Transmittal

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To: Robert Weimer
Alaska Department of Conservation (ADEC)
555 Cordova Street
Anchorage, Alaska 95501

Subject: ADEC File ID 2100.26.007

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1	First Semiannual 2017 Groundwater Monitoring Report	Report 7	

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First Semiannual 2017 Groundwater Monitoring Report

Former Chevron-Branded Service Station 96097
303 West Fireweed Lane
Anchorage, Alaska
ADEC File ID: 2100.26.007
Hazard ID: 24073

Chevron Environmental Management Company

GHD | 14998 West 6th Avenue, Suite 800, Golden, Colorado USA 80401

062328 | 95 | 1SA17 | Report No 7 | June 22, 2017

First Semiannual 2017
Groundwater Monitoring Report

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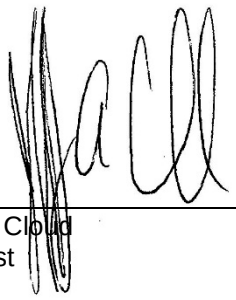
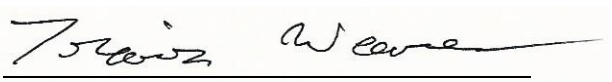
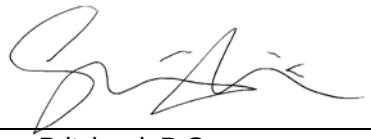


Jeffrey Cloud
Chemist



Travis Weaver
Project Geologist



Siobhan Pritchard, P.G.
Senior Project Geologist

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Acronyms and Abbreviations

AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
BTEX	benzene, toluene, ethylbenzene, and xylenes
COPCs	contaminants of potential concern
CSM	conceptual site model
DRO	diesel range organics
ft btoc	feet below top of casing
GRO	gasoline range organics
GAC	granular activated carbon
No	number
PAH	polynuclear aromatic hydrocarbons
P.G.	Professional Geologist
USTs	underground storage tanks
VOCs	volatile organic compounds

1. Introduction

GHD is submitting this *First Semiannual 2017 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 96097. GHD conducted groundwater monitoring and sampling in accordance with the ADEC's March 2016 *Field Sampling Guidance for Contaminated Sites and Underground Storage Tank Sites*. Reporting was performed by GHD 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 current groundwater conditions to evaluate petroleum hydrocarbon attenuation.

1.1 Site Description and Background

The site is located at 303 West Fireweed Lane, Anchorage, Alaska (Figure 1). The property's legal description is LEO WILDER LT 1A-1. The site latitude and longitude are approximately 61.1986040° north and 149°8876630° west. The site is a former Chevron service station, which included six fuel underground storage tanks (USTs). In 1990, one waste oil UST was removed from the southwest corner of the station building and according to ADEC records identified hydrocarbon impacts to soil. In 1992, three gasoline USTs, one waste oil UST, and one heating oil UST were removed and three double-walled fiberglass gasoline USTs, nine dispensers, and product lines were installed. The site ceased operations as a service station in 2000 and all site facilities, including all USTs, product lines, dispensers, and station building were removed. The site is currently a Sockeye Inn hotel with parking. The majority of former USTs and dispensers are located beneath the parking area, east of the site.

The surrounding area is a mixed commercial and light industrial land use. The site is bordered by a Buddhist temple to the north, West Fireweed Lane to the south, C Street to the east, and Reilly's Bar to the west. There are no current plans to redevelop the site.

Seven onsite groundwater monitoring wells and six offsite groundwater monitoring are monitored and sampled semiannually (Figure 2). Site photographs are included in Appendix A.

1.2 Hydrogeology

The site is located in south central Alaska, between the northern Knik Arm and southern Turnagain Arm of Cook Inlet. Historic static groundwater depths have ranged between 43.50 and 60.52 feet below top of casing (ft btoc) from 1992 to present. Static groundwater depths ranged from 44.11 (MW-4R) to 59.99 ft btoc (MW-12) on May 8, 2017. Groundwater flow was to the northwest with a gradient of 0.16, which is consistent with historical data (Figure 2).

1.3 Conceptual Site Model

GHD updated the conceptual site model (CSM) for this site. The human health CSM scoping and graphics forms are presented in Appendix B.

1.4 Contaminants of Potential Concern - Cleanup Levels

Site contaminants of potential concern (COPCs) are:

Table 1.1 Contaminants of Potential Concern

COPCs	ADEC Cleanup Levels	
	Groundwater (mg/L)	*Soil (mg/kg)*
DRO	1.5	250
GRO	2.2	300
benzene	0.0046	0.022
PAH*		

mg/L milligrams per liter
mg/kg milligrams per kilogram
DRO diesel range organics
GRO gasoline range organics
PAH polynuclear aromatic hydrocarbons
* various constituents, see Tables 3 and 4 or referenced ADEC regulations for specific cleanup levels

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

GHD gauged wells MW-4R, MW-5, MW-6, MW-8, MW-9, MW-10R, and MW-12 through MW-15 on May 8, 2017. GHD sampled all wells with the exception of wells MW-7 due to inaccessibility, MW-15 was monitor only, and MW-16, and MW-17 had obstructions. Field monitoring data is presented in Appendix C.

2.1 No Purge Sampling

Prior to gauging, each monitoring well was opened and the cap removed to allow groundwater levels to stabilize and equilibrate. Depth to groundwater and total well depth was measured and recorded with a water level meter capable of 0.01 foot accuracy. A new, unused HydraSleeve™ sampler was deployed in sampled monitoring wells based on sampler length and water column height to collect volatile organic compound (VOC) and semi-volatile organic compound (SVOC) samples. The sampler was deployed such that the top is suspended one sampler length below the soil/groundwater interface. The sampler was deployed a minimum of two hours before sample collection to allow for sufficient equilibration time. HydraSleeve™ samplers were pulled upward through the water column at an approximate rate of 1 foot per second to collect samples. Teflon

bailers were used to collect non-VOC samples where an insufficient volume of water was collected in the HydraSleeve™. Bailers were lowered to a depth such that the top of the bailer was suspended one bailer length below the soil/groundwater interface and then pulled upward to collect the sample. Groundwater samples, including a duplicate sample, were collected in clean sampling media and submitted under chain-of-custody to Eurofins Lancaster Laboratories of Lancaster, Pennsylvania.

2.2 Data Quality

All appropriate field instruments were calibrated prior to mobilization according to the manufacturer's specifications and calibration was checked and documented onsite on a daily basis. Equipment calibration forms are available in Appendix C. All field staff is trained in routine operation and maintenance of instruments. All reusable sampling equipment was decontaminated between wells with a stiff brush and laboratory-grade detergent and rinsed twice with clean water and once with distilled water between wells.

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

2.3 Purged Groundwater Disposal

No purge water was generated during the first semiannual sampling event.

3. Results and Findings

3.1 Groundwater Analytical Methods

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

- DRO by Alaska Series Method AK102
- GRO by Alaska Series Method AK101
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX) by method SW-846 8260
- PAH by method SW-846 8270C SIM

3.2 Groundwater Sampling Results

No DRO, GRO, or benzene was detected above ADEC Table C cleanup levels in wells MW-4R, MW-6, MW-8, MW-13, and MW-14. MW-5 contained the highest DRO (16 milligrams per liter (mg/L)) and MW-10R contained the highest GRO (3.9 mg/L) concentrations. MW-9 contained the highest benzene concentration (0.034 mg/L). Current groundwater analytical data is presented in Table 1 and Table 3. Historical groundwater analytical data is presented in Tables 2 and 4.

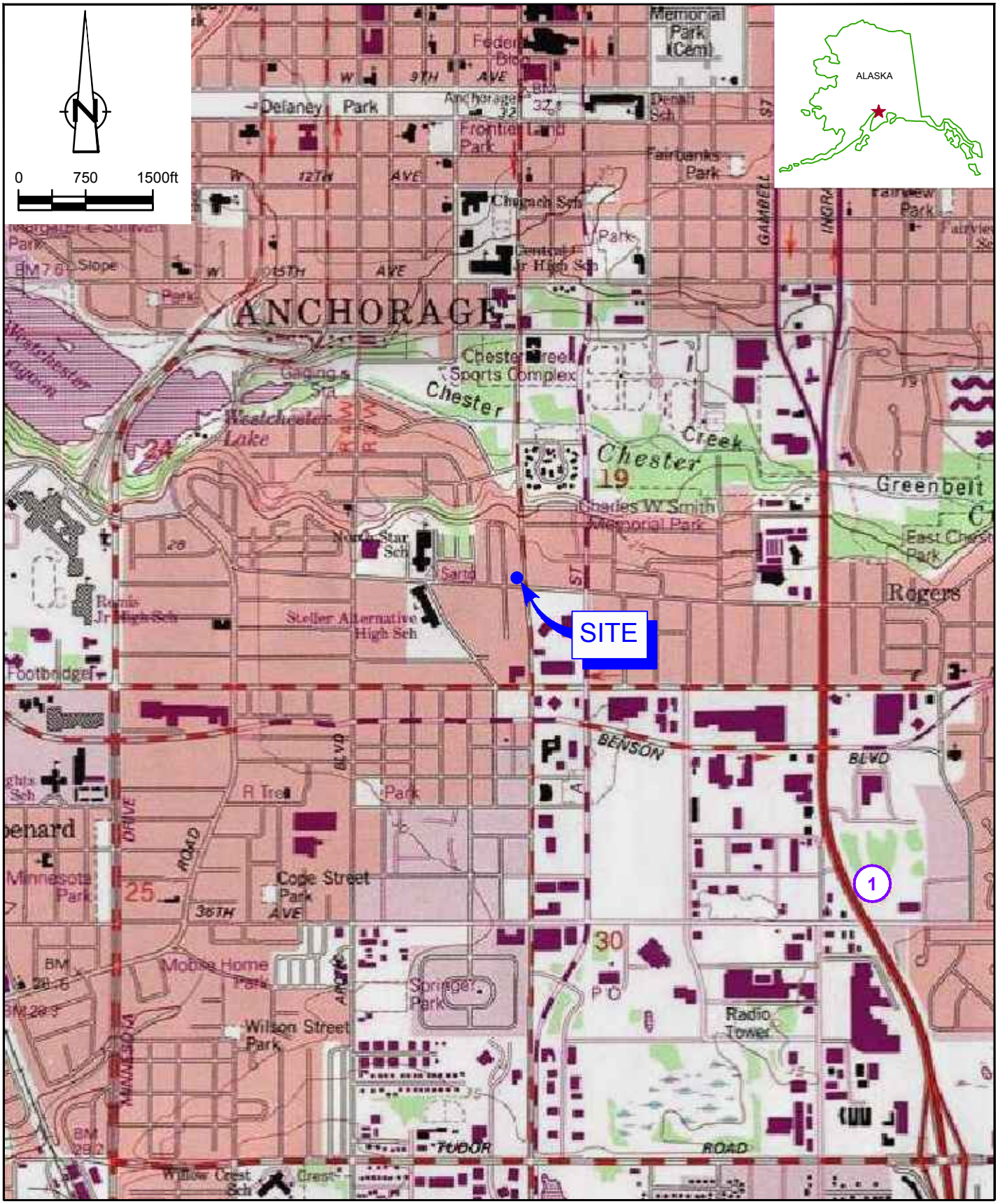
Petroleum hydrocarbon concentrations are presented on Figure 2. The laboratory analytical report is presented in Appendix D. Historical groundwater analytical data and petroleum hydrocarbon concentration graphs are presented in Appendix E.

Based on the quality assurance/quality control review, the data submitted were judged to be acceptable for use with the qualifications noted. The ADEC Laboratory Review Checklist and memorandum are presented in Appendix F.

4. Conclusions

Petroleum hydrocarbons are stable and continue to be detected above ADEC Table C cleanup levels in wells downgradient of the former USTs. GHD will continue semiannual groundwater monitoring and sampling in 2017. GHD requests to suspend sampling in well MW-4R; no petroleum hydrocarbons have been detected above cleanup levels since 2011.

Figures



SOURCE: TOPO MAPS

FORMER CHEVRON-BRANDED SERVICE STATION 96097
303 WEST FIREWEED LANE
ANCHORAGE, ALASKA

62328-95

Jun 12, 2017

VICINITY MAP

FIGURE 1

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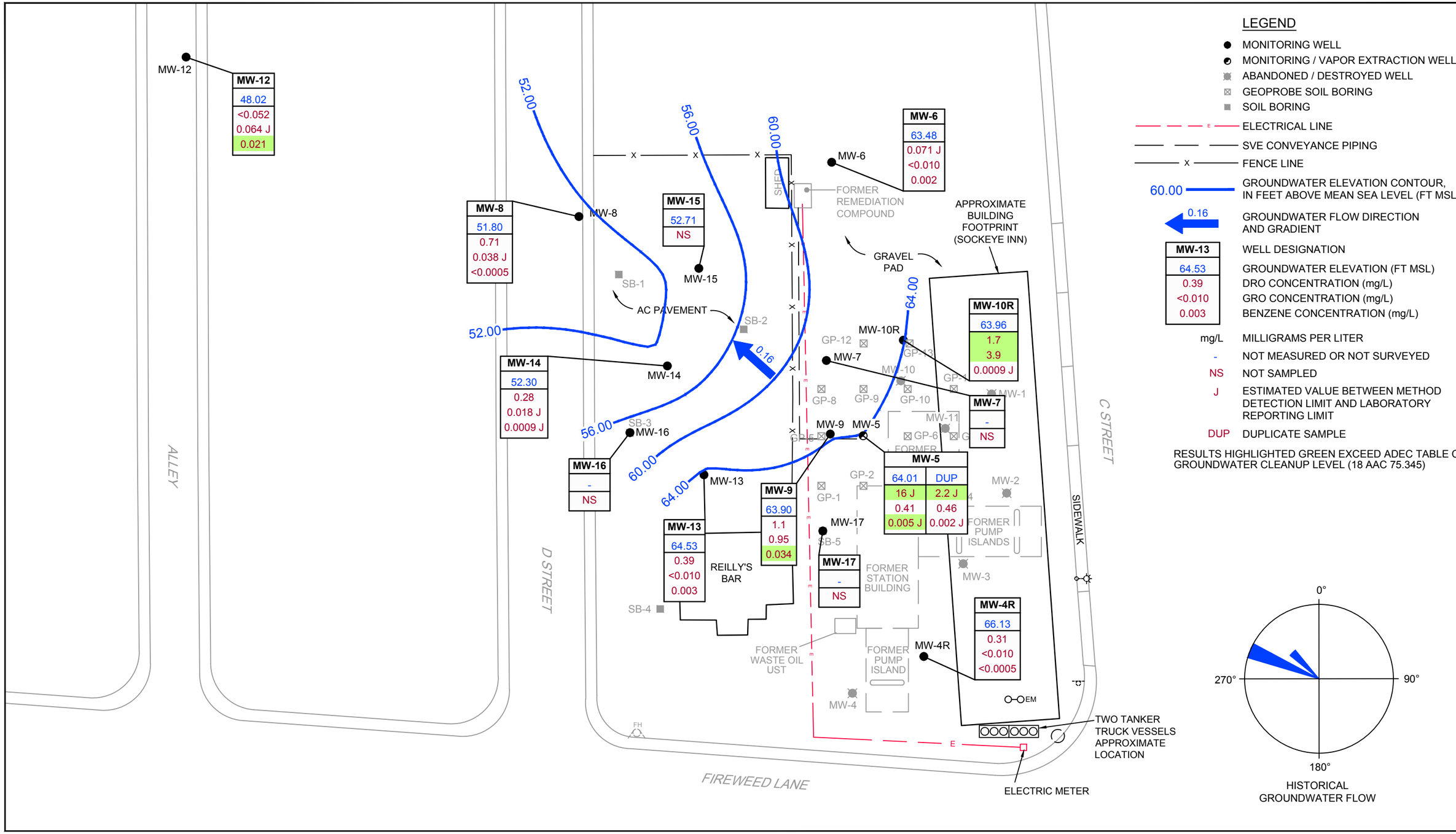

SOURCE: SITE PLAN PROVIDED BY SECOR, MODIFIED WITH AUGUST 29, 2008 SURVEY PROVIDED BY McCLANE CONSULTING

FORMER CHEVRON-BRANDED SERVICE STATION 96097
303 WEST FIREWEED LANE
ANCHORAGE, ALASKA

GROUNDWATER ELEVATION CONTOUR AND HYDROCARBON CONCENTRATION MAP - MAY 8, 2017

62328-95

Jun 22, 2017

FIGURE 2

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Tables

Table 1

Current Groundwater Analytical Results
Former Chevron-Branded Service Station 96097
303 W. Fireweed Ln.
Anchorage, AK

Location ID	Date	TOC ft msl	DTW ft btoc	GWE ft msl	HYDROCARBONS DRO mg/l	HYDROCARBONS GRO mg/l	PRIMARY VOCS Benzene mg/l	PRIMARY VOCS Toluene mg/l	PRIMARY VOCS Ethylbenzene mg/l	PRIMARY VOCS Xylene (total) mg/l
ADEC Groundwater Cleanup Levels 2016[a]					**1.5**	**2.2**	**0.0046**	**1.1**	**0.015**	**0.19**
MW-4R	05/08/2017	110.24	44.11	66.13	0.31	<0.010	<0.0005	<0.0005	<0.0005	<0.0005
MW-5	05/08/2017	109.77	45.76	64.01	**16 J / 2.2 J**	0.41 / 0.46	**0.005 J /** 0.002 J	0.028 J / 0.011 J	**0.028 J** / 0.009 J	0.19 / 0.12
MW-6	05/08/2017	110.23	46.75	63.48	0.071 J	<0.010	0.002	0.01	0.008	0.11
MW-7	5/8/2017[4]	108.86	-	-	-	-	-	-	-	-
MW-8	05/08/2017	108.01	56.21	51.80	0.71	0.038 J	<0.0005	<0.0005	<0.0005	<0.0005
MW-9	05/08/2017	109.64	45.74	63.90	1.1	0.95	**0.034**	0.006	0.007	0.026
MW-10R	05/08/2017	109.64	45.68	63.96	**1.7**	**3.9**	0.0009 J	<0.0005	0.005	0.036
MW-12	05/08/2017	108.01	59.99	48.02	<0.052	0.064 J	**0.021**	<0.0005	**0.044**	**0.30**
MW-13	05/08/2017	108.88	44.35	64.53	0.39	<0.010	0.003	<0.0005	<0.0005	0.020
MW-14	05/08/2017	109.00	56.70	52.30	0.28	0.018 J	0.0009 J	<0.0005	0.005	0.036
MW-15	5/8/2017[3]	108.69	55.98	52.71	-	-	-	-	-	-
MW-16	5/8/2017[5]	108.85	-	-	-	-	-	-	-	-
MW-17	5/8/2017[5]	-	-	-	-	-	-	-	-	-
QA	05/08/2017	-	-	-	-	<0.010	<0.0005	<0.0005	<0.0005	<0.0005

Table 1

Current Groundwater Analytical Results
Former Chevron-Branded Service Station 96097
303 W. Fireweed Ln.
Anchorage, AK

Notes and Abbreviations

ID = Identification
TOC = top of casing
DTW = depth to water
GWE = groundwater elevation
DRO = Diesel Range Organics by Alaska Series Method AK102
GRO = Gasoline Range Organics by Alaska Series Method AK101
Benzene, Toluene, Ethylbenzene, and Total Xylenes by SW-846 8021B or 8260B
Total Xylenes = Sum of m-, o-, and p-xylenes
MTBE = Methyl Tertiary-Butyl Ether
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
NA = Not Applicable
ft msl = feet above mean sea level
ft btoc = Feet Below Top of Casing
mg/L = Milligrams per Liter
ND = Not detected above laboratory method detection limits
U = Non-detect
J = Estimated value
- = Not Measured/Not Analyzed
<x = Constituent not detected above x milligrams per liter
x / y = Sample Results / Blind Duplicate Results
[1] = BTEX by SW-846 8021B
[2] = DRO with Silica Gel Cleanup
[3] = Gauge Only
[4] = Inaccessible
[5] = Obstruction

Table 2

Historical Groundwater Analytical Results
Former Chevron-Branded Service Station 96097
303 W. Fireweed Ln.
Anchorage, AK

Location	Date	TOC	DTW	GWE	HYDROCARBONS		PRIMARY VOCS				
					DRO	GRO	Benzene	Toluene	Ethylbenzene	Xylene (total)	MTBE
	Units	ft msl	ft btoc	ft msl	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
ADEC Groundwater Cleanup Levels 2016[a]					**1.5**	**2.2**	**0.0046**	**1.1**	**0.015**	**0.19**	**0.14**
MW-1	09/01/1992	97.90	45.54	52.36	-	-	-	-	-	-	-
MW-1	05/01/1993	97.90	45.65	52.25	-	-	-	-	-	-	-
MW-1	08/01/1993	97.90	45.97	51.93	-	-	-	-	-	-	-
MW-1	11/01/1993	97.90	45.56	52.34	-	-	-	-	-	-	-
MW-1	03/01/1994	97.90	45.95	51.95	-	-	-	-	-	-	-
MW-1	06/01/1994	97.90	46.03	51.87	-	-	-	-	-	-	-
MW-1	08/01/1994	97.90	46.40	51.50	-	-	-	-	-	-	-
MW-1	12/22/1994	97.90	46.22	51.68	-	-	-	-	-	-	-
MW-1	03/21/1995	97.90	46.45	51.45	-	-	-	-	-	-	-
MW-1	06/15/1995	97.90	45.96	51.94	-	-	-	-	-	-	-
MW-1	08/24/1995	97.90	46.11	51.79	-	-	-	-	-	-	-
MW-1	11/14/1995	97.90	45.98	51.92	-	-	-	-	-	-	-
MW-1	01/29/1996	97.90	46.23	51.67	-	-	-	-	-	-	-
MW-1	05/29/1996	97.90	46.84	51.06	-	-	-	-	-	-	-
MW-1	08/20/1996	97.90	47.09	50.81	-	-	-	-	-	-	-
MW-1	10/15/1996	97.90	47.00	50.90	-	-	-	-	-	-	-
MW-1	04/27/1997	97.90	46.90	51.00	-	-	-	-	-	-	-
MW-1	09/07/1997	97.90	45.74	52.16	-	-	-	-	-	-	-
MW-1	04/21/1998	97.90	45.45	52.45	-	-	-	-	-	-	-
MW-1	09/17/1998	97.90	45.99	51.91	-	-	-	-	-	-	-
MW-1	04/26/1999	97.90	45.34	52.56	-	-	-	-	-	-	-
MW-1	10/11/1999	97.90	46.45	51.45	-	-	-	-	-	-	-
MW-1	05/18/2000	97.90	46.00	51.90	-	-	-	-	-	-	-
MW-1	09/25/2000	97.90	--	--	-	-	-	-	-	-	-
MW-1	05/08/2001	97.90	--	--	-	-	-	-	-	-	-
MW-1	10/03/2001	97.90	--	--	-	-	-	-	-	-	-
MW-1	05/03/2002	97.90	--	--	-	-	-	-	-	-	-
MW-1	09/28/2002	97.90	--	--	-	-	-	-	-	-	-
MW-1	05/22/2003	104.80	--	--	-	-	-	-	-	-	-
MW-1	10/13/2003	104.80	--	--	-	-	-	-	-	-	-
MW-1	06/10/2004	104.80	--	--	-	-	-	-	-	-	-
MW-1	09/22/2004	104.80	--	--	-	-	-	-	-	-	-
MW-1	05/18/2005	104.80	--	--	-	-	-	-	-	-	-
MW-1	09/28/2005	104.80	--	--	-	-	-	-	-	-	-
MW-1	05/17/2006	104.80	--	--	-	-	-	-	-	-	-
MW-1	09/23/2006	--	--	--	-	-	-	-	-	-	-
MW-1	05/16/2007	--	--	--	-	-	-	-	-	-	-
MW-2	09/01/1992	104.27	--	--	-	-	-	-	-	-	-
MW-2	09/23/2006	--	--	--	-	-	-	-	-	-	-
MW-2	05/16/2007	--	--	--	-	-	-	-	-	-	-
MW-4	09/01/1992	99.00	45.32	53.68	-	-	-	-	-	-	-
MW-4	05/01/1993	99.00	45.40	53.60	-	-	-	-	-	-	-
MW-4	08/01/1993	99.00	45.68	53.32	-	-	-	-	-	-	-
MW-4	11/01/1993	99.00	45.27	53.73	-	-	-	-	-	-	-
MW-4	12/22/1994	99.00	45.61	53.39	-	-	-	-	-	-	-
MW-4	03/21/1995	99.00	45.85	53.15	-	-	-	-	-	-	-

Table 2

Historical Groundwater Analytical Results
Former Chevron-Branded Service Station 96097
303 W. Fireweed Ln.
Anchorage, AK

