19	--	<0.05	0.00305	<0.0005	<0.0005	<0.001	0.0113 / 0.0104	--	--	--
MW-11	05/03/2002	224.49	16.32	208.17	--	<0.05 / <0.05	<0.0002 / 0.000206	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.001 / <0.001	<0.001 / 0.00109	--	--	--
MW-11	10/01/2002	224.49	16.44	208.05	--	--	--	--	--	--	--	--	--	--
MW-11	12/05/2002	224.78	17.03	207.75	--	0.041	0.028	<0.0005	<0.0005	<0.0005	0.15	--	--	--
MW-11	06/03/2003	224.78	17.21	207.57	--	<0.01	0.003	<0.0005	<0.0005	<0.0005	0.29	--	--	--
MW-11	10/05/2003	224.78	16.83	207.95	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	0.06	--	--	--
MW-11	06/09/2004	224.78	17.13	207.65	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	0.029	--	--	--
MW-11	09/27/2004	224.78	16.69	208.09	--	0.13	0.028	<0.0005	<0.0005	<0.0005	0.21	--	--	--
MW-11	05/15/2005	224.78	16.71	208.07	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	0.013	--	--	--
MW-11	09/26/2005	224.78	16.49	208.29	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	--	--	--
MW-11	05/12/2006	224.78	17.22	207.56	--	<0.01	0.0007	<0.0005	<0.0005	<0.0005	0.009	--	--	--
MW-11	09/27/2006	224.73							INACCESSIBLE -- UNABLE TO OPEN WELL LID					
MW-11	05/23/2007	225.73							INACCESSIBLE -- UNABLE TO OPEN WELL LID					
MW-11	09/20/2007	225.73	16.71	209.02	--	0.2	0.067	<0.0005	<0.0005	<0.0005	0.15	--	--	--
MW-11	05/20/2008	225.73	16.63	209.10	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	0.0008	--	--	--
MW-11	09/13/2008	225.73	16.74	208.99	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--
MW-11	05/21/2009	225.73	17.13	208.60	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0015	0.0091	--	--	--
MW-11	09/15/2009	225.73	17.28	208.45	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0015	--	--	--	--
MW-11	06/22/2010	225.73	17.74	207.99	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--
MW-11	10/03/2010	225.73	17.32	208.41	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0015	--	--	--	--
MW-11	04/18/2011	225.73	17.20	208.53	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0015	--	--	--	--
MW-11	10/05/2011	225.73	17.50	208.23	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0015	0.004	--	--	--
MW-11	05/24/2012	225.73	16.51	209.22	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--
MW-11	08/02/2012	225.73	16.25	209.48	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0015	--	--	--	--
MW-11	05/14/2013	225.73	15.72	210.01	--	--	--	--	--	--	--	--	--	--
MW-11	05/15/2013	--	--	--	--	<0.050	<0.00024	<0.00023	<0.00024	<0.00072	<0.00050	--	--	--
MW-11 ^{HS}	05/15/2013	--	--	--	--	<0.050	<0.00024	<0.00023	<0.00024	<0.00072	<0.00050	--	--	--
MW-11	09/17/2013	225.73	15.63	210.10	--	<0.050	<0.00024	<0.00023	<0.00024	<0.00072	--	--	--	--
MW-11	04/29/2014	225.73	15.57	210.16	--	--	--	--	--	--	--	--	--	--
MW-11	05/01/2014	--	--	--	--	<0.050	<0.00015	<0.00056	<0.00016	<0.00040	0.00034 J	--	--	--
MW-11 ^{HS}	05/01/2014	--	--	--	--	<0.050	<0.00015	<0.00011	<0.00016	<0.00040	<0.00017	--	--	--
MW-11	10/03/2014	225.73	15.07	210.66	--	<0.050	<0.00015	<0.00011	<0.00016	<0.00040	--	--	--	--
MW-11	05/05/2015	225.73	16.71	209.02	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--
MW-11	11/05/2015	225.73	16.48	209.25	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--
MW-11	04/18/2016 ¹	225.73	16.40	209.33	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--
MW-11	09/26/2016 ¹	225.73	16.03	209.70	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	--	<0.0000095	0.074	
MW-11	4/25/2017 ⁵	225.73	--	--	--	--	--	--	--	--	--	--	--	--
MW-11	10/05/2017 ¹	225.73	16.31	209.42	--	<0.10	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--	--
MW-11	04/23/2018	225.73	15.82	209.91	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--
MW-11	08/29/2018	225.73	16.06	209.67	--	<0.014 R	<0.0002 R	<0.0002 R	<0.0002 R	<0.0005 R	--	--	--	--

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Location	Date	TOC	DTW	GWE	HYDROCARBONS		PRIMARY VOCS				ADDITIONAL ANALYTES			
					TPH	GRO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	1,2-DCA	EDB	Lead
	Units	ft msl	ft btoc	ft msl	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
ADEC Groundwater Cleanup Levels					1.5	2.2	0.0046	1.1	0.015	0.19	0.14	0.0017	0.000075	0.015
MW-12	09/28/2000	--	17.71	--	--	<0.05	<0.0002	<0.0005	<0.0005	<0.001	<0.001	--	--	--
MW-12	05/09/2001	--	17.88	--	--	<0.05	0.000202	<0.0005	<0.0005	<0.001	<0.001	--	--	--
MW-12	09/30/2001	--	--	--	--	--	--	UNABLE TO LOCATE -- COVERED BY PILE OF ASPHALT			--	--	--	
MW-12	05/03/2002	--	--	--	--	--	--	UNABLE TO LOCATE -- COVERED BY PILE OF ASPHALT			--	--	--	
MW-12	10/01/2002	--	--	--	--	--	--	UNABLE TO LOCATE -- COVERED BY PILE OF ASPHALT			--	--	--	
MW-12	12/05/2002	222.31	13.70	208.61	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	0.038	--	--	--
MW-12	06/03/2003	222.31	14.96	207.35	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	0.016	--	--	--
MW-12	10/05/2003	222.31	16.88	205.43	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	0.006	--	--	--
MW-12	06/09/2004	222.31	12.73	209.58	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	0.002	--	--	--
MW-12	09/27/2004	222.31	16.72	205.59	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	0.004	--	--	--
MW-12	05/15/2005	222.31	11.35	210.96	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	--	--	--
MW-12	09/26/2005	222.31	--	--	--	--	--	UNABLE TO LOCATE			--	--	--	
MW-12	05/12/2006	222.31	--	--	--	--	--	UNABLE TO LOCATE -- AREA COVERED BY PILE OF ASPHALT			--	--	--	
MW-12	09/27/2006	222.27	13.85	208.42	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	--	--	--
MW-12	05/23/2007	222.27	13.41	208.86	--	--	--	--	--	--	--	--	--	--
MW-12	09/20/2007	222.27	16.11	206.16	--	--	--	--	--	--	--	--	--	--
MW-12	05/20/2008	222.27	12.17	210.10	--	--	--	--	--	--	--	--	--	--
MW-12	09/13/2008	222.27	15.40	206.87	--	--	--	--	--	--	--	--	--	--
MW-12	05/21/2009	222.27	14.91	207.36	--	--	--	--	--	--	--	--	--	--
MW-12	06/22/2010	222.27	14.61	207.66	--	--	--	--	--	--	--	--	--	--
MW-12	10/03/2010	222.27	15.42	206.85	--	--	--	--	--	--	--	--	--	--
MW-12	04/18/2011	222.27	16.50	205.77	--	--	--	--	--	--	--	--	--	--
MW-12	10/05/2011	--	--	--	--	--	--	UNABLE TO LOCATE			--	--	--	
MW-12	05/24/2012	222.27	11.47	210.80	--	--	--	--	--	--	--	--	--	--
MW-12	08/02/2012	222.27	14.70	207.57	--	--	--	--	--	--	--	--	--	--
MW-12	05/14/2013	222.27	11.21	211.06	--	--	--	--	--	--	--	--	--	--
MW-12	09/17/2013	222.27	14.11	208.16	--	--	--	--	--	--	--	--	--	--
MW-12	04/29/2014	222.27	10.71	211.56	--	--	--	--	--	--	--	--	--	--
MW-12	10/03/2014	222.27	10.55	211.72	--	--	--	--	--	--	--	--	--	--
MW-12	05/05/2015	222.27	13.89	208.38	--	--	--	--	--	--	--	--	--	--
MW-12	11/05/2015	--	--	--	--	--	--	UNABLE TO LOCATE			--	--	--	
MW-12	04/18/2016 ²	222.27	15.92	206.35	--	--	--	--	--	--	--	--	--	--
MW-12	09/26/2016 ²	222.27	16.00	206.27	--	--	--	--	--	--	--	--	--	--
MW-12	04/25/2017 ²	222.27	15.03	207.24	--	--	--	--	--	--	--	--	--	--
MW-12	10/04/2017 ²	222.27	15.11	207.16	--	--	--	--	--	--	--	--	--	--
MW-12	04/23/2018 ²	222.27	14.89	207.38	--	--	--	--	--	--	--	--	--	--
MW-12	08/29/2018 ²	222.27	16.05	206.22	--	--	--	--	--	--	--	--	--	--
MW-13	10/01/2002	--	--	--	--	--	--	INACCESSIBLE -- DUE TO FLOODING			--	--	--	
MW-13	12/05/2002	221.31	14.03	207.28	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--
MW-13	06/03/2003	221.31	14.22	207.09	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	--	--	--
MW-13	10/05/2003	221.31	13.88	207.43	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	--	--	--
MW-13	06/09/2004	221.31	14.21	207.10	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	--	--	--
MW-13	09/27/2004	221.31	13.71	207.60	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	--	--	--
MW-13	05/15/2005	221.31	13.89	207.42	--	0.24	<0.0005	0.004	0.004	0.026	<0.002	--	--	--
MW-13	09/26/2005	221.31	13.72	207.59	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	--	--	--
MW-13	05/12/2006	221.31	--	--	--	--	--	INACCESSIBLE -- OBSTRUCTION AT 3.77 FEET			--	--	--	
MW-13	09/27/2006	221.63	13.96	207.67	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	--	--	--
MW-13	05/23/2007	221.63	14.15	207.48	--	<0.01	<0.0005	<0.0005	<0.0005	0.0005	<0.0005	--	--	--
MW-13	09/20/2007	221.63	14.09	207.54	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--
MW-13	05/20/2008	221.63	14.11	207.52	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--

Table 2
Historical Groundwater Analytical Results
Former Chevron-Branded Service Station 90430
6470 DeBarr Road
Anchorage, Alaska

Location	Date	TOC	DTW	GWE	HYDROCARBONS		PRIMARY VOCS				ADDITIONAL ANALYTES			
					TPH	GRO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	1,2-DCA	EDB	Lead
	Units	ft msl	ft btoc	ft msl	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
ADEC Groundwater Cleanup Levels					1.5	2.2	0.0046	1.1	0.015	0.19	0.14	0.0017	0.000075	0.015
MW-13	09/13/2008	221.63	14.19	207.44	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--
MW-13	05/21/2009	221.63	14.59	207.04	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0015	<0.0025	--	--	--
MW-13	10/07/2009	221.63	14.67	206.96	--	<0.010 / <0.010	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0015 / <0.0015	--	--	--	--
MW-14	09/27/2006	222.33	8.96	213.37	--	140	5.2	35	1.5	11	<0.005	--	--	--
MW-14	05/23/2007	222.33	9.37	212.96	--	120 / 130	1.9 / 1.8	23 / 21	1.7 / 1.8	14 / 15	<0.025 / <0.025	--	--	--
MW-14	09/20/2007	222.33	9.53	212.80	--	180 / 180	3.5 / 3.5	47 / 41	2.5 / 2.4	23 / 23	<0.025 / <0.025	--	--	--
MW-14	05/20/2008	222.33	8.60	213.73	--	120	0.77	15	1.5	13	<0.01	--	--	--
MW-14	09/13/2008	222.33	11.15	211.18	--	6	0.085	1.1	0.17	0.68	<0.0005	--	--	--
MW-14	05/21/2009	222.33	9.84	212.49	--	2.1	0.16	0.23	0.043	0.29	0.0042	--	--	--
MW-14	09/15/2009	222.33	11.53	210.80	--	0.27	0.0028	0.081	0.0073	0.048	--	--	--	--
MW-14	06/22/2010	222.33	11.47	210.86	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0015	--	--	--	--
MW-14	10/03/2010	222.33	10.70	211.63	--	1.8	0.026	0.18	0.088	0.41	--	--	--	--
MW-14	04/18/2011	222.33	9.53	212.80	--	0.13	0.0015 J	0.041	0.0027	0.022	--	--	--	--
MW-14	10/05/2011	222.33	12.43	209.90	--	<0.010	<0.0005	0.0024	<0.0005	<0.0015	--	--	--	--
MW-14	05/24/2012	222.33	10.06	212.27	--	5.0	0.16	1.4	0.088	0.44	--	--	--	--
MW-14	08/02/2012	222.33	14.91	207.42	--	1.4	0.029	0.31	0.026	0.11	--	--	--	--
MW-14	05/14/2013	222.33	9.27	213.06	--	--	--	--	--	--	--	--	--	--
MW-14	05/16/2013	--	--	--	--	24.6	0.12	5.1	0.48	3.3	--	--	--	--
MW-14 ^{HS}	05/16/2013	--	--	--	--	12.7	0.071	2.9	0.28	2.1	--	--	--	--
MW-14	09/17/2013	222.33	8.28	214.05	--	1.6	0.028	0.19	0.16	<0.072	--	--	--	--
MW-14	04/29/2014	222.33	8.59	213.74	--	--	--	--	--	--	--	--	--	--
MW-14	05/01/2014	--	--	--	--	62.9	0.16	16.0 J	1.3	9.9	--	--	--	--
MW-14 ^{HS}	05/01/2014	--	--	--	--	52.6	0.12	11.5	0.96	9.2	--	--	--	--
MW-14	10/03/2014	222.33	8.86	213.47	--	50.4	0.13	10.9	1.1	5.7	--	--	--	--
MW-14	05/05/2015	222.33	10.91	211.42	--	39	0.10	9.7	0.85	6.3	--	--	--	--
MW-14	11/05/2015	222.33	8.93	213.40	--	33	0.085 J	8.4	0.77	4.3	--	--	--	--
MW-14	04/18/2016 ¹	222.33	10.59	211.74	--	12	0.015	2.0	0.2	1.9	--	--	--	--
MW-14	09/26/2016 ¹	222.33	9.28	213.05	--	34	0.076 J	9.7	0.73	4.7	--	--	<0.000095	<0.0062
MW-14	04/25/2017	222.33	8.34	213.99	--	5.1	0.008	1.0	0.11	0.75	--	--	--	--
MW-14	10/04/2017	222.33	9.32	213.01	--	18	0.030	3.6	0.61	3.2	--	--	--	--
MW-14	04/23/2018	222.16*	8.41	213.75	--	18	0.026	4.2	0.72	4.1	--	--	--	--
MW-14	08/29/2018	222.16	9.68	212.48	--	0.14 / 0.14	0.0003 J	0.014	0.006	0.024	--	--	--	--
MW-15	09/27/2006	226.12	15.14	210.98	--	<0.01 / <0.01	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.002 / <0.002	--	--	--
MW-15	05/23/2007	226.12	14.37	211.75	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--
MW-15	09/20/2007	226.12	16.56	209.56	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--
MW-15	05/20/2008	226.12	13.03	213.09	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--
MW-15	09/13/2008	226.12	16.89	209.23	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--
MW-15	05/21/2009	226.12	15.06	211.06	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0015	<0.0025	--	--	--
MW-15	06/22/2010	226.12	16.34	209.78	--	--	--	--	--	--	--	--	--	--
MW-15	10/03/2010	226.12	16.41	209.71	--	--	--	--	--	--	--	--	--	--
MW-15	04/18/2011	226.12	17.17	208.95	--	--	--	--	--	--	--	--	--	--
MW-15	10/05/2011	226.12	17.12	209.00	--	--	--	--	--	--	--	--	--	--
MW-15	05/24/2012	226.12	13.87	212.25	--	--	--	--	--	--	--	--	--	--
MW-15	08/02/2012	226.12	16.32	209.80	--	--	--	--	--	--	--	--	--	--
MW-15	05/14/2013	226.12	12.08	214.04	--	--	--	--	--	--	--	--	--	--
MW-15	09/17/2013	226.12	13.51	212.61	--	--	--	--	--	--	--	--	--	--
MW-15	04/29/2014	226.12	12.34	213.78	--	--	--	--	--	--	--	--	--	--
MW-15	10/03/2014	226.12	13.65	212.47	--	--	--	--	--	--	--	--	--	--
MW-15	05/05/2015	226.12	16.32	209.80	--	--	--	--	--	--	--	--	--	--
MW-15	11/05/2015													

UNABLE TO LOCATE

Table 2
Historical Groundwater Analytical Results
Former Chevron-Branded Service Station 90430
6470 DeBarr Road
Anchorage, Alaska

Location	Date	TOC	DTW	GWE	HYDROCARBONS		PRIMARY VOCS				ADDITIONAL ANALYTES			
					TPH	GRO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	1,2-DCA	EDB	Lead
	Units	ft msl	ft btoc	ft msl	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
ADEC Groundwater Cleanup Levels					1.5	2.2	0.0046	1.1	0.015	0.19	0.14	0.0017	0.000075	0.015
MW-15	04/18/2016 ²	226.12	16.61	209.51	--	--	--	--	--	--	--	--	--	--
MW-15	09/26/2016 ²	226.12	16.14	209.98	--	--	--	--	--	--	--	--	--	--
MW-15	04/25/2017 ²	226.12	14.13	211.99	--	--	--	--	--	--	--	--	--	--
MW-15	10/05/2017 ²	226.12	15.76	210.36	--	--	--	--	--	--	--	--	--	--
MW-15	04/23/2018 ²	226.12	14.15	211.97	--	--	--	--	--	--	--	--	--	--
MW-15	08/29/2018 ²	226.12	16.63	209.49	--	--	--	--	--	--	--	--	--	--
MW-16	09/27/2006	223.57												
MW-16	05/23/2007	223.57	16.06	207.51	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	0.001	--	--	--
MW-16	09/20/2007	223.57	15.99	207.58	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--
MW-16	05/20/2008	223.57	15.91	207.66	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--
MW-16	09/13/2008	223.57	16.05	207.52	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--
MW-16	05/21/2009	223.57	16.40	207.17	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0015	<0.0025	--	--	--
MW-16	09/15/2009	223.57	16.55	207.02	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0015	--	--	--	--
MW-16	06/22/2010	223.57	16.95	206.62	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--
MW-16	10/03/2010	223.57	16.60	206.97	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0015	--	--	--	--
MW-16	04/18/2011	223.57	16.44	207.13	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--
MW-16	10/05/2011	223.57	16.78	206.79	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0015	--	--	--	--
MW-16	05/24/2012	223.57	15.84	207.73	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--
MW-16	08/02/2012	223.57	15.50	208.07	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0015	--	--	--	--
MW-16	05/14/2013	223.57	15.03	208.54	--	--	--	--	--	--	--	--	--	--
MW-16	05/15/2013	--	--	--	--	<0.050	<0.00024	<0.00023	<0.00024	<0.00072	<0.00050	--	--	--
MW-16 ^{HS}	05/15/2013	--	--	--	--	<0.050	<0.00024	<0.00023	<0.00024	<0.00072	<0.00050	--	--	--
MW-16	09/17/2013	223.57	14.93	208.64	--	<0.050	<0.00024	<0.00023	<0.00024	<0.00072	--	--	--	--
MW-16	04/29/2014	223.57	15.82	207.75	--	--	--	--	--	--	--	--	--	--
MW-16	05/01/2014	--	--	--	--	<0.050	<0.00015	<0.00011	<0.00016	<0.00040	<0.00017	--	--	--
MW-16 ^{HS}	05/01/2014	--	--	--	--	<0.050	<0.00015	<0.00011	<0.00016	<0.00040	<0.00017	--	--	--
MW-16	10/03/2014	223.57	15.43	208.14	--	<0.050	<0.00015	<0.00011	<0.00016	<0.00040	--	--	--	--
MW-16	05/05/2015	223.57	16.03	207.54	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--
MW-16	11/05/2015	223.57	17.73	205.84	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	0.002	--	--	--
MW-16	04/18/2016 ¹	223.57	15.72	207.85	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	0.0009 J	--	--	--
MW-16	09/26/2016 ¹	223.57	15.32	208.25	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	--	--	<0.0000095	0.0176
MW-16	04/25/2017 ¹	223.57	14.59	208.98	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--	--
MW-16	10/04/2017 ¹	223.57	15.63	207.94	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--	--
MW-16	04/23/2018	223.57	15.15	208.42	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--
MW-16	08/29/2018	223.57	15.41	208.16	--	<0.014 R	<0.0002 R	<0.0002 R	<0.0002 R	<0.0002 R	--	--	--	--
MW-17	09/27/2006	223.07	15.12	207.95	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	--	--	--
MW-17	05/23/2007	223.07	15.12	207.95	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--
MW-17	09/20/2007	223.07	15.07	208.00	--	--	--	--	--	--	--	--	--	--
MW-17	05/20/2008	223.07	14.95	208.12	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--
MW-17	09/13/2008	223.07	15.05	208.02	--	--	--	--	--	--	--	--	--	--
MW-17	05/21/2009	223.07	15.43	207.64	--	--	--	--	--	--	--	--	--	--
MW-17	09/15/2009	223.07	15.61	207.46	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0015	--	--	--	--
MW-17	06/22/2010	223.07	16.05	207.02	--	--	--	--	--	--	--	--	--	--
MW-17	10/03/2010	223.07	15.68	207.39	--	--	--	--	--	--	--	--	--	--
MW-17	04/18/2011	223.07	15.45	207.62	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0015	--	--	--	--
MW-17	10/05/2011	223.07	15.82	207.25	--	--	--	--	--	--	--	--	--	--
MW-17	05/24/2012	223.07	14.85	208.22	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0015	--	--	--	--
MW-17	08/02/2012	223.07	14.60	208.47	--	--	--	--	--	--	--	--	--	--
MW-17	05/14/2013	223.07	14.01	209.06	--	--	--	--	--	--	--	--	--	--
MW-17	05/16/2013	--	--	--	--	<0.050	<0.00024	<0.00023	<0.00024	<0.00072	--	--	--	--