Location	Date	TOC	DTW	GWE	HYDROCARBONS		PRIMARY VOCS				
					DRO	GRO	Benzene	Toluene	Ethylbenzene	Xylene (total)	MTBE
	Units	ft msl	ft btoc	ft msl	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
ADEC Groundwater Cleanup Levels 2016[a]					**1.5**	**2.2**	**0.0046**	**1.1**	**0.015**	**0.19**	**0.14**
MW-4	06/15/1995	99.00	45.60	53.40	-	-	-	-	-	-	-
MW-4	08/24/1995	99.00	45.53	53.47	-	-	-	-	-	-	-
MW-4	11/14/1995	99.00	45.33	53.67	-	-	-	-	-	-	-
MW-4	01/29/1996	99.00	45.61	53.39	-	-	-	-	-	-	-
MW-4	05/29/1996	99.00	46.24	52.76	-	-	-	-	-	-	-
MW-4	08/20/1996	99.00	46.49	52.51	-	-	-	-	-	-	-
MW-4	10/15/1996	99.00	46.41	52.59	-	-	-	-	-	-	-
MW-4	04/27/1997	99.00	46.14	52.86	-	-	-	-	-	-	-
MW-4	09/07/1997	99.00	44.97	54.03	-	-	-	-	-	-	-
MW-4	04/21/1998	99.00	44.66	54.34	-	-	-	-	-	-	-
MW-4	09/17/1998	99.00	47.02	51.98	-	-	-	-	-	-	-
MW-4	04/26/1999	99.00	45.54	53.46	-	-	-	-	-	-	-
MW-4	10/11/1999	99.00	45.62	53.38	-	-	-	-	-	-	-
MW-4	05/18/2000	99.00	45.20	53.80	-	-	-	-	-	-	-
MW-4	09/25/2000	99.00	44.70	54.30	-	-	-	-	-	-	-
MW-4	05/08/2001	99.00	45.76	53.24	-	-	-	-	-	-	-
MW-4	10/03/2001	99.00	45.71	53.29	-	-	-	-	-	-	-
MW-4	05/03/2002	99.00	45.80	53.20	-	-	-	-	-	-	-
MW-4	09/28/2002	99.00	45.73	53.27	-	-	-	-	-	-	-
MW-4	05/22/2003	104.28	45.26	59.02	-	-	-	-	-	-	-
MW-4	10/13/2003	104.28	45.55	58.73	-	-	-	-	-	-	-
MW-4	06/10/2004	104.28	45.42	58.86	-	-	-	-	-	-	-
MW-4	09/22/2004	104.28	45.42	58.86	-	-	-	-	-	-	-
MW-4	05/18/2005	104.28	--	--	-	-	-	-	-	-	-
MW-4	09/28/2005	104.28	45.34	58.94	-	-	-	-	-	-	-
MW-4	05/17/2006	104.28	45.68	58.60	-	-	-	-	-	-	-
MW-4	09/23/2006	--	45.11	--	-	-	-	-	-	-	-
MW-4	05/16/2007	103.92	44.24	59.68	-	-	-	-	-	-	-
MW-4	09/27/2007	103.92	--	--	-	-	-	-	-	-	-
MW-4	05/17/2008	103.93	--	--	-	-	-	-	-	-	-
MW-4	09/14/2008	103.93	--	--	-	-	-	-	-	-	-
MW-4R	09/28/2011	--	45.18	--	<0.50 / <0.048[2]	<0.0100	<0.00050	<0.00050	-	-	-
MW-4R	05/21/2012	--	44.67	--	0.072 / 0.053[2]	<0.0100	<0.00050	<0.00050	<0.00050	<0.00150	-
MW-4R	09/18/2012	--	44.52	--	<0.25 / <0.25[2]	<0.0100	<0.00050	<0.00050	<0.00050	<0.00150	-
MW-4R	05/06/2013	110.24	44.27	65.97	-	-	-	-	<0.00050	<0.00150	-
MW-4R	05/07/2013	110.24	--	--	<0.5100 / <0.4800	<0.1000 / <0.1000	<0.00100 / <0.00100	<0.00100 / <0.00100	-	-	-
MW-4R	09/16/2013	110.24	44.07	66.17	<0.4100	<0.1000	<0.00100	<0.00100	<0.00100 / <0.00100	<0.00300 / <0.00300	-
MW-4R	05/02/2014	110.24	43.54	66.70	-	-	-	-	<0.00100	<0.00300	-
MW-4R	05/05/2014	110.24	--	--	<0.40 / <0.42	<0.1000 / <0.1000	<0.00100 / <0.00100	<0.00100 / <0.00100	-	-	-
MW-4R	09/02/2014	110.24	43.81	66.43	-	-	-	-	<0.00100 / <0.00100	<0.00300 / <0.00300	-
MW-4R	09/03/2014	110.24	--	--	<0.40	<0.1000	<0.00100	<0.00100	-	-	-
MW-4R	04/15/2015	110.24	44.23	66.01	-	-	-	-	<0.00100	<0.00300	-
MW-4R	04/16/2015	110.24	--	--	<0.053	<0.0100	<0.00050	<0.00050	-	-	-
MW-4R	10/29/2015	110.24	44.27	65.97	<0.052	<0.0100	<0.00050	<0.00050	<0.00050	<0.00050	-
MW-4R	04/19/2016	110.24	44.76	65.48	0.64	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	-
MW-4R	09/23/2016	110.24	44.79	65.45	<0.18 J	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	-
MW-4R	05/08/2017	110.24	44.11	66.13	0.31	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	-

Table 2

Historical Groundwater Analytical Results
Former Chevron-Branded Service Station 96097
303 W. Fireweed Ln.
Anchorage, AK

Location	Date	TOC	DTW	GWE	HYDROCARBONS		PRIMARY VOCS				
					DRO	GRO	Benzene	Toluene	Ethylbenzene	Xylene (total)	MTBE
	Units	ft msl	ft btoc	ft msl	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
ADEC Groundwater Cleanup Levels 2016[a]					**1.5**	**2.2**	**0.0046**	**1.1**	**0.015**	**0.19**	**0.14**
MW-5	09/01/1992	98.89	46.89	52.00	-	-	-	-	<0.00050	<0.00050	-
MW-5	05/01/1993	98.89	--	--	-	-	-	-	-	-	-
MW-5	12/22/1994	98.89	47.69	51.22	-	-	-	-	-	-	-
MW-5	03/21/1995	98.89	47.87	51.02	-	-	-	-	-	-	-
MW-5	06/15/1995	98.89	47.73	51.49	-	-	-	-	-	-	-
MW-5	08/24/1995	98.89	47.71	51.36	-	-	-	-	-	-	-
MW-5	11/14/1995	98.89	47.50	51.43	-	-	-	-	-	-	-
MW-5	01/29/1996	98.89	47.75	51.14	-	-	-	-	-	-	-
MW-5	05/29/1996	98.89	48.44	50.45	-	-	-	-	-	-	-
MW-5	08/20/1996	98.89	48.61	50.30	-	-	-	-	-	-	-
MW-5	10/15/1996	98.89	48.55	50.36	-	-	-	-	-	-	-
MW-5	04/27/1997	98.89	48.35	50.56	-	-	-	-	-	-	-
MW-5	09/07/1997	98.89	47.55	51.83	-	-	-	-	-	-	-
MW-5	04/21/1998	98.89	47.58	52.00	-	-	-	-	-	-	-
MW-5	09/17/1998	98.89	48.35	50.88	-	-	-	-	-	-	-
MW-5	04/26/1999	98.89	48.13	50.86	-	-	-	-	-	-	-
MW-5	10/11/1999	98.89	47.90	51.01	-	-	-	-	-	-	-
MW-5	05/18/2000	98.89	47.78	51.35	-	-	-	-	-	-	-
MW-5	09/25/2000	98.89	47.33	51.62	-	-	-	-	-	-	-
MW-5	05/08/2001	98.89	47.96	51.14	-	-	-	-	-	-	-
MW-5	10/03/2001	98.89	48.12	50.8	-	-	-	-	-	-	-
MW-5	05/03/2002	98.89	47.81	51.08	-	-	-	-	-	-	-
MW-5	09/28/2002	98.89	48.09	50.8	-	-	-	-	-	-	-
MW-5	05/22/2003	104.60	47.38	57.22	-	-	-	-	-	-	-
MW-5	10/13/2003	104.60	48.08	56.52	-	-	-	-	-	-	-
MW-5	06/11/2004	98.89	47.54	51.35	-	**22**	**0.022**	0.032	**0.099**	**2.5**	<0.0030
MW-5	09/22/2004	98.89	47.73	51.16	-	**6.9**	**0.002**	0.017	0.009	**0.31**	<0.0020
MW-5	05/18/2005	98.89	46.31	52.58	-	**4.9**	**0.017**	0.003	**0.022**	**0.4**	<0.0020
MW-5	09/28/2005	104.60	47.46	57.14	**1400**	**2.2**	0.001	<0.00050	0.006	0.049	<0.0020
MW-5	05/17/2006	104.60	47.90	56.7	**720**	**6.4**	**0.01**	0.002	**0.036**	**0.31**	<0.0020
MW-5	09/23/2006	--	47.21	--	**130**	**2.6**	0.001	<0.00050	**0.016**	0.071	-
MW-5	05/16/2007	104.54	46.33	58.21	**36 / 27**	**2.6 / 1.7**	0.003 / 0.002 , 0.002	<0.0050 / <0.0050 , <0.0050	0.006 / 0.005 , 0.005	0.03[1] / 0.03 , 0.03[1]	-
MW-5	09/27/2007	104.54	--	--	-	-	-	-	-	-	-
MW-5	05/17/2008	104.54	--	--	-	-	-	-	-	-	-
MW-5	09/14/2008	104.54	45.58	58.96	**17**	**3.6**	**0.01**	0.003	0.04	**0.2**	-
MW-5	05/29/2009	104.54	45.39	59.15	**68**	1.2	0.0042	0.0012	0.0099	0.057	-
MW-5	09/17/2009	104.54	45.92	58.62	**100**	1.4	0.0036	0.0019	0.0093	0.084	-
MW-5	05/11/2010	104.54	45.86	58.68	**11**	1.2	0.0017	<0.0050	0.0023	0.048	-
MW-5	09/07/2010	104.54	45.81	58.73	**18**	0.037	<0.00050	<0.00050	<0.00050	<0.00150	-
MW-5	04/20/2011	104.54	45.74	58.80	**11 / 6**	1 / 1.2	0.0034[1] / 0.0043	0.0016 / 0.0017	0.0026[1] / 0.0031	0.029 / 0.036	-
MW-5	09/28/2011	104.54	46.18	58.36	**170 / 3.3[2]**	0.35	0.0009	<0.00050	0.0006	0.0038	-
MW-5	05/21/2012	104.54	45.73	58.81	**25 / 18[2]**	1.2	0.003	0.0028	0.0018	0.014	-
MW-5	09/18/2012	104.54	45.67	58.87	**3.5 / 2.8[2]**	1.1	0.0024	<0.0030	0.00150 J	0.0052	-
MW-5	05/07/2013	109.77	45.45	64.32	1.3000 / 1.2000 / <0.5200[2]/ 0.5300[2]	0.2990 / 0.4500	<0.00100 / <0.00100	<0.00100 / <0.00100	<0.00100 / <0.00100	<0.00300 / <0.00300	-
MW-5	09/16/2013	109.77	45.32	64.45	0.98 / 0.5600[2]	<0.1000	<0.00100	<0.00100	<0.00100	<0.00300	-
MW-5	05/05/2014	109.77	44.87	64.90	1.4 / 0.68	0.353 / 0.351	0.0019 / <0.00100	0.0034 / 0.0011	0.0011 / <0.00100	0.0065 / <0.00300	-

Table 2

Historical Groundwater Analytical Results
Former Chevron-Branded Service Station 96097
303 W. Fireweed Ln.
Anchorage, AK

Location	Date	TOC	DTW	GWE	HYDROCARBONS		PRIMARY VOCS				
	Units	ft msl	ft btoc	ft msl	DRO mg/l	GRO mg/l	Benzene mg/l	Toluene mg/l	Ethylbenzene mg/l	Xylene (total) mg/l	MTBE mg/l
ADEC Groundwater Cleanup Levels 2016[a]					**1.5**	**2.2**	**0.0046**	**1.1**	**0.015**	**0.19**	**0.14**
MW-5	09/03/2014	109.77	45.29	64.48	0.61	0.552	0.0022	<0.00100	0.0058	<0.00300	-
MW-5	04/16/2015	109.77	45.68	64.09	**5**	0.34	<0.00050	<0.00050	<0.00050	0.00070 J	-
MW-5	10/29/2015	109.77	45.83	63.94	0.72	0.0670 J	<0.00050	<0.00050	<0.00050	<0.00050	-
MW-5	04/19/2016	109.77	46.00	63.77	**2.7**	0.38	<0.0005	0.0006 J	<0.0005	<0.0005	-
MW-5	09/23/2016	109.77	46.31	63.46	**2.0**	0.76	0.002	<0.0005	**0.015**	<0.0005	-
MW-5	05/08/2017	109.77	45.76	64.01	**16 J / 2.2 J**	0.41 / 0.46	**0.005 J /** 0.002 J	0.028 J / 0.011 J	**0.028 J** / 0.009 J	0.19 / 0.12	-
MW-6	06/15/1995	98.12	47.18	50.94	-	-	-	-	-	-	-
MW-6	08/24/1995	98.12	47.64	50.48	-	-	-	-	-	-	-
MW-6	11/14/1995	98.12	47.50	50.62	-	-	-	-	-	-	-
MW-6	01/29/1996	98.12	47.84	50.28	-	-	-	-	-	-	-
MW-6	05/29/1996	98.12	48.22	49.90	-	-	-	-	-	-	-
MW-6	08/20/1996	98.12	48.42	49.70	-	-	-	-	-	-	-
MW-6	10/15/1996	98.12	48.37	49.75	-	-	-	-	-	-	-
MW-6	04/27/1997	98.12	48.12	50.00	-	-	-	-	-	-	-
MW-6	09/07/1997	98.12	46.36	51.76	-	-	-	-	-	-	-
MW-6	04/21/1998	98.12	46.65	51.47	-	-	-	-	-	-	-
MW-6	09/17/1998	98.12	47.22	50.90	-	-	-	-	-	-	-
MW-6	04/26/1999	98.12	--	--	-	-	-	-	-	-	-
MW-6	10/11/1999	98.12	47.62	50.50	-	-	-	-	-	-	-
MW-6	05/18/2000	98.12	47.15	50.97	-	-	-	-	-	-	-
MW-6	09/25/2000	98.12	46.95	51.17	-	-	-	-	-	-	-
MW-6	05/08/2001	98.12	47.70	50.42	-	-	-	-	-	-	-
MW-6	10/03/2001	98.12	--	--	-	-	-	-	-	-	-
MW-6	05/03/2002	98.12	47.40	50.72	-	-	-	-	-	-	-
MW-6	09/28/2002	98.12	47.77	50.35	-	-	-	-	-	-	-
MW-6	05/22/2003	104.60	47.11	57.49	-	-	-	-	-	-	-
MW-6	10/13/2003	103.60	47.60	56.00	-	-	-	-	-	-	-
MW-6	06/10/2004	103.60	47.18	56.42	-	<0.0100 / <0.0100	<0.00050 / <0.00050	<0.00050 / <0.00050	<0.00050 / <0.00050	<0.00050 / <0.00050	<0.0020 / <0.0020
MW-6	09/22/2004	103.60	47.34	56.26	-	<0.0100	<0.00050	<0.00050	<0.00050	<0.00050	<0.0020
MW-6	05/18/2005	103.60	46.73	56.87	-	<0.0100	<0.00050	<0.00050	<0.00050	<0.00050	<0.0020
MW-6	09/28/2005	103.60	47.09	56.61	<0.0250	<0.0100	<0.00050	<0.00050	<0.00050	<0.00050	<0.0020
MW-6	05/17/2006	103.60	47.55	56.05	0.034	<0.0100	<0.00050	<0.00050	<0.00050	<0.00050	<0.0020
MW-6	09/23/2006	103.60	46.98	56.62	-	-	-	-	-	-	-
MW-6	05/16/2007	103.60	46.19	57.41	0.13	<0.0100	<0.0010	<0.0010	<0.0010	<0.0020	-
MW-6	09/27/2007	103.60	--	--	-	-	-	-	-	-	-
MW-6	05/17/2008	103.60	--	--	-	-	-	-	-	-	-
MW-6	09/14/2008	103.60	46.65	56.95	0.069	<0.0100	<0.0010	<0.0010	<0.0010	<0.0020	-
MW-6	05/29/2009	103.60	46.50	57.10	<0.0510	<0.010	<0.00050	<0.00050	<0.00050	<0.00150	-
MW-6	09/17/2009	103.60	46.96	56.64	<0.0510	<0.010	<0.00050	<0.00050	<0.00050	<0.00150	-
MW-6	05/11/2010	103.60	46.89	56.71	-	-	-	-	-	-	-
MW-6	09/07/2010	103.60	46.93	56.67	0.21	<0.0100	<0.00050	<0.00050	<0.00050	<0.00150	-
MW-6	04/20/2011	103.60	46.77	56.83	0.11	-	-	-	-	-	-
MW-6	09/28/2011	103.60	47.22	56.38	0.053 / <0.048[2]	-	-	-	-	-	-
MW-6	05/21/2012	103.60	46.68	56.92	0.055 / <0.050[2]	-	-	-	-	-	-
MW-6	09/18/2012	103.60	46.71	56.89	<0.047 / <0.047[2]	-	-	-	-	-	-
MW-6	05/06/2013	110.23	46.46	63.77	<0.4800	<0.1000	<0.00100	<0.00100	<0.00100	<0.00300	-
MW-6	05/06/2013	110.23	--	--	<0.5700	<0.1000	<0.00100	<0.00100	<0.00100	<0.00300	-

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303 W. Fireweed Ln.
Anchorage, AK

Location	Date	TOC	DTW	GWE	HYDROCARBONS		PRIMARY VOCS				
					DRO	GRO	Benzene	Toluene	Ethylbenzene	Xylene (total)	MTBE
	Units	ft msl	ft btoc	ft msl	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
ADEC Groundwater Cleanup Levels 2016[a]					**1.5**	**2.2**	**0.0046**	**1.1**	**0.015**	**0.19**	**0.14**
MW-6	09/16/2013	110.23	46.34	63.89	<0.4000	-	-	-	-	-	-
MW-6	05/02/2014	110.23	45.95	64.28	<0.40	-	-	-	-	-	-
MW-6	05/02/2014	110.23	--	--	<0.40	-	-	-	-	-	-
MW-6	09/03/2014	110.23	45.95	64.28	<0.40	<0.1000	<0.00100	<0.00100	<0.00100	<0.00300	-
MW-6	04/16/2015	110.23	46.69	63.54	0.086 J	-	-	-	-	-	-
MW-6	10/29/2015	110.23	46.76	63.47	0.68	<0.0100	<0.00050	<0.00050	<0.00050	<0.00050	-
MW-6	04/19/2016	110.23	46.94	63.29	0.44	-	-	-	-	-	-
MW-6	09/23/2016	110.23	47.21	63.02	0.12 J U	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	-
MW-6	05/08/2017	110.23	46.75	63.48	0.071 J	<0.010	0.002	0.01	0.008	0.11	-
MW-7	05/22/2003	103.90	47.20	56.70	-	-	-	-	-	-	-
MW-7	10/13/2003	103.90	47.75	56.15	-	-	-	-	-	-	-
MW-7	06/10/2004	103.90	47.36	56.54	-	**70 / 75**	**2 / 2**	**11 / 11**	**2.4 / 2.4**	**8.5 / 8.5**	-
MW-7	09/22/2004	103.90	47.53	56.37	-	**68 / 69**	**2.4 / 2.6**	**12 / 11**	**2.9 / 2.9**	**9.9 / 9.7**	-
MW-7	05/18/2005	103.90	46.94	56.96	-	**65 / 69**	**0.96 / 1.1**	**9.6 / 10**	**2.6 / 2.6**	**9.1 / 9.4**	-
MW-7	09/28/2005	103.90	47.24	56.66	**12**	**65**	**0.79**	**9.4**	**2.6**	**9.2**	-
MW-7	05/17/2006	103.90	47.70	56.20	**12**	**64**	**0.64**	**7.3**	**2.4**	**9.5**	-
MW-7	09/23/2006	103.90	47.25	56.65	**10**	**45**	**0.27**	**3.6**	**2.5**	**7.3**	-
MW-7	05/16/2007	104.31	46.44	57.87	**6.3**	**36**	**0.2**	**2.7**	**2.4**	**5.9**	-
MW-7	09/27/2007	104.31	--	--	-	-	-	-	-	-	-
MW-7	05/17/2008	104.31	--	--	-	-	-	-	-	-	-
MW-7	09/14/2008	104.31	45.19	59.12	**3.9**	**34**	**0.1**	**1.3**	**2.7**	**5.8**	-
MW-7	05/29/2009	104.31	45.07	59.24	**2.3**	**26**	**0.068**	0.63	**2.4**	**4.4**	-
MW-7	09/17/2009	104.31	45.54	58.77	**2.3**	**23**	**0.073**	0.48	**2.6**	**3.9**	-
MW-7	05/11/2010	104.31	45.49	58.82	**3.4**	**23**	**0.071**	0.3	**2.7**	**3.5**	-
MW-7	09/07/2010	104.31	45.50	58.81	**3.1**	**19**	**0.052**	0.18	**2.2**	**2.5**	-
MW-7	04/20/2011	104.31	45.36	58.95	**3**	**20**	**0.087**	0.12	**2.8**	**2.5**	-
MW-7	09/28/2011	104.31	45.79	58.52	**3.7** / 1.2[2]	**16**	**0.061**	0.097	**2.3**	**2.2**	-
MW-7	05/21/2012	104.31	45.34	58.97	**3.4** / 0.38[2]	**16**	**0.061**	0.068	**2.2**	**1.7**	-
MW-7	09/18/2012	104.31	45.28	59.03	**4 / 2.2**[2]	**15**	**0.062**	0.069	**2.3**	**1.9**	-
MW-7	05/06/2013	108.86	45.46	63.40	-	-	-	-	-	-	-
MW-7	05/07/2013	108.86	--	--	**2.8000 / 2.3000 / 1.9000**[2] / 1.4000[2]	**21.2000 / 15.9000**	**0.0217 / 0.0208**	0.0756 / 0.0727	**2.21 / 1.77**	**2.1 / 1.94**	-
MW-7	09/16/2013	108.86	44.99	63.87	**3.1 / 2.6000**[2]	**22.7**	**0.0192**	0.0505	**2.3**	**2.42**	-
MW-7	05/02/2014	108.86	44.55	64.31	**3.5 / 2.6**	**21.1 / 12.5**	**0.01460 / 0.01300**	0.0928 / 0.06010	**2.3100 / 1.6800**	**2.930 / 1.88**	-
MW-7	09/03/2014	108.86	44.96	63.90	**4**	0.232	<0.02000	0.083	**2.53**	**3.07**	-
MW-7	04/16/2015	108.86	45.30	63.56	**2.1 / 4.6**	**20 / 20**	**0.012 / 0.013**	0.052 / 0.06	**1.4 / 1.8**	**1.5 / 2**	-
MW-7	10/29/2015	108.86	45.89	62.97	**4.4**	**19**	**0.0130 J**	0.044	**1.7**	**1.9**	-
MW-7	04/19/2016	108.86	45.56	63.30	**4.9 J**	-	-	-	-	-	-
MW-7 DUP	04/19/2016	108.86	45.56	63.30	**2.0 J**	**20**	**0.014**	0.044	**1.7**	**1.8**	-
MW-7	09/23/2016	108.86	45.85	63.01	**5.8**	**18**	**0.014**	0.053	**1.7**	**2.1**	-
MW-7-DUP	09/23/2016	108.86	45.85	63.01	**5.4**	**17**	**0.013**	0.047	**1.5**	**1.8**	-
MW-7	5/8/2017[4]	108.86	--	--	-	-	-	-	-	-	-
MW-8	09/28/2002	--	56.83	--	-	-	-	-	-	-	-
MW-8	05/22/2003	101.38	56.33	45.05	-	-	-	-	-	-	-
MW-8	10/13/2003	101.38	56.75	44.63	-	-	-	-	-	-	-
MW-8	05/27/2004	101.38	--	--	-	0.39 , 0.46	**0.074**	0.0006	**0.029**	0.0007	<0.00050

Table 2

Historical Groundwater Analytical Results
Former Chevron-Branded Service Station 96097
303 W. Fireweed Ln.
Anchorage, AK