Table 2
Historical Groundwater Analytical Results
Former Chevron-Branded Service Station 90430
6470 DeBarr Road
Anchorage, Alaska

Location	Date	TOC	DTW	GWE	HYDROCARBONS		PRIMARY VOCS				ADDITIONAL ANALYTES			
					TPH	GRO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	1,2-DCA	EDB	Lead
	Units	ft msl	ft btoc	ft msl	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
ADEC Groundwater Cleanup Levels					1.5	2.2	0.0046	1.1	0.015	0.19	0.14	0.0017	0.000075	0.015
MW-17 ^{HS}	05/16/2013	--	--	--	--	<0.050	<0.00024	<0.00023	<0.00024	<0.00072	--	--	--	--
MW-17	09/17/2013	223.07	13.98	209.09	--	--	--	--	--	--	--	--	--	--
MW-17	04/29/2014	223.07	13.85	209.22	--	--	--	--	--	--	--	--	--	--
MW-17	04/30/2014	--	--	--	--	<0.050	<0.00015	<0.00011	<0.00016	<0.00040	--	--	--	--
MW-17 ^{HS}	04/30/2014	--	--	--	--	<0.050	<0.00015	<0.00011	<0.00016	<0.00040	--	--	--	--
MW-17	10/03/2014	223.07	14.45	208.62	--	--	--	--	--	--	--	--	--	--
MW-17	05/05/2015	223.07	15.09	207.98	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0015	--	--	--	--
MW-17	11/05/2015	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-17	04/18/2016 ¹	223.07	14.73	208.34	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	UNABLE TO LOCATE	--	--	--
MW-17	09/26/2016 ²	223.07	14.34	208.73	--	--	--	--	--	--	--	--	--	--
MW-17	04/25/2017 ¹	223.07	12.59	210.48	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--	--
MW-17	10/04/2017 ²	223.07	14.69	208.38	--	--	--	--	--	--	--	--	--	--
MW-17	04/23/2018	223.07	14.18	208.89	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--	--
MW-17	08/29/2018 ²	223.07	14.44	208.63	--	--	--	--	--	--	--	--	--	--
TRIPBLANK	02/13/1996	--	--	--	--	ND	ND	ND	ND	ND	--	--	--	--
TRIPBLANK	05/30/1996	--	--	--	--	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--	--
TRIPBLANK	08/23/1996	--	--	--	--	<0.05	<0.0005	0.000609	<0.0005	<0.001	--	--	--	--
TRIPBLANK	10/22/1996	--	--	--	--	<0.05	<0.0005	<0.0005	<0.0005	<0.001	--	--	--	--
TRIPBLANK	04/27/1997	--	--	--	--	<0.05	<0.0005	<0.0005	<0.0005	<0.001	--	--	--	--
TRIPBLANK	09/08/1997	--	--	--	--	<0.05	<0.0005	<0.0005	<0.0005	<0.001	--	--	--	--
TRIPBLANK	09/17/1998	--	--	--	--	<0.05	<0.0005	<0.0005	<0.0005	<0.001	--	--	--	--
TRIPBLANK	04/26/1999	--	--	--	--	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	--	--	--
TRIPBLANK	05/24/2000	--	--	--	--	<0.05	<0.0005	<0.0005	<0.0005	<0.001	<0.001	--	--	--
TRIPBLANK	09/28/2000	--	--	--	--	<0.05	<0.0002	0.000574	<0.0005	<0.001	<0.001	--	--	--
TRIPBLANK	05/09/2001	--	--	--	--	<0.05	--	--	--	--	--	--	--	--
TRIPBLANK	09/30/2001	--	--	--	--	<0.05	<0.0002	<0.0005	<0.0005	<0.001	<0.001	--	--	--
TRIPBLANK	05/03/2002	--	--	--	--	<0.05	<0.0002	<0.0005	<0.0005	<0.001	<0.001	--	--	--
TRIPBLANK	06/03/2003	--	--	--	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	--	--	--
TRIPBLANK	10/05/2003	--	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	--	--	--
TRIPBLANK	06/09/2004	--	--	--	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	--	--	--
TRIPBLANK	09/27/2004	--	--	--	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	--	--	--
TRIPBLANK	05/15/2005	--	--	--	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	--	--	--
TRIPBLANK	09/26/2005	--	--	--	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	--	--	--
TRIPBLANK	05/12/2006	--	--	--	--	<0.01	<0.0005	<0.0005	<0.0005	0.0005	<0.002	--	--	--
TRIPBLANK	09/27/2006	--	--	--	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	--	--	--
TRIPBLANK	05/23/2007	--	--	--	--	<0.01	<0.0005	0.0006	<0.0005	<0.0005	<0.0005	<0.0005	--	--
TRIPBLANK	09/20/2007	--	--	--	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	--	--
TRIPBLANK	05/20/2008	--	--	--	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	--	--
TRIPBLANK	09/13/2008	--	--	--	--	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	--	--
TRIPBLANK	05/21/2009	--	--	--	--	<0.011	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	--	--
TRIPBLANK	09/15/2009	--	--	--	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0015	--	--	--	--
TRIPBLANK	10/07/2009	--	--	--	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0015	--	--	--	--
TRIPBLANK	06/10/2010	--	--	--	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	--	<0.00017	--
TRIPBLANK	10/03/2010	--	--	--	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0015	<0.0005	--	--	--
TRIPBLANK	04/18/2011	--	--	--	--	<0.010	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0015	<0.0005	--	--	--
TRIPBLANK	10/05/2011	--	--	--	--	0.010 J	<0.0005	<0.0005	<0.0005	<0.0015	<0.0005	--	<0.0000098	--
TRIPBLANK	05/24/2012	--	--	--	--	<0.010	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0015	<0.0005	--	<0.0000096	--
TRIPBLANK	08/02/2012	--	--	--	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0015	<0.0005	--	--	--
TRIPBLANK	05/16/2013	--	--	--	--	<0.050	<0.00024	<0.00023	<0.00024	<0.00072	<0.00050	--	<0.0000026	--
TRIPBLANK	05/16/2013	--	--	--	--	<0.050	<0.00024	<0.00023	<0.00024	<0.00072	--	--	--	--
TRIPBLANK	09/17/2013	--	--	--	--	--	<0.00024	<0.00023	<0.00024	<0.00072	<0.00050	--	<0.0000027	--

Table 2
Historical Groundwater Analytical Results
Former Chevron-Branded Service Station 90430
6470 DeBarr Road
Anchorage, Alaska

Location	Date	TOC	DTW	GWE	HYDROCARBONS		PRIMARY VOCS				ADDITIONAL ANALYTES			
					TPH	GRO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	1,2-DCA	EDB	Lead
	Units	ft msl	ft btoc	ft msl	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
ADEC Groundwater Cleanup Levels					1.5	2.2	0.0046	1.1	0.015	0.19	0.14	0.0017	0.000075	0.015
TRIPBLANK	05/01/2014	--	--	--	--	<0.050	<0.00015	<0.00011	<0.00016	<0.00040	<0.00017	--	--	--
TRIPBLANK	05/01/2014	--	--	--	--	<0.050	<0.00015	<0.00011	<0.00016	<0.00040	<0.00017	--	--	--
TRIPBLANK	10/03/2014	--	--	--	--	<0.050	<0.00015	<0.00011	<0.00016	<0.00040	<0.00017	--	--	--
TRIPBLANK	05/05/2015	--	--	--	--	<0.010	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0015	<0.0005	--	--	--
TRIPBLANK	11/05/2015	--	--	--	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	--	<0.000098	--
TRIPBLANK	04/18/2016	--	--	--	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	--	--	<0.000097	--
TRIPBLANK	09/26/2016	--	--	--	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	--	--	<0.000096	--
TRIPBLANK	04/26/2017	--	--	--	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	--	--	<0.000096	--
TRIPBLANK	10/04/2017	--	--	--	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--	--
TRIPBLANK	04/23/2018	--	--	--	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	--	<0.000094	--
TRIPBLANK	08/29/2018	--	--	--	--	<0.014 R	<0.0002 R	<0.0002 R	<0.0002 R	<0.0005 R	--	--	<0.000098 R	--

Notes and Abbreviations

- TOC = top of casing
- DTW = depth to water
- GWE = groundwater elevation
- TPH = total petroleum hydrocarbons
- GRO = gasoline range organics by Alaska Series Method AK101
- Benzene, toluene, ethylbenzene, and total xylenes by Environmental Protection Agency (EPA) Method 8021B or 8260B
- Total Xylenes = Sum of m-, o-, and p-xylenes
- MTBE = methyl tertiary-butyl ether
- 1,2-DCA - 1,2-dichloroethane
- EDB - 1,2-dibromoethane
- ADEC = Alaska Department of Environmental Conservation
- ^a = Levels established in ADEC Table C Groundwater Cleanup Levels (18 AAC 75.345)
- BOLD** = Indicates concentration above the ADEC Table C Groundwater Cleanup Level
- ft msl = feet above mean sea level
- ft btoc = feet below top of casing
- mg/L = milligrams per liter
- = Not measured / not analyzed
- <x = Constituent not detected above x milligrams per liter
- x / y = Sample results / blind duplicate results
- R = Rejected result
- * TOC adjusted for 2" cut in order for lid to be placed back on.
- ** TOC adjusted by 1.05 ft cut.
- ND = not detected
- HS = Hydrasleeve
- ¹ Hydrasleeve sample; no purge
- ² Gauge only
- ³ Unable to locate
- ⁴ Unable to get hydrasleeve/bailer through ice - not sampled
- ⁵ Inaccessible

Table 3
Groundwater Analytical Results for PAHs
Former Chevron-Branded Service Station 90430
6470 Debarr Road
Anchorage, Alaska

Location	Date Units	PAHs							
		Acenaphthene mg/L	Acenaphthylene mg/L	Anthracene mg/L	Benzo(a)anthracene mg/L	Benzo(a)pyrene mg/L	Benzo(b)fluoranthene mg/L	Benzo(g,h,i)perylene mg/L	Benzo(k)fluoranthene mg/L
ADEC Groundwater Cleanup Levels		0.53	0.26	0.043	0.00030	0.00025	0.0025	0.00026	0.0008
MW-3	6/22/2010	<0.000095	<0.000095	<0.000095	<0.000095	<0.000095	<0.000095	<0.000095	<0.000095
MW-3	5/5/2015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-3	11/5/2015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-3	4/18/2016	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-3	9/26/2016	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009
MW-3	4/25/2017	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-3	10/5/2017	0.0002 J	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-3	4/23/2018	--	--	--	--	--	--	--	--
MW-3	8/29/2018	--	--	--	--	--	--	--	--
MW-4R	5/5/2015	0.0005 J / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001
MW-4R	11/5/2015	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001
MW-4R	4/18/2016	0.0002 J / 0.0002 J	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001
MW-4R	9/26/2016	<0.00009 / 0.0003 J	<0.00009 / <0.00009	<0.00009 / <0.00009	<0.00009 / <0.00009	<0.00009 / <0.00009	<0.00009 / <0.00009	<0.00009 / <0.00009	<0.00009 / <0.00009
MW-4R	4/26/2017	0.0004 J / <0.0001	<0.0001 / <0.0003	<0.0001 / <0.0003	<0.0001 / <0.0003	<0.0001 / <0.0003	<0.0001 / <0.0003	<0.0001 / <0.0003	<0.0001 / <0.0003
MW-4R	10/4/2017	0.0005 J / 0.0004 J	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001
MW-4R	4/23/2018	--	--	--	--	--	--	--	--
MW-4R	8/29/2018	--	--	--	--	--	--	--	--
MW-5R	5/5/2015	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
MW-5R	11/5/2015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-5R	4/18/2016	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-5R	9/26/2016	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001 J	<0.0001
MW-5R	4/25/2017	<0.00009 / <0.0001	<0.00009 / <0.0001	<0.00009 / <0.0001	<0.00009 / <0.0001	<0.00009 / <0.0001	<0.00009 / <0.0001	<0.00009 / <0.0001	<0.00009 / <0.0001
MW-5R	10/5/2017	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001
MW-5R	4/23/2018	--	--	--	--	--	--	--	--
MW-5R	8/29/2018	--	--	--	--	--	--	--	--
MW-7	5/5/2015	0.0002 J	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-7	11/5/2015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-7	4/18/2016	0.0002 J	<0.0001 J	<0.0001 J	<0.0001 J	<0.0001 J	<0.0001 J	0.0001 J	<0.0001 J
MW-7	9/26/2016	0.0002 J	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0002 J	<0.0001
MW-7	4/25/2017	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-7	10/5/2017	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-7	4/23/2018	--	--	--	--	--	--	--	--
MW-7	8/29/2018	--	--	--	--	--	--	--	--
MW-10	5/5/2015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-10	11/5/2015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-10	4/18/2016	--	--	--	--	--	--	--	--
MW-10	9/26/2016	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-10	4/25/2017	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-10	10/5/2017	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-10	4/23/2018	--	--	--	--	--	--	--	--
MW-10	8/29/2018	--	--	--	--	--	--	--	--

Table 3
Groundwater Analytical Results for PAHs
Former Chevron-Branded Service Station 90430
6470 Debarr Road
Anchorage, Alaska

Location	Date Units	PAHs							
		Acenaphthene mg/L	Acenaphthylene mg/L	Anthracene mg/L	Benzo(a)anthracene mg/L	Benzo(a)pyrene mg/L	Benzo(b)fluoranthene mg/L	Benzo(g,h,i)perylene mg/L	Benzo(k)fluoranthene mg/L
ADEC Groundwater Cleanup Levels		0.53	0.26	0.043	0.00030	0.00025	0.0025	0.00026	0.0008
MW-11	5/5/2015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-11	11/5/2015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-11	4/18/2016	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-11	9/26/2016	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009
MW-11	4/25/2017	--	--	--	--	--	--	--	--
MW-11	10/5/2017	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-11	4/23/2018	--	--	--	--	--	--	--	--
MW-11	8/29/2018	--	--	--	--	--	--	--	--
MW-14	5/5/2015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-14	4/18/2016	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-14	9/26/2016	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001 J	<0.0001	0.0001 J
MW-14	4/25/2017	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-14	10/4/2017	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-14	4/23/2018	--	--	--	--	--	--	--	--
MW-14	8/29/2018	--	--	--	--	--	--	--	--
MW-16	5/5/2015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-16	11/5/2015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-16	4/18/2016	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-16	9/26/2016	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009
MW-16	4/25/2017	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-16	10/5/2017	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-16	4/23/2018	--	--	--	--	--	--	--	--
MW-16	8/29/2018	--	--	--	--	--	--	--	--
MW-17	5/5/2015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-17	4/18/2016	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-17	4/25/2017	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-17	4/23/2018	--	--	--	--	--	--	--	--
MW-17	8/29/2018	--	--	--	--	--	--	--	--

Table 3
Groundwater Analytical Results for PAHs
Former Chevron-Branded Service Station 90430
6470 Debarr Road
Anchorage, Alaska

Location	Date Units	PAHs							
		Chrysene mg/L	Dibenz(a,h)anthracene mg/L	Fluoranthene mg/L	Fluorene mg/L	Indeno(1,2,3-cd)pyrene mg/L	Naphthalene mg/L	Phenanthrene mg/L	Pyrene mg/L
ADEC Groundwater Cleanup Levels		0.002	0.00025	0.26	0.29	0.00019	0.0017	0.17	0.12
MW-3	6/22/2010	<0.000095	<0.000095	<0.000095	0.0006	<0.000095	0.0087	0.00021 J	0.000098 J
MW-3	5/5/2015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-3	11/5/2015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-3	4/18/2016	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-3	9/26/2016	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	0.0002 J	<0.00009	<0.00009
MW-3	4/25/2017	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-3	10/5/2017	<0.0001	<0.0001	<0.0001	0.0006	<0.0001	0.003	0.0003 J	<0.0001
MW-3	4/23/2018	--	--	--	--	--	--	--	--
MW-3	8/29/2018	--	--	--	--	--	--	--	--
MW-4R	5/5/2015	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001	0.001 / 0.0009	<0.0001 / <0.0001	0.041 / 0.033	0.0002 J / 0.0003 J	<0.0001 / <0.0001
MW-4R	11/5/2015	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001	0.001 / 0.0009	<0.0001 / <0.0001	0.028 / 0.025	0.0003 J / 0.0003 J	<0.0001 / <0.0001
MW-4R	4/18/2016	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001	0.0008 / 0.0009	<0.0001 / <0.0001	0.030 / 0.035	0.0002 J / 0.0002 J	<0.0001 / <0.0001
MW-4R	9/26/2016	<0.00009 / <0.00009	0.0001 J / <0.00009	<0.00009 / <0.00009	0.001 / 0.001	<0.00009 / <0.00009	0.036 / 0.036	0.0003 J / 0.0003 J	<0.00009 / <0.00009
MW-4R	4/26/2017	<0.0001 / <0.0003	<0.0001 / <0.0003	<0.0001 / <0.0003	0.0007 J / 0.001	<0.0001 / <0.0003	0.037 / 0.029	0.0003 J / <0.0003	<0.0001 / <0.0003
MW-4R	10/4/2017	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001	0.0009 / 0.0008	<0.0001 / <0.0001	0.036 / 0.033	0.0003 J / 0.0003 J	<0.0001 / <0.0001
MW-4R	4/23/2018	--	--	--	--	--	--	--	--
MW-4R	8/29/2018	--	--	--	--	--	--	--	--
MW-5R	5/5/2015	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
MW-5R	11/5/2015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-5R	4/18/2016	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-5R	9/26/2016	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-5R	4/25/2017	<0.00009 / <0.0001	<0.00009 / <0.0001	<0.00009 / <0.0001	<0.00009 / <0.0001	<0.00009 / <0.0001	<0.00009 / <0.0001	<0.00009 / <0.0001	<0.00009 / <0.0001
MW-5R	10/5/2017	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001
MW-5R	4/23/2018	--	--	--	--	--	--	--	--
MW-5R	8/29/2018	--	--	--	--	--	--	--	--
MW-7	5/5/2015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.078	<0.0001	0.0001 J
MW-7	11/5/2015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.029	<0.0001	<0.0001
MW-7	4/18/2016	<0.0001J	<0.0001J	<0.0001J	<0.0001J	<0.0001J	0.087 J	<0.0001J	<0.0001J
MW-7	9/26/2016	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.09	<0.0001	<0.0001
MW-7	4/25/2017	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.009	<0.0001	<0.0001
MW-7	10/5/2017	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.046	<0.0001	<0.0001
MW-7	4/23/2018	--	--	--	--	--	--	--	--
MW-7	8/29/2018	--	--	--	--	--	--	--	--
MW-10	5/5/2015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-10	11/5/2015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-10	4/18/2016	--	--	--	--	--	--	--	--
MW-10	9/26/2016	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-10	4/25/2017	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-10	10/5/2017	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-10	4/23/2018	--	--	--	--	--	--	--	--
MW-10	8/29/2018	--	--	--	--	--	--	--	--

Table 3
Groundwater Analytical Results for PAHs
Former Chevron-Branded Service Station 90430
6470 Debarr Road
Anchorage, Alaska

Location	Date Units	PAHs							
		Chrysene mg/L	Dibenz(a,h)anthracene mg/L	Fluoranthene mg/L	Fluorene mg/L	Indeno(1,2,3-cd)pyrene mg/L	Naphthalene mg/L	Phenanthrene mg/L	Pyrene mg/L
ADEC Groundwater Cleanup Levels		0.002	0.00025	0.26	0.29	0.00019	0.0017	0.17	0.12
MW-11	5/5/2015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-11	11/5/2015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-11	4/18/2016	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-11	9/26/2016	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009
MW-11	4/25/2017	--	--	--	--	--	--	--	--
MW-11	10/5/2017	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-11	4/23/2018	--	--	--	--	--	--	--	--
MW-11	8/29/2018	--	--	--	--	--	--	--	--
MW-14	5/5/2015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.003	<0.0001	<0.0001
MW-14	4/18/2016	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0006	<0.0001	<0.0001
MW-14	9/26/2016	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.004	<0.0001	<0.0001
MW-14	4/25/2017	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0003 J	<0.0001	<0.0001
MW-14	10/4/2017	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.002	<0.0001	<0.0001
MW-14	4/23/2018	--	--	--	--	--	--	--	--
MW-14	8/29/2018	--	--	--	--	--	--	--	--
MW-16	5/5/2015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-16	11/5/2015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-16	4/18/2016	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-16	9/26/2016	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009
MW-16	4/25/2017	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-16	10/5/2017	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00009	<0.0001	<0.0001
MW-16	4/23/2018	--	--	--	--	--	--	--	--
MW-16	8/29/2018	--	--	--	--	--	--	--	--
MW-17	5/5/2015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-17	4/18/2016	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-17	4/25/2017	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
MW-17	4/23/2018	--	--	--	--	--	--	--	--
MW-17	8/29/2018	--	--	--	--	--	--	--	--

Notes and Abbreviations

PAHs = poly aromatic hydrocarbons by Method SW8270

ADEC = Alaska Department of Environmental Conservation

^a = Levels established in ADEC Table C Groundwater Cleanup Levels (18 AAC 75.345)**BOLD** = Indicates concentration above the ADEC Table C Groundwater Cleanup Level

mg/L = milligrams per liter

J = Estimated value

-- = Not measured / not analyzed

<x = Constituent not detected above x milligrams per liter

x / y = Sample results / blind duplicate results

Appendix A

Site Photographs



1. Looking Southwest



2. Looking West



3. Looking Northwest



FORMER CHEVRON-BRANDED STATION 90430
6470 DEBARR ROAD
ANCHORAGE, ALASKA

SITE PHOTOGRAPHS

65001-95
Nov 22, 2016

Appendix B

Human Health Conceptual Site Model Scoping and Graphics Forms

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

Site Name:

File Number:

Completed by:

Introduction

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

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

1. General Information:

Sources (*check potential sources at the site*)

USTs

ASTs

Dispensers/fuel loading racks

Drums

Vehicles

Landfills

Transformers

Other:

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

Spills

Leaks

Direct discharge

Burning

Other:

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

Surface soil (0-2 feet bgs*)

Subsurface soil (>2 feet bgs)

Air

Sediment

Groundwater

Surface water

Biota

Other:

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

Residents (adult or child)

Commercial or industrial worker

Construction worker

Subsistence harvester (i.e. gathers wild foods)

Subsistence consumer (i.e. eats wild foods)

Site visitor

Trespasser

Recreational user

Farmer

Other:

* bgs - below ground surface

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

a) Direct Contact -

1. Incidental Soil Ingestion

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

If the box is checked, label this pathway complete:

Comments:

2. Dermal Absorption of Contaminants from Soil

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

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

If both boxes are checked, label this pathway complete:

Comments:

b) Ingestion -

1. Ingestion of Groundwater

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

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

If both boxes are checked, label this pathway complete:

Comments:

2. Ingestion of Surface Water

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

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

If both boxes are checked, label this pathway complete:

Comments:

3. Ingestion of Wild and Farmed Foods

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

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

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

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

Comments:

c) Inhalation-

1. Inhalation of Outdoor Air

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

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

If both boxes are checked, label this pathway complete:

Comments:

2. Inhalation of Indoor Air

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

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

If both boxes are checked, label this pathway complete:

Comments:

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

Dermal Exposure to Contaminants in Groundwater and Surface Water

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

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

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

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

Comments:

Inhalation of Volatile Compounds in Tap Water

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

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

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

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

Comments:

Inhalation of Fugitive Dust

Inhalation of fugitive dust may be a complete pathway if:

- Nonvolatile compounds are found in the top 2 centimeters of soil. The top 2 centimeters of soil are likely to be dispersed in the wind as dust particles.
- Dust particles are less than 10 micrometers (Particulate Matter - PM₁₀). Particles of this size are called respirable particles and can reach the pulmonary parts of the lungs when inhaled.

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

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

Comments:

Direct Contact with Sediment

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

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

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

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

Comments:

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

HUMAN HEALTH CONCEPTUAL SITE MODEL GRAPHIC FORM

Site: Former Chevron-branded Service Station 90430
6470 Debarr Road, Anchorage, Alaska

Completed By: GHD Services, Inc.
 Date Completed: May 18, 2017

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

(1) Media	(2) Transport Mechanisms
<input type="checkbox"/> Surface Soil (0-2 ft bgs)	<input type="checkbox"/> Direct release to surface soil <i>check soil</i> <input type="checkbox"/> Migration to subsurface <i>check soil</i> <input type="checkbox"/> Migration to groundwater <i>check groundwater</i> <input type="checkbox"/> Volatilization <i>check air</i> <input type="checkbox"/> Runoff or erosion <i>check surface water</i> <input type="checkbox"/> Uptake by plants or animals <i>check biota</i> <input type="checkbox"/> Other (list):
<input checked="" type="checkbox"/> Subsurface Soil (2-15 ft bgs)	<input type="checkbox"/> Direct release to subsurface soil <i>check soil</i> <input checked="" type="checkbox"/> Migration to groundwater <i>check groundwater</i> <input checked="" type="checkbox"/> Volatilization <i>check air</i> <input type="checkbox"/> Uptake by plants or animals <i>check biota</i> <input type="checkbox"/> Other (list):
<input checked="" type="checkbox"/> Groundwater	<input checked="" type="checkbox"/> Direct release to groundwater <i>check groundwater</i> <input checked="" type="checkbox"/> Volatilization <i>check air</i> <input type="checkbox"/> Flow to surface water body <i>check surface water</i> <input type="checkbox"/> Flow to sediment <i>check sediment</i> <input type="checkbox"/> Uptake by plants or animals <i>check biota</i> <input type="checkbox"/> Other (list):
<input type="checkbox"/> Surface Water	<input type="checkbox"/> Direct release to surface water <i>check surface water</i> <input type="checkbox"/> Volatilization <i>check air</i> <input type="checkbox"/> Sedimentation <i>check sediment</i> <input type="checkbox"/> Uptake by plants or animals <i>check biota</i> <input type="checkbox"/> Other (list):
<input type="checkbox"/> Sediment	<input type="checkbox"/> Direct release to sediment <i>check sediment</i> <input type="checkbox"/> Resuspension, runoff, or erosion <i>check surface water</i> <input type="checkbox"/> Uptake by plants or animals <i>check biota</i> <input type="checkbox"/> Other (list):

(3) Exposure Media	(4) Exposure Pathway/Route	(5) Current & Future Receptors						
		Residents (adults or children)	Commercial or Industrial workers	Site visitors, trespassers or recreational users	Construction workers	Farmers or subsistence harvesters	Subsistence consumers	Other
<input checked="" type="checkbox"/> soil	<input checked="" type="checkbox"/> Incidental Soil Ingestion <input type="checkbox"/> Dermal Absorption of Contaminants from Soil <input type="checkbox"/> Inhalation of Fugitive Dust	C/F	C/F	C/F	F			
<input checked="" type="checkbox"/> groundwater	<input checked="" type="checkbox"/> Ingestion of Groundwater <input type="checkbox"/> Dermal Absorption of Contaminants in Groundwater <input type="checkbox"/> Inhalation of Volatile Compounds in Tap Water	C/F	C/F	C/F	F			
<input checked="" type="checkbox"/> air	<input checked="" type="checkbox"/> Inhalation of Outdoor Air <input checked="" type="checkbox"/> Inhalation of Indoor Air <input type="checkbox"/> Inhalation of Fugitive Dust	C/F	C/F	C/F	F			
<input type="checkbox"/> surface water	<input type="checkbox"/> Ingestion of Surface Water <input type="checkbox"/> Dermal Absorption of Contaminants in Surface Water <input type="checkbox"/> Inhalation of Volatile Compounds in Tap Water							
<input type="checkbox"/> sediment	<input type="checkbox"/> Direct Contact with Sediment							
<input type="checkbox"/> biota	<input type="checkbox"/> Ingestion of Wild or Farmed Foods							

Appendix C

Monitoring Data Package



DAILY FIELD REPORT

Project Name: CEHC 90436	GHD Project Manager: S. PRITCHARD	Field Rep: O. YAN/T. WEAVER
Project Number: 065001	Date: 8/29/18	Site Address: 6470 DEBARR ROAD ANCHORAGE, AK
Scope of Work: PERFORM GW MONITORING/SAMPLING		Weather: 40-50 F - SUNNY
Equipment: YSI-556 (11F10228); TURBIDITY METER (17284); HP-50; WATER LEVEL METER (06781)		

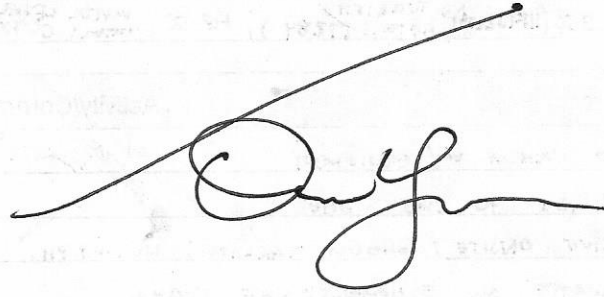
Time	Activity/Comments	SWA
0645	LOAD VEHICLE W/ EQUIPMENT	
0705	MOBILIZE TO THE SITE	
0730	ARRIVE ONSITE; CONDUCT TAILGATE; NOTIFY PH. (START W/ CAPPING WELLS. @ 753	
0853	CALIBRATE ALL EQUIPMENT; SEE FORMS.	
0904	SETUP @ MW-10 LOCATION.	
0906	START LF PURGE SAMPLING @ MW-10; COLLECT PARAMETER READINGS	
0938	COLLECT GW SAMPLE MW-10-W-180829; DECON EQUIPMENT; PURGE <u>0.80 GAL</u> THROUGH GAC.	
0949	SET UP ONSITE → START AT MW-11	
1001	START LF PURGE SAMPLING AT MW-11; COLLECT GW PARAMETER READINGS	
1033	COLLECT MW-11-W-180829 GW SAMPLE → DECON EQUIPMENT; PURGE <u>1.0 GAL</u> THROUGH GAC BUCKET.	
1039	SET UP @ MW-16 LOCATION.	
1045	START LF PURGE GW SAMPLING AT MW-16; COLLECT GW PARAMETER READINGS	
1117	COLLECT MW-16-W-180829 GW SAMPLE; DECON EQUIP; PURGE <u>0.75 GAL</u> THROUGH GAC.	
1133	START LF PURGE SAMPLING AT MW-3; COLLECT GW PARAMETER READINGS	
1205	COLLECT MW-3-W-180829 GW SAMPLE; DECON EQUIPMENT; PURGE <u>0.5 GAL</u> THROUGH GAC.	
1211	BREAK FOR LUNCH	
1250	SET UP AT MW-4R LOCATION	
1256	START LF PURGE SAMPLING LOCATION; COLLECT GW PARAMETERS.	
1328	COLLECT GW SAMPLES MW-4R-W-180829 / DUP-1-W-180829 (EOP/LEAD); DECON EQUIPMENT; PURGE <u>0.50 GAL</u> THROUGH GAC.	
1350	MOB TO MW-7 LOCATION	
1356	START LF PURGE SAMPLING AT MW-7; COLLECT GW PARAMETER READINGS.	
1427	COLLECT MW-7-W-180829 GW SAMPLE; DECON EQUIPMENT; PURGE <u>0.8 GAL</u> PURGE GW THROUGH GAC.	
1433	SET UP ON MW-5R.; DISPOSE OF <u>(9 GALLONS)</u> OF WASTE WATER FROM DRUM (2016) THROUGH GAC.	
1449	START LF-PURGE GW SAMPLING AT MW-5R; COLLECT GW PARAMETERS	
1515	COLLECT MW-5R-W-180829 / DUP-2-W-180829 (STC/MTC); DECON EQUIPMENT; PURGE <u>1.25 GAL</u> THROUGH GAC BUCKET	

SWA Key:	A: Person or People	B: Equipment	C: Environmental
	D: Procedures/Processes/JSA-review/revise	E: Visitors	

Operational Mileage: Start _____ End _____ Total _____

Site Photographs: GAC Tracker: Disposal Log: N/A Lab COC Review: _____

- 1520 MOR TO MW-14 FOR LF PURGE SAMPLING
- 1531 START W/ LOW-FLOW PURGE SAMPLING; COLLECT GW PARAMETER READINGS.
- 1603 COLLECT GW SAMPLE @ MW-14 - W-180829 / DUP-3 - W-180829 (GRB) / DECON EQUIPMENT /
PURGE 0.70 GAL GW THROUGH GAC; PURGE 1.80 GAL FROM DECON WATER
THROUGH GAC.
- 1621 DEMO3 FROM THE SITE.
- 1645 BACK @ OFFICE OFFLOAD SAMPLES.



Time	Activity	Notes
1520	MOR TO MW-14 FOR LF PURGE SAMPLING	
1531	START W/ LOW-FLOW PURGE SAMPLING; COLLECT GW PARAMETER READINGS.	
1603	COLLECT GW SAMPLE @ MW-14 - W-180829 / DUP-3 - W-180829 (GRB) / DECON EQUIPMENT / PURGE 0.70 GAL GW THROUGH GAC; PURGE 1.80 GAL FROM DECON WATER THROUGH GAC.	
1621	DEMO3 FROM THE SITE.	
1645	BACK @ OFFICE OFFLOAD SAMPLES.	

SWAKey
 A. Person or People
 B. Location
 C. Date
 D. Description
 E. Other



Groundwater Monitoring Field Sheet

Project Name: 90430 (ADEC File ID: 100.26.010)

Project Number: 065001

Field Staff: T. Weaver / O. Yan

Date: AUGUST 29, 2018

Well ID	Time	DTW (ft - btoc)	DTB (ft-btoc)	DTP (ft-btoc)	Product Thickness (feet)	Amount of Product Removed (feet)	Casing Diameter (inches)	PID (ppm)	Comments
MW-3	0836	11.34	18.42	--	--	--	4"	--	cut off <u>1.05</u> FEET OF CASING (ie 12.65 inches)
MW-4R	0840	10.31	17.45	--	--	--	2"	--	
MW-5R	0845	15.96	21.17	--	--	--	2"	--	
MW-7	0842	15.87	17.94	--	--	--	4"	--	
MW-8	0806	18.80	23.46	--	--	--	2"	--	gauge only
MW-9	0834	9.18	28.69	--	--	--	4"	--	gauge only soft bottom
MW-10	0803	15.42	24.93	--	--	--	2"	--	
MW-11	0827	16.06	24.97	--	--	--	4"	--	
MW-12	0814	16.05	25.76	--	--	--	2"	--	gauge only
MW-14	0838	9.68	18.02	--	--	--	2"	--	
MW-15	0809	16.63	17.78	--	--	--	2"	--	gauge only
MW-16	0830	15.41	24.09	--	--	--	2"	--	
MW-17	0822	14.44	23.59	--	--	--	2"	--	gauge only
GAC Filtered Water Volume:		<u>8.1</u> gallons		Volume logged on Portable GAC Volume Tracking Log? <input checked="" type="checkbox"/>					

DTP - depth to product; DTW - depth to water; DTB - depth to bottom; ft-btoc - feet below top of casing; ppm - parts per million



Groundwater Sampling Form

Project No. 065001 PM Siobhan Pritchard Well ID MW-5R Date 8/29/18 Page 3 of 8

Site ID / Location 90430 / 6470 Debarr Road, Anchorage, Alaska (ADEC File ID: 2100.26.010)

Screen Casing Well Material x PVC Sampled by T. Weaver
 Setting (ft-btoc) 12 Diameter (in.) 2" SS O. Yan

Static Water Level (ft-btoc) 15.96 Total Depth (ft-btoc) 21.17 Water Column / Gallons in Well 5.21 / 0.834
 Sample ID MW-5R-W-180829
 Dup ID DUP-2-W-180829

Sample Time _____ Start _____ End _____

No-Purge Method Sampler Length (in) <u>36</u> <input type="checkbox"/> Depth of Sampler (ft) _____ <u>30</u> <input type="checkbox"/>		Low Flow Method Pump type Bladder <input checked="" type="checkbox"/> Other <input type="checkbox"/> Pump Intake (ft-btoc) <u>16.70</u> Volumes Purged <u>1.25 GAL</u> Flow rate (ml/minute) <u>135-180</u> Purge Time: Start <u>1444</u> End <u>1514</u> Did well Dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Low-Flow Sampling Method Weights _____ Position _____ Suspended <input type="checkbox"/> Bottom set <input type="checkbox"/> Did well Dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Teflon Baler used to collect non volatile samples Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

Time	Minutes Elapsed	Rate (gpm) (mL/min)	Depth to Water (ft)	Gallons Purged	Temp (°C)	Cond. (mS/cm) 3%	Dissolved Oxygen (mg/L) 10%	pH 0.1	Redox (mV) 10	Turbidity (NTU)	Additional notes
1449	5	180	15.99	0.10	9.27	0.940	3.40	8.61	-44.9	37.1	CLEAR
1454	10	135	16.00	0.30	8.22	0.947	4.68	8.77	-48.6	19.4	↓
1459	15	135	16.01	0.50	7.70	0.952	4.56	8.91	-53.5	11.0	
1504	20	135	16.02	0.65	7.59	0.957	4.78	8.99	-55.8	11.6	
1509	25	135	16.02	0.75	7.44	0.962	4.97	9.03	-56.3	10.4	

Constituents Sampled	Container	Number	Preservative
BTEX by 8260 <input checked="" type="checkbox"/> + MTBE (8260B)	40 mL vial	56/6	HCl
VOCs by 8260 <input type="checkbox"/>			
HVOCs by 8260 <input type="checkbox"/>			
GRO by AK 101 <input checked="" type="checkbox"/>	40 mL vial	3	HCl
DRO by AK 102 <input type="checkbox"/>			
RRO by AK 103 <input type="checkbox"/>			
Lead by 6010 <input type="checkbox"/>			
PAHs by 8270 <input type="checkbox"/>			
Alkalinity by 2320B <input type="checkbox"/>			
Methane by RSK175 <input type="checkbox"/>			
Sulfate by EPA 300 <input type="checkbox"/>			
Nitrate/Nitrite by EPA 300 <input type="checkbox"/>			
Ferrous Iron <input type="checkbox"/>			
		TOTAL: 9/6	

Well Casing Volumes

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

Field Test Results: N/A Ferrous Iron _____ mg/L Nitrate _____ mg/L Other _____

Well Information

Well Location: ONSITE Well Locked at Arrival: Yes / No

Condition of Well: Good Well Locked at Departure: Yes / No

Well Completion: Flush Mount / Stick Up

Additional Notes



Groundwater Sampling Form

Project No. 065001 PM Siobhan Pritchard Well ID MW-10 Date 8/29/18 Page 5 of 8

Site ID / Location 90430 / 6470 Debarr Road, Anchorage, Alaska (ADEC File ID: 2100.26.010)

Screen Casing Well Material x PVC Sampled by T. Weaver
 Setting (ft-btoc) 10 Diameter (in.) 2" SS O. Yan

Static Water Level (ft-btoc) 15.42 Total Depth (ft-btoc) 24.93 Water Column / Gallons in Well 9.51 / 1.522
 Sample ID MW-10-W-180829
 Dup ID ---

Sample Time 0938 Start --- End ---

No-Purge Method Sampler Length (in) <u>36</u> <input type="checkbox"/> Depth of Sampler (#) <u>30</u> <input type="checkbox"/> Low-Flow Sampling Method Weights <u>---</u> Position <u>---</u> Suspended <input type="checkbox"/> Bottom <input type="checkbox"/> Bottom set <input type="checkbox"/> Was Teflon Baler used to collect non volatile samples Yes <input type="checkbox"/> No <input type="checkbox"/>				Low Flow Method Pump type Bladder <input checked="" type="checkbox"/> Other <input type="checkbox"/> Pump Intake (ft-btoc) <u>16.20</u> Volumes Purged <u>0.80642</u> Flow rate (ml/minute) <u>80-150</u> Purge Time: Start <u>906</u> End <u>936</u> Did well Dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
---	--	--	--	---	--	--	--

Time	Minutes Elapsed	Rate (gpm) (mL/min)	Depth to Water (ft)	Gallons Purged	Temp (°C)	Cond. (mS/cm) 3%	Dissolved Oxygen (mg/L) 10%	pH 0.1	Redox (mV) 10	Turbidity (NTU)	Additional notes
0911	5	150	16.01	0.20	7.27	0.415	6.25	6.68	208.1	>1000	cloudy
0916	10	80	16.03	0.35	7.03	0.411	5.63	6.79	217.4	>1000	↓
0921	15	80	16.01	0.45	6.77	0.408	5.92	6.90	223.8	749	
0926	20	80	16.01	0.55	6.56	0.406	7.39	6.99	224.1	714	
0931	25	80	16.01	0.60	6.42	0.405	7.65	7.06	225.6	317	

Constituents Sampled	Container	Number	Preservative
BTEX by 8260 <input checked="" type="checkbox"/> + MTBE (8260B)	40 mL vial	3 +3 ✓	HCl
VOCs by 8260 <input type="checkbox"/>			
HVOCs by 8260 <input type="checkbox"/>			
GRO by AK 101 <input checked="" type="checkbox"/>	40 mL vial	3 ✓	HCl
DRO by AK 102 <input type="checkbox"/>			
RRO by AK 103 <input type="checkbox"/>			
Lead by 6010 <input type="checkbox"/>			
PAHs by 8270 <input type="checkbox"/>			
Alkalinity by 2320B <input type="checkbox"/>			
Methane by RSK175 <input type="checkbox"/>			
Sulfate by EPA 300 <input type="checkbox"/>			
Nitrate/Nitrite by EPA 300 <input type="checkbox"/>			
Ferrous Iron <input type="checkbox"/>			
		TOTAL: 9	

Well Casing Volumes

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

Field Test Results: N/A Ferrous Iron mg/L Nitrate mg/L Other

Well Information

Well Location: OFFSITE - DOWN BEYOND THE FENCE Well Locked at Arrival: Yes / No

Condition of Well: GOOD Well Locked at Departure: Yes / No

Well Completion: Flush Mount / Stick Up

Additional Notes

NEEDS TO BE REDEVELOPED?