Location	Date	TOC	DTW	GWE	HYDROCARBONS		PRIMARY VOCS				
					DRO	GRO	Benzene	Toluene	Ethylbenzene	Xylene (total)	MTBE
	Units	ft msl	ft btoc	ft msl	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
ADEC Groundwater Cleanup Levels 2016[a]					**1.5**	**2.2**	**0.0046**	**1.1**	**0.015**	**0.19**	**0.14**
MW-8	06/10/2004	101.38	56.35	56.35	0.76	0.41	**0.085**	0.0008	**0.032**	0.0012	-
MW-8	09/22/2004	101.38	56.45	44.93	0.7	0.31 , 0.7	**0.078**	0.0007	**0.032**	0.0012	-
MW-8	05/18/2005	101.38	55.80	45.58	0.36	0.43	**0.062**	0.0008	**0.039**	0.0013	-
MW-8	09/29/2005	101.38	56.12	45.26	0.34	0.39	**0.06**	0.0008	**0.036**	0.001	-
MW-8	05/17/2006	101.38	56.49	44.89	0.33	0.32	**0.045**	0.0004	**0.035**	<0.00060	-
MW-8	09/23/2006	101.38	56.30	45.08	0.59	0.3	**0.046**	0.0004	**0.037**	<0.00060	-
MW-8	05/16/2007	101.38	55.88	45.50	0.21	0.1	**0.02**	<0.0010	**0.02**	<0.0020	-
MW-8	09/27/2007	101.38	56.23	45.15	0.15	0.3	**0.03**	<0.0010	**0.04**	<0.0010	-
MW-8	05/17/2008	101.38	56.01	45.37	0.29 / 0.25	0.1 / 0.1	**0.02 / 0.02**	<0.0010 / <0.0010	**0.02 / 0.02**	<0.0010 / <0.0010	-
MW-8	09/14/2008	101.38	56.26	45.12	0.25	0.05	<0.0010	0.001	<0.0010	0.001	-
MW-8	05/31/2009	101.38	56.09	45.29	<0.0470	0.14	**0.017**	<0.00050	**0.029**	<0.00050	-
MW-8	09/18/2009	101.38	56.42	44.96	0.049	0.12	**0.017**	<0.00050	**0.026**	<0.00050	-
MW-8	05/11/2010	101.38	56.32	45.06	0.24	0.089	**0.013**	<0.00050	**0.017**	<0.00050	-
MW-8	09/07/2010	101.38	56.50	44.88	0.44	0.11	**0.0099**	<0.00050	**0.028**	<0.00050	-
MW-8	09/28/2011	101.38	56.70	44.68	**25** / 0.35[2]	0.074	**0.012**	<0.00050	0.0087	<0.00050	-
MW-8	05/21/2012	101.38	56.25	45.13	-	-	-	-	-	-	-
MW-8	09/18/2012	101.38	56.26	45.12	0.38 / 0.15 J[2]	0.0490 J	**0.011**	<0.00050	<0.00050	<0.00050	-
MW-8	05/06/2013	108.01	--	--	-	-	-	-	-	-	-
MW-8	09/17/2013	108.01	56.03	51.98	<0.4100	<0.1000	**0.0079**	<0.00100	<0.00100	<0.00100	-
MW-8	05/05/2014	108.01	55.69	52.32	<0.40	<0.1000	**0.0053**	<0.00100	<0.00100	<0.00100	-
MW-8	05/05/2014	108.01	--	--	<0.42	<0.1000	**0.0075**	<0.00100	<0.00100	<0.00100	-
MW-8	09/02/2014	108.01	56.06	51.95	<0.42	<0.1000	**0.0071**	<0.00100	<0.00100	<0.00100	-
MW-8	04/15/2015	108.01	--	--	-	-	-	-	-	-	-
MW-8	10/29/2015	108.01	56.71	51.3	0.13 J	0.0310 J	0.004	<0.00050	<0.00050	<0.00050	-
MW-8	04/19/2016	108.01	53.61	54.40	0.23 J	0.034 J	0.004	<0.0005	<0.0005	<0.0005	-
MW-8	09/23/2016	108.01	56.55	51.46	0.36	0.035 J	0.003	<0.0005	<0.0005	<0.0005	-
MW-8	05/08/2017	108.01	56.21	51.80	0.71	0.038 J	<0.0005	<0.0005	<0.0005	<0.0005	-
MW-9	10/13/2003	104.17	47.62	56.55	-	-	-	-	-	-	-
MW-9	06/10/2004	104.17	47.22	56.95	-	-	-	-	-	-	-
MW-9	06/11/2004	104.17	--	--	1.4	0.91	**0.007**	0.001	**0.031**	0.001	<0.0020
MW-9	06/11/2004	104.17	--	--	1.4	-	**0.007**	0.001	**0.031**	0.001	<0.0020
MW-9	06/11/2004	104.17	--	--	1.4	-	**0.007**	0.001	**0.031**	0.001	<0.0020
MW-9	09/22/2004	104.17	47.40	56.77	**7.2**	**5.4 , 7.2**	**0.043**	0.002	**0.28**	0.002	<0.0020
MW-9	05/18/2005	104.17	46.80	57.37	0.98	0.5	0.003	<0.00050	0.006	<0.00050	<0.0020
MW-9	09/28/2005	104.17	47.13	57.04	**10 / 11**	**2.3 / 2.3**	**0.018 / 0.017**	0.001 / 0.001	**0.13 / 0.13**	0.001 / 0.001	<0.0020 / <0.0020
MW-9	05/17/2006	104.17	47.59	56.58	**15 / 5.4**	1.1 / 1.2	**0.008 / 0.009**	0.0007 / 0.0007	**0.066 / 0.066**	0.0007 / 0.0007	<0.0020 / <0.0020
MW-9	09/23/2006	104.17	47.16	57.01	**2.2 / 1.9**	0.2 / 0.21	0.003 / 0.003	<0.00050 / <0.00050	0.006 / 0.007	<0.00050 / <0.00050	-
MW-9	05/16/2007	104.70	46.31	58.39	**2.6**	0.3	0.003	<0.0010	0.01	<0.0010	-
MW-9	09/27/2007	104.70	--	--	-	-	-	-	-	-	-
MW-9	05/17/2008	104.70	--	--	-	-	-	-	-	-	-
MW-9	09/14/2008	104.70	45.45	59.25	**4.3**	1.9	**0.01**	0.001	**0.06**	0.001	-
MW-9	05/29/2009	104.70	45.27	59.43	**1.6**	0.61	**0.0056**	0.0008	**0.034**	0.0008	-
MW-9	09/17/2009	104.70	45.86	58.84	**2.7**	1.3	**0.0086**	0.0008	**0.078**	0.0008	-
MW-9	05/11/2010	104.70	45.84	58.86	**2.3**	1.4	**0.009**	0.0012	**0.089**	0.0012	-
MW-9	09/07/2010	104.70	47.18	57.52	**3.1**	2.1	**0.011**	0.0011	**0.11**	0.0011	-
MW-9	04/20/2011	104.70	45.76	58.94	**2.9**	2	**0.015**	0.0014	**0.1**	0.0014	-
MW-9	09/28/2011	104.70	46.16	58.54	**5.8** / 0.63[2]	1.4 / 1.5	**0.0094[1] / 0.01**	0.0012[1] / 0.0014	**0.071[1] / 0.072**	0.0012[1] / 0.0014	-

Table 2

Historical Groundwater Analytical Results
Former Chevron-Branded Service Station 96097
303 W. Fireweed Ln.
Anchorage, AK

Location	Date	TOC	DTW	GWE	HYDROCARBONS		PRIMARY VOCS				
					DRO	GRO	Benzene	Toluene	Ethylbenzene	Xylene (total)	MTBE
	Units	ft msl	ft btoc	ft msl	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
ADEC Groundwater Cleanup Levels 2016[a]					**1.5**	**2.2**	**0.0046**	**1.1**	**0.015**	**0.19**	**0.14**
MW-9	05/21/2012	104.70	45.70	59.00	**2.1** / 0.48[2]	1.2	**0.0069**	0.0012	**0.035**	0.0012	-
MW-9	09/18/2012	104.70	45.41	59.29	**2.1** / 0.34[2]	1.2	**0.0089**	0.00130J	**0.049**	0.00130 J	-
MW-9	05/06/2013	109.64	45.50	64.14	-	-	-	-	-	-	-
MW-9	05/07/2013	109.64	--	--	1.1 / <0.5000[2]	0.562	**0.0025**	<0.00100	**0.021**	<0.00100	-
MW-9	05/07/2013	109.64	--	--	**1.6** / <0.5000[2]	1.01	**0.0033**	<0.00100	**0.032**	<0.00100	-
MW-9	09/16/2013	109.64	45.32	64.32	**1.7** / 0.5600[2]	1.04	**0.0033**	<0.00100	**0.0371**	<0.00100	-
MW-9	05/05/2014	109.64	44.88	64.76	<0.40	<0.1000	<0.00100	<0.00100	0.0012	<0.00100	-
MW-9	05/05/2014	109.64	--	--	<0.42	0.146	0.0011	<0.00100	<0.00100	<0.00100	-
MW-9	09/03/2014	109.64	45.27	64.37	0.88	<0.1000	<0.00100	<0.00100	<0.00100	<0.00100	-
MW-9	04/16/2015	109.64	45.70	63.94	1.4	0.67	0.003	<0.00050	0.011	<0.00050	-
MW-9	10/29/2015	109.64	45.84	63.8	1.5	0.84	0.002	<0.00050	0.014	<0.00050	-
MW-9	04/19/2016	109.64	46.00	63.64	**1.5**	0.95	0.003	<0.0005	0.012	<0.0005	-
MW-9	09/23/2016	109.64	46.25	63.39	**7.5**	**0.073 J**	<0.0005	<0.0005	<0.0005	<0.0005	-
MW-9	05/08/2017	109.64	45.74	63.90	1.1	0.95	**0.034**	0.006	0.007	0.026	-
MW-10	10/13/2003	103.26	46.68	56.58	-	-	-	-	-	-	-
MW-10	06/01/2004	103.26	--	--	**2.9**	**5.5**	0.01	0.014	**0.4**	0.014	<0.0020
MW-10	06/10/2004	103.26	46.26	57.00	-	-	-	-	-	-	-
MW-10	09/22/2004	103.26	46.45	56.81	1.3	0.76	0.001	0.0009	**0.062**	0.0009	<0.0020
MW-10	05/18/2005	103.26	--	--	-	-	-	-	-	-	-
MW-10	09/28/2005	103.26	46.15	57.11	0.24	0.61	0.0006	0.0008	**0.03**	0.0008	<0.0020
MW-10	05/17/2006	103.26	46.63	56.63	0.75	2.1	0.003	<0.00050	**0.097**	<0.00050	<0.0020
MW-10	09/23/2006	103.26	46.17	57.09	-	-	-	-	-	-	-
MW-10	05/16/2007	103.74	45.25	58.49	0.93	1.3	**0.007**	0.002	**0.09**	0.002	-
MW-10	09/27/2007	103.74	--	--	-	-	-	-	-	-	-
MW-10	05/29/2009	103.74	--	--	-	-	-	-	-	-	-
MW-10	05/11/2010	103.74	--	--	**13**	-	-	-	-	-	-
MW-10R	09/28/2011	--	46.15	--	**3.6 / 2.2[2]**	**8.7**	**0.027**	0.007	**0.26**	0.007	-
MW-10R	05/21/2012	--	45.65	--	**12 / 3[2]**	**17**	**0.055**	0.053	**0.21**	0.053	-
MW-10R	09/18/2012	--	45.82	--	**9.12**	**6.7**	**0.022**	0.006	**0.14**	0.006	-
MW-10R	05/07/2013	109.64	44.47	65.17	1.5 / 1.2000[2]	**3.77**	<0.00500	<0.00500	**0.1880**	<0.00500	-
MW-10R	05/07/2013	109.64	--	--	**1.6** / 1.3000[2]	**4.81**	<0.00500	<0.00500	**0.168**	<0.00500	-
MW-10R	09/16/2013	109.64	45.28	64.36	**2.1 / 1.8000[2]**	2.17	0.0014	0.0013	**0.0534**	0.0013	-
MW-10R	05/02/2014	109.64	44.78	64.86	**1.7**	**2.97**	<0.00500	<0.00500	**0.183**	<0.00500	-
MW-10R	05/02/2014	109.64	--	--	**2.1**	**2.51**	<0.00500	<0.00500	**0.0513**	<0.00500	-
MW-10R	09/03/2014	109.64	46.21	63.43	**2.2**	**4.97**	<0.00500	<0.00500	**0.173**	<0.00500	-
MW-10R	04/16/2015	109.64	45.61	64.03	**5.9**	**3.6**	0.002	0.002	**0.16**	0.002	-
MW-10R	10/29/2015	109.64	45.76	63.88	**2.5**	**3**	0.00090 J	0.0010 J	**0.051**	0.0010J	-
MW-10R	04/19/2016	109.64	45.93	63.71	**3.6**	**4.5**	0.002	0.002	**0.13**	0.13	-
MW-10R	09/23/2016	109.64	46.24	63.40	**1.6**	**3.5**	0.001	0.001	**0.057**	0.062	-
MW-10R	05/08/2017	109.64	45.68	63.96	**1.7**	**3.9**	0.0009 J	<0.0005	0.005	0.036	-
MW-11	10/13/2003	103.27	46.42	56.85	-	-	-	-	-	-	-
MW-11	06/10/2004	103.27	46.02	57.25	-	-	-	-	-	-	-
MW-11	06/11/2004	103.27	--	--	**8.1**	**11**	**0.11**	0.39	**0.6**	**0.39**	<0.0020
MW-11	06/11/2004	103.27	--	--	**8.1**	-	**0.11**	0.39	**0.6**	**0.39**	<0.0020
MW-11	06/11/2004	103.27	--	--	**8.1**	-	**0.11**	0.39	**0.6**	**0.39**	<0.0020

Table 2

Historical Groundwater Analytical Results
Former Chevron-Branded Service Station 96097
303 W. Fireweed Ln.
Anchorage, AK

Location	Date	TOC	DTW	GWE	HYDROCARBONS		PRIMARY VOCS				
	Units	ft msl	ft btoc	ft msl	DRO mg/l	GRO mg/l	Benzene mg/l	Toluene mg/l	Ethylbenzene mg/l	Xylene (total) mg/l	MTBE mg/l
ADEC Groundwater Cleanup Levels 2016[a]					**1.5**	**2.2**	**0.0046**	**1.1**	**0.015**	**0.19**	**0.14**
MW-11	09/22/2004	103.27	46.21	57.06	0.64	0.011	<0.00050	<0.00050	<0.00050	<0.00050	<0.0020
MW-11	05/18/2005	103.27	45.61	57.66	**2.6**	**6.3**	**0.033**	0.15	**0.41**	0.15	<0.0020
MW-11	09/28/2005	103.27	45.90	57.37	0.032	0.029	<0.00050	<0.00050	0.002	<0.00050	<0.0020
MW-11	05/17/2006	103.27	--	--	-	-	-	-	-	-	-
MW-11	09/23/2006	103.27	--	--	-	-	-	-	-	-	-
MW-11	05/16/2007	103.27	--	--	-	-	-	-	-	-	-
MW-12	10/13/2003	101.38	60.52	40.86	**12**	0.56	**0.18**	<0.00050	<0.00050	<0.00050	<0.0020
MW-12	05/27/2004	101.38	--	--	-	0.32 , **8.5**	**0.12**	<0.00050	<0.00050	<0.00050	<0.00050
MW-12	06/11/2004	101.38	60.12	41.26	**3.4**	0.41	**0.15**	0.0006	0.0006	0.0006	<0.0020
MW-12	09/22/2004	101.38	60.23	41.15	**2.3**	0.38 , **2.3**	**0.16**	0.0005	<0.00050	0.0005	<0.0020
MW-12	05/18/2005	101.38	58.47	42.91	0.96	0.68	**0.17**	0.0009	0.001	0.0009	<0.0020
MW-12	09/29/2005	101.38	59.86	41.52	**1.7**	0.58	**0.19**	0.0008	0.001	0.0008	<0.0020
MW-12	05/17/2006	101.38	60.12	41.26	**1.8**	0.56	**0.18**	0.0008	0.001	0.0008	<0.0020
MW-12	09/23/2006	101.38	60.04	41.34	**2.1**	0.63	**0.17**	0.0007	0.001	0.0007	-
MW-12	05/16/2007	101.38	59.58	41.8	**1.8**	0.4	**0.1**	<0.0010	0.002	<0.0010	-
MW-12	09/27/2007	101.38	59.97	41.41	1.4 / 0.71	0.4 / 0.4	**0.1 / 0.1**	<0.0010 / <0.0010	0.002 / 0.002	<0.0010 / <0.0010	-
MW-12	05/17/2008	101.38	--	--	-	-	-	-	-	-	-
MW-12	09/14/2008	101.38	60.02	57.76	1.2	0.4	**0.1**	<0.0010	0.002	<0.0010	-
MW-12	05/29/2009	101.38	59.79	41.59	0.089	0.34	**0.13**	<0.00050	0.0017	<0.00050	-
MW-12	09/18/2009	101.38	60.15	41.23	0.071	0.26	**0.12**	<0.00050	0.0009	<0.00050	-
MW-12	05/11/2010	101.38	60.00	41.38	0.38	0.21	**0.092**	0.0005	0.0006	0.0005	-
MW-12	09/07/2010	101.38	60.40	40.98	0.74 / 1.1	0.17 / 0.18	**0.089[1] / 0.088**	<0.00050[1] / <0.00050	<0.00050[1] / <0.00050	<0.00050[1] / <0.00050	-
MW-12	04/20/2011	101.38	--	--	0.71	0.16	**0.069**	<0.00050	0.0006	<0.00050	-
MW-12	04/26/2011	101.38	60.29	41.09	-	-	-	-	-	-	-
MW-12	09/28/2011	101.38	60.62	40.76	**3.2** / 0.056[2]	0.13 / 0.13	**0.072[1] / 0.075**	<0.00050[1] / <0.00050	<0.00050[1] / <0.00050	<0.00050[1] / <0.00050	-
MW-12	05/21/2012	101.38	60.10	41.28	0.26 / 0.16[2]	0.13	**0.06**	<0.00050	<0.00050	<0.00050	-
MW-12	09/18/2012	101.38	60.12	41.26	0.52 / 0.33[2]	0.13	**0.068**	<0.00050	0.00060 J	<0.00050	-
MW-12	05/06/2013	108.01	59.90	48.11	<0.5400 / <0.4800	0.1600 / 0.1240	**0.0588 / 0.0458**	<0.00100 / <0.00100	<0.00100 / <0.00100	<0.00100 / <0.00100	-
MW-12	09/16/2013	108.01	59.96	48.05	<0.4100 / <0.4100	0.1600 / 0.17	**0.0523 / 0.0549**	<0.00100 / <0.00100	<0.00100 / <0.00100	<0.00100 / <0.00100	-
MW-12	05/02/2014	108.01	59.56	48.45	<0.42 / <0.40	0.153 / 0.14	**0.04250 / 0.038702**	<0.00100 / <0.00100	<0.00100 / <0.00100	<0.00100 / <0.00100	-
MW-12	09/02/2014	108.01	59.96	48.05	<0.40	<10.0000	**0.0417**	<0.00200	<0.00200	<0.00200	-
MW-12	04/16/2015	108.01	60.24	47.77	0.28	0.1000 J	**0.04**	<0.00050	<0.00050	<0.00050	-
MW-12	10/29/2015	108.01	60.14	47.87	0.31	0.0810 J	-	<0.00050	<0.00050	<0.00050	-
MW-12	04/19/2016	108.01	60.01	48.00	0.17 J	0.086 J	**0.031**	<0.0005	<0.0005	<0.0005	-
MW-12	09/23/2016	108.86	60.36	63.01	0.58 J	0.088 J	**0.035**	<0.0005	<0.0005	<0.0005	-
MW-12-DUP	09/23/2016	108.86	60.36	63.01	1.0 J	0.083 J	**0.035**	<0.0005	<0.0005	<0.0005	
MW-12	05/08/2017	108.01	59.99	48.02	<0.052	0.064 J	**0.021**	<0.0005	**0.044**	**0.30**	-
MW-13	05/09/2005	--	--	--	0.065	<0.0100	<0.00050	<0.00050	<0.00050	<0.00050	-
MW-13	06/16/2005	--	--	--	0.04	<0.0100	<0.00050	<0.00050	<0.00050	<0.00050	-
MW-13	09/29/2005	102.25	44.60	57.65	0.024	<0.0100	<0.00050	<0.00050	<0.00050	<0.00050	<0.0020
MW-13	05/17/2006	102.25	45.21	57.04	0.21	<0.0100	<0.00050	<0.00050	<0.00050	<0.00050	<0.0020
MW-13	09/23/2006	102.25	44.69	57.56	-	-	-	-	-	-	-
MW-13	05/16/2007	102.25	43.77	58.48	0.61	<0.0100	<0.0010	<0.0010	<0.0010	<0.0010	-
MW-13	09/27/2007	102.25	44.16	58.09	0.27	<0.0100	<0.0010	<0.0010	<0.0010	<0.0010	-
MW-13	05/17/2008	102.25	43.86	58.39	-	-	-	-	-	-	-
MW-13	09/14/2008	102.25	44.32	57.93	0.37	<0.0100	<0.0010	<0.0010	<0.0010	<0.0010	-

Table 2

Historical Groundwater Analytical Results
Former Chevron-Branded Service Station 96097
303 W. Fireweed Ln.
Anchorage, AK

Location	Date	TOC	DTW	GWE	HYDROCARBONS		PRIMARY VOCS				
	Units	ft msl	ft btoc	ft msl	DRO mg/l	GRO mg/l	Benzene mg/l	Toluene mg/l	Ethylbenzene mg/l	Xylene (total) mg/l	MTBE mg/l
ADEC Groundwater Cleanup Levels 2016[a]					**1.5**	**2.2**	**0.0046**	**1.1**	**0.015**	**0.19**	**0.14**
MW-13	05/31/2009	102.25	44.22	58.03	<0.0510	<0.010	<0.00050	<0.00050	<0.00050	<0.00050	-
MW-13	09/18/2009	102.25	44.67	57.58	<0.0490	<0.010	<0.00050	<0.00050	<0.00050	<0.00050	-
MW-13	05/11/2010	102.25	44.55	57.70	-	-	-	-	-	-	-
MW-13	09/07/2010	102.25	44.49	57.76	<0.052	<0.0100	<0.00050	<0.00050	<0.00050	<0.00050	-
MW-13	09/28/2011	102.25	47.78	54.47	1.2 / <0.049[2]	<0.0100	<0.00050	<0.00050	<0.00050	<0.00050	-
MW-13	05/21/2012	102.25	44.25	58.00	-	-	-	-	-	-	-
MW-13	09/18/2012	102.25	44.24	58.01	0.25 J / 0.19 / 0.077 J[2]	<0.0100 / <0.0100	<0.00050[1] / <0.00050	<0.00050[1] / <0.00050	<0.00050[1] / <0.00050	<0.00050[1] / <0.00050	-
MW-13	05/06/2013	108.88	--	--	-	-	-	-	-	-	-
MW-13	09/17/2013	108.88	43.91	64.97	<0.4100	<0.1000	<0.00100	<0.00100	<0.00100	<0.00100	-
MW-13	05/02/2014	108.88	43.50	65.38	-	-	-	-	-	-	-
MW-13	09/02/2014	108.88	43.91	64.97	0.45	<0.1000	<0.00100	<0.00100	<0.00100	<0.00100	-
MW-13	04/15/2015	108.88	44.30	64.58	-	-	-	-	-	-	-
MW-13	10/29/2015	108.88	44.32	64.56	0.32	<0.0100	<0.00050	<0.00050	<0.00050	<0.00050	-
MW-13	04/19/2016	108.88	44.68	64.20	0.78	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	-
MW-13	09/23/2016	108.88	44.83	64.05	0.63	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	--
MW-13	05/08/2017	108.88	44.35	64.53	0.39	<0.010	0.003	<0.0005	<0.0005	0.020	-
MW-14	06/16/2005	--	--	--	**15 / 19**	0.22 / 0.21	**0.044 / 0.043**	<0.00050 / <0.00050	0.011 / 0.011	<0.00050 / <0.00050	-
MW-14	09/29/2005	102.35	56.59	45.76	0.081	0.079	**0.025**	<0.00050	0.003	<0.00050	<0.0020
MW-14	05/17/2006	102.35	56.93	45.42	**1.6**	0.061	**0.019**	<0.00050	0.002	<0.00050	<0.0020
MW-14	09/23/2006	102.35	56.77	45.58	**2.9**	0.046	**0.011**	<0.00050	0.0009	<0.00050	-
MW-14	05/16/2007	102.35	56.28	46.07	**1.8**	0.02	**0.009**	<0.0010	<0.0010	<0.0010	-
MW-14	09/27/2007	102.35	56.68	45.67	0.57	0.03	**0.01**	<0.0010	0.001	<0.0010	-
MW-14	05/17/2008	102.35	56.44	45.91	**6.6**	0.03	**0.01**	<0.0010	<0.0010	<0.0010	-
MW-14	09/14/2008	102.35	56.71	45.64	1	0.04	**0.01**	<0.0010	0.002	<0.0010	-
MW-14	05/31/2009	102.35	56.56	45.79	<0.0500	0.02	**0.008**	<0.00050	0.001	<0.00050	-
MW-14	09/18/2009	102.35	56.96	45.39	0.47	0.032	**0.0093**	<0.00050	0.0027	<0.00050	-
MW-14	05/11/2010	102.35	56.77	45.58	0.43	0.027	**0.0087**	<0.00050	0.0012	<0.00050	-
MW-14	09/08/2010	102.35	56.95	45.40	1.5	0.024	**0.01**	<0.00050	0.0016	<0.00050	-
MW-14	04/20/2011	102.35	56.82	45.53	0.053	0.028	**0.0098**	<0.00050	0.0011	<0.00050	-
MW-14	09/28/2011	102.35	57.15	45.20	1.4 / 0.35[2]	0.021	**0.009**	<0.00050	0.0007	<0.00050	-
MW-14	05/21/2012	102.35	56.70	45.65	0.32 / 0.19[2]	0.02	**0.0074**	<0.00050	<0.00050	<0.00050	-
MW-14	09/18/2012	102.35	56.70	45.65	**1.8** / 1.3[2]	0.0150J	**0.0065**	<0.00050	<0.00050	<0.00050	-
MW-14	05/08/2013	109.00	56.02	52.98	<0.5400 / <0.5100	<0.1000 / <0.1000	**0.0057** / 0.0038	<0.00100 / <0.00100	<0.00100 / <0.00100	<0.00100 / <0.00100	-
MW-14	09/17/2013	109.00	56.54	52.46	<0.4100	<0.1000	**0.0054**	<0.00100	<0.00100	<0.00100	-
MW-14	05/05/2014	109.00	56.18	52.82	<0.40 / <0.40	<0.1000 / <0.1000	**0.0048** / 0.004	<0.00100 / <0.00100	<0.00100 / <0.00100	<0.00100 / <0.00100	-
MW-14	09/02/2014	109.00	56.53	52.47	<0.42	<0.1000	0.0043	<0.00100	<0.00100	<0.00100	-
MW-14	04/15/2015	109.00	--	--	-	-	-	-	-	-	-
MW-14	10/29/2015	109.00	56.90	52.1	0.29	0.0170 J	0.005	<0.00050	<0.00050	<0.00050	-
MW-14	04/19/2016[4]	109.00	--	--	-	-	-	-	-	-	-
MW-14	09/23/2016	109.00	57.03	51.97	0.56	0.015 J	0.004	<0.0005	<0.0005	<0.0005	-
MW-14	05/08/2017	109.00	56.70	52.30	0.28	0.018 J	0.0009 J	<0.0005	0.005	0.036	-
MW-15	05/11/2005	--	--	--	<0.0230	<0.0100	<0.00050	<0.00050	<0.00050	<0.00050	-
MW-15	06/16/2005	--	--	--	0.25	<0.0100	<0.00050	<0.00050	<0.00050	<0.00050	-
MW-15	09/29/2005	102.04	55.84	46.20	0.031	<0.0100	<0.00050	<0.00050	<0.00050	<0.00050	<0.0020
MW-15	05/17/2006	102.04	56.22	45.82	0.071	0.076	0.014	<0.00050	0.004	<0.00050	<0.0020
MW-15	09/23/2006	102.04	56.04	46.00	-	-	-	-	-	-	-

Table 2

Historical Groundwater Analytical Results
Former Chevron-Branded Service Station 96097
303 W. Fireweed Ln.
Anchorage, AK

Location	Date	TOC	DTW	GWE	HYDROCARBONS		PRIMARY VOCS				
					DRO	GRO	Benzene	Toluene	Ethylbenzene	Xylene (total)	MTBE
	Units	ft msl	ft btoc	ft msl	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
ADEC Groundwater Cleanup Levels 2016[a]					**1.5**	**2.2**	**0.0046**	**1.1**	**0.015**	**0.19**	**0.14**
MW-15	05/16/2007	102.04	55.45	46.59	0.077	<0.0100	<0.0010	<0.0010	<0.0010	<0.0010	-
MW-15	09/27/2007	102.04	55.92	46.12	0.072	<0.0100	<0.0010	<0.0010	<0.0010	<0.0010	-
MW-15	05/17/2008	102.04	55.62	46.42	-	-	-	-	-	-	-
MW-15	09/14/2008	102.04	55.95	46.09	0.093 / 0.11	<0.0100 / <0.0100	0.001[1] / <0.0010	<0.0010[1] / <0.0010	<0.0010[1] / <0.0010	<0.0010[1] / <0.0010	-
MW-15	05/31/2009	102.04	55.74	46.30	<0.0480 / <0.0510	<0.010 / <0.0100	0.0007[1] / 0.0007	<0.00050[1] / <0.00050	<0.00050[1] / <0.00050	<0.00050[1] / <0.00050	-
MW-15	09/18/2009	102.04	56.04	46.00	<0.0520	0.024 / --	**0.0052**	<0.00050	0.0023	<0.00050	-
MW-15	05/11/2010	102.04	56.06	45.98	0.069 / 0.073	0.012 / <0.0100	0.0015[1] / 0.0016	<0.00050[1] / <0.00050	<0.00050[1] / <0.00050	<0.00050[1] / <0.00050	-
MW-15	09/07/2010	102.04	56.22	45.82	0.098	0.028	0.0021	<0.00050	0.0009	<0.00050	-
MW-15	04/20/2011	102.04	56.14	45.90	-	-	-	-	-	-	-
MW-15	09/28/2011	102.04	56.40	45.64	-	-	-	-	-	-	-
MW-15	05/21/2012	102.24	--	--	-	-	-	-	-	-	-
MW-15	09/18/2012	102.24	--	--	-	-	-	-	-	-	-
MW-15	05/06/2013	108.69	55.76	52.93	-	-	-	-	-	-	-
MW-15	09/16/2013	108.69	--	--	-	-	-	-	-	-	-
MW-15	05/02/2014	108.69	55.42	53.27	-	-	-	-	-	-	-
MW-15	09/02/2014	108.69	55.80	52.89	-	-	-	-	-	-	-
MW-15	04/15/2015	108.69	56.07	52.62	-	-	-	-	-	-	-
MW-15	10/29/2015	108.69	56.03	52.66	-	-	-	-	-	-	-
MW-15	04/19/2016[3]	108.69	56.06	52.63	-	-	-	-	-	-	-
MW-15	09/23/2016	108.69	56.33	52.36	--	--	--	--	--	--	--
MW-15	5/8/2017[3]	108.69	55.98	52.71	-	-	-	-	-	-	-
MW-16	06/05/2008	--	--	--	**6.5**	1.3	**0.007**	0.0008	**0.03**	0.0008	-
MW-16	09/14/2008	--	57.01	--	**55**	0.3	0.001	<0.0010	0.005	<0.0010	-
MW-16	05/31/2009	108.84	57.45	51.39	**2.9**	1.4	**0.0068**	0.0013	**0.041**	0.0013	-
MW-16	09/18/2009	108.84	57.18	51.66	**8 / 2.6**	0.74 / 0.72	0.0031[1]/ 0.0029	0.0008[1] / 0.0007	**0.02[1] / 0.018**	0.0008[1] / 0.0007	-
MW-16	05/11/2010	108.84	57.10	51.74	**4.5**	0.027	<0.00050	<0.00050	<0.00050	<0.00050	-
MW-16	09/07/2010	108.84	57.25	51.59	**2.6**	<0.0100	<0.00050	<0.00050	<0.00050	<0.00050	-
MW-16	09/28/2011	108.84	57.46	51.38	**330 / 71[2]**	0.55	0.0013	<0.00050	0.0021	<0.00050	-
MW-16	05/21/2012	--	--	--	**39 / 39[2]**	0.034	<0.00050	<0.00050	<0.00050	<0.00050	-
MW-16	09/18/2012	108.84	57.05	51.79	**23 /13[2]**	0.0250 J	<0.00050	<0.00050	<0.00050	<0.00050	-
MW-16	05/08/2013	108.85	56.80	52.05	**7.5000 / 2.0000 / 7.5000[2]** / 1.4000[2]	<0.1000 / <0.1000	<0.00100 / <0.00100	<0.00100 / <0.00100	<0.00100 / 0.0024	<0.00100 / <0.00100	-
MW-16	09/17/2013	108.85	56.85	52.00	**7 / 6.6 / 6.2000[2]**	<0.1000 / <0.1000	<0.00100 / <0.00100	<0.00100 / <0.00100	<0.00100 / <0.00100	<0.00100 / <0.00100	-
MW-16	05/02/2014	108.85	56.45	52.40	-	-	-	-	-	-	-
MW-16	09/02/2014	108.85	56.83	52.02	**5.3**	<0.1000	<0.00100	<0.00100	<0.00100	<0.00100	-
MW-16	04/15/2015	108.85	--	--	-	-	-	-	-	-	-
MW-16	10/29/2015	108.85	57.16	51.69	**4.5**	0.0180 J	<0.00050	<0.00050	<0.00050	<0.00050	-
MW-16	04/19/2016[4]	108.85	57.13	51.72	-	-	-	-	-	-	-
MW-16	09/23/2016	108.85	57.39	51.46	**18**	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	-
MW-16	5/8/2017[5]	108.85	--	--	-	-	-	-	-	-	-
MW-17	06/10/2004	--	--	--	-	<0.0100	<0.00050	<0.00050	<0.00050	<0.00050	<0.0020
MW-17	09/22/2004	--	--	--	-	<0.0100	<0.00050	<0.00050	<0.00050	<0.00050	<0.0020
MW-17	05/18/2005	--	--	--	-	<0.0100	<0.00020	<0.00020	<0.00020	<0.00020	-
MW-17	09/28/2005	--	--	--	-	<0.0100	<0.00020	<0.00020	<0.00020	<0.00020	-
MW-17	05/17/2006	--	--	--	-	<0.0100	<0.00020	<0.00020	<0.00020	<0.00020	-
MW-17	09/23/2006	--	--	--	-	<0.0100	<0.00020	<0.00020	<0.00020	<0.00020	-

Table 2

Historical Groundwater Analytical Results
Former Chevron-Branded Service Station 96097
303 W. Fireweed Ln.
Anchorage, AK

Location	Date	TOC	DTW	GWE	HYDROCARBONS		PRIMARY VOCS				
					DRO	GRO	Benzene	Toluene	Ethylbenzene	Xylene (total)	MTBE
	Units	ft msl	ft btoc	ft msl	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
ADEC Groundwater Cleanup Levels 2016[a]					**1.5**	**2.2**	**0.0046**	**1.1**	**0.015**	**0.19**	**0.14**
MW-17	05/16/2007	--	--	--	-	<0.0100	<0.0010	<0.0010	<0.0010	<0.0010	-
MW-17	09/27/2007	--	--	--	-	<0.0100	<0.0010	<0.0010	<0.0010	<0.0010	-
MW-17	05/17/2008	--	--	--	-	<0.0100	-	-	-	-	-
MW-17	09/13/2008	--	--	--	1.1	<0.0100	<0.0010	<0.0010	<0.0010	<0.0010	-
MW-17	09/14/2008	--	--	--	-	<0.0100	<0.0010	<0.0010	<0.0010	<0.0010	-
MW-17	05/29/2009	--	45.59	--	<0.0480	<0.010	<0.00050	<0.00050	0.0008	<0.00050	-
MW-17	09/17/2009	--	46.01	--	<0.0530	0.014	<0.00050	<0.00050	0.0014	<0.00050	-
MW-17	05/11/2010	--	45.82	--	<0.0490	<0.010 , <0.0100	<0.00050 , <0.00050[1]	<0.00050 , <0.00050[1]	<0.00050 , <0.00050[1]	<0.00050 , <0.00050	-
MW-17	09/07/2010	--	45.88	--	-	<0.0100	<0.00050	<0.00050	-	<0.00050	-
MW-17	09/08/2010	--	--	--	0.094 / 0.57	<0.0100 / <0.0100	<0.00050[1] / <0.00050	<0.00050[1] / <0.00050	<0.00050[1] / <0.00050	<0.00050[1] / <0.00050	-
MW-17	04/20/2011	--	45.75	--	-	-	-	-	-	-	-
MW-17	09/28/2011	--	46.13	--	-	-	-	-	-	-	-
MW-17	09/02/2014	--	45.23	--	-	-	-	-	-	-	-
MW-17	04/15/2015	--	45.61	--	-	-	-	-	-	-	-
MW-17	10/29/2015	--	47.61	--	0.93	<0.0100	<0.00050	-	<0.00050	-	-
MW-17	04/19/2016[3]	--	45.88	--	-	-	-	-	-	-	-
MW-17	09/23/2016	--	46.08	--	-	-	-	-	-	-	-
MW-17	5/8/2017[5]	--	--	--	-	-	-	-	-	-	-
QA	04/19/2016	--	--	--	-	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	-
QA	09/23/2016	--	--	--	-	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	-
QA	05/08/2017	-	-	-	-	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	-

Notes and Abbreviations
TOC = top of casing
DTW = depth to water
GWE = groundwater elevation
DRO = Diesel Range Organics by Alaska Series Method AK102
GRO = Gasoline Range Organics by Alaska Series Method AK101
Benzene, Toluene, Ethylbenzene, and Total Xylenes by SW-846 8021B or 8260B
Total Xylenes = Sum of m-, o-, and p-xylenes
MTBE = Methyl Tertiary-Butyl Ether
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
NA = Not Applicable
ft msl = feet above mean sea level
ft btoc = Feet Below Top of Casing
mg/L = Milligrams per Liter
ND = Not detected above laboratory method detection limits
U = Non-detect
J = Estimated value
- = Not Measured/Not Analyzed
<x = Constituent not detected above x milligrams per liter
x / y = Sample Results / Blind Duplicate Results
[1] = BTEX by SW-846 8021B
[2] = DRO with Silica Gel Cleanup
[3] = Gauge Only
[4] = Inaccessible
[5] = Obstruction

Table 3

Current PAH Groundwater Analytical Results
Former Chevron-Branded Service Station 96097
303 W. Fireweed Ln.
Anchorage, AK

Location ID	Date	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 2016[a]		**0.53**	**0.26**	**0.043**	**0.00012**	**0.000034**	**0.00034**	**0.00026**	**0.00080**
MW-5	5/8/2017	0.00057 / 0.00032 J	0.00055 / 0.00062	0.0017 / 0.0013	**0.0013 J / 0.0019 J**	**0.0015 / 0.0018**	**0.0040 / 0.0050**	**0.0016 / 0.0020**	**0.00097 / 0.0012**
MW-7	5/8/2017[1]	--	--	--	--	--	--	--	--
MW-9	5/8/2017	0.00013	0.000014 J	<0.0000095	<0.0000095	<0.0000095	0.000018 J	<0.0000095	<0.0000095
MW-10R	5/8/2017	0.00069	0.00034 J	0.00026 J	**0.00028 J**	<0.00010	**0.00041 J**	0.00016 J	0.00014 J

Table 3

Current PAH Groundwater Analytical Results
Former Chevron-Branded Service Station 96097
303 W. Fireweed Ln.
Anchorage, AK

Location ID	Date	Chrysene mg/L	Dibenz(a,h)anthracene mg/L	Fluorene mg/L	Fluoranthene mg/L	Indeno(1,2,3-cd)pyrene mg/L	Naphthalene mg/L	Phenanthrene mg/L	Pyrene mg/L
ADEC Groundwater Cleanup Levels 2016[a]		**0.0020**	**0.000034**	**0.29**	**0.26**	**0.00019**	**0.0017**	**0.17**	**0.12**
MW-5	5/8/2017	**0.0041 / 0.0048**	**0.00021 J / 0.00030 J**	0.0011 / 0.0014	0.0033 / 0.0039	0.00070 / 0.00080	0.0013 / 0.0014	0.0028 J / 0.0037 J	0.0062 / 0.010
MW-7	5/8/2017[1]	--	--	--	--	--	--	--	--
MW-9	5/8/2017	0.000019 J	<0.0000095	0.00023	0.000019 J	<0.0000095	0.0018	0.000042 J	0.000029 J
MW-10R	5/8/2017	0.00026 J	<0.00010	0.00050 J	0.00047 J	<0.00010	**0.030**	0.0010	0.0012

Notes and Abbreviations

PAH = polynuclear aromatic hydrocarbons
ID = Identification
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
NA = Not Applicable
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
[1] = Inaccessible

Table 4

Historical PAH Groundwater Analytical Results
Former Chevron-Branded Service Station 96097
303 W. Fireweed Ln.
Anchorage, AK

Location ID	Date	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)Pyrene	Benzo(b)Fluoranthene	Benzo(g,h,i)perylene	Benzo(k)Fluoranthene
		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
ADEC Groundwater Cleanup Levels 2016[a]		0.53	0.26	0.043	0.00012	0.000034	0.00034	0.00026	0.0008
MW-4R	04/19/2016	--	--	--	--	--	--	--	--
MW-4R	09/23/2016	--	--	--	--	--	--	--	--
MW-4R	05/08/2017	--	--	--	--	--	--	--	--
MW-5	06/11/2004	--	--	--	--	--	--	--	--
MW-5	09/22/2004	--	--	--	--	--	--	--	--
MW-5	05/18/2005	--	--	--	--	--	--	--	--
MW-5	09/28/2005	--	--	--	--	--	--	--	--
MW-5	05/17/2006	--	--	--	--	--	--	--	--
MW-5	09/23/2006	--	--	--	--	--	--	--	--
MW-5	05/29/2009	--	--	--	--	--	--	--	--
MW-5	09/17/2009	--	--	--	--	--	--	--	--
MW-5	05/11/2010	0.00096	0.0015	0.0008	**0.0022**	**0.0016**	**0.0051**	0.0014	0.0017
MW-5	09/07/2010	<0.0010	<0.0010	<0.0010	**0.0024**	**0.0016**	**0.0034**	0.0029	<0.0010
MW-5	04/20/2011	<0.000190	<0.000190	<0.000190	**0.00033**	**0.00032**	0.00085	0.00066	<0.000190
MW-5	09/28/2011	0.00013	0.000072	<0.0000110	**0.00021**	**0.00013**	0.00031	0.00021	0.00014
MW-5	05/21/2012	<0.0000960	<0.0000960	<0.0000960	**0.0021**	**0.0013**	**0.0025**	0.0019	0.0011
MW-5	09/18/2012	0.0000890 J	0.000130 J	0.000110 J	**0.00033**	**0.000240J**	0.0004	0.000220J	0.000240J
MW-5	05/07/2013	<0.0000440/ <0.0000430	<0.0000440/ <0.0000430	<0.0000440/ <0.0000430	<0.0000440/ <0.0000430	<0.0000440/ <0.0000430	<0.000110/ <0.000110	<0.0000440/ <0.0000430	<0.0000440/ <0.0000430
MW-5	09/16/2013	<0.0000400	<0.0000400	<0.0000400	<0.0000400	<0.0000400	<0.0000400	<0.0000400	<0.0000400
MW-5	05/05/2014	<0.0000400/ <0.0000430	<0.0000400/ <0.0000430	<0.0000400/ <0.0000430	<0.0000400/ <0.0000430	<0.0000400/ <0.0000430	<0.0000400/ <0.0000430	<0.0000400/ <0.0000430	<0.0000400/ <0.0000430
MW-5	09/03/2014	0.000048	<0.0000400	<0.0000400	<0.0000400	<0.0000400	<0.0000400	<0.0000400	<0.0000400
MW-5	04/16/2015	0.000140 J	0.000230 J	0.000410 J	**0.00082**	**0.00072**	**0.0019**	0.0011	0.00052
MW-5	10/29/2015	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010J	<0.00010
MW-5	04/19/2016	0.00050 J	0.00036 J	<0.00026	**0.0012 J**	**0.0012 J**	**0.0031**	0.0018	0.00074 J
MW-5	09/23/2016	0.00010	<0.0000095	<0.0000095	<0.0000095	<0.0000095	0.000010 J	0.000012 J	<0.0000095
MW-5	05/08/2017	0.00057 / 0.00032 J	0.00055 / 0.00062	0.0017 / 0.0013	**0.0013 J / 0.0019 J**	**0.0015 / 0.0018**	**0.0040 / 0.0050**	**0.0016 / 0.0020**	**0.00097 / 0.0012**
MW-6	06/10/2004	--	--	--	--	--	--	--	--
MW-6	09/22/2004	--	--	--	--	--	--	--	--
MW-6	05/18/2005	--	--	--	--	--	--	--	--
MW-6	09/28/2005	--	--	--	--	--	--	--	--
MW-6	05/17/2006	--	--	--	--	--	--	--	--
MW-6	05/29/2009	--	--	--	--	--	--	--	--
MW-6	09/17/2009	--	--	--	--	--	--	--	--
MW-6	09/23/2016	--	--	--	--	--	--	--	--
MW-6	05/08/2017	--	--	--	--	--	--	--	--
MW-7	05/17/2006	--	--	--	--	--	--	--	--
MW-7	09/23/2006	--	--	--	--	--	--	--	--
MW-7	05/16/2007	--	--	--	--	--	--	--	--
MW-7	09/14/2008	--	--	--	--	--	--	--	--
MW-7	05/29/2009	--	--	--	--	--	--	--	--
MW-7	09/17/2009	--	--	--	--	--	--	--	--
MW-7	05/11/2010	0.00012	0.000061	0.000011	<0.00000950	<0.00000950	0.000012	<0.00000950	<0.00000950
MW-7	09/07/2010	0.00014	0.00007	0.000058	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
MW-7	04/20/2011	0.00019	0.000097	0.000021	<0.00000960	<0.00000960	0.000017	0.00001	<0.00000960
MW-7	09/28/2011	0.00014	<0.000080	<0.00000960	<0.00000960	<0.00000960	<0.00000960	<0.00000960	<0.00000960
MW-7	05/21/2012	0.00018	<0.0000980	<0.0000980	<0.0000980	<0.0000980	<0.0000980	<0.0000980	<0.0000980
MW-7	09/18/2012	0.00011	0.000066	<0.00000980	<0.00000980	<0.00000980	<0.00000980	<0.00000980	<0.00000980

Table 4

Historical PAH Groundwater Analytical Results
Former Chevron-Branded Service Station 96097
303 W. Fireweed Ln.
Anchorage, AK

Location ID	Date	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)Pyrene	Benzo(b)Fluoranthene	Benzo(g,h,i)perylene	Benzo(k)Fluoranthene
		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
ADEC Groundwater Cleanup Levels 2016[a]		0.53	0.26	0.043	0.00012	0.000034	0.00034	0.00026	0.0008
MW-7	05/07/2013	0.00014/0.000088	<0.0000420/ <0.0000440	0.000044/ <0.0000440	<0.0000420/ <0.0000440	<0.0000420/ <0.0000440	<0.000100/ <0.000110	<0.0000420/ <0.0000440	<0.0000420/ <0.0000440
MW-7	09/16/2013	0.00014	0.000081	<0.0000440	<0.0000440	<0.0000440	<0.0000440	<0.0000440	<0.0000440
MW-7	05/02/2014	0.00018/0.00012	0.000082/0.000056	<0.0000420/ <0.0000430	<0.0000420/ <0.0000430	<0.0000420/ <0.0000430	<0.0000420/ <0.0000430	<0.0000420/ <0.0000430	<0.0000420/ <0.0000430
MW-7	09/03/2014	0.00015	0.000056	<0.0000420	<0.0000420	<0.0000420	<0.0000420	<0.0000420	<0.0000420
MW-7	04/16/2015	0.00022	0.0001	0.0000280 J	<0.00000980	<0.00000980	<0.00000980	<0.00000980	<0.00000980
MW-7	10/29/2015	0.00030 J	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
MW-7	04/19/2016	--	--	--	--	--	--	--	--
MW-7	09/23/2016	0.00016 J / 0.00025 J	0.000070 / 0.000080	0.000016 J / 0.000018 J	<0.0000098/<0.0000097	<0.0000098/<0.0000097	<0.0000098/<0.0000097	<0.0000098/<0.0000097	<0.0000098/<0.0000097
MW-7	05/08/2017[1]	--	--	--	--	--	--	--	--
MW-8	05/31/2009	--	--	--	--	--	--	--	--
MW-8	09/18/2009	--	--	--	--	--	--	--	--
MW-8	04/19/2016	--	--	--	--	--	--	--	--
MW-8	09/23/2016	--	--	--	--	--	--	--	--
MW-8	05/08/2017	--	--	--	--	--	--	--	--
MW-9	05/29/2009	--	--	--	--	--	--	--	--
MW-9	09/17/2009	--	--	--	--	--	--	--	--
MW-9	04/20/2011	0.00013	0.000033	<0.00000980	<0.00000980	<0.00000980	0.000013	0.000011	<0.00000980
MW-9	09/28/2011	0.00014	<0.000020	<0.00000960	<0.00000960	<0.00000960	<0.00000960	<0.00000960	<0.00000960
MW-9	05/21/2012	0.00015	0.000026	<0.0000110	<0.0000110	<0.0000110	0.000018	0.000013	<0.0000110
MW-9	09/18/2012	0.00013	0.0000310J	<0.00000970	<0.00000970	<0.00000970	0.0000120J	<0.00000970	<0.00000970
MW-9	05/07/2013	0.000088	<0.0000430	<0.0000420	<0.0000430	<0.0000430	<0.000100	<0.0000420	<0.0000420
MW-9	05/07/2013	0.000082	<0.0000420	<0.0000430	<0.0000420	<0.0000420	<0.000110	<0.0000430	<0.0000430
MW-9	09/16/2013	0.00015	<0.0000410	<0.0000410	<0.0000410	<0.0000410	<0.0000410	<0.0000410	<0.0000410
MW-9	05/05/2014	<0.0000430	<0.0000430	<0.0000430	<0.0000430	<0.0000430	<0.0000430	<0.0000430	<0.0000430
MW-9	05/05/2014	<0.0000430	<0.0000430	<0.0000430	<0.0000430	<0.0000430	<0.0000430	<0.0000430	<0.0000430
MW-9	09/03/2014	<0.0000420	<0.0000420	<0.0000420	<0.0000420	<0.0000420	0.000071	0.000085	<0.0000420
MW-9	04/16/2015	0.00015	0.0000220J	<0.00000940	<0.00000940	0.0000110 J	0.0000300J	0.0000280J	0.0000100J
MW-9	10/29/2015	0.00020 J	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
MW-9	04/19/2016	0.00017	0.000017 J	<0.0000097	<0.0000097	<0.0000097	<0.0000097	<0.0000097	<0.0000097
MW-9	09/23/2016	<0.000095	<0.000095	0.000096 J	**0.00043 J**	**0.00047 J**	**0.0010**	0.00084	0.00043 J
MW-9	05/08/2017	0.00013	0.000014 J	<0.0000095	<0.0000095	<0.0000095	0.000018 J	<0.0000095	<0.0000095
MW-10R	09/28/2011	0.00053	<0.000390	<0.00000950	0.000031	0.000017	0.00003	0.000024	0.000017
MW-10R	05/21/2012	0.00041	0.00029	0.000079	0.000028	<0.00000970	0.000011	0.000019	<0.00000970
MW-10R	09/18/2012	0.00027	0.00015	0.0000190 J	<0.00000980	<0.00000980	<0.00000980	<0.00000980	<0.00000980
MW-10R	05/07/2013	0.000087	<0.0000450	<0.0000440	<0.0000450	<0.0000450	<0.000110	<0.0000440	<0.0000440
MW-10R	05/07/2013	0.000077	<0.0000440	<0.0000450	<0.0000440	<0.0000440	<0.000110	<0.0000450	<0.0000450
MW-10R	09/16/2013	0.00017	0.000085	<0.0000420	<0.0000420	<0.0000420	<0.0000420	<0.0000420	<0.0000420
MW-10R	05/02/2014	0.00014	0.00007	<0.0000420	<0.0000420	<0.0000420	<0.0000410	<0.0000410	<0.0000410
MW-10R	05/02/2014	0.00019	0.000079	<0.0000410	<0.0000410	<0.0000410	<0.0000420	<0.0000420	<0.0000420
MW-10R	09/03/2014	0.0002	0.000083	<0.0000400	<0.0000400	<0.0000400	<0.0000400	<0.0000400	<0.0000400
MW-10R	04/16/2015	0.00063	0.00039	0.00025	**0.00015**	0.0000350 J	0.0000380J	0.0000320J	0.0000260J
MW-10R	10/29/2015	0.00030 J	<0.00010	<0.00010	**0.00020 J**	<0.00010	<0.00010	<0.00010	<0.00010
MW-10R	04/19/2016	0.00034	0.00012 J	0.000094 J	0.00011 J	<0.000052	<0.000052	<0.000052	<0.000052
MW-10R	09/23/2016	0.000087	0.000023 J	0.000011 J	0.00002 J	<0.0000098	<0.0000098	<0.0000098	<0.0000098
MW-10R	05/08/2017	0.00069	0.00034 J	0.00026 J	**0.00028 J**	<0.00010	**0.00041 J**	0.00016 J	0.00014 J
MW-12	05/29/2009	--	--	--	--	--	--	--	--