Groundwater Sampling Form

Project No. 065001 PM Siobhan Pritchard Well ID MW-11 Date 8/29/18 Page 6 of 8

Site ID / Location 90430 / 6470 Debarr Road, Anchorage, Alaska (ADEC File ID: 2100.26.010)

Screen Casing Well Material x PVC Sampled by T. Weaver
 Setting (ft-btoc) 2 Diameter (in.) 4" SS O. Yan

Static Water Level (ft-btoc) 16.06 Total Depth (ft-btoc) 24.43 Water Column / Gallons in Well 8.41 / 5.467 Sample ID MW-11-W-180829
 Dup ID —

Sample Time 1633 Start — End —

No-Purge Method Sampler Length (in) 36 <input type="checkbox"/> Depth of Sampler (ft) <u>—</u> 30 <input type="checkbox"/> Low-Flow Sampling Method Weights <u>—</u> Position <u>—</u> Suspended <input type="checkbox"/> Bottom <input type="checkbox"/> Bottom set <input type="checkbox"/> Was Teflon Baler used to collect non volatile samples Yes <input type="checkbox"/> No <input type="checkbox"/>				Low Flow Method Pump type Bladder <input checked="" type="checkbox"/> Other <input type="checkbox"/> Pump Intake (ft-btoc) <u>16.70</u> Volumes Purged <u>1.0 GAL</u> Flow rate (ml/minute) <u>100-120</u> Purge Time: Start <u>1001</u> Did well Dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> End <u>1031</u>			
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Time	Minutes Elapsed	Rate (gpm) (mL/min)	Depth to Water (ft)	Gallons Purged	Temp (°C)	Cond. (mS/cm) 3%	Dissolved Oxygen (mg/L) 10%	pH 0.1	Redox (mV) 10	Turbidity (NTU)	Additional notes
1006	5	100	16.08	0.05	9.79	0.326	0.31	7.66	234.1	15.4	CLEAR
1011	10	120	16.08	0.15	9.27	0.321	4.43	7.70	234.4	12.4	↓
1016	15	120	16.08	0.30	8.98	0.330	4.32	7.66	233.4	7.2	
1021	20	120	16.08	0.45	8.88	0.318	4.70	7.71	232.5	5.57	
1026	25	120	16.08	0.70	8.86	0.318	4.61	7.74	232.7	4.56	

Constituents Sampled	Container	Number	Preservative
BTEX by 8260 <input checked="" type="checkbox"/> + MTBE (1SA ONLY)	40 mL vial	3	HCl
VOCs by 8260 <input type="checkbox"/>			
HVOCs by 8260 <input type="checkbox"/>			
GRO by AK 101 <input checked="" type="checkbox"/>	40 mL vial	3	HCl
DRO by AK 102 <input type="checkbox"/>			
RRO by AK 103 <input type="checkbox"/>			
Lead by 6010 <input type="checkbox"/>			
PAHs by 8270 <input type="checkbox"/>			
Alkalinity by 2320B <input type="checkbox"/>			
Methane by RSK175 <input type="checkbox"/>			
Sulfate by EPA 300 <input type="checkbox"/>			
Nitrate/Nitrite by EPA 300 <input type="checkbox"/>			
Ferrous Iron <input type="checkbox"/>			

TOTAL: 6

Well Casing Volumes

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

Field Test Results: N/A Ferrous Iron — mg/L Nitrate — mg/L Other —

Well Information

Well Location: ONSITE Well Locked at Arrival: Yes / No

Condition of Well: GOOD Well Locked at Departure: Yes / No

Well Completion: Flush Mount / Stick Up

Additional Notes

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Groundwater Sampling Form

Project No. 065001 PM Siobhan Pritchard Well ID MW-14 Date 8/29/16 Page 7 of 8

Site ID / Location 90430 / 6470 Debarr Road, Anchorage, Alaska (ADEC File ID: 2100.26.010)
 Screen Casing Well Material x PVC
 Setting (ft-btoc) 5 Diameter (in.) 2" SS
 Sampled by T. Weaver
O. Yan

Static Water Level (ft-btoc) 9.63 Total Depth (ft-btoc) 18.02 Water Column / Gallons in Well 8.39 / 1.342
 Sample ID MW-14-W-180825
 Dup ID DUP-3-W-180826

Sample Time 1603 Start _____ End _____

No-Purge Method Sampler Length (in) 36 <input type="checkbox"/> 30 <input type="checkbox"/> Depth of Sampler (ft) _____ Weights _____ Position _____ Suspended <input type="checkbox"/> Bottom set <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>				Low Flow Method Pump type Bladder <input checked="" type="checkbox"/> Other <input type="checkbox"/> Pump Intake (ft-btoc) <u>10.50</u> Volumes Purged <u>0.70 GAL</u> Flow rate (ml/minute) <u>95-150</u> Purge Time: Start <u>1531</u> End <u>1603</u> Did well Dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
--	--	--	--	---	--	--	--

Time	Minutes Elapsed	Rate (gpm) (mL/min)	Depth to Water (ft)	Gallons Purged	Temp (°C)	Cond. (mS/cm) 3%	Dissolved Oxygen (mg/L) 10%	pH 0.1	Redox (mV) 10	Turbidity (NTU)	Additional notes
1536	5	150	9.79	0.10	11.78	0.636	5.56	8.02	28.6	4.27	CLEAR
1541	10	90	9.79	0.20	10.87	0.618	5.05	7.96	24.4	2.88	↓
1546	15	90	9.79	0.30	10.36	0.603	5.20	7.99	26.9	2.31	
1551	20	90	9.79	0.40	9.94	0.581	5.56	8.01	32.1	1.93	
1556	25	90	9.79	0.50	9.53	0.577	5.34	8.05	38.2	1.61	

Constituents Sampled	Container	Number	Preservative
BTEX by 8260 <input checked="" type="checkbox"/>	40 mL vial	3	HCl
VOCs by 8260 <input type="checkbox"/>			
HVOCs by 8260 <input type="checkbox"/>			
GRO by AK 101 <input checked="" type="checkbox"/>	40 mL vial	3 + 3	HCl
DRO by AK 102 <input type="checkbox"/>			
RRO by AK 103 <input type="checkbox"/>			
Lead by 6010 <input type="checkbox"/>			
PAHs by 8270 <input type="checkbox"/>			
Alkalinity by 2320B <input type="checkbox"/>			
Methane by RSK175 <input type="checkbox"/>			
Sulfate by EPA 300 <input type="checkbox"/>			
Nitrate/Nitrite by EPA 300 <input type="checkbox"/>			
Ferrous Iron <input type="checkbox"/>			

TOTAL = 6/3

Well Casing Volumes

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

Field Test Results:
 N/A Ferrous Iron mg/L Nitrate mg/L Other

Well Information

Well Location: ONSITE Well Locked at Arrival: Yes / No

Condition of Well: GOOD Well Locked at Departure: Yes / No

Well Completion: Flush Mount / Stick Up

Additional Notes

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Groundwater Sampling Form

Project No. 065001 PM Siobhan Pritchard Well ID MW-16 Date 8/29/16 Page 8 of 8

Site ID / Location 90430 / 6470 Debarr Road, Anchorage, Alaska (ADEC File ID: 2100.26.010)
Screen Casing Well Material x PVC
Setting (ft-btoc) 15 Diameter (in.) 2" SS
Sampled by T. Weaver
O. Yan

Static Water Level (ft-btoc) 15.41 Total Depth (ft-btoc) 24.09 Water Column / Gallons in Well 8.68 / 1.389
Sample ID MW-16-W-180829
Dup ID _____

Sample Time 1117 Start _____ End _____

No-Purge Method Sampler Length (in) 36 <input type="checkbox"/> 30 <input type="checkbox"/> Depth of Sampler (ft) _____ Weights _____ Position _____ Suspended <input type="checkbox"/> Bottom set <input type="checkbox"/> Was Teflon Baler used to collect non volatile samples Yes <input type="checkbox"/> No <input type="checkbox"/>				Low Flow Method Pump type Bladder <input checked="" type="checkbox"/> Other <input type="checkbox"/> Pump Intake (ft-btoc) <u>16.10</u> Volumes Purged <u>0.75 GAL</u> Flow rate (ml/minute) <u>120-130</u> Purge Time: Start <u>1045</u> End <u>1115</u> Did well Dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
--	--	--	--	--	--	--	--

Time	Minutes Elapsed	Rate (gpm) (mL/min)	Depth to Water (ft)	Gallons Purged	Temp (°C)	Cond. (mS/cm) 3%	Dissolved Oxygen (mg/L) 10%	pH 0.1	Redox (mV) 10	Turbidity (NTU)	Additional notes
1050	5	120	15.42	0.10	9.14	0.570	8.20	7.50	252.0	428	CLOUDY
1055	10	130	15.43	0.20	8.44	0.579	7.65	7.51	258.5	502	↓
1100	15	130	15.41	0.30	7.52	0.586	8.12	7.61	251.5	369	
1105	20	130	15.41	0.40	7.11	0.588	8.30	7.68	263.3	222	
1110	25	130	15.41	0.50	6.96	0.590	8.04	7.70	255.9	170	

Constituents Sampled	Container	Number	Preservative
BTEX by 8260 <input checked="" type="checkbox"/> + MTBE (1SA ONLY)	40 mL vial	3 ✓	HCl
VOCs by 8260 <input type="checkbox"/>			
HVOCs by 8260 <input type="checkbox"/>			
GRO by AK 101 <input checked="" type="checkbox"/>	40 mL vial	3 ✓	HCl
DRO by AK 102 <input type="checkbox"/>			
RRO by AK 103 <input type="checkbox"/>			
Lead by 6010 <input type="checkbox"/>			
PAHs by 8270 <input type="checkbox"/>			
Alkalinity by 2320B <input type="checkbox"/>			
Methane by RSK175 <input type="checkbox"/>			
Sulfate by EPA 300 <input type="checkbox"/>			
Nitrate/Nitrite by EPA 300 <input type="checkbox"/>			
Ferrous Iron <input type="checkbox"/>			

TOTAL: 6

Well Casing Volumes

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

Field Test Results: N/A Ferrous Iron mg/L Nitrate mg/L Other

Well Information

Well Location: ONSITE Well Locked at Arrival: Yes / No

Condition of Well: GOOD Well Locked at Departure: Yes / No

Well Completion: Flush Mount / Stick Up

Additional Notes
NEEDS LOCK

Field Data Record Form
Meter, Water Level
(QSF-251D)

Page 1 of 1

Control number: 06784
Date (mm/dd/yyyy): 08/29/18
User (print name): YAN, OLIVER

Project number: 065001
Project name: CENIC 90430

Location: 6470 DEBARR RD.
ANCHORAGE, AK

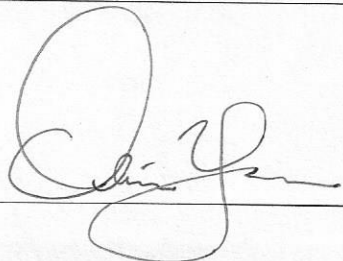
Additional equipment control numbers and descriptions: _____

Field procedure before use:

	Check when completed
<ul style="list-style-type: none">• Check for broken or missing parts.• Check battery• Check operation of buzzer.• Check operation of signal light.• Test probe in water to ensure unit operates, both visually and audibly.• Check cable.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

Filing: Field file

Signature: _____



Field Data Record Form
Meter, PH/Cond./Temp./DO/ORP/ Salinity/Flow Cell,
YSI 556 MPS
(QSF-483D)

Control number: 11F 102278 (JTJ EW)
 Date (mm/dd/yyyy): 08/29/18
 User (print name): YAN, OLIVER

Project number: 065001
 Project name: CEMC 90430
 Location: 6470 DEBARR ROAD
ANCHORAGE, AK

Calibration solution(s):	pH 7.0	pH 4.0	CONDUCTIVITY	ORP
Lot #(s):	VT1	WX1	VT2	2079
Supplier(s):	OAKTON	OAKTON	OAKTON	HANNA
Expiration date(s):	01/2019	03/2020	07/2019	10/2022

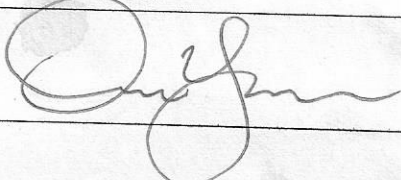
Additional information: _____

Field procedure before use:

	Check when completed
<ul style="list-style-type: none"> Check kit contents. Check pH 7 buffer reading. Calibrate if greater than ± 0.2. <p>PH is a two point calibration but always start with the seven standard.</p> <ul style="list-style-type: none"> Fill calibration cup with pH 7.0 buffer and attach to probe with probes facing down. Press Esc to enter into main menu and use down arrow key to highlight calibration menu. Press \downarrow key to accept. Use \downarrow key to highlight pH symbol and press enter \downarrow. Select 2 point calibration and use number pad to enter 7.0 and push \downarrow to accept value. Push \downarrow again to calibrate. Repeat these steps to calibrate your pH value to <u>4.0</u> or 10.0. Press Esc to return to the calibration screen. <p>Check conductivity standard near the expected range. Calibrate if greater than $\pm 0.5\%$.</p> <p>Conductivity is a one point calibration.</p> <ul style="list-style-type: none"> Fill calibration cup with 1.413 mS standard and attach to probe with probes facing up. Press Esc to return to the calibration screen. Use the \uparrow or \downarrow to select SpC and press \downarrow Use the number key pad to enter 1.413 and push \downarrow to accept value. Push \downarrow again to calibrate. <p>Check ORP standard:</p> <ul style="list-style-type: none"> Press Esc to return to the calibration screen. Use the \uparrow or \downarrow to select ORP and press \downarrow Use the number key pad to enter the value and push \downarrow to accept. Push \downarrow again to calibrate. <p>To calibrate DO, see manual for instructions.</p>	<p><input checked="" type="checkbox"/></p> <p>Reading <u>7.01</u></p> <p>Calibrated <u>Y</u> / N</p> <p>Reading <u>4.01</u></p> <p>Standard <u>1.413</u></p> <p>Reading <u>1.413</u></p> <p>Calibrated <u>Y</u> / N</p> <p>Standard <u>240</u> mV</p> <p>Reading <u>240.1</u> mV</p> <p>Calibrated <u>Y</u> / N</p>

Filing: Field file

Signature: _____



Field Data Record Form
Meter, Turbidity (Portable), HF Scientific
(QSF-249D)

Control number: 17284
 Date (mm/dd/yyyy): 08/29/18
 User (print name): MA TRAVIS VERAOK

Project number: 065001
 Project name: CEHC 90430

Location: 6470 DEBARRE ROAD
ANCHORAGE, AK

Additional equipment control numbers and descriptions:

20.1 NTU	20 NTU	100 NTU	800 NTU
LOT: A7163	LOT: A7187	LOT: A7188	LOT: A7191
HACH	HACH	HACH	HACH
EXP: SEP-18	EXP: OCT-18	EXP: OCT-18	EXP: OCT-18

Field procedure before use:

	Check when completed
• Turn the DRT-15CE to the 0-10 range.	<input checked="" type="checkbox"/>
• Check outside of reference standard bottles for cleanliness, no condensation, surface scratches, or finger smudges.	<input type="checkbox"/>
• Insert the reference standard and index.	<input type="checkbox"/>
• Adjust the Reference Adjust in the appropriate direction to cause the display to read 0.02 NTU.	<input type="checkbox"/>
• The unity is now ready to use on any range.	
<p>Note: Condensation, surface scratches, finger smudges, and dirt on outside of sample bottles affects meter readings.</p>	

Filing: Field file

Signature: Zari [Signature]

Appendix D

Laboratory Analytical Report



ANALYSIS REPORT

Prepared by:

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

Prepared for:

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Report Date: September 13, 2018 13:48

Project: 90430

Account #: 10880
Group Number: 1983071
PO Number: 0015280824
Release Number: HETRICK
State of Sample Origin: AK

Electronic Copy To Chevron
Electronic Copy To GHD
Electronic Copy To GHD
Electronic Copy To GHD
Electronic Copy To GHD

Attn: GHD EDD
Attn: Jeffrey Cloud
Attn: Sarah Gillette
Attn: Siobhan Pritchard
Attn: GHD EDF

Respectfully Submitted,



Megan A. Moeller
Senior Specialist

(717) 556-7261

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



SAMPLE INFORMATION

<u>Client Sample Description</u>	<u>Sample Collection Date/Time</u>	<u>ELLE#</u>
MW-10-W-180829 Grab Groundwater	08/29/2018 09:38	9784830
MW-11-W-180829 Grab Groundwater	08/29/2018 10:33	9784831
MW-16-W-180829 Grab Groundwater	08/29/2018 11:17	9784832
MW-3-W-180829 Grab Groundwater	08/29/2018 12:05	9784833
MW-4R-W-180829 Grab Groundwater	08/29/2018 13:28	9784834
MW-7-W-180829 Grab Groundwater	08/29/2018 14:27	9784835
MW-5R-W-180829 Grab Groundwater	08/29/2018 15:15	9784836
MW-14-W-180829 Grab Groundwater	08/29/2018 16:03	9784837
DUP-1-WD-180829 Grab Groundwater	08/29/2018	9784838
DUP-2-WD-180829 Grab Groundwater	08/29/2018	9784839
QA-O-180829 Water	08/29/2018	9784840
DUP-3-WD-180829 Grab Groundwater	08/29/2018	9784841

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

Project Name: 90430
ELLE Group #: 1983071

General Comments:

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below.

Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are not included in this data set.

Matrix QC may not be reported if 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.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

The temperature of the temperature blank bottle(s) upon receipt at the lab was 22.0 C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 22.2-23.4 C.

Analysis Specific Comments:

SW-846 8260B, GC/MS Volatiles

Sample #s: 9784830

A preserved vial was submitted for analysis. However, the pH at the time of analysis was 6.

Sample Description: MW-10-W-180829 Grab Groundwater
Facility# 90430
6470 Debarr Rd - Anchorage, AK

ChevronTexaco
ELLE Sample #: WW 9784830
ELLE Group #: 1983071
Matrix: Groundwater

Project Name: 90430

Submittal Date/Time: 09/04/2018 09:20
Collection Date/Time: 08/29/2018 09:38

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles		SW-846 8260B	mg/l	mg/l	mg/l	
10945	Benzene	71-43-2	N.D.	0.0002	0.001	1
10945	Ethylbenzene	100-41-4	N.D.	0.0002	0.001	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	0.0007 J	0.0002	0.001	1
10945	Toluene	108-88-3	N.D.	0.0002	0.001	1
10945	Xylene (Total)	1330-20-7	N.D.	0.0005	0.005	1
A preserved vial was submitted for analysis. However, the pH at the time of analysis was 6.						
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

Sample Comments

State of Alaska Lab Certification No. UST-061
The temperature of the temperature blank bottle(s) upon receipt at the lab was 22.0 C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 22.2-23.4 C.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	F182491AA	09/06/2018 23:19	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F182491AA	09/06/2018 23:19	Hu Yang	1
01438	TPH-GRO AK water C6-C10	AK 101	1	18249B20B	09/08/2018 16:14	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	18249B20B	09/08/2018 16:14	Jeremy C Giffin	1

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

Sample Description: MW-11-W-180829 Grab Groundwater
Facility# 90430
6470 Debarr Rd - Anchorage, AK

ChevronTexaco
ELLE Sample #: WW 9784831
ELLE Group #: 1983071
Matrix: Groundwater

Project Name: 90430

Submission Date/Time: 09/04/2018 09:20
Collection Date/Time: 08/29/2018 10:33

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles		SW-846 8260B	mg/l	mg/l	mg/l	
10945	Benzene	71-43-2	N.D.	0.0002	0.001	1
10945	Ethylbenzene	100-41-4	N.D.	0.0002	0.001	1
10945	Toluene	108-88-3	N.D.	0.0002	0.001	1
10945	Xylene (Total)	1330-20-7	N.D.	0.0005	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

Sample Comments

State of Alaska Lab Certification No. UST-061
The temperature of the temperature blank bottle(s) upon receipt at the lab was 22.0 C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 22.2-23.4 C.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX 8260B Water	SW-846 8260B	1	F182492AA	09/06/2018 22:00	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F182492AA	09/06/2018 22:00	Hu Yang	1
01438	TPH-GRO AK water C6-C10	AK 101	1	18249B20A	09/07/2018 20:28	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	18249B20A	09/07/2018 20:28	Jeremy C Giffin	1

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

Sample Description: MW-16-W-180829 Grab Groundwater
Facility# 90430
6470 Debarr Rd - Anchorage, AK

ChevronTexaco
ELLE Sample #: WW 9784832
ELLE Group #: 1983071
Matrix: Groundwater

Project Name: 90430

Submission Date/Time: 09/04/2018 09:20
Collection Date/Time: 08/29/2018 11:17

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles		SW-846 8260B	mg/l	mg/l	mg/l	
10945	Benzene	71-43-2	N.D.	0.0002	0.001	1
10945	Ethylbenzene	100-41-4	N.D.	0.0002	0.001	1
10945	Toluene	108-88-3	N.D.	0.0002	0.001	1
10945	Xylene (Total)	1330-20-7	N.D.	0.0005	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

Sample Comments

State of Alaska Lab Certification No. UST-061
The temperature of the temperature blank bottle(s) upon receipt at the lab was 22.0 C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 22.2-23.4 C.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX 8260B Water	SW-846 8260B	1	F182492AA	09/06/2018 23:29	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F182492AA	09/06/2018 23:29	Hu Yang	1
01438	TPH-GRO AK water C6-C10	AK 101	1	18249B20A	09/07/2018 20:56	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	18249B20A	09/07/2018 20:56	Jeremy C Giffin	1

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

Sample Description: MW-3-W-180829 Grab Groundwater
Facility# 90430
6470 Debarr Rd - Anchorage, AK

ChevronTexaco
ELLE Sample #: WW 9784833
ELLE Group #: 1983071
Matrix: Groundwater

Project Name: 90430

Submittal Date/Time: 09/04/2018 09:20
Collection Date/Time: 08/29/2018 12:05

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles		SW-846 8260B	mg/l	mg/l	mg/l	
10945	Benzene	71-43-2	0.040	0.0002	0.001	1
10945	Ethylbenzene	100-41-4	0.002	0.0002	0.001	1
10945	Toluene	108-88-3	0.0004 J	0.0002	0.001	1
10945	Xylene (Total)	1330-20-7	0.004 J	0.0005	0.005	1
GC Volatiles		AK 101	mg/l	mg/l	mg/l	
01438	TPH-GRO AK water C6-C10	n.a.	0.16	0.014	0.10	1

Sample Comments

State of Alaska Lab Certification No. UST-061
The temperature of the temperature blank bottle(s) upon receipt at the lab was 22.0 C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 22.2-23.4 C.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX 8260B Water	SW-846 8260B	1	F182492AA	09/06/2018 23:51	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F182492AA	09/06/2018 23:51	Hu Yang	1
01438	TPH-GRO AK water C6-C10	AK 101	1	18249B20A	09/07/2018 21:24	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	18249B20A	09/07/2018 21:24	Jeremy C Giffin	1

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

Sample Description: MW-4R-W-180829 Grab Groundwater
Facility# 90430
6470 Debarr Rd - Anchorage, AK

ChevronTexaco
ELLE Sample #: WW 9784834
ELLE Group #: 1983071
Matrix: Groundwater

Project Name: 90430

Submission Date/Time: 09/04/2018 09:20
Collection Date/Time: 08/29/2018 13:28

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles						
		SW-846 8260B	mg/l	mg/l	mg/l	
10945	Benzene	71-43-2	0.009	0.0002	0.001	1
10945	Ethylbenzene	100-41-4	0.041	0.0002	0.001	1
10945	Toluene	108-88-3	0.11	0.0002	0.001	1
10945	Xylene (Total)	1330-20-7	0.18	0.0005	0.005	1
GC Volatiles						
		AK 101	mg/l	mg/l	mg/l	
01438	TPH-GRO AK water C6-C10	n.a.	0.84	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
Metals						
		SW-846 6010C	mg/l	mg/l	mg/l	
07055	Lead	7439-92-1	N.D.	0.0071	0.0300	1

Sample Comments

State of Alaska Lab Certification No. UST-061
The temperature of the temperature blank bottle(s) upon receipt at the lab was 22.0 C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 22.2-23.4 C.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX 8260B Water	SW-846 8260B	1	F182492AA	09/07/2018 00:13	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F182492AA	09/07/2018 00:13	Hu Yang	1
01438	TPH-GRO AK water C6-C10	AK 101	1	18249B20A	09/07/2018 22:19	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	18249B20A	09/07/2018 22:19	Jeremy C Giffin	1
10398	EDB by 8011	SW-846 8011	1	182500011A	09/11/2018 20:14	Rachel Umberger	1
07786	EDB Extraction (8011)	SW-846 8011	1	182500011A	09/08/2018 11:50	Olivia Arosemena	1
07055	Lead	SW-846 6010C	1	182481063502	09/11/2018 08:23	Lisa J Cooke	1
10635	ICP-WW, 3005A (tot rec) - U4	SW-846 3005A	1	182481063502	09/06/2018 04:25	James L Mertz	1

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

Sample Description: MW-7-W-180829 Grab Groundwater
Facility# 90430
6470 Debarr Rd - Anchorage, AK

ChevronTexaco
ELLE Sample #: WW 9784835
ELLE Group #: 1983071
Matrix: Groundwater

Project Name: 90430

Submittal Date/Time: 09/04/2018 09:20
Collection Date/Time: 08/29/2018 14:27

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles		SW-846 8260B	mg/l	mg/l	mg/l	
10945	Benzene	71-43-2	0.94	0.002	0.010	10
10945	Ethylbenzene	100-41-4	0.71	0.002	0.010	10
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.002	0.010	10
10945	Toluene	108-88-3	0.10	0.002	0.010	10
10945	Xylene (Total)	1330-20-7	0.87	0.005	0.050	10
GC Volatiles		AK 101	mg/l	mg/l	mg/l	
01438	TPH-GRO AK water C6-C10	n.a.	7.7	0.070	0.50	5

Sample Comments

State of Alaska Lab Certification No. UST-061
The temperature of the temperature blank bottle(s) upon receipt at the lab was 22.0 C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 22.2-23.4 C.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	D182502AA	09/08/2018 06:10	Hu Yang	10
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D182502AA	09/08/2018 06:10	Hu Yang	10
01438	TPH-GRO AK water C6-C10	AK 101	1	18249B20B	09/08/2018 17:36	Jeremy C Giffin	5
01146	GC VOA Water Prep	SW-846 5030B	1	18249B20B	09/08/2018 17:36	Jeremy C Giffin	5

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

Sample Description: MW-5R-W-180829 Grab Groundwater
Facility# 90430
6470 Debarr Rd - Anchorage, AK

ChevronTexaco
ELLE Sample #: WW 9784836
ELLE Group #: 1983071
Matrix: Groundwater

Project Name: 90430

Submittal Date/Time: 09/04/2018 09:20
Collection Date/Time: 08/29/2018 15:15

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles		SW-846 8260B	mg/l	mg/l	mg/l	
10945	Benzene	71-43-2	3.7	0.020	0.10	100
10945	Ethylbenzene	100-41-4	0.003 J	0.002	0.010	10
10945	Methyl Tertiary Butyl Ether	1634-04-4	0.10	0.002	0.010	10
10945	Toluene	108-88-3	N.D.	0.002	0.010	10
10945	Xylene (Total)	1330-20-7	0.007 J	0.005	0.050	10
GC Volatiles		AK 101	mg/l	mg/l	mg/l	
01438	TPH-GRO AK water C6-C10	n.a.	8.5	0.070	0.50	5

Sample Comments

State of Alaska Lab Certification No. UST-061
The temperature of the temperature blank bottle(s) upon receipt at the lab was 22.0 C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 22.2-23.4 C.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	D182502AA	09/08/2018 06:34	Hu Yang	10
10945	BTEX/MTBE	SW-846 8260B	1	D182502AA	09/08/2018 06:58	Hu Yang	100
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D182502AA	09/08/2018 06:34	Hu Yang	10
01163	GC/MS VOA Water Prep	SW-846 5030B	2	D182502AA	09/08/2018 06:58	Hu Yang	100
01438	TPH-GRO AK water C6-C10	AK 101	1	18249B20B	09/08/2018 18:04	Jeremy C Giffin	5
01146	GC VOA Water Prep	SW-846 5030B	1	18249B20B	09/08/2018 18:04	Jeremy C Giffin	5

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

Sample Description: MW-14-W-180829 Grab Groundwater
Facility# 90430
6470 Debarr Rd - Anchorage, AK

ChevronTexaco
ELLE Sample #: WW 9784837
ELLE Group #: 1983071
Matrix: Groundwater

Project Name: 90430

Submission Date/Time: 09/04/2018 09:20
Collection Date/Time: 08/29/2018 16:03

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles		SW-846 8260B	mg/l	mg/l	mg/l	
10945	Benzene	71-43-2	0.0003 J	0.0002	0.001	1
10945	Ethylbenzene	100-41-4	0.006	0.0002	0.001	1
10945	Toluene	108-88-3	0.014	0.0002	0.001	1
10945	Xylene (Total)	1330-20-7	0.024	0.0005	0.005	1
GC Volatiles		AK 101	mg/l	mg/l	mg/l	
01438	TPH-GRO AK water C6-C10	n.a.	0.14	0.014	0.10	1

Sample Comments

State of Alaska Lab Certification No. UST-061
The temperature of the temperature blank bottle(s) upon receipt at the lab was 22.0 C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 22.2-23.4 C.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX 8260B Water	SW-846 8260B	1	F182492AA	09/07/2018 00:35	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F182492AA	09/07/2018 00:35	Hu Yang	1
01438	TPH-GRO AK water C6-C10	AK 101	1	18249B20B	09/08/2018 16:41	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	18249B20B	09/08/2018 16:41	Jeremy C Giffin	1

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

Sample Description: DUP-1-WD-180829 Grab Groundwater
Facility# 90430
6470 Debarr Rd - Anchorage, AK

ChevronTexaco
ELLE Sample #: WW 9784838
ELLE Group #: 1983071
Matrix: Groundwater

Project Name: 90430

Submittal Date/Time: 09/04/2018 09:20
Collection Date/Time: 08/29/2018

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
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
Metals						
	SW-846 6010C		mg/l	mg/l	mg/l	
07055	Lead	7439-92-1	N.D.	0.0071	0.0300	1

Sample Comments

State of Alaska Lab Certification No. UST-061
The temperature of the temperature blank bottle(s) upon receipt at the lab was 22.0 C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 22.2-23.4 C.

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	182500011A	09/11/2018 20:30	Rachel Umberger	1
07786	EDB Extraction (8011)	SW-846 8011	1	182500011A	09/08/2018 11:50	Olivia Arosemena	1
07055	Lead	SW-846 6010C	1	182481063502	09/11/2018 08:26	Lisa J Cooke	1
10635	ICP-WW, 3005A (tot rec) - U4	SW-846 3005A	1	182481063502	09/06/2018 04:25	James L Mertz	1

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

Sample Description: DUP-2-WD-180829 Grab Groundwater
Facility# 90430
6470 Debarr Rd - Anchorage, AK

ChevronTexaco
ELLE Sample #: WW 9784839
ELLE Group #: 1983071
Matrix: Groundwater

Project Name: 90430

Submittal Date/Time: 09/04/2018 09:20
Collection Date/Time: 08/29/2018

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles		SW-846 8260B	mg/l	mg/l	mg/l	
10945	Benzene	71-43-2	3.7	0.020	0.10	100
10945	Ethylbenzene	100-41-4	N.D.	0.002	0.010	10
10945	Methyl Tertiary Butyl Ether	1634-04-4	0.11	0.002	0.010	10
10945	Toluene	108-88-3	N.D.	0.002	0.010	10
10945	Xylene (Total)	1330-20-7	N.D.	0.005	0.050	10

Sample Comments

State of Alaska Lab Certification No. UST-061
The temperature of the temperature blank bottle(s) upon receipt at the lab was 22.0 C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 22.2-23.4 C.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	Z182531AA	09/11/2018 05:29	Hu Yang	10
10945	BTEX/MTBE	SW-846 8260B	1	Z182531AA	09/11/2018 05:53	Hu Yang	100
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z182531AA	09/11/2018 05:29	Hu Yang	10
01163	GC/MS VOA Water Prep	SW-846 5030B	2	Z182531AA	09/11/2018 05:53	Hu Yang	100

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

Sample Description: QA-O-180829 Water
Facility# 90430
6470 Debarr Rd - Anchorage, AK

ChevronTexaco
ELLE Sample #: WW 9784840
ELLE Group #: 1983071
Matrix: Water

Project Name: 90430

Submittal Date/Time: 09/04/2018 09:20
Collection Date/Time: 08/29/2018

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles						
		SW-846 8260B	mg/l	mg/l	mg/l	
10945	Benzene	71-43-2	N.D.	0.0002	0.001	1
10945	Ethylbenzene	100-41-4	N.D.	0.0002	0.001	1
10945	Toluene	108-88-3	N.D.	0.0002	0.001	1
10945	Xylene (Total)	1330-20-7	N.D.	0.0005	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	0.0000098	0.000029	1

Sample Comments

State of Alaska Lab Certification No. UST-061
The temperature of the temperature blank bottle(s) upon receipt at the lab was 22.0 C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 22.2-23.4 C.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX 8260B Water	SW-846 8260B	1	F182492AA	09/06/2018 21:38	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F182492AA	09/06/2018 21:38	Hu Yang	1
01438	TPH-GRO AK water C6-C10	AK 101	1	18249B20A	09/07/2018 17:41	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	18249B20A	09/07/2018 17:41	Jeremy C Giffin	1
10398	EDB by 8011	SW-846 8011	1	182500011A	09/11/2018 20:46	Rachel Umberger	1
07786	EDB Extraction (8011)	SW-846 8011	1	182500011A	09/08/2018 11:50	Olivia Arosemena	1

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

Sample Description: DUP-3-WD-180829 Grab Groundwater
Facility# 90430
6470 Debarr Rd - Anchorage, AK

ChevronTexaco
ELLE Sample #: WW 9784841
ELLE Group #: 1983071
Matrix: Groundwater

Project Name: 90430

Submittal Date/Time: 09/04/2018 09:20
Collection Date/Time: 08/29/2018

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC Volatiles		AK 101	mg/l	mg/l	mg/l	
01438	TPH-GRO AK water C6-C10	n.a.	0.14	0.014	0.10	1

Sample Comments

State of Alaska Lab Certification No. UST-061
The temperature of the temperature blank bottle(s) upon receipt at the lab was 22.0 C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 22.2-23.4 C.

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	18249B20A	09/07/2018 23:43	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	18249B20A	09/07/2018 23:43	Jeremy C Giffin	1

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

Quality Control Summary

Client Name: ChevronTexaco
Reported: 09/13/2018 13:48

Group Number: 1983071

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: D182502AA	Sample number(s): 9784835-9784836		
Benzene	N.D.	0.0002	0.001
Ethylbenzene	N.D.	0.0002	0.001
Methyl Tertiary Butyl Ether	N.D.	0.0002	0.001
Toluene	N.D.	0.0002	0.001
Xylene (Total)	N.D.	0.0005	0.005
Batch number: F182491AA	Sample number(s): 9784830		
Benzene	N.D.	0.0002	0.001
Ethylbenzene	N.D.	0.0002	0.001
Methyl Tertiary Butyl Ether	N.D.	0.0002	0.001
Toluene	N.D.	0.0002	0.001
Xylene (Total)	N.D.	0.0005	0.005
Batch number: F182492AA	Sample number(s): 9784831-9784834,9784837,9784840		
Benzene	N.D.	0.0002	0.001
Ethylbenzene	N.D.	0.0002	0.001
Toluene	N.D.	0.0002	0.001
Xylene (Total)	N.D.	0.0005	0.005
Batch number: Z182531AA	Sample number(s): 9784839		
Benzene	N.D.	0.0002	0.001
Ethylbenzene	N.D.	0.0002	0.001
Methyl Tertiary Butyl Ether	N.D.	0.0002	0.001
Toluene	N.D.	0.0002	0.001
Xylene (Total)	N.D.	0.0005	0.005
Batch number: 18249B20A	Sample number(s): 9784831-9784834,9784840-9784841		
TPH-GRO AK water C6-C10	N.D.	0.014	0.10
Batch number: 18249B20B	Sample number(s): 9784830,9784835-9784837		
TPH-GRO AK water C6-C10	N.D.	0.014	0.10
Batch number: 182500011A	Sample number(s): 9784834,9784838,9784840		
Ethylene dibromide	N.D.	0.000010	0.000030
Batch number: 182481063502	Sample number(s): 9784834,9784838		
Lead	N.D.	0.0071	0.0300

*- 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: ChevronTexaco
Reported: 09/13/2018 13:48

Group Number: 1983071

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: D182502AA	Sample number(s): 9784835-9784836								
Benzene	0.0200	0.0179			90		80-120		
Ethylbenzene	0.0200	0.0174			87		80-120		
Methyl Tertiary Butyl Ether	0.0200	0.0182			91		69-122		
Toluene	0.0200	0.0172			86		80-120		
Xylene (Total)	0.0600	0.0527			88		80-120		
Batch number: F182491AA	Sample number(s): 9784830								
Benzene	0.0200	0.0192			96		80-120		
Ethylbenzene	0.0200	0.0183			92		80-120		
Methyl Tertiary Butyl Ether	0.0200	0.0187			93		69-122		
Toluene	0.0200	0.0191			96		80-120		
Xylene (Total)	0.0600	0.0584			97		80-120		
Batch number: F182492AA	Sample number(s): 9784831-9784834,9784837,9784840								
Benzene	0.0200	0.0166			83		80-120		
Ethylbenzene	0.0200	0.0168			84		80-120		
Toluene	0.0200	0.0180			90		80-120		
Xylene (Total)	0.0600	0.0529			88		80-120		
Batch number: Z182531AA	Sample number(s): 9784839								
Benzene	0.0200	0.0214			107		80-120		
Ethylbenzene	0.0200	0.0207			104		80-120		
Methyl Tertiary Butyl Ether	0.0200	0.0208			104		69-122		
Toluene	0.0200	0.0220			110		80-120		
Xylene (Total)	0.0600	0.0630			105		80-120		
	mg/l	mg/l	mg/l	mg/l					
Batch number: 18249B20A	Sample number(s): 9784831-9784834,9784840-9784841								
TPH-GRO AK water C6-C10	1.10	1.10	1.10	1.10	100	100	60-120	0	20
Batch number: 18249B20B	Sample number(s): 9784830,9784835-9784837								
TPH-GRO AK water C6-C10	1.10	1.10	1.10	1.10	100	100	60-120	0	20
	mg/l	mg/l	mg/l	mg/l					
Batch number: 182500011A	Sample number(s): 9784834,9784838,9784840								
Ethylene dibromide	0.000129	0.000125	0.000129	0.000125	97	98	60-140	0	20
	mg/l	mg/l	mg/l	mg/l					
Batch number: 182481063502	Sample number(s): 9784834,9784838								
Lead	0.150	0.149			100		87-113		

*- Outside of specification

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(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: ChevronTexaco
Reported: 09/13/2018 13:48

Group Number: 1983071

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: F182492AA	Sample number(s): 9784831-9784834,9784837,9784840 UNSPK: 9784831									
Benzene	N.D.	0.0200	0.0180	0.0200	0.0179	90	89	80-120	1	30
Ethylbenzene	N.D.	0.0200	0.0177	0.0200	0.0173	89	86	80-120	2	30
Toluene	N.D.	0.0200	0.0185	0.0200	0.0174	93	87	80-120	7	30
Xylene (Total)	N.D.	0.0600	0.0566	0.0600	0.0543	94	91	80-120	4	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
Batch number: D182502AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9784835	103	99	95	94
9784836	102	101	95	93
Blank	104	99	95	95
LCS	105	102	95	95
Limits:	80-120	80-120	80-120	80-120

Analysis Name: BTEX/MTBE
Batch number: F182491AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9784830	97	95	94	93
Blank	101	98	94	90
LCS	100	97	95	96
Limits:	80-120	80-120	80-120	80-120

Analysis Name: BTEX 8260B Water
Batch number: F182492AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9784831	101	98	97	88
9784832	100	104	94	92
9784833	100	104	94	86
9784834	94	99	97	90
9784837	103	102	91	90
9784840	102	98	95	86
Blank	94	92	97	93

*- 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: ChevronTexaco
Reported: 09/13/2018 13:48

Group Number: 1983071

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: BTEX 8260B Water
Batch number: F182492AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
LCS	99	101	100	92
MS	96	98	96	95
MSD	100	104	95	93
Limits:	80-120	80-120	80-120	80-120

Analysis Name: BTEX/MTBE
Batch number: Z182531AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9784839	97	103	104	95
Blank	98	105	103	94
LCS	98	104	104	99
Limits:	80-120	80-120	80-120	80-120

Analysis Name: TPH-GRO AK water C6-C10
Batch number: 18249B20A

	Trifluorotoluene-F
9784831	86
9784832	90
9784833	78
9784834	77
9784840	81
9784841	86
Blank	89
LCS	100
LCSD	99
Limits:	60-120

Analysis Name: TPH-GRO AK water C6-C10
Batch number: 18249B20B

	Trifluorotoluene-F
9784830	81
9784835	84
9784836	87
9784837	90
Blank	91
LCS	100
LCSD	99

*- 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: ChevronTexaco
Reported: 09/13/2018 13:48

Group Number: 1983071

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: TPH-GRO AK water C6-C10
Batch number: 18249B20B

Limits: 60-120

Analysis Name: EDB by 8011
Batch number: 182500011A

	1,1,2,2-Tetrachloroethane-D1	1,1,2,2-Tetrachloroethane-D2
9784834	82	86
9784838	77	82
9784840	76	76
Blank	92	91
LCS	88	88
LCSD	89	89
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.

Chevron Generic Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 10880

For Eurofins Lancaster Laboratories use only
 Group # 1983071 Sample # 9784830-41
 Instructions on reverse side correspond with circled numbers.