Table 4

Historical PAH Groundwater Analytical Results
Former Chevron-Branded Service Station 96097
303 W. Fireweed Ln.
Anchorage, AK

Location ID	Date	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)Pyrene	Benzo(b)Fluoranthene	Benzo(g,h,i)perylene	Benzo(k)Fluoranthene
		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
ADEC Groundwater Cleanup Levels 2016[a]		0.53	0.26	0.043	0.00012	0.000034	0.00034	0.00026	0.0008
MW-12	09/18/2009	--	--	--	--	--	--	--	--
MW-12	04/20/2011	<0.00000970	<0.00000970	<0.00000970	<0.00000970	<0.00000970	<0.00000970	<0.00000970	<0.00000970
MW-12	09/23/2016	--	--	--	--	--	--	--	--
MW-12	05/08/2017	--	--	--	--	--	--	--	--
MW-13	05/31/2009	--	--	--	--	--	--	--	--
MW-13	09/18/2009	--	--	--	--	--	--	--	--
MW-13	09/23/2016	--	--	--	--	--	--	--	--
MW-13	05/08/2017	--	--	--	--	--	--	--	--
MW-14	05/31/2009	--	--	--	--	--	--	--	--
MW-14	09/18/2009	--	--	--	--	--	--	--	--
MW-14	09/23/2016	--	--	--	--	--	--	--	--
MW-14	05/08/2017	--	--	--	--	--	--	--	--
MW-15	05/31/2009	--	--	--	--	--	--	--	--
MW-15	09/18/2009	--	--	--	--	--	--	--	--
MW-15	09/23/2016	--	--	--	--	--	--	--	--
MW-15	05/08/2017	--	--	--	--	--	--	--	--
MW-16	05/31/2009	--	--	--	--	--	--	--	--
MW-16	09/18/2009	--	--	--	--	--	--	--	--
MW-16	09/23/2016	--	--	--	--	--	--	--	--
MW-16	05/08/2017	--	--	--	--	--	--	--	--
MW-17	05/16/2007	--	--	--	--	--	--	--	--
MW-17	09/14/2008	--	--	--	--	--	--	--	--
MW-17	05/29/2009	--	--	--	--	--	--	--	--
MW-17	09/17/2009	--	--	--	--	--	--	--	--
MW-17	09/23/2016	--	--	--	--	--	--	--	--
MW-17	05/08/2017	--	--	--	--	--	--	--	--
QA	04/19/2016	--	--	--	--	--	--	--	--
QA	09/23/2016	--	--	--	--	--	--	--	--
QA	05/08/2017	--	--	--	--	--	--	--	--

Table 4

Historical PAH Groundwater Analytical Results
Former Chevron-Branded Service Station 96097
303 W. Fireweed Ln.
Anchorage, AK

Location ID	Date	Chrysene	Dibenz(a,h)anthracene	Fluorene	Fluoranthene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene
		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
ADEC Groundwater Cleanup Levels 2016[a]		0.002	0.000034	0.29	0.26	0.00019	0.0017	0.17	0.12
MW-4R	04/19/2016	--	--	--	--	--	--	--	--
MW-4R	09/23/2016	--	--	--	--	--	--	--	--
MW-4R	05/08/2017	--	--	--	--	--	--	--	--
MW-5	06/11/2004	--	--	--	--	--	--	--	--
MW-5	09/22/2004	--	--	--	--	--	--	--	--
MW-5	05/18/2005	--	--	--	--	--	--	--	--
MW-5	09/28/2005	--	--	--	--	--	--	--	--
MW-5	05/17/2006	--	--	--	--	--	--	--	--
MW-5	09/23/2006	--	--	--	--	--	--	--	--
MW-5	05/29/2009	--	--	--	--	--	--	--	--
MW-5	09/17/2009	--	--	--	--	--	--	--	--
MW-5	05/11/2010	0.0043	**0.00025**	0.0031	0.0056	**0.00079**	**0.0067**	0.0035	0.0068
MW-5	09/07/2010	0.0041	<0.0010	<0.0010	0.0066	**0.0011**	**0.0027**	0.004	0.0057
MW-5	04/20/2011	0.00086	<0.000190	0.00042	0.00089	**0.00029**	0.00058	0.00062	0.001
MW-5	09/28/2011	0.00043	0.000033	0.0003	0.00046	0.000088	0.00076	0.00054	0.00065
MW-5	05/21/2012	0.0036	**0.00023**	0.002	0.0045	**0.00069**	**0.0046**	0.0046	0.0056
MW-5	09/18/2012	0.00049	0.0000670J	0.0000870J	0.00064	**0.000120 J**	0.00044	0.000170J	0.00071
MW-5	05/07/2013	<0.0000440/ <0.0000430	<0.0000440/ <0.0000430	<0.0000440/ <0.0000430	<0.0000440/ <0.0000430	<0.0000440/ <0.0000430	<0.0000440/ <0.0000430	<0.0000440/ <0.0000430	<0.0000440/ <0.0000430
MW-5	09/16/2013	<0.0000400	<0.0000400	<0.0000400	<0.0000400	<0.0000400	<0.0000400	<0.0000400	<0.0000400
MW-5	05/05/2014	<0.0000400/ <0.0000430	<0.0000400/ <0.0000430	0.000065/ <0.0000430	<0.0000400/ <0.0000430	<0.0000400/ <0.0000430	0.0002/0.000059	<0.0000400/ <0.0000430	<0.0000400/ <0.0000430
MW-5	09/03/2014	<0.0000400	<0.0000400	0.000054	<0.0000400	<0.0000400	**0.0019**	<0.0000400	<0.0000400
MW-5	04/16/2015	0.0025	**0.000130J**	0.00062	0.002	**0.000430 J**	0.00084	0.0014	0.0025
MW-5	10/29/2015	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
MW-5	04/19/2016	0.0038	**0.00028 J**	0.00080 J	0.0032	**0.00075 J**	0.00085 J	0.0025	0.0050
MW-5	09/23/2016	<0.0000095	<0.0000095	0.00012	0.000010 J	<0.0000095	0.00081	<0.000029	0.000013 J
MW-5	05/08/2017	**0.0041 / 0.0048**	**0.00021 J / 0.00030 J**	0.0011 / 0.0014	0.0033 / 0.0039	0.00070 / 0.00080	0.0013 / 0.0014	0.0028 J / 0.0037 J	0.0062 / 0.010
MW-6	06/10/2004	--	--	--	--	--	--	--	--
MW-6	09/22/2004	--	--	--	--	--	--	--	--
MW-6	05/18/2005	--	--	--	--	--	--	--	--
MW-6	09/28/2005	--	--	--	--	--	--	--	--
MW-6	05/17/2006	--	--	--	--	--	--	--	--
MW-6	05/29/2009	--	--	--	--	--	--	--	--
MW-6	09/17/2009	--	--	--	--	--	--	--	--
MW-6	09/23/2016	--	--	--	--	--	--	--	--
MW-6	05/08/2017	--	--	--	--	--	--	--	--
MW-7	05/17/2006	--	--	--	--	--	--	--	--
MW-7	09/23/2006	--	--	--	--	--	--	--	--
MW-7	05/16/2007	--	--	--	--	--	--	--	--
MW-7	09/14/2008	--	--	--	--	--	--	--	--
MW-7	05/29/2009	--	--	--	--	--	--	--	--
MW-7	09/17/2009	--	--	--	--	--	--	--	--
MW-7	05/11/2010	0.00001	<0.00000950	0.00007	0.000018	<0.00000950	**0.45**	0.000092	0.000013
MW-7	09/07/2010	<0.000010	<0.000010	0.000076	0.000012	<0.000010	**0.45**	0.00007	<0.000010
MW-7	04/20/2011	0.000017	<0.00000960	0.00013	0.00003	<0.00000960	**0.39**	0.0001	0.000032
MW-7	09/28/2011	<0.00000960	<0.00000960	0.000065	<0.00000960	<0.00000960	**0.38**	0.000036	<0.00000960
MW-7	05/21/2012	<0.0000980	<0.0000980	<0.0000980	<0.0000980	<0.0000980	**0.37**	<0.000290	<0.0000980
MW-7	09/18/2012	<0.00000980	<0.00000980	0.00006	<0.00000980	<0.00000980	**0.34**	0.0000410 J	<0.00000980

Table 4

Historical PAH Groundwater Analytical Results
Former Chevron-Branded Service Station 96097
303 W. Fireweed Ln.
Anchorage, AK

Location ID	Date	Chrysene	Dibenz(a,h)anthracene	Fluorene	Fluoranthene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene
		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
ADEC Groundwater Cleanup Levels 2016[a]		0.002	0.000034	0.29	0.26	0.00019	0.0017	0.17	0.12
MW-7	05/07/2013	<0.0000420/ <0.0000440	<0.0000420/ <0.0000440	0.000054/ <0.0000440	<0.0000420/ <0.0000440	<0.0000420/ <0.0000440	**0.352/0.208**	<0.0000420/ <0.0000440	<0.0000420/ <0.0000440
MW-7	09/16/2013	<0.0000440	<0.0000440	0.000078	<0.0000440	<0.0000440	**0.336**	<0.0000440	<0.0000440
MW-7	05/02/2014	<0.0000420/ <0.0000430	<0.0000420/ <0.0000430	0.000083/0.000054	<0.0000420/ <0.0000430	<0.0000420/ <0.0000430	**0.241/0.183**	0.000044/ <0.0000430	<0.0000420/ <0.0000430
MW-7	09/03/2014	<0.0000420	<0.0000420	0.000074	<0.0000420	<0.0000420	**0.25**	0.000057	<0.0000420
MW-7	04/16/2015	0.0000100J	<0.00000980	0.00014	0.0000200 J	<0.00000980	**0.3**	0.00015	0.0000230 J
MW-7	10/29/2015	<0.00010	<0.00010	0.00020J	<0.00010	<0.00010	**0.3**	0.00030 J	<0.00010
MW-7	04/19/2016	--	--	--	--	--	--	--	--
MW-7	09/23/2016	<0.0000098/<0.0000097	<0.0000098/<0.0000097	0.000090 / 0.00011	0.000016 J / 0.000013 J	<0.0000098/<0.0000097	**0.27 / 0.27**	0.00011 / 0.00011	0.000016 J / 0.000016 J
MW-7	05/08/2017[1]	--	--	--	--	--	--	--	--
MW-8	05/31/2009	--	--	--	--	--	--	--	--
MW-8	09/18/2009	--	--	--	--	--	--	--	--
MW-8	04/19/2016	--	--	--	--	--	--	--	--
MW-8	09/23/2016	--	--	--	--	--	--	--	--
MW-8	05/08/2017	--	--	--	--	--	--	--	--
MW-9	05/29/2009	--	--	--	--	--	--	--	--
MW-9	09/17/2009	--	--	--	--	--	--	--	--
MW-9	04/20/2011	0.000014	<0.00000980	0.00023	0.000022	<0.00000980	**0.015**	0.000046	0.000013
MW-9	09/28/2011	<0.00000960	<0.00000960	0.00027	0.000014	<0.00000960	**0.012**	0.00003	0.000014
MW-9	05/21/2012	0.000022	<0.0000110	0.00028	0.00002	<0.0000110	**0.0077**	0.000061	0.000023
MW-9	09/18/2012	<0.00000970	<0.00000970	0.00025	0.0000120 J	<0.00000970	**0.0081**	0.0000320 J	0.0000150 J
MW-9	05/07/2013	<0.0000420	<0.0000420	0.000095	<0.0000430	<0.0000430	0.00076	<0.0000420	<0.0000430
MW-9	05/07/2013	<0.0000430	<0.0000430	0.00011	<0.0000420	<0.0000420	**0.0025**	<0.0000430	<0.0000420
MW-9	09/16/2013	<0.0000410	<0.0000410	0.00021	<0.0000410	<0.0000410	**0.0037**	<0.0000410	<0.0000410
MW-9	05/05/2014	<0.0000430	<0.0000430	<0.0000430	<0.0000430	<0.0000430	0.00045	<0.0000430	<0.0000430
MW-9	05/05/2014	<0.0000430	<0.0000430	<0.0000430	<0.0000430	<0.0000430	0.00047	<0.0000430	<0.0000430
MW-9	09/03/2014	0.00011	<0.0000420	<0.0000420	0.000086	<0.0000420	<0.0000420	<0.0000420	0.00014
MW-9	04/16/2015	0.000048	<0.00000940	0.00016	0.0000330 J	0.0000120 J	**0.0044**	0.0000400 J	0.0000250 J
MW-9	10/29/2015	<0.00010	<0.00010	0.00030J	<0.00010	<0.00010	**0.002**	<0.00010	<0.00010
MW-9	04/19/2016	<0.0000097	<0.0000097	0.00029	<0.0000097	<0.0000097	**0.0021**	<0.000029	<0.0000097
MW-9	09/23/2016	0.0013	**0.00011 J**	0.00014 J	**0.0010**	**0.00035 J**	0.00053 J	0.00066	0.0013
MW-9	05/08/2017	0.000019 J	<0.0000095	0.00023	0.000019 J	<0.0000095	0.0018	0.000042 J	0.000029 J
MW-10R	09/28/2011	0.000018	<0.00000950	0.00034	0.000059	<0.00000950	**0.13**	0.00029	0.000071
MW-10R	05/21/2012	0.000024	<0.00000970	0.00026	0.000096	<0.00000970	**0.069**	0.00025	0.000088
MW-10R	09/18/2012	<0.00000980	<0.00000980	0.00012	0.0000190 J	<0.00000980	**0.04**	0.000071	0.0000230 J
MW-10R	05/07/2013	<0.0000440	<0.0000440	<0.0000450	<0.0000450	<0.0000450	**0.0107**	<0.0000440	<0.0000450
MW-10R	05/07/2013	<0.0000450	<0.0000450	<0.0000440	<0.0000440	<0.0000440	**0.0071**	<0.0000450	<0.0000440
MW-10R	09/16/2013	<0.0000420	<0.0000420	0.00008	<0.0000420	<0.0000420	**0.036**	0.000051	<0.0000420
MW-10R	05/02/2014	<0.0000410	<0.0000410	0.000062	<0.0000420	<0.0000420	**0.0488**	<0.0000410	<0.0000410
MW-10R	05/02/2014	<0.0000420	<0.0000420	0.000075	<0.0000410	<0.0000410	**0.0355**	0.000044	<0.0000420
MW-10R	09/03/2014	<0.0000400	<0.0000400	0.000088	<0.0000400	<0.0000400	**0.0646**	0.000057	<0.0000400
MW-10R	04/16/2015	0.00012	<0.00000960	0.00049	0.00036	0.0000110 J	**0.15**	0.0008	0.00049
MW-10R	10/29/2015	<0.00010	<0.00010	0.00020J	0.00020 J	<0.00010	**0.014**	0.0006	0.00040 J
MW-10R	04/19/2016	0.000082 J	<0.000052	0.00021 J	0.00019 J	<0.000052	**0.021**	0.00034	0.00038
MW-10R	09/23/2016	0.000015 J	<0.0000098	0.00003 J	0.000036 J	<0.0000098	**0.0089**	<0.000029	0.000051
MW-10R	05/08/2017	0.00026 J	<0.00010	0.00050 J	0.00047 J	<0.00010	**0.030**	0.0010	0.0012
MW-12	05/29/2009	--	--	--	--	--	--	--	--

Table 4

Historical PAH Groundwater Analytical Results
Former Chevron-Branded Service Station 96097
303 W. Fireweed Ln.
Anchorage, AK

Location ID	Date	Chrysene	Dibenz(a,h)anthracene	Fluorene	Fluoranthene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene
		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
ADEC Groundwater Cleanup Levels 2016[a]		0.002	0.000034	0.29	0.26	0.00019	0.0017	0.17	0.12
MW-12	09/18/2009	--	--	--	--	--	--	--	--
MW-12	04/20/2011	<0.00000970	<0.00000970	<0.00000970	<0.00000970	<0.00000970	<0.0000290	0.000011	<0.00000970
MW-12	09/23/2016	--	--	--	--	--	--	--	--
MW-12	05/08/2017	--	--	--	--	--	--	--	--
MW-13	05/31/2009	--	--	--	--	--	--	--	--
MW-13	09/18/2009	--	--	--	--	--	--	--	--
MW-13	09/23/2016	--	--	--	--	--	--	--	--
MW-13	05/08/2017	--	--	--	--	--	--	--	--
MW-14	05/31/2009	--	--	--	--	--	--	--	--
MW-14	09/18/2009	--	--	--	--	--	--	--	--
MW-14	09/23/2016	--	--	--	--	--	--	--	--
MW-14	05/08/2017	--	--	--	--	--	--	--	--
MW-15	05/31/2009	--	--	--	--	--	--	--	--
MW-15	09/18/2009	--	--	--	--	--	--	--	--
MW-15	09/23/2016	--	--	--	--	--	--	--	--
MW-15	05/08/2017	--	--	--	--	--	--	--	--
MW-16	05/31/2009	--	--	--	--	--	--	--	--
MW-16	09/18/2009	--	--	--	--	--	--	--	--
MW-16	09/23/2016	--	--	--	--	--	--	--	--
MW-16	05/08/2017	--	--	--	--	--	--	--	--
MW-17	05/16/2007	--	--	--	--	--	--	--	--
MW-17	09/14/2008	--	--	--	--	--	--	--	--
MW-17	05/29/2009	--	--	--	--	--	--	--	--
MW-17	09/17/2009	--	--	--	--	--	--	--	--
MW-17	09/23/2016	--	--	--	--	--	--	--	--
MW-17	05/08/2017	--	--	--	--	--	--	--	--
QA	04/19/2016	--	--	--	--	--	--	--	--
QA	09/23/2016	--	--	--	--	--	--	--	--
QA	05/08/2017	--	--	--	--	--	--	--	--

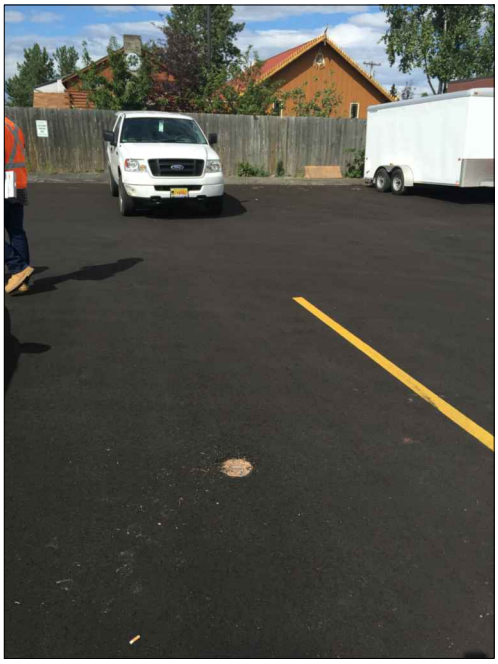
Notes and Abbreviations

PAH = polynuclear aromatic hydrocarbons
ID = Identification
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
NA = Not Applicable
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
[1] = Inaccessible

Appendix A
Site Photographs

1. Site overview, looking south

2. Well MW-4R



3. Well MW-15

4. Well MW-12

FORMER CHEVRON-BRANDED SERVICE STATION 96097
303 WEST FIREWEED LANE
ANCHORAGE, ALASKA

062328-95

Oct 19, 2016

SITE PHOTOGRAPHS

Appendix B
Human Health Conceptual Site Model Scoping and Graphics Forms

Human Health Conceptual Site Model
Scoping Form

Site Name: Chevron - 96097

File Number: 2100.26.007

Completed by: GHD Services, Inc.

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, a CSM graphic and text must be submitted with the site characterization work plan.

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
- ☑ Groundwater
- ☐ Surface water
- ☐ 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

Is soil contaminated anywhere between 0 and 15 feet bgs? ☑

Do people use the site or is there a chance they will use the site in the future? ☑

If both boxes are checked, label this pathway complete: Complete

2 Dermal Absorption of Contaminants from Soil

Is soil contaminated anywhere between 0 and 15 feet bgs? ☑

Do people use the site or is there a chance they will use the site in the future? ☑

Can the soil contaminants permeate the skin? (Contaminants listed below, or within the groups listed below, should be evaluated for dermal absorption). ☑

Arsenic	Lindane
Cadmium	PAHs
Chlordane	Pentachlorophenol
2,4-dichlorophenoxyacetic acid	PCBs
Dioxins	SVOCs
DDT	

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

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 ADEC has determined the groundwater is not a currently or reasonably expected future source of drinking water according to 18 AAC 75.350.* ☑

If both the boxes are checked, label this pathway complete: Complete

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: Incomple

3 Ingestion of Wild Foods

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

Do the site contaminants have the potential to bioaccumulate (*see* Appendix A)? ☑

Are site contaminants located where they would have the potential to be taken up into biota? (i.e. the top 6 feet of soil, in groundwater that **could be** connected to surface water, etc.) ☐

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

c) Inhalation

1 Inhalation of Outdoor Air

Is soil contaminated anywhere between 0 and 15 feet bgs? ☑

Do people use the site or is there a chance they will use the site in the future? ☑

Are the contaminants in soil volatile (*See Appendix B*)? ☑

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

2 Inhalation of Indoor Air

Are occupied buildings on the site or reasonably expected to be placed on the site in an area that could be affected by contaminant vapors? (i.e., within 100 feet, horizontally or vertically, of the contaminated soil or groundwater, <u>or</u> subject to "preferential pathways" that promote easy airflow, like utility conduits or rock fractures) ☑

Are volatile compounds present in soil or groundwater (*See Appendix C*)? ☑

If both boxes are checked, label this pathway complete: Complete

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

Exposure from this pathway may need to be assessed only in cases where DEC water-quality or drinking-water standards are not being applied as cleanup levels. Examples of conditions that may warrant further investigation include:

- Climate permits recreational use of waters for swimming,
- Climate permits exposure to groundwater during activities, such as construction, without protective clothing, or
- Groundwater or surface water is used for household purposes.

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

Comments:

Inhalation of Volatile Compounds in Household Water

Exposure from this pathway may need to be assessed only in cases where DEC water-quality or drinking-water standards are not being applied as cleanup levels. Examples of conditions that may warrant further investigation include:

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

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

Comments:

Inhalation of Fugitive Dust

Generally DEC soil ingestion cleanup levels in Table B1 of 18 AAC 75 are protective of this pathway, although this is not true in the case of chromium. Examples of conditions that may warrant further investigation include:

- 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. This size can be inhaled and would be of concern for determining if this pathway is complete.

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 recreational or some types of subsistence activities. People then incidentally **ingest** sediment from normal hand-to-mouth activities. In addition, **dermal absorption of contaminants** may be of concern if people come in contact with sediment and the contaminants are able to permeate the skin (see dermal exposure to soil section). This type of exposure is rare but it should be investigated if:

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

ADEC soil ingestion cleanup levels are protective of direct contact with sediment. If they are determined to be over-protective for sediment exposure at a particular site, other screening levels could be adopted or developed.

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.)*

APPENDIX A

BIOACCUMULATIVE COMPOUNDS

Table A-1: List of Compounds of Potential Concern for Bioaccumulation

Organic compounds are identified as bioaccumulative if they have a BCF equal to or greater than 1,000 or a log K_{ow} greater than 3.5. Inorganic compounds are identified as bioaccumulative if they are listed as such by EPA (2000). Those compounds in Table X of 18 AAC 75.345 that are bioaccumulative, based on the definition above, are listed below.

Aldrin	DDT	Lead
Arsenic	Dibenzo(a,h)anthracene	Mercury
Benzo(a)anthracene	Dieldrin	Methoxychlor
Benzo(a)pyrene	Dioxin	Nickel
Benzo(b)fluoranthene	Endrin	PCBs
Benzo(k)fluoranthene	Fluoranthene	
Cadmium	Heptachlor	Pyrene
Chlordane	Heptachlor epoxide	Selenium
Chrysene	Hexachlorobenzene	Silver
Copper	Hexachlorocyclopentadiene	Toxaphene
DDD	Indeno(1,2,3-c,d)pyrene	Zinc
DDE		

Because BCF values can relatively easily be measured or estimated, the BCF is frequently used to determine the potential for a chemical to bioaccumulate. A compound with a BCF greater than 1,000 is considered to bioaccumulate in tissue (EPA 2004b).

For inorganic compounds, the BCF approach has not been shown to be effective in estimating the compound's ability to bioaccumulate. Information available, either through scientific literature or site-specific data, regarding the bioaccumulative potential of an inorganic site contaminant should be used to determine if the pathway is complete.