1 Client Information				4 Matrix				5 Analyses Requested										6 Remarks																																																								
Facility # <u>LEMC 90430</u>		WBS <u>08.02</u>		Sediment <input type="checkbox"/>		Ground <input checked="" type="checkbox"/>		Surface <input type="checkbox"/>		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td><input type="checkbox"/> BTEX, MTBE, 8021</td> <td><input type="checkbox"/> 8260</td> <td><input type="checkbox"/> Naphth</td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> </tr> <tr> <td colspan="2">8260 full scan</td> <td colspan="2">Oxygenates</td> <td colspan="2">TPH-GRO <u>AK-101</u></td> <td colspan="2">8015</td> <td colspan="2">8260</td> <td colspan="2">TPH-DRO</td> <td colspan="2">Silica Gel Cleanup</td> <td colspan="2">Lead Total <input checked="" type="checkbox"/></td> <td colspan="2">Diss. <input type="checkbox"/> Method <u>6010</u></td> </tr> <tr> <td colspan="2">VPH <input type="checkbox"/></td> <td colspan="2">EPH <input type="checkbox"/></td> <td colspan="2">Method</td> <td colspan="2">MTBE <u>8260</u></td> <td colspan="2">EDB <u>8011</u></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> </tr> </table>										<input type="checkbox"/> BTEX, MTBE, 8021	<input type="checkbox"/> 8260	<input type="checkbox"/> Naphth															8260 full scan		Oxygenates		TPH-GRO <u>AK-101</u>		8015		8260		TPH-DRO		Silica Gel Cleanup		Lead Total <input checked="" type="checkbox"/>		Diss. <input type="checkbox"/> Method <u>6010</u>		VPH <input type="checkbox"/>		EPH <input type="checkbox"/>		Method		MTBE <u>8260</u>		EDB <u>8011</u>										SCR #: _____	
<input type="checkbox"/> BTEX, MTBE, 8021	<input type="checkbox"/> 8260	<input type="checkbox"/> Naphth																																																																								
8260 full scan		Oxygenates		TPH-GRO <u>AK-101</u>		8015		8260		TPH-DRO		Silica Gel Cleanup		Lead Total <input checked="" type="checkbox"/>		Diss. <input type="checkbox"/> Method <u>6010</u>																																																										
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Site Address <u>6470 DEBARR RD, ANCHORAGE, AK</u>		Chevron PM <u>ERIC HETRICK</u>		Lead Consultant		Consultant/Office <u>5610 SILVERADO WAY, STE A2, ANCHORAGE, AK</u>		Consultant Project Mgr. <u>STEPHAN PRITCHARD</u>		Consultant Phone # <u>970-222-3220</u>		Sampler <u>O. YAN & T. WEAVER</u>		3 Composite																																																												
2 Sample Identification		Collected		Grab	Composite	Soil	Water	Oil	Total Number of Containers	BTEX, MTBE, 8021	8260	TPH-GRO	TPH-DRO	Lead Total	VPH	EPH	Method	MTBE	EDB																																																							
Date	Time																																																																									
<u>MW-10-W-180829</u>	<u>8/29/18</u>	<u>0938</u>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		<u>9</u>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>																																																								
<u>MW-11-W-180829</u>	<u>8/29/18</u>	<u>1033</u>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		<u>6</u>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>																																																														
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<u>MW-3-W-180829</u>	<u>8/29/18</u>	<u>1205</u>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		<u>6</u>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>																																																												
<u>MW-4R-W-180829</u>	<u>8/29/18</u>	<u>1328</u>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		<u>9</u>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																																																							
<u>MW-7-W-180829</u>	<u>8/29/18</u>	<u>1427</u>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		<u>9</u>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>																																																								
<u>MW-5R-W-180829</u>	<u>8/29/18</u>	<u>1515</u>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		<u>9</u>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>																																																								
<u>MW-14-W-180829</u>	<u>8/29/18</u>	<u>1603</u>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		<u>6</u>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>							<input checked="" type="checkbox"/>																																																							
<u>DUP-1-W-180829</u>	<u>8/29/18</u>	<u>-</u>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		<u>3</u>					<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>																																																							
<u>DUP-2-W-180829</u>	<u>8/29/18</u>	<u>-</u>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		<u>6</u>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>																																																								
<u>QA-1-W-180829</u>	<u>8/29/18</u>	<u>-</u>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		<u>6</u>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>							<input checked="" type="checkbox"/>																																																							
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7 Turnaround Time Requested (TAT) (please circle)				Relinquished by		Date		Time		Received by		Date		Time		9																																																										
Standard <u>5 day</u> 4 day 72 hour 48 hour 24 hour				<u>[Signature]</u>		<u>08/30/18</u>		<u>0715</u>		<u>[Signature]</u>																																																																
8 Data Package (circle if required)				EDD (circle if required)		Relinquished by Commerical Carrier:				Received by		Date		Time																																																												
Type I - Full		Alaska/Type III		CVX-RTBU-FL_05 (default)		UPS _____ FedEx <u>X</u> Other _____				<u>[Signature]</u>		<u>9/4/18</u>		<u>0920</u>																																																												
Type VI (Raw Data)		Other: _____		Temperature Upon Receipt <u>21.7 °C</u>				Custody Seals Intact? <u>Yes</u> No																																																																		

- Results in Dry Weight
- J value reporting needed
- Must meet lowest detection limits possible for 8260 compounds
- 8021 MTBE Confirmation
- Confirm MTBE + Naphthalene
- Confirm highest hit by 8260
- Confirm all hits by 8260
- Run _____ oxy's on highest hit
- Run _____ oxy's on all hits

EMAIL RESULTS TO
 STEPHAN.PRITCHARD@LHND.COM



Client: Chevron

Delivery and Receipt Information

Delivery Method: Fed Ex Arrival Timestamp: 09/04/2018 9:20
 Number of Packages: 1 Number of Projects: 1
 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 \geq 6mm:	Yes
Samples Chilled:	Yes	VOA IDs (\geq 6mm):	See Below
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	6
Samples Intact:	Yes	Trip Blank Type:	HCl
Missing Samples:	No	Air Quality Samples Present:	No
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

VOA Vial IDs (Headspace \geq 6mm): (2 HCl) MW-10, (1 HCl) DUP-2

Unpacked by Kristin Zeigler (2123) at 11:02 on 09/04/2018

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?	Samples Collected Same Day as Receipt?
1	DT42-02	22.0	DT	Wet	N	Bagged	Y	N

Elevated Temperature Details

All Temperatures in °C

Cooler #	Thermometer ID	Top Left Temp	Top Right Temp	Bottom Left Temp	Bottom Right Temp	Center Temp	Factors Contributing to Elevated Temp	Comments
1	32170023	22.7	22.2	23.4	22.4	22.4		

General Comments: (1 HCl vial) for DUP-3 received empty

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.

This report shall not be reproduced except in full, without the written approval of the laboratory.

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.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Data Qualifiers

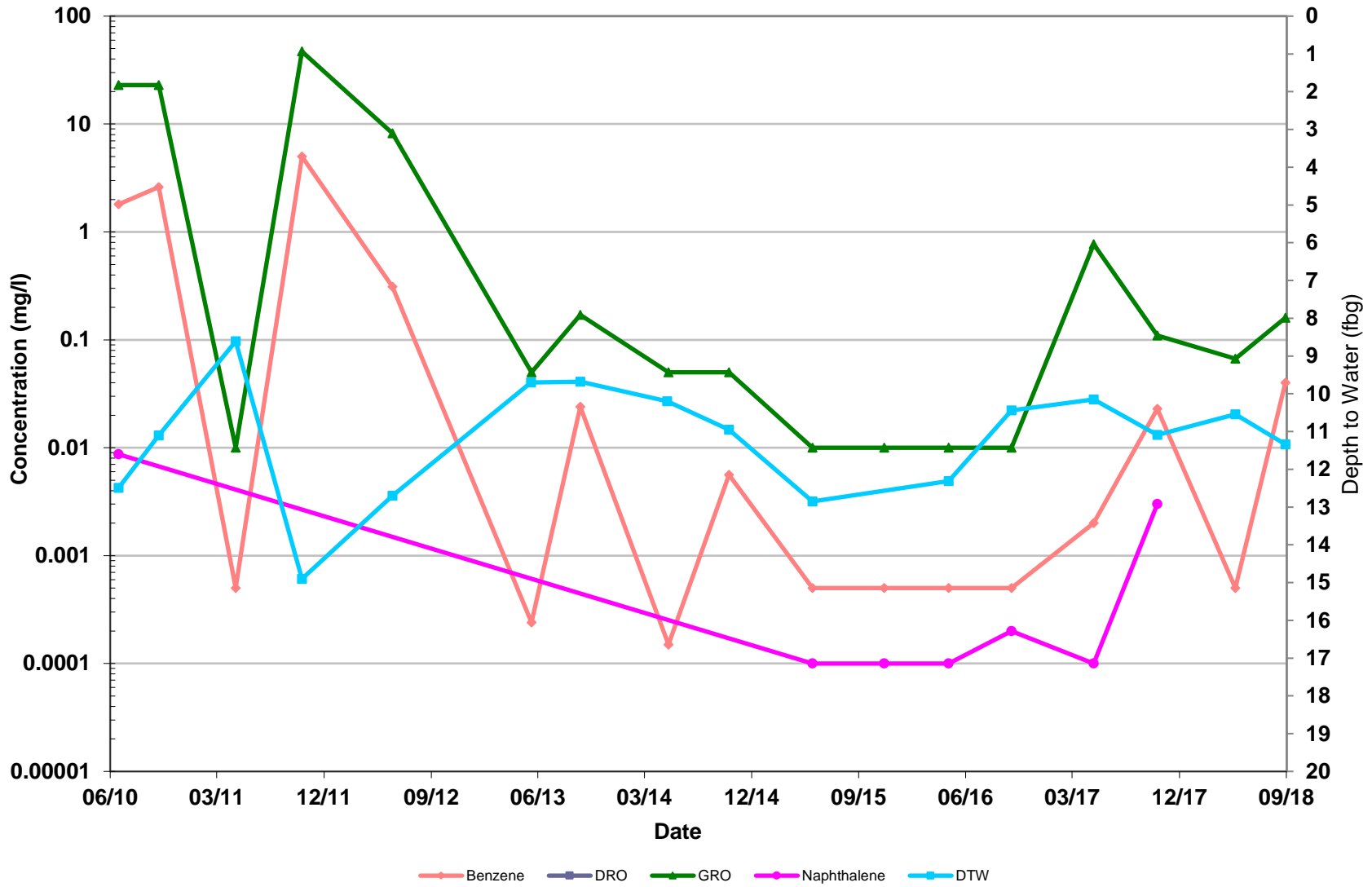
Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the 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 \geq 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 E

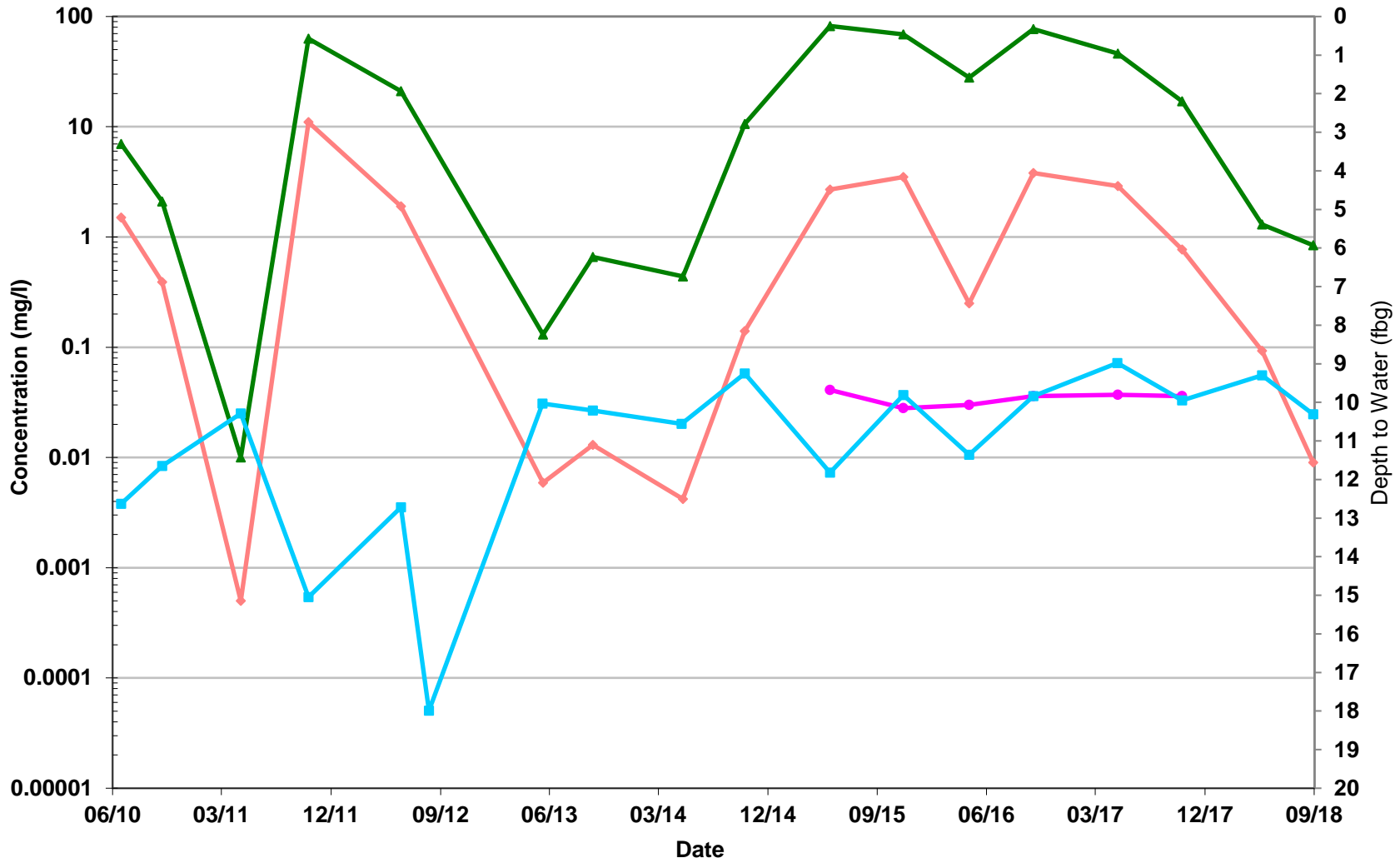
Petroleum Hydrocarbon Concentration Graphs