The list was developed by including organic compounds that either have a BCF equal to or greater than 1,000 or a log K_{ow} greater than 3.5 and inorganic compounds that are listed by the United States Environmental Protection Agency (EPA) as being bioaccumulative (EPA 2000). The BCF can also be estimated from a chemical's physical and chemical properties. A chemical's octanol-water partitioning coefficient (K_{ow}) along with defined regression equations can be used to estimate the BCF. EPA's Persistent, Bioaccumulative, and Toxic (PBT) Profiler (EPA 2004) can be used to estimate the BCF using the K_{ow} and linear regressions presented by Meylan et al. (1996). The PBT Profiler is located at http://www.pbtprofiler.net/. For compounds not found in the PBT Profiler, DEC recommends using a log K_{ow} greater than 3.5 to determine if a compound is bioaccumulative.

APPENDIX B

VOLATILE COMPOUNDS

Table B-1: List of Volatile Compounds of Potential Concern
Common volatile contaminants of concern at contaminated sites. A chemical is defined as volatile if the Henry's Law constant is 1 x 10^{-5} atm-m^3/mol or greater and the molecular weight less than 200 g/mole (g/mole; EPA 2004a). Those compounds in Table X of 18 AAC 75.345 that are volatile, based on the definition above, are listed below.

Acenaphthene	1,4-dichlorobenzene	Pyrene
Acetone	1,1-dichloroethane	Styrene
Anthracene	1,2-dichloroethane	1,1,2,2-tetrachloroethane
Benzene	1,1-dichloroethylene	Tetrachloroethylene
Bis(2-chlorethyl)ether	Cis-1,2-dichloroethylene	Toluene
Bromodichloromethane	Trans-1,2-dichloroethylene	1,2,4-trichlorobenzene
Carbon disulfide	1,2-dichloropropane	1,1,1-trichloroethane
Carbon tetrachloride	1,3-dichloropropane	1,1,2-trichloroethane
Chlorobenzene	Ethylbenzene	Trichloroethylene
Chlorodibromomethane	Fluorene	Vinyl acetate
Chloroform	Methyl bromide	Vinyl chloride
2-chlorophenol	Methylene chloride	Xylenes
Cyanide	Naphthalene	GRO
1,2-dichlorobenzene	Nitrobenzene	DRO

APPENDIX C

COMPOUNDS OF CONCERN FOR VAPOR MIGRATION

Table C-1: List of Compounds of Potential Concern for the Vapor Migration

A chemical is considered sufficiently toxic if the vapor concentration of the pure component poses an incremental lifetime cancer risk greater than 10-6 or a non-cancer hazard index greater than 1. A chemical is considered sufficiently volatile if it's Henry's Law constant is 1 x 10^{-5} atm-m^3/mol or greater.

Acenaphthene	Dibenzofuran	Hexachlorobenzene
Acetaldehyde	1,2-Dibromo-3-chloropropane	Hexachlorocyclopentadiene
Acetone	1,2-Dibromoethane (EDB)	Hexachloroethane
Acetonitrile	1,3-Dichlorobenzene	Hexane
Acetophenone	1,2-Dichlorobenzene	Hydrogen cyanide
Acrolein	1,4-Dichlorobenzene	Isobutanol
Acrylonitrile	2-Nitropropane	Mercury (elemental)
Aldrin	N-Nitroso-di-n-butylamine	Methacrylonitrile
alpha-HCH (alpha-BHC)	n-Propylbenzene	Methoxychlor
Benzaldehyde	o-Nitrotoluene	Methyl acetate
Benzene	o-Xylene	Methyl acrylate
Benzo(b)fluoranthene	p-Xylene	Methyl bromide
Benzylchloride	Pyrene	Methyl chloride chloromethane)
beta-Chloronaphthalene	sec-Butylbenzene	Methylcyclohexane
Biphenyl	Styrene	Methylene bromide
Bis(2-chloroethyl)ether	tert-Butylbenzene	Methylene chloride
Bis(2-chloroisopropyl)ether	1,1,1,2-Tetrachloroethane	Methylethylketone (2-butanone)
Bis(chloromethyl)ether	1,1,2,2-Tetrachloroethane	Methylisobutylketone
Bromodichloromethane	Tetrachloroethylene	Methylmethacrylate
Bromoform	Dichlorodifluoromethane	2-Methylnaphthalene
1,3-Butadiene	1,1-Dichloroethane	MTBE
Carbon disulfide	1,2-Dichloroethane	m-Xylene
Carbon tetrachloride	1,1-Dichloroethylene	Naphthalene
Chlordane	1,2-Dichloropropane	n-Butylbenzene
2-Chloro-1,3-butadiene (chloroprene)	1,3-Dichloropropene	Nitrobenzene
Chlorobenzene	Dieldrin	Toluene
1-Chlorobutane	Endosulfan	trans-1,2-Dichloroethylene
Chlorodibromomethane	Epichlorohydrin	1,1,2-Trichloro-1,2,2-trifluoroethane
Chlorodifluoromethane	Ethyl ether	1,2,4-Trichlorobenzene
Chloroethane (ethyl chloride)	Ethylacetate	1,1,2-Trichloroethane
Chloroform	Ethylbenzene	1,1,1-Trichloroethane
2-Chlorophenol	Ethylene oxide	Trichloroethylene
2-Chloropropane	Ethylmethacrylate	Trichlorofluoromethane
Chrysene	Fluorene	1,2,3-Trichloropropane
cis-1,2-Dichloroethylene	Furan	1,2,4-Trimethylbenzene
Crotonaldehyde (2-butenal)	Gamma-HCH (Lindane)	1,3,5-Trimethylbenzene
Cumene	Heptachlor	Vinyl acetate
DDE	Hexachloro-1,3-butadiene	Vinyl chloride (chloroethene)

Source: EPA 2002.

HUMAN HEALTH CONCEPTUAL SITE MODEL GRAPHIC FORM

Site: Chevron 96097
File ID: 2100.26.007

Completed By: GHD Services, Inc.
Date Completed: 6/16/17

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

(1) *Check the media that could be directly affected by the release.*

(2) *For each medium identified in (1), follow the top arrow and check possible transport mechanisms. Check additional media under (1) if the media acts as a secondary source.*

(3) *Check all exposure media identified in (2).*

(4) *Check all pathways that could be complete. The pathways identified in this column **must** agree with Sections 2 and 3 of the Human Health CSM Scoping Form.*

(5) *Identify the receptors potentially affected by each exposure pathway: Enter "C" for current receptors, "F" for future receptors, "C/F" for both current and future receptors, or "I" for insignificant exposure.*

Media	Transport Mechanisms	Exposure Media	Exposure Pathway/Route	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
☐ Surface Soil (0-2 ft bgs)	☐ Direct release to surface soil — check soil									
	☐ Migration to subsurface — check soil									
	☐ Migration to groundwater — check groundwater									
	☐ Volatilization — check air									
	☐ Runoff or erosion — check surface water									
	☐ Uptake by plants or animals — check biota									
	☐ Other (list):									
☑ Subsurface Soil (2-15 ft bgs)	☐ Direct release to subsurface soil — check soil									
	✔ Migration to groundwater — check groundwater									
	✔ Volatilization — check air									
	☐ Uptake by plants or animals — check biota									
	☐ Other (list):									
☐ Ground-water	☐ Direct release to groundwater — check groundwater									
	☐ Volatilization — check air									
	☐ Flow to surface water body — check surface water									
	☐ Flow to sediment — check sediment									
	☐ Uptake by plants or animals — check biota									
	☐ Other (list):									
☐ Surface Water	☐ Direct release to surface water — check surface water									
	☐ Volatilization — check air									
	☐ Sedimentation — check sediment									
	☐ Uptake by plants or animals — check biota									
	☐ Other (list):									
☐ Sediment	☐ Direct release to sediment — check sediment									
	☐ Resuspension, runoff, or erosion — check surface water									
	☐ Uptake by plants or animals — check biota									
	☐ Other (list):									
		☑ soil	✔ Incidental Soil Ingestion	C/F	C/F	C/F	C/F			
			✔ Dermal Absorption of Contaminants from Soil	C/F	C/F	C/F	C/F			
			☐ Inhalation of Fugitive Dust							
		☑ groundwater	✔ Ingestion of Groundwater	C/F	C/F	C/F	C/F			
			☐ Dermal Absorption of Contaminants in Groundwater							
			☐ Inhalation of Volatile Compounds in Tap Water							
		☑ air	✔ Inhalation of Outdoor Air	C/F	C/F	C/F	C/F			
			✔ Inhalation of Indoor Air	C/F	C/F	C/F	C/F			
			☐ Inhalation of Fugitive Dust							
		☐ surface water	☐ Ingestion of Surface Water							
			☐ Dermal Absorption of Contaminants in Surface Water							
			☐ Inhalation of Volatile Compounds in Tap Water							
		☐ sediment	☐ Direct Contact with Sediment							
		☐ biota	☐ Ingestion of Wild or Farmed Foods							

Revised, 10/01/2010

Appendix C
Monitoring Data Package

Groundwater Monitoring Field Sheet

Project Name: 96097 (ADEC File ID: 2100.26.007) Project Number: 062328

Field Staff: O.Yan / D.Trudeau Date: 5/8/17

Well ID	Time	DTW (ft-btoc)	DTB (ft-btoc)	DTP (ft-btocP	Product Thickness (feet)	Amount of Product Removed (feet)	Casing Diameter (inches)	PID (ppm)	Comments
MW-4R	0807	44.11	52.98	—	—	—	2"	—	
MW-5	0823	45.76	49.44	—	—	—	4"	—	
MW-6	0843	46.75	53.99	—	—	—	2"	—	
MW-7	—	—	BLOCKED BY CAR — UNABLE TO MOVE; PERSON GONE FOR THE DAY						
MW-8	~~0823~~ 0919	56.21	69.12	—	—	—	2"	—	
MW-9	0828	45.74	51.65	—	—	—	4"	—	
MW-10R	0837	45.68	51.50	—	—	—	4" 2"	—	
MW-12	0930	59.99	67.85	—	—	—	2"	—	
MW-13	0900	44.35	63.92	—	—	—	2"	—	
MW-14	0913	56.70	64.04	—	—	—	2"	—	
MW-15	0917	55.98	61.60	—	—	—	2"	—	* gauge only
MW-16	0910	2.80 → OBSTRUCTION →	ICE @ THIS DEPTH				2"		
MW-17	0850	3.42 → OBSTRUCTION →	ICE @ THIS DEPTH				2"		* gauge only

GAC Filtered Water Volume: 0 gallons Volume logged on *Portable GAC Volume Tracking Log?* ☐ N/A

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. 062328 PM Siobhan Pritchard Well ID MW-4R Date 5/8/17 Page 1 of 10

Site ID / Location 96097 / 303 West Fireweed Lane, Anchorage, AK (ADEC File ID: 2100.26.007)

Screen Casing Well Material x PVC Sampled by O. Yan

Setting (ft-btoc) UNK Diameter (in.) 2" SS D. Trupkin ~~J. Hudnall~~

Static Water Level (ft-btoc) 44.11 Total Depth (ft-btoc) 52.98 Water Column / Gallons in Well 8.87 / 1.419 Sample ID MW-4R-W-170508

Dup ID —

Sample Time 1038 Start 810 End 1010

No-Purge Method

Sampler Length (in) 36 ☒ 30 ☐ Depth of Sampler (ft-btoc) ~47.15

Weights Top ☐ Bottom ☒ Position Supended ☒ Bottom set ☐

Was Teflon Baler used to collect non volatile samples Yes ☐ No ☒

Low Flow Method

Pump type Bladder ☐ Other ☐ Pump Intake (ft-btoc)

Flow rate (ml/minute) Volumes Purged

Did well Dewater? Yes ☐ No ☐ Purge Time: Start End

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

No-Purge Sampling Method (Hydrasleeves)

Constituents Sampled

			Container	Number	Preservative
BTEX by 8260	■	8021 ☐	40 mL voa ✓	3	HCl
HVOCs by 8260	☐				
GRO by AK 101	■		40 mL voa ✓	3	HCl
DRO by AK 102	■		250 mL amber ✓	2	HCl
RRO by AK 103	☐				
Lead by 6010	☐				
PAHs by 8270	☐				
Alkalinity by 2320B	☐				
Methane by RSK175	☐				
Sulfate by EPA 300	☐				
Nitrate/Nitrite by EPA 300	☐				
Ferrous Iron	☐				
				8.	

Well Casing Volumes

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

Field Test Results:

Ferrous Iron mg/L Nitrate mg/L Other

Well Information

Well Location: ONSITE – DRIVEWAY AREA

Condition of Well: GOOD

Well Completion: Flush Mount / Stick Up

Well Locked at Arrival: Yes / No

Well Locked at Departure: Yes / No

Additional Notes

Groundwater Sampling Form

Project No. 062328 PM Siobhan Pritchard Well ID MW-5 Date 5/8/17 Page 2 of 10

Site ID / Location 96097 / 303 West Fireweed Lane, Anchorage, AK (ADEC File ID: 2100.26.007)

Screen Setting (ft-btoc) Unknown Casing Diameter (in.) 4" Well Material x PVC SS Sampled by O. Yan D. Truden ~~J. Hudnall~~

Static Water Level (ft-btoc) 45.76 Total Depth (ft-btoc) 49.44 Water Column / Gallons in Well 3.71 / 2.41

Sample ID MW-5-W-170508 Dup ID DUP-1-W-170508

Sample Time 1110 Start End

No-Purge Method

Sampler Length (in) 36 ☒ 30 ☐ Depth of Sampler (ft-btoc)

Weights Top ☐ Bottom ☒ Position Supended ☒ Bottom set ☐

Was Teflon Baler used to collect non volatile samples Yes ☐ No ☒

Low Flow Method

Pump type Bladder ☐ Other ☐ Pump Intake (ft-btoc)

Flow rate (ml/minute) Volumes Purged

Did well Dewater? Yes ☐ No ☐ Purge Time: Start End

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

No-Purge Sampling Method (Hydrasleeves)

Constituents Sampled

			Container	Number	Preservative
BTEX by 8260	■	8021 ☐	40 mL voa	3	HCl
HVOCs by 8260	☐				
GRO by AK 101	■		40 mL voa	3	HCl
DRO by AK 102	■		250 mL amber	2	HCl
RRO by AK 103	☐				
Lead by 6010	☐		1L		
PAHs by 8270	■		~~250 mL~~ amber	2	None
Alkalinity by 2320B	☐				
Methane by RSK175	☐				
Sulfate by EPA 300	☐				
Nitrate/Nitrite by EPA 300	☐				
Ferrous Iron	☐				
				(10)	

Well Casing Volumes

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

Field Test Results:

Ferrous Iron mg/L Nitrate mg/L Other

Well Information

Well Location: ONSITE

Condition of Well: GOOD

Well Completion: (Flush Mount) / Stick Up

Well Locked at Arrival: (Yes) / No

Well Locked at Departure: (Yes) / No

Additional Notes

- USED TEFLON BAILER TO COLLECT PAH SAMPLE FOR DUP / MW-5.
- HYDRASLEEVES USED FOR VOCs AND DRO.

Groundwater Sampling Form

Project No. 062328 PM Siobhan Pritchard Well ID MW-6 Date 5/8/17 Page 3 of 10

Site ID / Location 96097 / 303 West Fireweed Lane, Anchorage, AK (ADEC File ID: 2100.26.007)

Screen Setting (ft-btoc) 45-60 Casing Diameter (in.) 2" Well Material x PVC ___ SS

Sampled by O. Yan D. TRUDEAU ~~J. Hudnall~~

Static Water Level (ft-btoc) 46.75 Total Depth (ft-btoc) 53.99 Water Column / Gallons in Well 7.24 / 1.16

Sample ID MW-6-W-170508 Dup ID —

Sample Time 1145 Start 0843 End 1043

No-Purge Method

Sampler Length (in) 36 ☒ 30 ☐ Depth of Sampler (ft-btoc) ___

Weights Top ☐ Bottom ☒ Position Supended ☒ Bottom set ☐

Was Teflon Baler used to collect non volatile samples Yes ☐ No ☒

Low Flow Method

Pump type Bladder ☐ Other ☐ Pump Intake (ft-btoc) ___ Volumes Purged ___

Flow rate (ml/minute) ___ Purge Time: Start ___ End ___

Did well Dewater? Yes ☐ No ☐

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

No-Purge Sampling Method (Hydrasleeves)

Constituents Sampled

			Container	Number	Preservative
BTEX by 8260	4Q ONLY ■	8021 ☐	40 mL voa	3	HCl
HVOCs by 8260	☐				
GRO by AK 101	4Q ONLY ■		40 mL voa	3	HCl
DRO by AK 102	■		250 mL amber	2	HCl
RRO by AK 103	☐				
Lead by 6010	☐				
PAHs by 8270	☐				
Alkalinity by 2320B	☐				
Methane by RSK175	☐				
Sulfate by EPA 300	☐				
Nitrate/Nitrite by EPA 300	☐				
Ferrous Iron	☐				
				(8)	

Well Casing Volumes

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

Field Test Results:

Ferrous Iron ___ mg/L Nitrate ___ mg/L Other ___

Well Information

Well Location: ONSITE

Condition of Well: GOOD

Well Completion: (Flush Mount) / Stick Up

Well Locked at Arrival: (Yes) / No

Well Locked at Departure: (Yes) / No

Additional Notes

Groundwater Sampling Form

Project No. 062328 PM Siobhan Pritchard Well ID MW-8 Date 5/8/17 Page 4 of 10

Site ID / Location 96097 / 303 West Fireweed Lane, Anchorage, AK (ADEC File ID: 2100.26.007)

Screen Casing Well Material x PVC Sampled by O. Yan

Setting (ft-btoc) Unknown Diameter (in.) 2" SS D. Truden ~~J. Hudnall~~

Static Water Level (ft-btoc) 56.21 Total Depth (ft-btoc) 64.12 Water Column / Gallons in Well 7.91 / 1.27 Sample ID MW-8-W-170508

Dup ID

Sample Time 1220 Start 0919 End 1119

No-Purge Method

Sampler Length (in) 36 ☒ 30 ☐ Depth of Sampler (ft-btoc)

Weights Top ☐ Bottom ☒ Position Supended ☒ Bottom set ☐

Was Teflon Baler used to collect non volatile samples Yes ☐ No ☒

Low Flow Method

Pump type Bladder ☐ Other ☐ Pump Intake (ft-btoc)

Flow rate (ml/minute) Volumes Purged

Did well Dewater? Yes ☐ No ☐ Purge Time: Start End

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

No-Purge Sampling Method (Hydrasleeves)

Constituents Sampled

		Container	Number	Preservative
BTEX by 8260	☒ 8021 ☐	40 mL voa	3	HCl
HVOCs by 8260	☐			
GRO by AK 101	☒	40 mL voa	3	HCl
DRO by AK 102	☒	250 mL amber	2	HCl
RRO by AK 103	☐			
Lead by 6010	☐			
PAHs by 8270	☐			
Alkalinity by 2320B	☐			
Methane by RSK175	☐			
Sulfate by EPA 300	☐			
Nitrate/Nitrite by EPA 300	☐			
Ferrous Iron	☐			
			(8)	

Well Casing Volumes

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

Field Test Results:

Ferrous Iron mg/L Nitrate mg/L Other

Well Information

Well Location: ~~ONSITE~~ OFF SITE

Condition of Well: GOOD

Well Completion: Flush Mount / Stick Up

Well Locked at Arrival: Yes / No

Well Locked at Departure: Yes / No

Additional Notes

Groundwater Sampling Form

Project No. 062328 PM Siobhan Pritchard Well ID MW-9 Date 5/8/17 Page 5 of 10

Site ID / Location 96097 / 303 West Fireweed Lane, Anchorage, AK (ADEC File ID: 2100.26.007)

Screen Casing Well Material x PVC Sampled by O. Yan

Setting (ft-btoc) Unknown Diameter (in.) 4" SS D. TRUDEAU ~~J. Hudnall~~

Static Water Level (ft-btoc) 45.74 Total Depth (ft-btoc) 51.65 Water Column / Gallons in Well 5.91 / 3.842 Sample ID MW-9-W-170508

Dup ID —

Sample Time 1055 Start 0828 End 1028

No-Purge Method

Sampler Length (in) 36 ☒ 30 ☐ Depth of Sampler (ft-btoc) ~48.80

Weights Top ☐ Bottom ☒ Position Supended ☒ Bottom set ☐

Was Teflon Baler used to collect non volatile samples Yes ☐ No ☒

Low Flow Method

Pump type Bladder ☐ Other ☐ Pump Intake (ft-btoc)

Volumes Purged

Flow rate (ml/minute) Purge Time: Start

Did well Dewater? Yes ☐ No ☐ End

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

No-Purge Sampling Method (Hydrasleeves)

Constituents Sampled		Container	Number	Preservative
BTEX by 8260	■ 8021 ☐	40 mL voa	3	HCl
HVOCs by 8260	☐			
GRO by AK 101	■	40 mL voa	3	HCl
DRO by AK 102	■	250 mL amber	2	HCl
RRO by AK 103	☐			
Lead by 6010	☐			
PAHs by 8270	■	~~1L~~ ~~250 mL~~ amber	2	None
Alkalinity by 2320B	☐			
Methane by RSK175	☐			
Sulfate by EPA 300	☐			
Nitrate/Nitrite by EPA 300	☐			
Ferrous Iron	☐			
			10	

Well Casing Volumes

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

Field Test Results:

Ferrous Iron mg/L Nitrate mg/L Other

Well Information N/A

Well Location: ONSITE

Condition of Well: GOOD

Well Completion: Flush Mount / Stick Up

Well Locked at Arrival: Yes / No

Well Locked at Departure: Yes / No

Additional Notes

USED BAILER TO COLLECT PAH SAMPLES.

Groundwater Sampling Form

Project No. 062328 PM Siobhan Pritchard Well ID MW-10 Date 5/8/17 Page 6 of 10

Site ID / Location 96097 / 303 West Fireweed Lane, Anchorage, AK (ADEC File ID: 2100.26.007)

Screen Casing Well Material x PVC Sampled by O. Yan

Setting (ft-btoc) 40-55 Diameter (in.) 2" SS D. TRUONG ~~J. Hudnall~~

Static Water Level (ft-btoc) 5.68 Total Depth (ft-btoc) 51.50 Water Column / Gallons in Well 5.82 / 0.938 Sample ID MW-10-W-170508

Dup ID

Sample Time 1135 Start 0837 End

No-Purge Method

Sampler Length (in) 36 ☒ 30 ☐ Depth of Sampler (ft-btoc) 48.75

Weights Top ☐ Bottom ☒ Position Supended ☒ Bottom set ☐

Was Teflon Baler used to collect non volatile samples Yes ☐ No ☒

Low Flow Method

Pump type Bladder ☐ Other ☐ Pump Intake (ft-btoc)

Flow rate (ml/minute) Volumes Purged

Did well Dewater? Yes ☐ No ☐ Purge Time: Start End

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

No-Purge Sampling Method (Hydrasleeves)

Constituents Sampled

		Container	Number	Preservative
BTEX by 8260 ■	8021 ☐	40 mL voa	3	HCl
HVOCs by 8260 ☐				
GRO by AK 101 ■		40 mL voa	3	HCl
DRO by AK 102 ■		250 mL amber	2	HCl
RRO by AK 103 ☐				
Lead by 6010 ☐				
PAHs by 8270 ■		250 mL amber	2	None
Alkalinity by 2320B ☐				
Methane by RSK175 ☐				
Sulfate by EPA 300 ☐				
Nitrate/Nitrite by EPA 300 ☐				
Ferrous Iron ☐				
			(10)	

Well Casing Volumes

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

Field Test Results:

Ferrous Iron mg/L Nitrate mg/L Other

Well Information

Well Location: ONSITE

Condition of Well: GOOD

Well Completion: Flush Mount / Stick Up

Well Locked at Arrival: Yes / No

Well Locked at Departure: Yes / No

Additional Notes

Groundwater Sampling Form

Project No. 062328 PM Siobhan Pritchard Well ID MW-12 Date 5/8/17 Page 7 of 10

Site ID / Location 96097 / 303 West Fireweed Lane, Anchorage, AK (ADEC File ID: 2100.26.007)

Screen Setting (ft-btoc) Unknown Casing Diameter (in.) 2" Well Material x PVC ___ SS Sampled by O. Yan D. Townsend ~~I. Hudnall~~

Static Water Level (ft-btoc) 59.99 Total Depth (ft-btoc) 67.85 Water Column / Gallons in Well 7.86 / 1.258 Sample ID MW-12-W-170508 Dup ID ___

Sample Time 1240 Start 0930 End 1130

No-Purge Method

Sampler Length (in) 36 ☒ 30 ☐ Depth of Sampler (ft-btoc) 63.15'

Weights Top ☐ Bottom ☒ Position Supended ☒ Bottom set ☐

Was Teflon Baler used to collect non volatile samples Yes ☐ No ☒

Low Flow Method

Pump type Bladder ☐ Other ☐ Pump Intake (ft-btoc) ___ Volumes Purged ___

Flow rate (ml/minute) ___ Purge Time: Start ___ End ___

Did well Dewater? Yes ☐ No ☐

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

No-Purge Sampling Method (Hydrasleeves)

Constituents Sampled

		Container	Number	Preservative
BTEX by 8260	■ 8021 ☐	40 mL voa	3	HCl
HVOCs by 8260	☐			
GRO by AK 101	■	40 mL voa	3	HCl
DRO by AK 102	■	250 mL amber	2	HCl
RRO by AK 103	☐			
Lead by 6010	☐			
PAHs by 8270	☐			
Alkalinity by 2320B	☐			
Methane by RSK175	☐			
Sulfate by EPA 300	☐			
Nitrate/Nitrite by EPA 300	☐			
Ferrous Iron	☐			
			(8)	