MW-3



Former Chevron-Branded Service Station 90430
6470 Debarr Road
Anchorage, Alaska

MW-4R

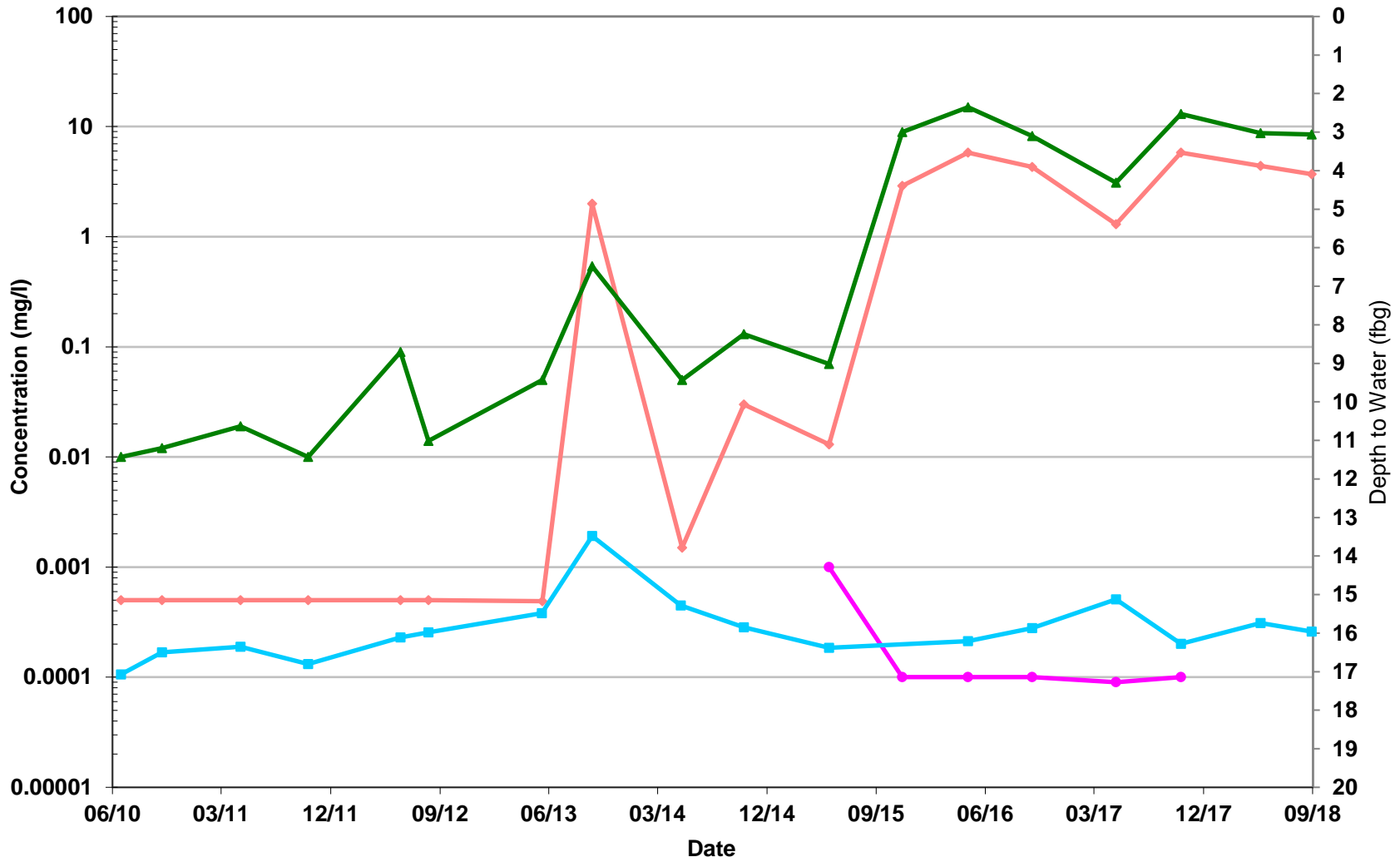


— Benzene — DRO — GRO — Naphthalene — DTW



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MW-5R

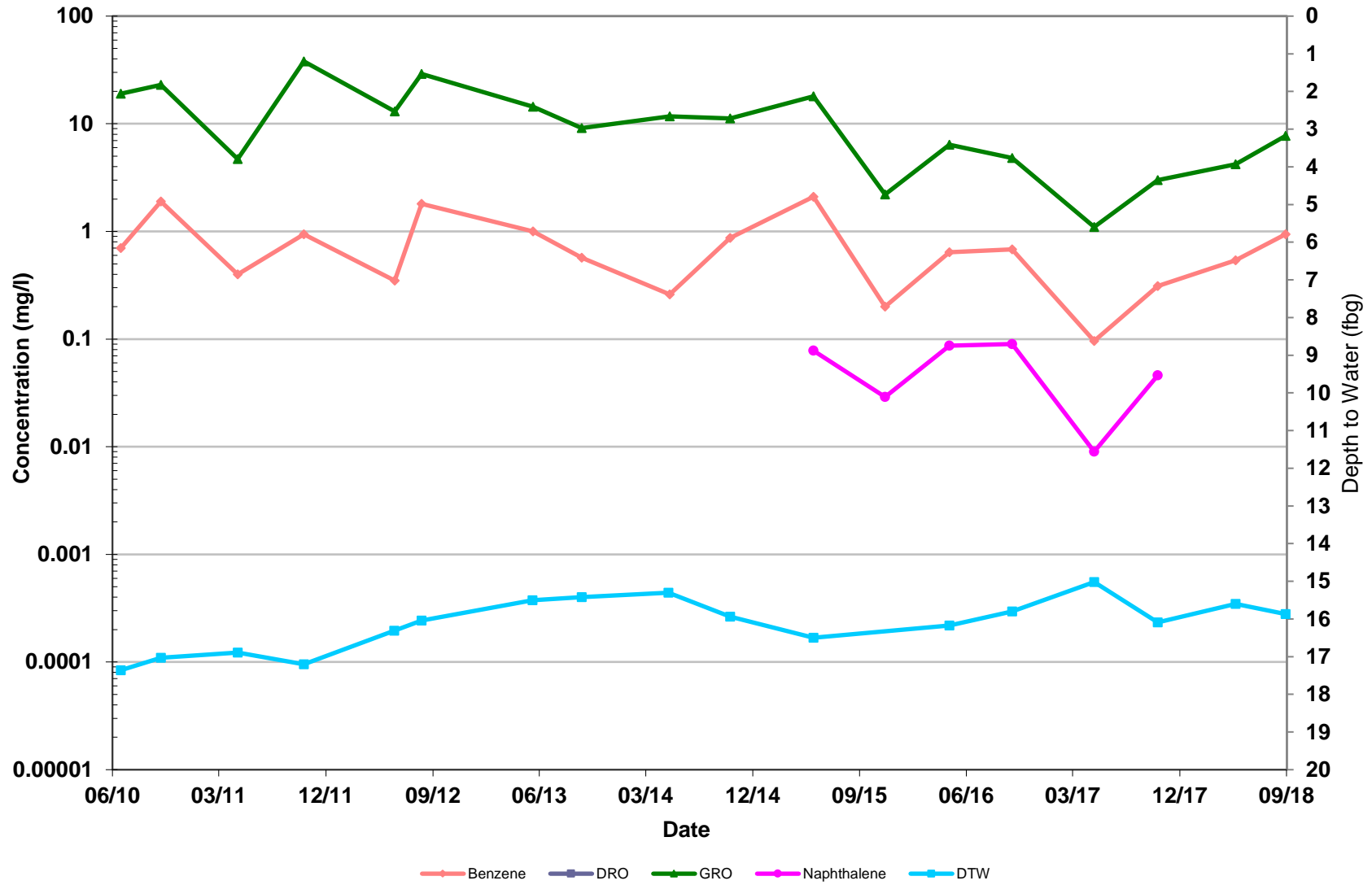


—◆— Benzene —■— DRO —▲— GRO —●— Naphthalene —□— DTW



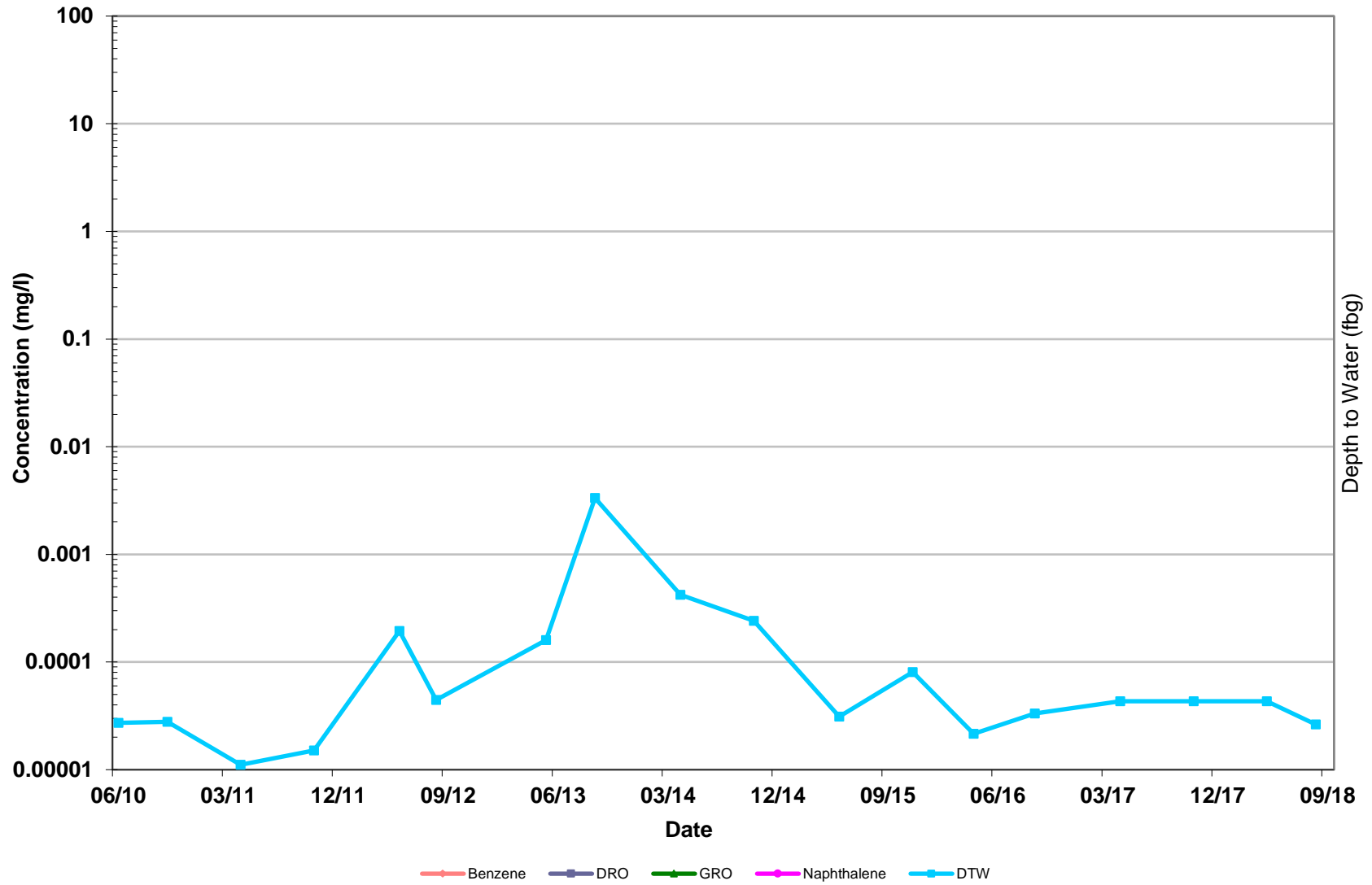
Former Chevron-Branded Service Station 90430
6470 Debarr Road
Anchorage, Alaska

MW-7



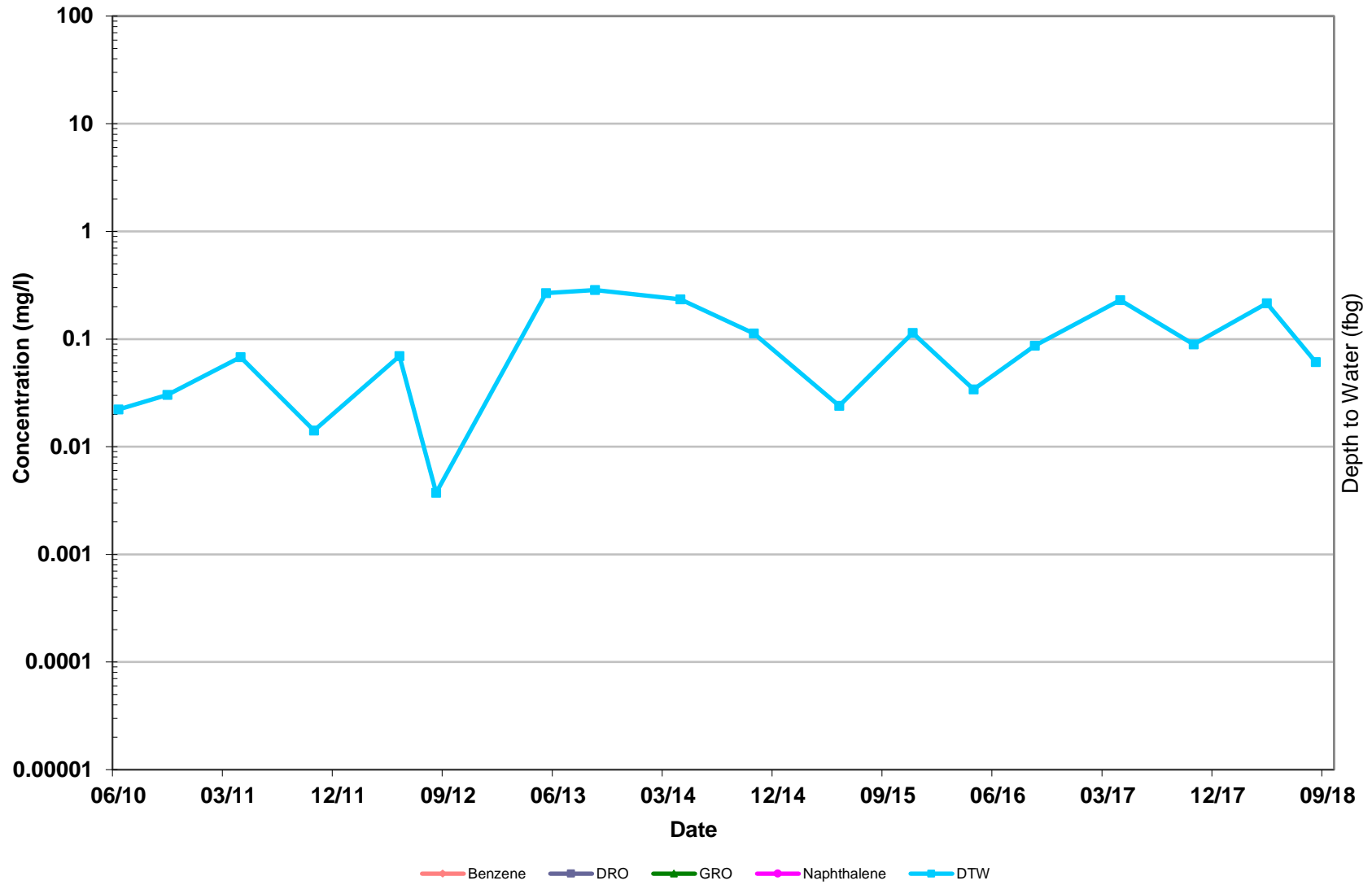
Former Chevron-Branded Service Station 90430
6470 Debarr Road
Anchorage, Alaska

MW-8



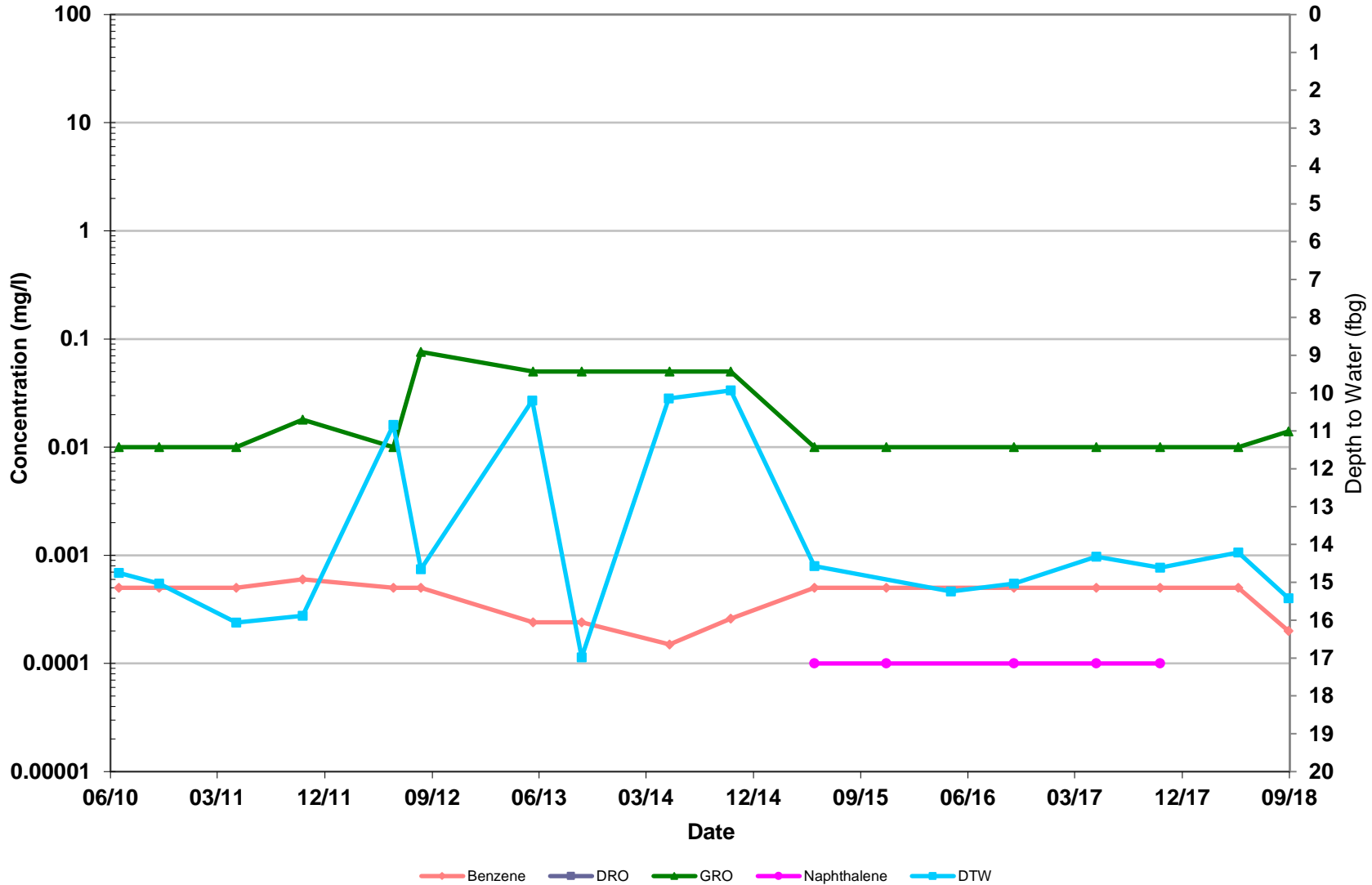
Former Chevron-Branded Service Station 90430
6470 Debarr Road
Anchorage, Alaska

MW-9



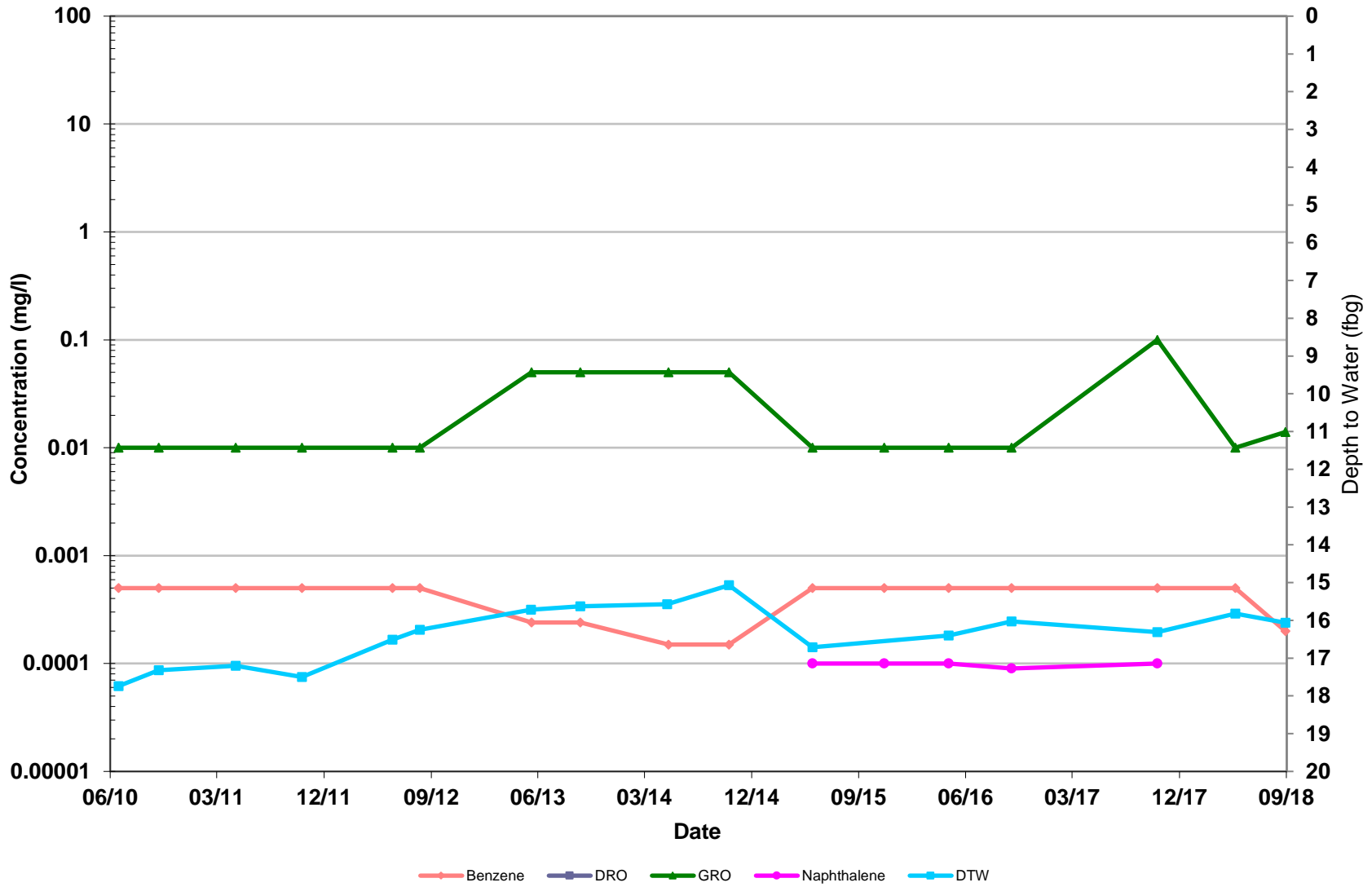
Former Chevron-Branded Service Station 90430
6470 Debarr Road
Anchorage, Alaska

MW-10



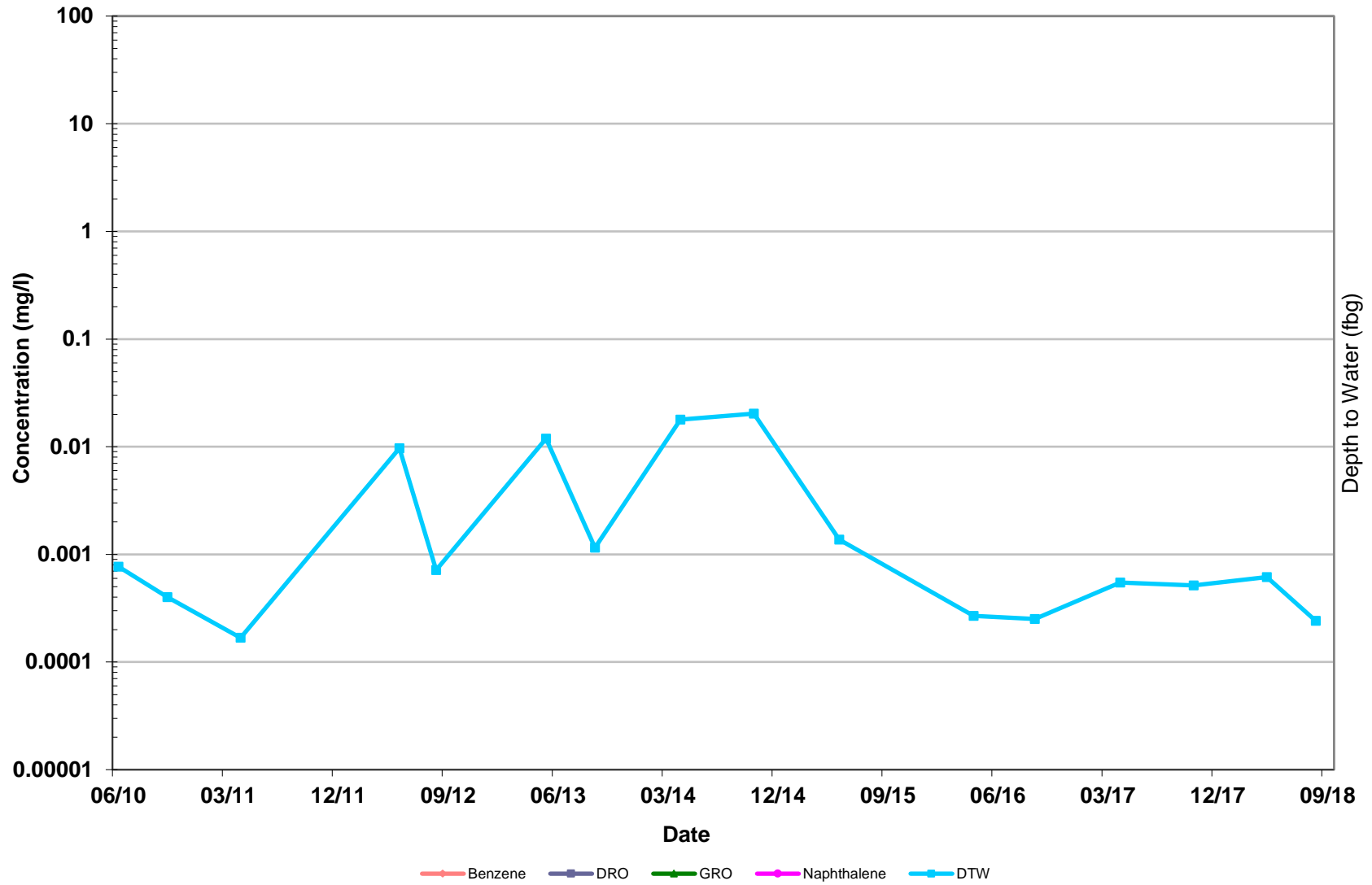
Former Chevron-Branded Service Station 90430
6470 Debarr Road
Anchorage, Alaska

MW-11



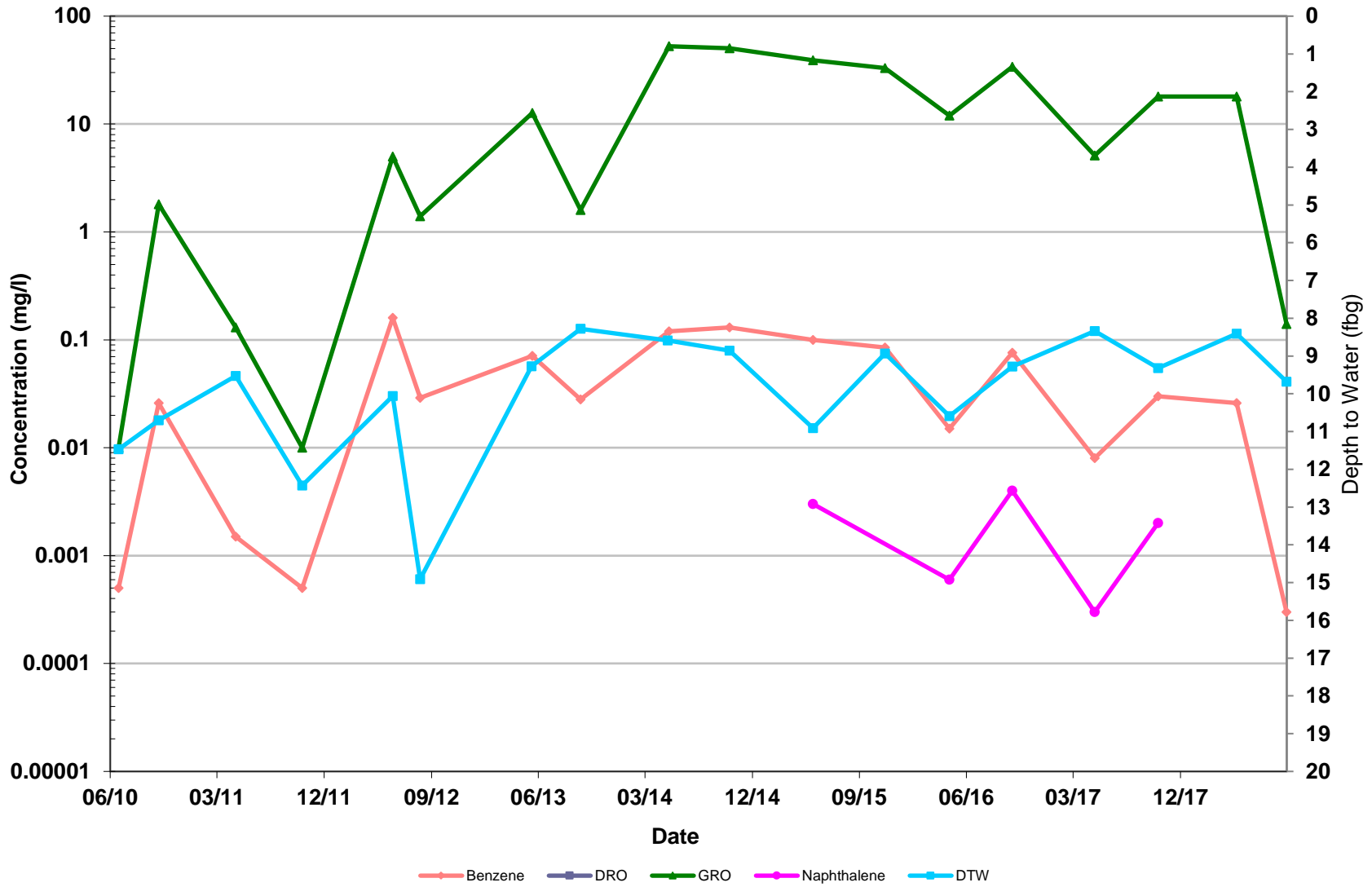
Former Chevron-Branded Service Station 90430
6470 Debarr Road
Anchorage, Alaska

MW-12



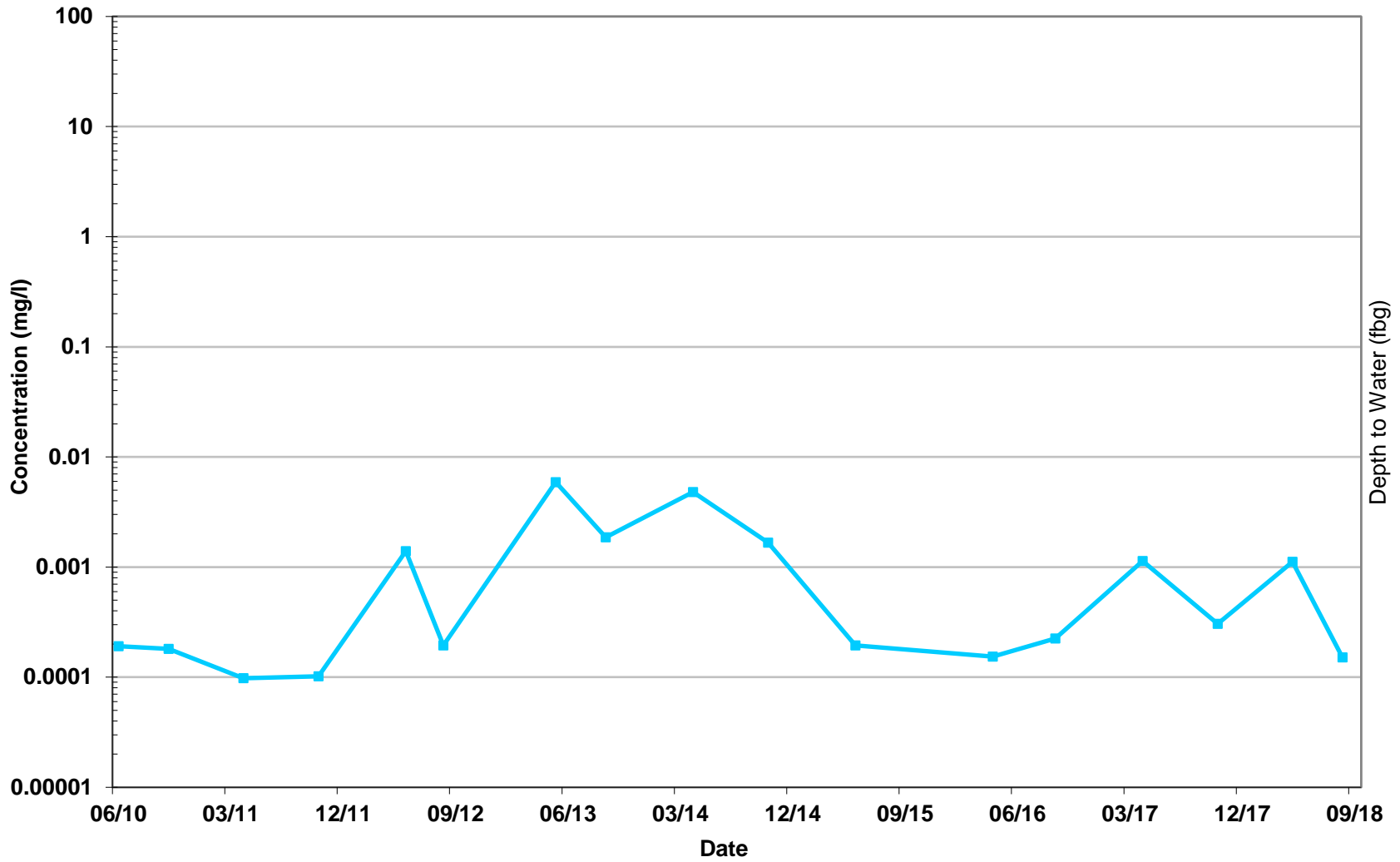
Former Chevron-Branded Service Station 90430
6470 Debarr Road
Anchorage, Alaska

MW-14



Former Chevron-Branded Service Station 90430
6470 Debarr Road
Anchorage, Alaska

MW-15

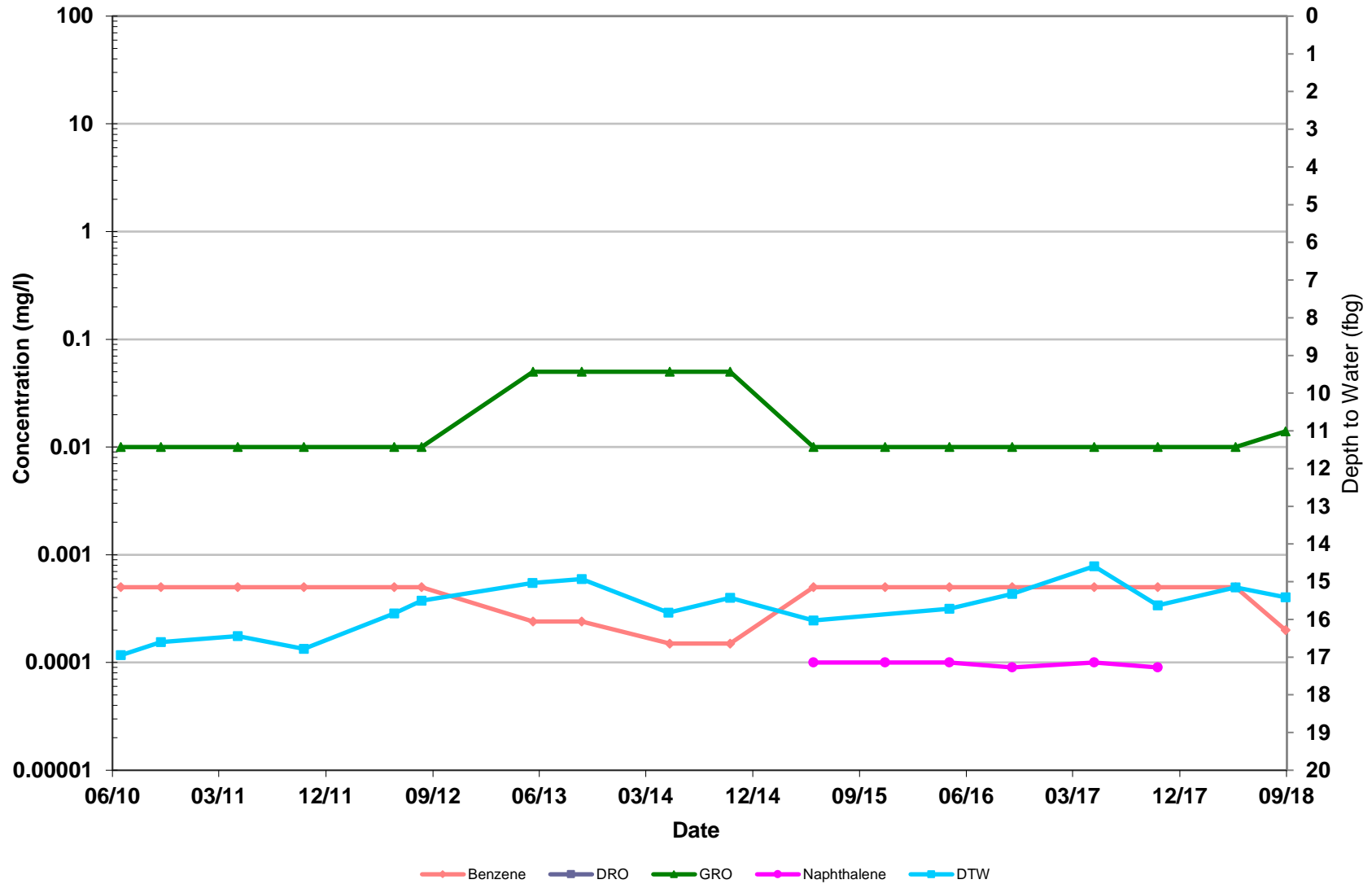


Legend: Benzene (red line), DRO (purple line), GRO (green line), Naphthalene (magenta line), DTW (cyan line)



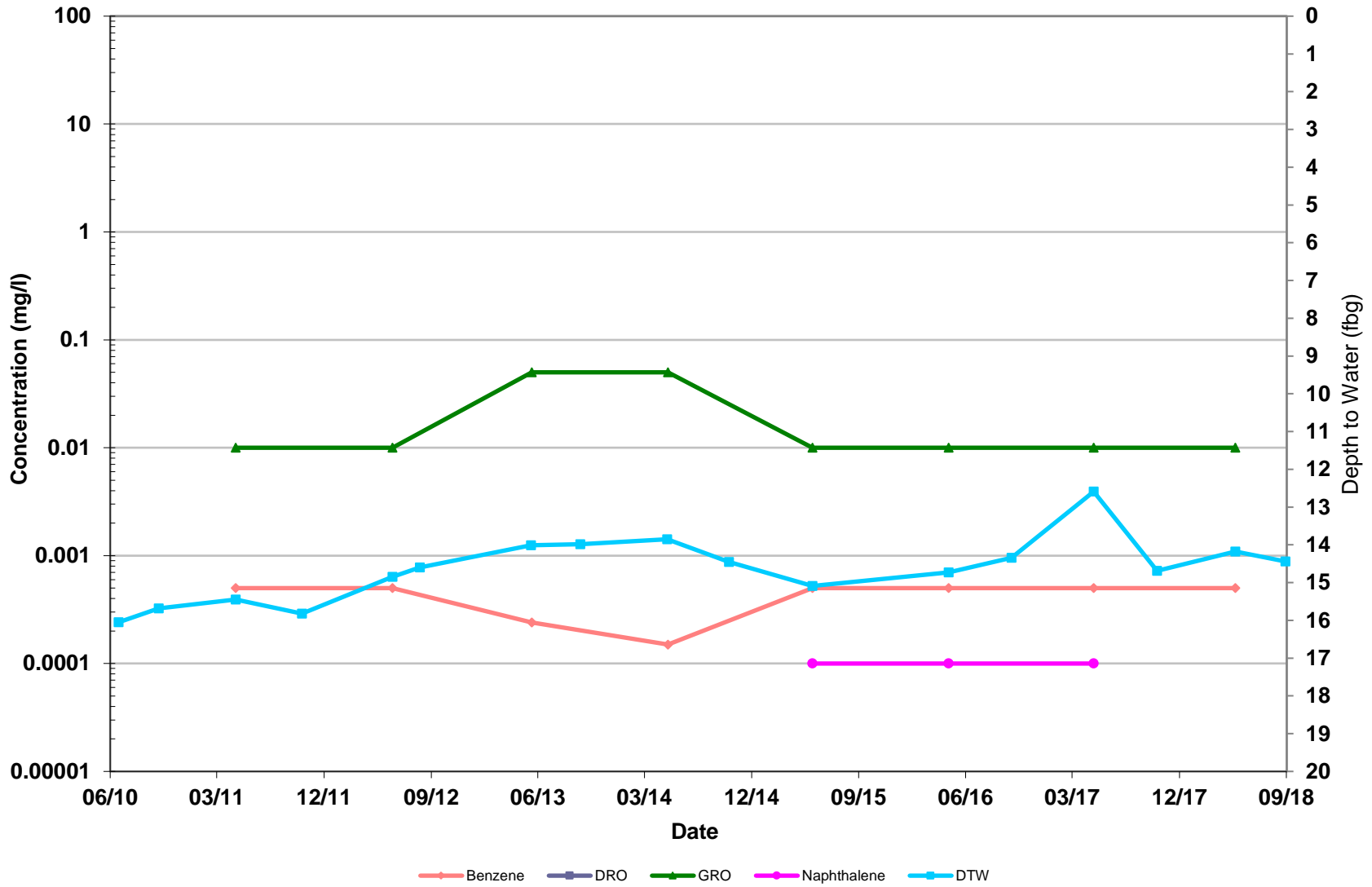
Former Chevron-Branded Service Station 90430
6470 Debarr Road
Anchorage, Alaska

MW-16



Former Chevron-Branded Service Station 90430
6470 Debarr Road
Anchorage, Alaska

MW-17



Former Chevron-Branded Service Station 90430
6470 Debarr Road
Anchorage, Alaska

Appendix F

ADEC Laboratory Data Review Checklist and Memorandum

Laboratory Data Review Checklist

Completed by:

J Cloud

Title:

Project Chemist

Date:

September 27, 2018

CS Report Name:

Second Semiannual 2018
Groundwater Monitoring
Report

Report Date:

September 13, 2018

Consultant Firm:

GHD Services Inc.

Laboratory Name:

Eurofins Lancaster Laboratories Environmental

Laboratory Report Number:

1983071

ADEC File Number:

2100.26.010

Hazard Identification Number:

23615

1. Laboratory

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

Yes No Comments:

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 not transferred

2. Chain of Custody (COC)

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

Yes No Comments:

b. Correct analyses requested?

Yes No Comments:

3. Laboratory Sample Receipt Documentation

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

Yes No Comments:

The cooler was received at 22.0°C

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

Yes No Comments:

The VOC sample container for sample MW-10 was received by the laboratory with a pH outside of the acceptable limit resulting in a reduced holding time.

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

Yes No Comments:

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:

e. Data quality or usability affected?

Comments:

The VOC, GRO and EDB sample detections were qualified as estimated and the VOC, GRO and EDB non-detect results were rejected

4. Case Narrative

a. Present and understandable?

Yes No

Comments:

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

Yes No

Comments:

c. Were all corrective actions documented?

Yes No

Comments:

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

Comments:

None

5. Samples Results

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

Yes No

Comments:

b. All applicable holding times met?

Yes No

Comments:

The VOC analysis for sample MW-10 was not analyzed within the reduced holding time.

c. All soils reported on a dry weight basis?

Yes No

Comments:

No soils

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

Yes No

Comments:

e. Data quality or usability affected?

Comments:

The VOC sample results for MW-10 were qualified as estimated due to the implied low bias

6. QC Samples

a. Method Blank

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

Yes No

Comments:

ii. All method blank results less than limit of quantitation (LOQ)?

Yes No

Comments:

iii. If above LOQ, what samples are affected?

Comments:

No affected samples

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

Yes No

Comments:

No affected samples

v. Data quality or usability affected?

Comments:

None

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:

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

Yes No

Comments:

No project related matrix duplicates were analyzed for method 6010

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:

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:

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

Comments:

No affected samples

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

Yes No Comments:

No affected samples

vii. Data quality or usability affected?

Comments:

None

c. Surrogates – Organics Only

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

Yes No Comments:

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:

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

Yes No Comments:

No failed surrogates

iv. Data quality or usability affected?

Comments:

None

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

i. One trip blank reported per matrix, analysis and cooler?

Yes No

Comments:

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

Yes No

Comments:

iii. All results less than LOQ?

Yes No

Comments:

iv. If above LOQ, what samples are affected?

Comments:

No affected samples

v. Data quality or usability affected?

Comments:

None

e. Field Duplicate

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

Yes No

Comments:

ii. Submitted blind to lab?

Yes No

Comments:

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

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

Where R_1 = Sample Concentration
 R_2 = Field Duplicate Concentration

Yes No Comments:

- iv. Data quality or usability affected?

Comments:

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

Yes No Not Applicable

- i. All results less than LOQ?

Yes No Comments:

- ii. If above LOQ, what samples are affected?

Comments:

- iii. Data quality or usability affected?

Comments:

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

- a. Defined and appropriate?

Yes No Comments:



Memorandum

November 8, 2018

To: ADEC Ref. No.: 065001

From: Jeffrey Cloud  Tel: 206-914-3141

cc: Siobhan Pritchard

**Subject: QA/QC Review
ChevronTexaco Site 90430
Job # 1983071
August 2018**

1. Introduction

This document details a reduced validation of analytical results for groundwater samples collected in Anchorage, Alaska during August 2018. Samples were submitted to Eurofins Lancaster Laboratories Environmental, located in Lancaster, Pennsylvania.

Standard GHD report deliverables were submitted by the laboratory. The final results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from the chain of custody form, finished report forms, method blank data, recovery data from surrogate spikes, laboratory control samples, matrix spikes and field QC samples.

The QA/QC criteria by which these data have been assessed are outlined in the analytical methods and applicable guidance from the documents entitled:

- "USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review", USEPA 540-R-08-01, June 2008
- "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review", USEPA 540-R-10-011, January 2010

These items will subsequently be referred to as the "Guidelines" in this Memorandum.

2. Sample Holding Time and Preservation

The sample holding time criteria and sample preservation requirements for the analyses are summarized in the methods. The sample chain of custody document and analytical report were used to determine sample holding times. All samples were prepared and analyzed within the required holding times with the exception



of the volatile organic compound (VOC) analysis for sample MW-10. The VOC results for sample MW-10 were qualified as estimated due to the implied low bias.

All samples were properly preserved, delivered on ice and stored by the laboratory at the required temperature (0-6°C) with the exception of the VOC sample container for sample MW-10 which was received by the laboratory with a pH outside of the acceptable limit resulting in a reduced holding time. The VOC analysis for sample MW-10 was not analyzed within the reduced holding time and was qualified as described above.

The sample cooler was received by the laboratory at a temperature of 22.0°C. The VOC, gasoline range organics (GRO) and ethylene dibromide (EDB) sample detections were qualified as estimated and the VOC, GRO and EDB non-detect results were rejected

3. Laboratory Method Blank Analyses

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

For this study, laboratory method blanks were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

All method blank results were non-detect, indicating that laboratory contamination was not a factor for this investigation.

4. Surrogate Spike Recoveries

In accordance with the methods employed, all samples, blanks, and QC samples analyzed for organics are spiked with surrogate compounds prior to sample extraction and/or analysis. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices.

All samples submitted for VOC, GRO and EDB analysis were spiked with the appropriate number of surrogate compounds prior to sample extraction and/or analysis.

Surrogate recoveries were assessed against the control limits. All surrogate recoveries met the associated criteria.

5. Laboratory Control Sample Analyses

Laboratory control samples (LCS)/laboratory control sample duplicates (LCSD) are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects. The relative percent difference (RPD) of the LCS/LCSD recoveries is used to evaluate analytical precision.



For this study, LCS or LCS/LCSD were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

Organic Analyses

The LCS and LCS/LCSD contained all analytes of interest. All LCS and LCS/LCSD recoveries and RPDs were within associated control limits, demonstrating acceptable analytical accuracy and precision (where applicable).

Inorganic Analyses

The LCS contained all analytes of interest. LCS recoveries were assessed per the "Guidelines". All LCS recoveries were within the control limits, demonstrating acceptable analytical accuracy.

6. Matrix Spike/Matrix Spike Duplicate Analyses

To evaluate the effects of sample matrices on the extraction process, measurement procedures, and accuracy of a particular analysis, samples are spiked with a known concentration of the analyte of concern and analyzed as matrix spike/matrix spike duplicate (MS/MSD) samples. The RPD between the MS and MSD is used to assess analytical precision.

The MS/MSD samples were spiked with the analytes of interest. All percent recoveries and RPD values were within the associated control limits, demonstrating acceptable analytical accuracy and precision.

7. Field QA/QC Samples

The field QA/QC consisted of one trip blank sample and three field duplicate sample sets.

Trip Blank Sample Analysis

To evaluate contamination from sample collection, transportation, storage, and analytical activities, one trip blank was submitted to the laboratory for analysis. All results were non-detect for the analytes of interest.

Field Duplicate Sample Analysis

To assess the analytical and sampling protocol precision, three field duplicate samples were collected and submitted "blind" to the laboratory. The RPDs associated with these duplicate samples must be less than 50 percent. If the reported concentration in both the investigative sample and its duplicate is less than five times the reporting limit (RL), the evaluation criterion is one times the RL value.

All field duplicate results were within acceptable agreement, demonstrating acceptable sampling and analytical precision.



8. Analyte Reporting

Non-detect data were reported down to the laboratory's method detection limit (MDL) for each analyte. Positive analyte detections less than the RL but greater than the MDL were reported as estimated (J).

9. Conclusion

Based on the assessment detailed in the foregoing, the summarized data are reported with the specific exceptions and qualifications noted herein.