Well Casing Volumes

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

Field Test Results:

Ferrous Iron ___ mg/L Nitrate ___ mg/L Other ___

Well Information

Well Location: OFFSITE - ALLEYWAY

Condition of Well: GOOD

Well Completion: (Flush Mount) / Stick Up

Well Locked at Arrival: (Yes) / No

Well Locked at Departure: (Yes) / No

Additional Notes

Groundwater Sampling Form

Project No. 062328 PM Siobhan Pritchard Well ID MW-13 Date 5/8/17 Page 8 of 10

Site ID / Location 96097 / 303 West Fireweed Lane, Anchorage, AK (ADEC File ID: 2100.26.007)

Screen Casing Well Material x PVC Sampled by O. Yan

Setting (ft-btoc) Unknown Diameter (in.) 2" SS D. TRUDEAU ~~J. Hudnall~~

Static Water Level (ft-btoc) 44.35 Total Depth (ft-btoc) 63.92 Water Column / Gallons in Well 19.57 / 3.131 Sample ID MW-13-W-170508

Dup ID

Sample Time 1210 Start 0900 End 1100

No-Purge Method

Sampler Length (in) 36 ☒ 30 ☐ Depth of Sampler (ft-btoc) 47.50'

Weights Top ☐ Bottom ☒ Position Supended ☒ Bottom set ☐

Was Teflon Baler used to collect non volatile samples Yes ☐ No ☒

Low Flow Method

Pump type Bladder ☐ Other ☐ Pump Intake (ft-btoc)

Flow rate (ml/minute) Volumes Purged

Did well Dewater? Yes ☐ No ☐ Purge Time: Start End

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

No-Purge Sampling Method (Hydrasleeves)

Constituents Sampled		Container	Number	Preservative
BTEX by 8260	■ 8021 ☐	40 mL voa	3	HCl
HVOCs by 8260	☐			
GRO by AK 101	■	40 mL voa	3	HCl
DRO by AK 102	■	250 mL amber	2	HCl
RRO by AK 103	☐			
Lead by 6010	☐			
PAHs by 8270	☐			
Alkalinity by 2320B	☐			
Methane by RSK175	☐			
Sulfate by EPA 300	☐			
Nitrate/Nitrite by EPA 300	☐			
Ferrous Iron	☐			
			(4)	

Well Casing Volumes

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

Field Test Results:

Ferrous Iron mg/L Nitrate mg/L Other

Well Information

Well Location: OFF SITE

Condition of Well: GOOD

Well Completion: Flush Mount / Stick Up

Well Locked at Arrival: Yes / No

Well Locked at Departure: Yes / No

Additional Notes

Groundwater Sampling Form

Project No. 062328 PM Siobhan Pritchard Well ID MW-14 Date 5/8/17 Page 9 of 10

Site ID / Location 96097 / 303 West Fireweed Lane, Anchorage, AK (ADEC File ID: 2100.26.007)

Screen Casing Well Material x PVC Sampled by O. Yan

Setting (ft-btoc) Unknown Diameter (in.) 2" SS D. TRUDEAU ~~J. Hudnall~~

Static Water Level (ft-btoc) 56.70 ~~0913~~ Total Depth (ft-btoc) 64.04 Water Column / Gallons in Well 7.34 / 1.174 Sample ID MW-14-W-170508

Dup ID

Sample Time 1202 Start 0913 End 1113

No-Purge Method

Sampler Length (in) 36 ☒ 30 ☐ Depth of Sampler (ft-btoc) 59.85

Weights Top ☐ Bottom ☒ Position Supended ☒ Bottom set ☐

Was Teflon Baler used to collect non volatile samples Yes ☐ No ☒

Low Flow Method

Pump type Bladder ☐ Other ☐ Pump Intake (ft btoc)

Flow rate (ml/minute) Volumes Purged

Did well Dewater? Yes ☐ No ☐ Purge Time: Start End

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

No-Purge Sampling Method (Hydrasleeves)

Constituents Sampled		Container	Number	Preservative
BTEX by 8260	■ 8021 ☐	40 mL voa	3	HCl
HVOCs by 8260	☐			
GRO by AK 101	■	40 mL voa	3	HCl
DRO by AK 102	■	250 mL amber	2	HCl
RRO by AK 103	☐			
Lead by 6010	☐			
PAHs by 8270	☐			
Alkalinity by 2320B	☐			
Methane by RSK175	☐			
Sulfate by EPA 300	☐			
Nitrate/Nitrite by EPA 300	☐			
Ferrous Iron	☐			
			(8)	

Well Casing Volumes

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

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

Well Information

Well Location: OFFSITE - RILEY'S PARKING LOT

Condition of Well: GOOD

Well Completion: Flush Mount / Stick Up

Well Locked at Arrival: Yes / No

Well Locked at Departure: Yes / No

Additional Notes

Groundwater Sampling Form

Project No. 062328 PM Siobhan Pritchard Well ID MW-16 Date 5/8/17 Page 10 of 10

Site ID / Location 96097 / 303 West Fireweed Lane, Anchorage, AK (ADEC File ID: 2100.26.007)

Screen Casing Well Material x PVC Sampled by O. Yan

Setting (ft-btoc) Unknown Diameter (in.) 2" SS D. Truden ~~J. Hudnall~~

Static Water Level (ft-btoc) Obstructed / ICE Total Depth (ft-btoc) 2.80 Water Column / Gallons in Well /

Sample ID

Dup ID

Sample Time 0910 Start End

No-Purge Method

Sampler Length (in) 36 ☐ 30 ☐ Depth of Sampler (ft-btoc)

Weights Top ☐ Bottom ☐ Position Supended ☐ Bottom set ☐

Was Teflon Baler used to collect non volatile samples Yes ☐ No ☐

Low Flow Method

Pump type Bladder ☐ Other ☐ Pump Intake (ft-btoc)

Flow rate (ml/minute) Volumes Purged

Did well Dewater? Yes ☐ No ☐ Purge Time: Start End

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

No-Purge Sampling Method (Hydrasleeves)

Constituents Sampled

		Container	Number	Preservative
BTEX by 8260	■ 8021 ☐	40 mL voa	3	HCl
HVOCs by 8260	☐			
GRO by AK 101	■	40 mL voa	3	HCl
DRO by AK 102	■	250 mL amber	2	HCl
RRO by AK 103	☐			
Lead by 6010	☐			
PAHs by 8270	☐			
Alkalinity by 2320B	☐			
Methane by RSK175	☐			
Sulfate by EPA 300	☐			
Nitrate/Nitrite by EPA 300	☐			
Ferrous Iron	☐			

NOT SAMPLED BY OBSTRUCTED ICE

Well Casing Volumes

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

Field Test Results:

Ferrous Iron mg/L Nitrate mg/L Other

Well Information

Well Location: OFF SITE

Condition of Well: Good

Well Completion: Flush Mount / Stick Up

Well Locked at Arrival: Yes / No

Well Locked at Departure: Yes / No

Additional Notes

Well OBSTRUCTED BY ICE @ 2.80' FBTOC.

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

Control number: 06784
Date (mm/dd/yyyy): 5/8/17
User (print name): OLIVER YAW

Project number: 062328
Project name: 96097

Location: 303 W. FIREWEED LN
ANCHORAGE, AK

Additional equipment control numbers and descriptions:

Field procedure before use:

	Check when completed
• 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.	☑

Filing: Field file

Signature:

This completed form is a quality record

Field data:

Measurement number	Well number	Date	Time	Reference elevation (in m/ft)	Water depth (in m/ft)	Water elevation (in m/ft)	Comments
#1	MW-4R	5/8/17	823	—	44.11	—	good

Filing: Field file

Project number: _____ **Name:** _____ (please print)

Date (mm/dd/yyyy): _____ **Signature:** _____

Appendix D
Laboratory Analytical Report

eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

ANALYTICAL RESULTS

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: May 24, 2017

Project: 96097

Submittal Date: 05/10/2017
Group Number: 1799538
SDG: AKC10
PO Number: 0015242269
Release Number: CARRIER
State of Sample Origin: AK

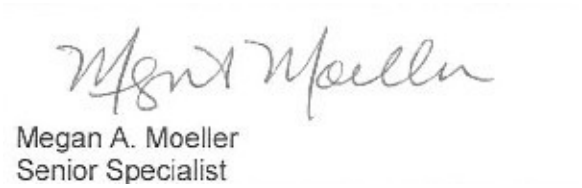
Client Sample Description	Lancaster Labs (LL) #
MW-4R-W-170508 Grab Groundwater	8985816
MW-5-W-170508 Grab Groundwater	8985817
MW-6-W-170508 Grab Groundwater	8985818
MW-8-W-170508 Grab Groundwater	8985819
MW-9-W-170508 Grab Groundwater	8985820
MW-10-W-170508 Grab Groundwater	8985821
MW-12-W-170508 Grab Groundwater	8985822
MW-13-W-170508 Grab Groundwater	8985823
MW-14-W-170508 Grab Groundwater	8985824
DUP-1-WD-170508 Grab Groundwater	8985825
QA-1-T-170508 NA Water	8985826

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

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our current scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . To request copies of prior scopes of accreditation, contact your project manager.

Electronic Copy To	GHD	Attn: GHD EDF
Electronic Copy To	GHD	Attn: Siobhan Pritchard
Electronic Copy To	GHD	Attn: Sarah Gillette
Electronic Copy To	GHD	Attn: Jeffrey Cloud
Electronic Copy To	Chevron	Attn: GHD EDD

Respectfully Submitted,



Megan A. Moeller
Senior Specialist

(717) 556-7261

Project Name: 96097
LL Group #: 1799538

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.

Analysis Specific Comments:

SW-846 8270D SIM, GC/MS Semivolatiles

Sample #s: 8985821

The recovery for the sample internal standard is outside the QC acceptance limits. The following corrective action was taken: The sample was re-analyzed and internal standard areas are again outside of the QC acceptance limits, indicating a matrix effect.

Sample #s: 8985825

The recovery for the sample internal standard is outside the QC acceptance limits. The following corrective action was taken: The sample was re-analyzed and internal standard areas are again outside of the QC acceptance limits, indicating a matrix effect. The reported data is from the initial analysis of the sample.

Sample Description: MW-4R-W-170508 Grab Groundwater
Facility# 96097
303 W Fireweed Lane - Anchorage, AK

LL Sample # WW 8985816
LL Group # 1799538
Account # 10880

Project Name: 96097

Collected: 05/08/2017 10:38 by OY

Submitted: 05/10/2017 09:30
Reported: 05/24/2017 13:30

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

WFL04 SDG#: AKC10-01

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.	0.0005	0.001	1
10945	Ethylbenzene	100-41-4	N.D.	0.0005	0.001	1
10945	Toluene	108-88-3	N.D.	0.0005	0.001	1
10945	Xylene (Total)	1330-20-7	N.D.	0.0005	0.001	1
GC Volatiles	**AK 101**		**mg/l**	**mg/l**	**mg/l**	
01438	TPH-GRO AK water C6-C10	n.a.	N.D.	0.010	0.10	1
GC Petroleum Hydrocarbons	**AK 102-SV 4/8/02**		**mg/l**	**mg/l**	**mg/l**	
13025	DRO C10-C25	n.a.	0.31	0.058	0.29	1

Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

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	D171321AA	05/12/2017 12:08	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D171321AA	05/12/2017 12:08	Anita M Dale	1
01438	TPH-GRO AK water C6-C10	AK 101	1	17135B20A	05/16/2017 17:23	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	17135B20A	05/16/2017 17:23	Jeremy C Giffin	1
13025	AK 102-SV DRO	AK 102-SV 4/8/02	1	171310022A	05/13/2017 08:05	Tyler O Griffin	1
13027	Mini-Ext. AK 102-SV DRO	AK 102/AK 103 04/08/02	1	171310022A	05/11/2017 16:40	Kate E Lutte	1

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

Sample Description: MW-5-W-170508 Grab Groundwater
Facility# 96097
303 W Fireweed Lane - Anchorage, AK

LL Sample # WW 8985817
LL Group # 1799538
Account # 10880

Project Name: 96097

Collected: 05/08/2017 11:10 by OY

Submitted: 05/10/2017 09:30
Reported: 05/24/2017 13:30

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

WFL05 SDG#: AKC10-02

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	0.005	0.0005	0.001	1
10945	Ethylbenzene	100-41-4	0.028	0.0005	0.001	1
10945	Toluene	108-88-3	0.028	0.0005	0.001	1
10945	Xylene (Total)	1330-20-7	0.19	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
12971	Acenaphthene	83-32-9	0.00057	0.000094	0.00047	10
12971	Acenaphthylene	208-96-8	0.00055	0.000094	0.00047	10
12971	Anthracene	120-12-7	0.0017	0.000094	0.00047	10
12971	Benzo(a)anthracene	56-55-3	0.0013	0.000094	0.00047	10
12971	Benzo(a)pyrene	50-32-8	0.0015	0.000094	0.00047	10
12971	Benzo(b)fluoranthene	205-99-2	0.0040	0.000094	0.00047	10
12971	Benzo(g,h,i)perylene	191-24-2	0.0016	0.000094	0.00047	10
12971	Benzo(k)fluoranthene	207-08-9	0.00097	0.000094	0.00047	10
12971	Chrysene	218-01-9	0.0041	0.000094	0.00047	10
12971	Dibenz(a,h)anthracene	53-70-3	0.00021 J	0.000094	0.00047	10
12971	Fluoranthene	206-44-0	0.0033	0.000094	0.00047	10
12971	Fluorene	86-73-7	0.0011	0.000094	0.00047	10
12971	Indeno(1,2,3-cd)pyrene	193-39-5	0.00070	0.000094	0.00047	10
12971	Naphthalene	91-20-3	0.0013	0.00028	0.00057	10
12971	Phenanthrene	85-01-8	0.0028	0.00028	0.00057	10
12971	Pyrene	129-00-0	0.0062	0.000094	0.00047	10
GC Volatiles	**AK 101**		**mg/l**	**mg/l**	**mg/l**	
01438	TPH-GRO AK water C6-C10	n.a.	0.41	0.010	0.10	1
GC Petroleum Hydrocarbons	**AK 102-SV 4/8/02**		**mg/l**	**mg/l**	**mg/l**	
13025	DRO C10-C25	n.a.	16	0.52	2.6	10

Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

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	D171321AA	05/12/2017 12:32	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D171321AA	05/12/2017 12:32	Anita M Dale	1
12971	SIM SVOAs 8270D, water	SW-846 8270D SIM	1	17130WAL026	05/22/2017 17:32	William H Saadeh	10

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

Sample Description: MW-5-W-170508 Grab Groundwater
Facility# 96097
303 W Fireweed Lane - Anchorage, AK

LL Sample # WW 8985817
LL Group # 1799538
Account # 10880

Project Name: 96097

Collected: 05/08/2017 11:10 by OY

Submitted: 05/10/2017 09:30
Reported: 05/24/2017 13:30

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

WFL05 SDG#: AKC10-02

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10466	BNA Water Extraction SIM	SW-846 3510C	1	17130WAL026	05/11/2017 08:00	Kayla A Yuditsky	1
01438	TPH-GRO AK water C6-C10	AK 101	1	17135B20A	05/16/2017 17:50	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	17135B20A	05/16/2017 17:50	Jeremy C Giffin	1
13025	AK 102-SV DRO	AK 102-SV 4/8/02	1	171310022A	05/13/2017 05:40	Tyler O Griffin	10
13027	Mini-Ext. AK 102-SV DRO	AK 102/AK 103 04/08/02	1	171310022A	05/11/2017 16:40	Kate E Lutte	1

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

Sample Description: MW-6-W-170508 Grab Groundwater
Facility# 96097
303 W Fireweed Lane - Anchorage, AK

LL Sample # WW 8985818
LL Group # 1799538
Account # 10880

Project Name: 96097

Collected: 05/08/2017 11:45 by OY

Submitted: 05/10/2017 09:30
Reported: 05/24/2017 13:30

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

WFL06 SDG#: AKC10-03

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	0.002	0.0005	0.001	1
10945	Ethylbenzene	100-41-4	0.008	0.0005	0.001	1
10945	Toluene	108-88-3	0.01	0.0005	0.001	1
10945	Xylene (Total)	1330-20-7	0.11	0.0005	0.001	1
GC Volatiles	**AK 101**		**mg/l**	**mg/l**	**mg/l**	
01438	TPH-GRO AK water C6-C10	n.a.	N.D.	0.010	0.10	1
GC Petroleum Hydrocarbons	**AK 102-SV 4/8/02**		**mg/l**	**mg/l**	**mg/l**	
13025	DRO C10-C25	n.a.	0.071 J	0.050	0.25	1

Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

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	D171321AA	05/12/2017 12:56	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D171321AA	05/12/2017 12:56	Anita M Dale	1
01438	TPH-GRO AK water C6-C10	AK 101	1	17135B20A	05/16/2017 18:18	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	17135B20A	05/16/2017 18:18	Jeremy C Giffin	1
13025	AK 102-SV DRO	AK 102-SV 4/8/02	1	171310022A	05/13/2017 08:34	Tyler O Griffin	1
13027	Mini-Ext. AK 102-SV DRO	AK 102/AK 103 04/08/02	1	171310022A	05/11/2017 16:40	Kate E Lutte	1

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

Sample Description: MW-8-W-170508 Grab Groundwater
Facility# 96097
303 W Fireweed Lane - Anchorage, AK

LL Sample # WW 8985819
LL Group # 1799538
Account # 10880

Project Name: 96097

Collected: 05/08/2017 12:20 by OY

Submitted: 05/10/2017 09:30
Reported: 05/24/2017 13:30

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

WFL08 SDG#: AKC10-04

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.	0.0005	0.001	1
10945	Ethylbenzene	100-41-4	N.D.	0.0005	0.001	1
10945	Toluene	108-88-3	N.D.	0.0005	0.001	1
10945	Xylene (Total)	1330-20-7	N.D.	0.0005	0.001	1
GC Volatiles	**AK 101**		**mg/l**	**mg/l**	**mg/l**	
01438	TPH-GRO AK water C6-C10	n.a.	0.038 J	0.010	0.10	1
GC Petroleum Hydrocarbons	**AK 102-SV 4/8/02**		**mg/l**	**mg/l**	**mg/l**	
13025	DRO C10-C25	n.a.	0.71	0.052	0.26	1

Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

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	D171321AA	05/12/2017 13:20	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D171321AA	05/12/2017 13:20	Anita M Dale	1
01438	TPH-GRO AK water C6-C10	AK 101	1	17135B20A	05/16/2017 18:45	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	17135B20A	05/16/2017 18:45	Jeremy C Giffin	1
13025	AK 102-SV DRO	AK 102-SV 4/8/02	1	171310022A	05/16/2017 15:33	Tyler O Griffin	1
13027	Mini-Ext. AK 102-SV DRO	AK 102/AK 103 04/08/02	1	171310022A	05/11/2017 16:40	Kate E Lutte	1

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

Sample Description: MW-9-W-170508 Grab Groundwater
Facility# 96097
303 W Fireweed Lane - Anchorage, AK

LL Sample # WW 8985820
LL Group # 1799538
Account # 10880

Project Name: 96097

Collected: 05/08/2017 10:55 by OY

Submitted: 05/10/2017 09:30
Reported: 05/24/2017 13:30

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

WFL09 SDG#: AKC10-05

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	0.034	0.0005	0.001	1
10945	Ethylbenzene	100-41-4	0.007	0.0005	0.001	1
10945	Toluene	108-88-3	0.006	0.0005	0.001	1
10945	Xylene (Total)	1330-20-7	0.026	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
12971	Acenaphthene	83-32-9	0.00013	0.0000095	0.000048	1
12971	Acenaphthylene	208-96-8	0.000014 J	0.0000095	0.000048	1
12971	Anthracene	120-12-7	N.D.	0.0000095	0.000048	1
12971	Benzo(a)anthracene	56-55-3	N.D.	0.0000095	0.000048	1
12971	Benzo(a)pyrene	50-32-8	N.D.	0.0000095	0.000048	1
12971	Benzo(b)fluoranthene	205-99-2	0.000018 J	0.0000095	0.000048	1
12971	Benzo(g,h,i)perylene	191-24-2	N.D.	0.0000095	0.000048	1
12971	Benzo(k)fluoranthene	207-08-9	N.D.	0.0000095	0.000048	1
12971	Chrysene	218-01-9	0.000019 J	0.0000095	0.000048	1
12971	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000095	0.000048	1
12971	Fluoranthene	206-44-0	0.000019 J	0.0000095	0.000048	1
12971	Fluorene	86-73-7	0.00023	0.0000095	0.000048	1
12971	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0000095	0.000048	1
12971	Naphthalene	91-20-3	0.0018	0.000029	0.000057	1
12971	Phenanthrene	85-01-8	0.000042 J	0.000029	0.000057	1
12971	Pyrene	129-00-0	0.000029 J	0.0000095	0.000048	1
GC Volatiles	**AK 101**		**mg/l**	**mg/l**	**mg/l**	
01438	TPH-GRO AK water C6-C10	n.a.	0.95	0.010	0.10	1
GC Petroleum Hydrocarbons	**AK 102-SV 4/8/02**		**mg/l**	**mg/l**	**mg/l**	
13025	DRO C10-C25	n.a.	1.1	0.050	0.25	1

Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

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	D171321AA	05/12/2017 13:44	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D171321AA	05/12/2017 13:44	Anita M Dale	1
12971	SIM SVOAs 8270D, water	SW-846 8270D SIM	1	17130WAL026	05/20/2017 06:17	William H Saadeh	1

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

Sample Description: **MW-9-W-170508 Grab Groundwater**
Facility# 96097
303 W Fireweed Lane - Anchorage, AK

LL Sample # WW 8985820
LL Group # 1799538
Account # 10880

Project Name: 96097

Collected: 05/08/2017 10:55 by OY

Submitted: 05/10/2017 09:30
Reported: 05/24/2017 13:30

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

WFL09 SDG#: AKC10-05

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10466	BNA Water Extraction SIM	SW-846 3510C	1	17130WAL026	05/11/2017 08:00	Kayla A Yuditsky	1
01438	TPH-GRO AK water C6-C10	AK 101	1	17135B20A	05/16/2017 19:40	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	17135B20A	05/16/2017 19:40	Jeremy C Giffin	1
13025	AK 102-SV DRO	AK 102-SV 4/8/02	1	171310022A	05/13/2017 09:03	Tyler O Griffin	1
13027	Mini-Ext. AK 102-SV DRO	AK 102/AK 103 04/08/02	1	171310022A	05/11/2017 16:40	Kate E Lutte	1

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

Sample Description: MW-10-W-170508 Grab Groundwater
Facility# 96097
303 W Fireweed Lane - Anchorage, AK

LL Sample # WW 8985821
LL Group # 1799538
Account # 10880

Project Name: 96097

Collected: 05/08/2017 11:35 by OY

Submitted: 05/10/2017 09:30
Reported: 05/24/2017 13:30

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

WFL10 SDG#: AKC10-06

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	0.0009 J	0.0005	0.001	1
10945	Ethylbenzene	100-41-4	0.005	0.0005	0.001	1
10945	Toluene	108-88-3	N.D.	0.0005	0.001	1
10945	Xylene (Total)	1330-20-7	0.036	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
12971	Acenaphthene	83-32-9	0.00069	0.00010	0.00051	10
12971	Acenaphthylene	208-96-8	0.00034 J	0.00010	0.00051	10
12971	Anthracene	120-12-7	0.00026 J	0.00010	0.00051	10
12971	Benzo(a)anthracene	56-55-3	0.00028 J	0.00010	0.00051	10
12971	Benzo(a)pyrene	50-32-8	N.D.	0.00010	0.00051	10
12971	Benzo(b)fluoranthene	205-99-2	0.00041 J	0.00010	0.00051	10
12971	Benzo(g,h,i)perylene	191-24-2	0.00016 J	0.00010	0.00051	10
12971	Benzo(k)fluoranthene	207-08-9	0.00014 J	0.00010	0.00051	10
12971	Chrysene	218-01-9	0.00026 J	0.00010	0.00051	10
12971	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00010	0.00051	10
12971	Fluoranthene	206-44-0	0.00047 J	0.00010	0.00051	10
12971	Fluorene	86-73-7	0.00050 J	0.00010	0.00051	10
12971	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00010	0.00051	10
12971	Naphthalene	91-20-3	0.030	0.00030	0.00061	10
12971	Phenanthrene	85-01-8	0.0010	0.00030	0.00061	10
12971	Pyrene	129-00-0	0.0012	0.00010	0.00051	10
	The recovery for the sample internal standard is outside the QC acceptance limits. The following corrective action was taken: The sample was re-analyzed and internal standard areas are again outside of the QC acceptance limits, indicating a matrix effect.					
GC Volatiles	**AK 101**		**mg/l**	**mg/l**	**mg/l**	
01438	TPH-GRO AK water C6-C10	n.a.	3.9	0.10	1.0	10
GC Petroleum Hydrocarbons	**AK 102-SV 4/8/02**		**mg/l**	**mg/l**	**mg/l**	
13025	DRO C10-C25	n.a.	1.7	0.050	0.25	1

Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

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	D171321AA	05/12/2017 14:08	Anita M Dale	1

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

Sample Description: MW-10-W-170508 Grab Groundwater
Facility# 96097
303 W Fireweed Lane - Anchorage, AK

LL Sample # WW 8985821
LL Group # 1799538
Account # 10880

Project Name: 96097

Collected: 05/08/2017 11:35 by OY

Submitted: 05/10/2017 09:30
Reported: 05/24/2017 13:30

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

WFL10 SDG#: AKC10-06

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D171321AA	05/12/2017 14:08	Anita M Dale	1
12971	SIM SVOAs 8270D, water	SW-846 8270D SIM	1	17130WAL026	05/22/2017 18:05	William H Saadeh	10
10466	BNA Water Extraction SIM	SW-846 3510C	1	17130WAL026	05/11/2017 08:00	Kayla A Yuditsky	1
01438	TPH-GRO AK water C6-C10	AK 101	1	17135B20A	05/16/2017 23:20	Jeremy C Giffin	10
01146	GC VOA Water Prep	SW-846 5030B	1	17135B20A	05/16/2017 23:20	Jeremy C Giffin	10
13025	AK 102-SV DRO	AK 102-SV 4/8/02	1	171310022A	05/13/2017 09:32	Tyler O Griffin	1
13027	Mini-Ext. AK 102-SV DRO	AK 102/AK 103 04/08/02	1	171310022A	05/11/2017 16:40	Kate E Lutte	1

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

Sample Description: MW-12-W-170508 Grab Groundwater
Facility# 96097
303 W Fireweed Lane - Anchorage, AK

LL Sample # WW 8985822
LL Group # 1799538
Account # 10880

Project Name: 96097

Collected: 05/08/2017 12:40 by OY

Submitted: 05/10/2017 09:30
Reported: 05/24/2017 13:30

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

WFL12 SDG#: AKC10-07

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	0.021	0.0005	0.001	1
10945	Ethylbenzene	100-41-4	0.044	0.0005	0.001	1
10945	Toluene	108-88-3	N.D.	0.0005	0.001	1
10945	Xylene (Total)	1330-20-7	0.30	0.0005	0.001	1
GC Volatiles	**AK 101**		**mg/l**	**mg/l**	**mg/l**	
01438	TPH-GRO AK water C6-C10	n.a.	0.064 J	0.010	0.10	1
GC Petroleum Hydrocarbons	**AK 102-SV 4/8/02**		**mg/l**	**mg/l**	**mg/l**	
13025	DRO C10-C25	n.a.	N.D.	0.052	0.26	1

Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

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	D171321AA	05/12/2017 14:32	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D171321AA	05/12/2017 14:32	Anita M Dale	1
01438	TPH-GRO AK water C6-C10	AK 101	1	17135B20A	05/16/2017 20:08	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	17135B20A	05/16/2017 20:08	Jeremy C Giffin	1
13025	AK 102-SV DRO	AK 102-SV 4/8/02	1	171310022A	05/13/2017 10:01	Tyler O Griffin	1
13027	Mini-Ext. AK 102-SV DRO	AK 102/AK 103 04/08/02	1	171310022A	05/11/2017 16:40	Kate E Lutte	1

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

Sample Description: MW-13-W-170508 Grab Groundwater
Facility# 96097
303 W Fireweed Lane - Anchorage, AK

LL Sample # WW 8985823
LL Group # 1799538
Account # 10880

Project Name: 96097

Collected: 05/08/2017 12:10 by OY

Submitted: 05/10/2017 09:30
Reported: 05/24/2017 13:30

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

WFL13 SDG#: AKC10-08

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	0.003	0.0005	0.001	1
10945	Ethylbenzene	100-41-4	N.D.	0.0005	0.001	1
10945	Toluene	108-88-3	N.D.	0.0005	0.001	1
10945	Xylene (Total)	1330-20-7	0.020	0.0005	0.001	1
GC Volatiles	**AK 101**		**mg/l**	**mg/l**	**mg/l**	
01438	TPH-GRO AK water C6-C10	n.a.	N.D.	0.010	0.10	1
GC Petroleum Hydrocarbons	**AK 102-SV 4/8/02**		**mg/l**	**mg/l**	**mg/l**	
13025	DRO C10-C25	n.a.	0.39	0.054	0.27	1

Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

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	D171321AA	05/12/2017 14:56	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D171321AA	05/12/2017 14:56	Anita M Dale	1
01438	TPH-GRO AK water C6-C10	AK 101	1	17135B20A	05/16/2017 20:35	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	17135B20A	05/16/2017 20:35	Jeremy C Giffin	1
13025	AK 102-SV DRO	AK 102-SV 4/8/02	1	171310022A	05/13/2017 05:11	Tyler O Griffin	1
13027	Mini-Ext. AK 102-SV DRO	AK 102/AK 103 04/08/02	1	171310022A	05/11/2017 16:40	Kate E Lutte	1

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

Sample Description: MW-14-W-170508 Grab Groundwater
Facility# 96097
303 W Fireweed Lane - Anchorage, AK

LL Sample # WW 8985824
LL Group # 1799538
Account # 10880

Project Name: 96097

Collected: 05/08/2017 12:02 by OY

Submitted: 05/10/2017 09:30
Reported: 05/24/2017 13:30

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

WFL14 SDG#: AKC10-09

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	0.0009 J	0.0005	0.001	1
10945	Ethylbenzene	100-41-4	0.005	0.0005	0.001	1
10945	Toluene	108-88-3	N.D.	0.0005	0.001	1
10945	Xylene (Total)	1330-20-7	0.036	0.0005	0.001	1
GC Volatiles	**AK 101**		**mg/l**	**mg/l**	**mg/l**	
01438	TPH-GRO AK water C6-C10	n.a.	0.018 J	0.010	0.10	1
GC Petroleum Hydrocarbons	**AK 102-SV 4/8/02**		**mg/l**	**mg/l**	**mg/l**	
13025	DRO C10-C25	n.a.	0.28	0.051	0.25	1

Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

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	D171321AA	05/12/2017 15:20	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D171321AA	05/12/2017 15:20	Anita M Dale	1
01438	TPH-GRO AK water C6-C10	AK 101	1	17135B20A	05/16/2017 21:03	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	17135B20A	05/16/2017 21:03	Jeremy C Giffin	1
13025	AK 102-SV DRO	AK 102-SV 4/8/02	1	171310022A	05/13/2017 10:30	Tyler O Griffin	1
13027	Mini-Ext. AK 102-SV DRO	AK 102/AK 103 04/08/02	1	171310022A	05/11/2017 16:40	Kate E Lutte	1

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

Sample Description: DUP-1-WD-170508 Grab Groundwater
Facility# 96097
303 W Fireweed Lane - Anchorage, AK

LL Sample # WW 8985825
LL Group # 1799538
Account # 10880

Project Name: 96097

Collected: 05/08/2017 by OY

Submitted: 05/10/2017 09:30
Reported: 05/24/2017 13:30

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

WFLFD SDG#: AKC10-10FD

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	0.002	0.0005	0.001	1
10945	Ethylbenzene	100-41-4	0.009	0.0005	0.001	1
10945	Toluene	108-88-3	0.011	0.0005	0.001	1
10945	Xylene (Total)	1330-20-7	0.12	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
12971	Acenaphthene	83-32-9	0.00032 J	0.00010	0.00051	10
12971	Acenaphthylene	208-96-8	0.00062	0.00010	0.00051	10
12971	Anthracene	120-12-7	0.0013	0.00010	0.00051	10
12971	Benzo(a)anthracene	56-55-3	0.0019	0.00010	0.00051	10
12971	Benzo(a)pyrene	50-32-8	0.0018	0.00010	0.00051	10
12971	Benzo(b)fluoranthene	205-99-2	0.0050	0.00010	0.00051	10
12971	Benzo(g,h,i)perylene	191-24-2	0.0020	0.00010	0.00051	10
12971	Benzo(k)fluoranthene	207-08-9	0.0012	0.00010	0.00051	10
12971	Chrysene	218-01-9	0.0048	0.00010	0.00051	10
12971	Dibenz(a,h)anthracene	53-70-3	0.00030 J	0.00010	0.00051	10
12971	Fluoranthene	206-44-0	0.0039	0.00010	0.00051	10
12971	Fluorene	86-73-7	0.0014	0.00010	0.00051	10
12971	Indeno(1,2,3-cd)pyrene	193-39-5	0.00080	0.00010	0.00051	10
12971	Naphthalene	91-20-3	0.0014	0.00031	0.00061	10
12971	Phenanthrene	85-01-8	0.0037	0.00031	0.00061	10
12971	Pyrene	129-00-0	0.010	0.00010	0.00051	10

The recovery for the sample internal standard is outside the QC acceptance limits. The following corrective action was taken: The sample was re-analyzed and internal standard areas are again outside of the QC acceptance limits, indicating a matrix effect. The reported data is from the initial analysis of the sample.

GC Volatiles	**AK 101**		**mg/l**	**mg/l**	**mg/l**	
01438	TPH-GRO AK water C6-C10	n.a.	0.46	0.010	0.10	1
GC Petroleum Hydrocarbons	**AK 102-SV 4/8/02**		**mg/l**	**mg/l**	**mg/l**	
13025	DRO C10-C25	n.a.	2.2	0.26	1.3	5

Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

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

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

Sample Description: DUP-1-WD-170508 Grab Groundwater
Facility# 96097
303 W Fireweed Lane - Anchorage, AK

LL Sample # WW 8985825
LL Group # 1799538
Account # 10880

Project Name: 96097

Collected: 05/08/2017 by OY

Submitted: 05/10/2017 09:30
Reported: 05/24/2017 13:30

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

WFLFD SDG#: AKC10-10FD

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	D171321AA	05/12/2017 15:44	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D171321AA	05/12/2017 15:44	Anita M Dale	1
12971	SIM SVOAs 8270D, water	SW-846 8270D SIM	1	17130WAL026	05/20/2017 07:22	William H Saadeh	10
10466	BNA Water Extraction SIM	SW-846 3510C	1	17130WAL026	05/11/2017 08:00	Kayla A Yuditsky	1
01438	TPH-GRO AK water C6-C10	AK 101	1	17135B20A	05/16/2017 21:30	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	17135B20A	05/16/2017 21:30	Jeremy C Giffin	1
13025	AK 102-SV DRO	AK 102-SV 4/8/02	1	171310022A	05/13/2017 06:38	Tyler O Griffin	5
13027	Mini-Ext. AK 102-SV DRO	AK 102/AK 103 04/08/02	1	171310022A	05/11/2017 16:40	Kate E Lutte	1

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

Sample Description: QA-1-T-170508 NA Water
Facility# 96097
303 W Fireweed Lane - Anchorage, AK

LL Sample # WW 8985826
LL Group # 1799538
Account # 10880

Project Name: 96097

Collected: 05/08/2017

Submitted: 05/10/2017 09:30
Reported: 05/24/2017 13:30

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

WFLTB SDG#: AKC10-11TB

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.	0.0005	0.001	1
10945	Ethylbenzene	100-41-4	N.D.	0.0005	0.001	1
10945	Toluene	108-88-3	N.D.	0.0005	0.001	1
10945	Xylene (Total)	1330-20-7	N.D.	0.0005	0.001	1
GC Volatiles	**AK 101**		**mg/l**	**mg/l**	**mg/l**	
01438	TPH-GRO AK water C6-C10	n.a.	N.D.	0.010	0.10	1

Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

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	D171321AA	05/12/2017 07:57	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D171321AA	05/12/2017 07:57	Anita M Dale	1
01438	TPH-GRO AK water C6-C10	AK 101	1	17135B20A	05/16/2017 15:05	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	17135B20A	05/16/2017 15:05	Jeremy C Giffin	1

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

Quality Control Summary

Client Name: ChevronTexaco
Reported: 05/24/2017 13:30

Group Number: 1799538

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: D171321AA	Sample number(s): 8985816-8985826		
Benzene	N.D.	0.0005	0.001
Ethylbenzene	N.D.	0.0005	0.001
Toluene	N.D.	0.0005	0.001
Xylene (Total)	N.D.	0.0005	0.001
Batch number: 17130WAL026	Sample number(s): 8985817,8985820-8985821,8985825		
Acenaphthene	N.D.	0.000010	0.000050
Acenaphthylene	N.D.	0.000010	0.000050
Anthracene	N.D.	0.000010	0.000050
Benzo(a)anthracene	N.D.	0.000010	0.000050
Benzo(a)pyrene	N.D.	0.000010	0.000050
Benzo(b)fluoranthene	N.D.	0.000010	0.000050
Benzo(g,h,i)perylene	N.D.	0.000010	0.000050
Benzo(k)fluoranthene	N.D.	0.000010	0.000050
Chrysene	N.D.	0.000010	0.000050
Dibenz(a,h)anthracene	N.D.	0.000010	0.000050
Fluoranthene	N.D.	0.000010	0.000050
Fluorene	N.D.	0.000010	0.000050
Indeno(1,2,3-cd)pyrene	N.D.	0.000010	0.000050
Naphthalene	N.D.	0.000030	0.000060
Phenanthrene	N.D.	0.000030	0.000060
Pyrene	N.D.	0.000010	0.000050
Batch number: 17135B20A	Sample number(s): 8985816-8985826		
TPH-GRO AK water C6-C10	N.D.	0.010	0.10
Batch number: 171310022A	Sample number(s): 8985816-8985825		
DRO C10-C25	N.D.	0.050	0.25

LCS/LCSD

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: D171321AA	Sample number(s): 8985816-8985826								
Benzene	0.0200	0.0202	0.0200	0.0201	101	100	78-120	0	30
Ethylbenzene	0.0200	0.0207	0.0200	0.0204	104	102	78-120	1	30
Toluene	0.0200	0.0204	0.0200	0.0200	102	100	80-120	2	30

*- 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.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: ChevronTexaco
Reported: 05/24/2017 13:30

Group Number: 1799538

LCS/LCSD (continued)

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	mg/l	mg/l	mg/l	mg/l					
Xylene (Total)	0.0600	0.0629	0.0600	0.0618	105	103	80-120	2	30
	mg/l	mg/l	mg/l	mg/l					
Batch number: 17130WAL026	Sample number(s): 8985817,8985820-8985821,8985825								
Acenaphthene	0.00100	0.00102	0.00100	0.00106	102	106	66-132	4	30
Acenaphthylene	0.00100	0.000863	0.00100	0.000921	86	92	60-110	7	30
Anthracene	0.00100	0.000851	0.00100	0.000946	85	95	59-119	11	30
Benzo(a)anthracene	0.00100	0.000909	0.00100	0.000955	91	95	58-130	5	30
Benzo(a)pyrene	0.00100	0.000794	0.00100	0.000858	79	86	60-124	8	30
Benzo(b)fluoranthene	0.00100	0.000878	0.00100	0.000967	88	97	64-128	10	30
Benzo(g,h,i)perylene	0.00100	0.000790	0.00100	0.000859	79	86	50-123	8	30
Benzo(k)fluoranthene	0.00100	0.000790	0.00100	0.000848	79	85	62-123	7	30
Chrysene	0.00100	0.000877	0.00100	0.000938	88	94	68-113	7	30
Dibenz(a,h)anthracene	0.00100	0.000807	0.00100	0.000881	81	88	46-133	9	30
Fluoranthene	0.00100	0.000807	0.00100	0.00101	81	101	69-112	23	30
Fluorene	0.00100	0.000971	0.00100	0.00102	97	102	66-110	5	30
Indeno(1,2,3-cd)pyrene	0.00100	0.000779	0.00100	0.000857	78	86	52-122	9	30
Naphthalene	0.00100	0.000765	0.00100	0.000796	77	80	48-115	4	30
Phenanthrene	0.00100	0.000871	0.00100	0.000937	87	94	60-120	7	30
Pyrene	0.00100	0.000846	0.00100	0.000901	85	90	52-124	6	30
	mg/l	mg/l	mg/l	mg/l					
Batch number: 17135B20A	Sample number(s): 8985816-8985826								
TPH-GRO AK water C6-C10	1.10	0.999	1.10	0.986	91	90	60-120	1	20
	mg/l	mg/l	mg/l	mg/l					
Batch number: 171310022A	Sample number(s): 8985816-8985825								
DRO C10-C25	4.00	3.41	4.00	3.13	85	78	75-125	9	20

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 8260B Water
Batch number: D171321AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
8985816	97	95	100	97
8985817	97	97	100	101
8985818	97	93	100	99
8985819	98	99	99	97
8985820	97	97	100	99
8985821	95	95	100	99
8985822	92	92	102	100
8985823	94	95	101	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.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: ChevronTexaco
Reported: 05/24/2017 13:30

Group Number: 1799538

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 8260B Water
Batch number: D171321AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
8985824	96	94	100	99
8985825	96	98	99	100
8985826	98	97	100	98
Blank	99	95	99	98
LCS	98	99	100	101
LCSD	97	99	100	101
Limits:	80-116	77-113	80-113	78-113

Analysis Name: SIM SVOAs 8270D, water
Batch number: 17130WAL026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
8985817	70	70	94
8985820	85	90	88
8985821	80	50	103
8985825	78	74	103
Blank	80	86	71
LCS	79	81	77
LCSD	94	90	81
Limits:	51-135	29-140	45-119

Analysis Name: TPH-GRO AK water C6-C10
Batch number: 17135B20A

	Trifluorotoluene-F
8985816	91
8985817	95
8985818	90
8985819	90
8985820	103
8985821	95
8985822	90
8985823	91
8985824	89
8985825	97
8985826	86
Blank	91
LCS	91
LCSD	87
Limits:	60-120

Analysis Name: AK 102-SV DRO
Batch number: 171310022A

*- 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.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: ChevronTexaco
Reported: 05/24/2017 13:30

Group Number: 1799538

Surrogate Quality Control (continued)

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

Analysis Name: AK 102-SV DRO
Batch number: 171310022A

	Orthoterphenyl
8985816	65
8985817	82
8985818	82
8985819	77
8985820	66
8985821	74
8985822	80
8985823	83
8985824	81
8985825	51
Blank	74
LCS	92
LCSD	89
Limits:	50-150

*- 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.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Chevron Generic Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

Acct. # 10880 — For Eurofins Lancaster Laboratories Environmental use only — Group # 1799538 Sample # 8985816026

Instructions on reverse side correspond with circled numbers.

1 Client Information

Facility # CHEVRON 96097 — WBS 08.02

Site Address 303 W. FIREWEED LANE, ANCHORAGE, AK

Chevron PM DAN CARRIER — Lead Consultant GHD SERVICES, INC.

Consultant/Office 645 G STREET, STE 401, ANCHORAGE, AK

Consultant Project Mgr. SIOBHAN PRITCHARD

Consultant Phone # (720) 974-0163

Sampler O.YAN / D.TRUDEAU / T.WEAVER

4 Matrix

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

5 Analyses Requested

SCR #: _____

- ☐ 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

2 Sample Identification	Collected Date	Collected Time	3 Grab	Composite	Total Number of Containers	BTEX + ~~MTBE~~ 8021 ☐ 8260 ☒ Naphth ☐	8260 full scan	Oxygenates ___	TPH-GRO 8015 ☐ 8260 ☐ AK101	TPH-DRO without Silica Gel Cleanup ☐ AK102	TPH-DRO with Silica Gel Cleanup ☐	VPH ☐ EPH ☐ Method ___	Lead Total ☐ Diss. ☐ Method ___	PAHs by 8270
MW-4R-W-170508	05/08/17	1038	X		8	X			X	X				
MW-5-W-170508	5/8/17	1110	X		10	X			X	X				X
MW-6-W-170508	5/8/17	1145	X		8	X			X	X				
MW-8-W-170508	5/8/17	1220	X		8	X			X	X				
MW-9-W-170508	5/8/17	1055	X		10	X			X	X				X
MW-10-W-170508	5/8/17	1135	X		10	X			X	X				X
MW-12-W-170508	5/8/17	1240	X		8	X			X	X				
MW-13-W-170508	5/8/17	1210	X		8	X			X	X				
MW-14-W-170508	5/8/17	1202	X		8	X			X	X				
~~MW-16-W-170508~~ TW 5/8/17	5/8/17	0910	X											
DUP-1-W-170508	5/8/17	—	X		10	X			X	X				X
QA-1-W-170508	5/8/17	—			4	X			X					

6 Remarks

email results to:
siobhan.pritchard@ghd.com

7 Turnaround Time Requested (TAT) (please circle)

Standard — 5 day — 4 day — 72 hour — 48 hour — 24 hour

8 Data Package (circle if required)

Type I - Full — Alaska/Type III — Type VI (Raw Data)

EDD (circle if required)

CVX-RTBU-FI_05 (default)

Other: _____

Relinquished by	Date	Time	Received by	Date	Time
	5/9/17	1245			9
Relinquished by	Date	Time	Received by	Date	Time

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____

Received by — Date 5/10/17 — Time 930

Temperature Upon Receipt 1.2 - 4.7°C

Custody Seals Intact? Yes No

eurofins | Lancaster Laboratories Environmental

Sample Administration Receipt Documentation Log

Doc Log ID: 183297

Group Number(s): 1799538

Client: Chevron

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	05/10/2017 9:30
Number of Packages:	3	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 ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	4
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Simon Nies (25112) at 16:41 on 05/10/2017

Samples Chilled Details

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

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	32170023	4.7	IR	Wet	Y	Bagged	N
2	DT121	2.0	DT	Wet	Y	Bagged	N
3	DT121	1.2	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425

T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

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

BMQL	Below Minimum Quantitation Level	**mg**	milligram(s)
C	degrees Celsius	**mL**	milliliter(s)
cfu	colony forming units	**MPN**	Most Probable Number
CP Units	cobalt-chloroplatinate units	**N.D.**	none detected
F	degrees Fahrenheit	**ng**	nanogram(s)
g	gram(s)	**NTU**	nephelometric turbidity units
IU	International Units	**pg/L**	picogram/liter
kg	kilogram(s)	**RL**	Reporting Limit
L	liter(s)	**TNTC**	Too Numerous To Count
lb.	pound(s)	**µg**	microgram(s)
m3	cubic meter(s)	**µL**	microliter(s)
meq	milliequivalents	**umhos/cm**	micromhos/cm

<	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.

Laboratory Data Qualifiers:

C - Result confirmed by reanalysis
E - Concentration exceeds the calibration range
J (or G, I, X) - estimated value ≥ the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P - Concentration difference between the primary and confirmation column >40%. The lower result is reported.
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.

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.

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.

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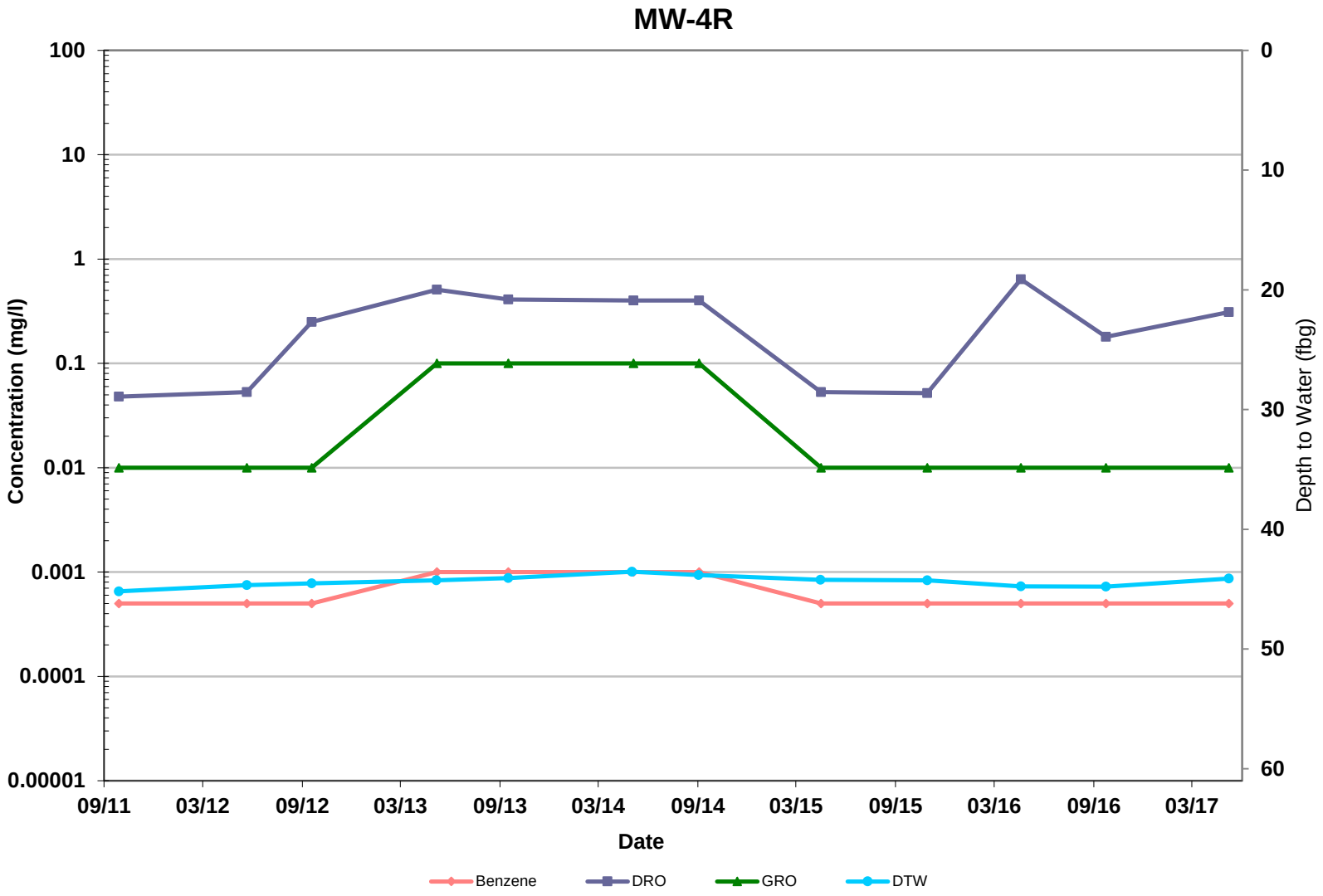
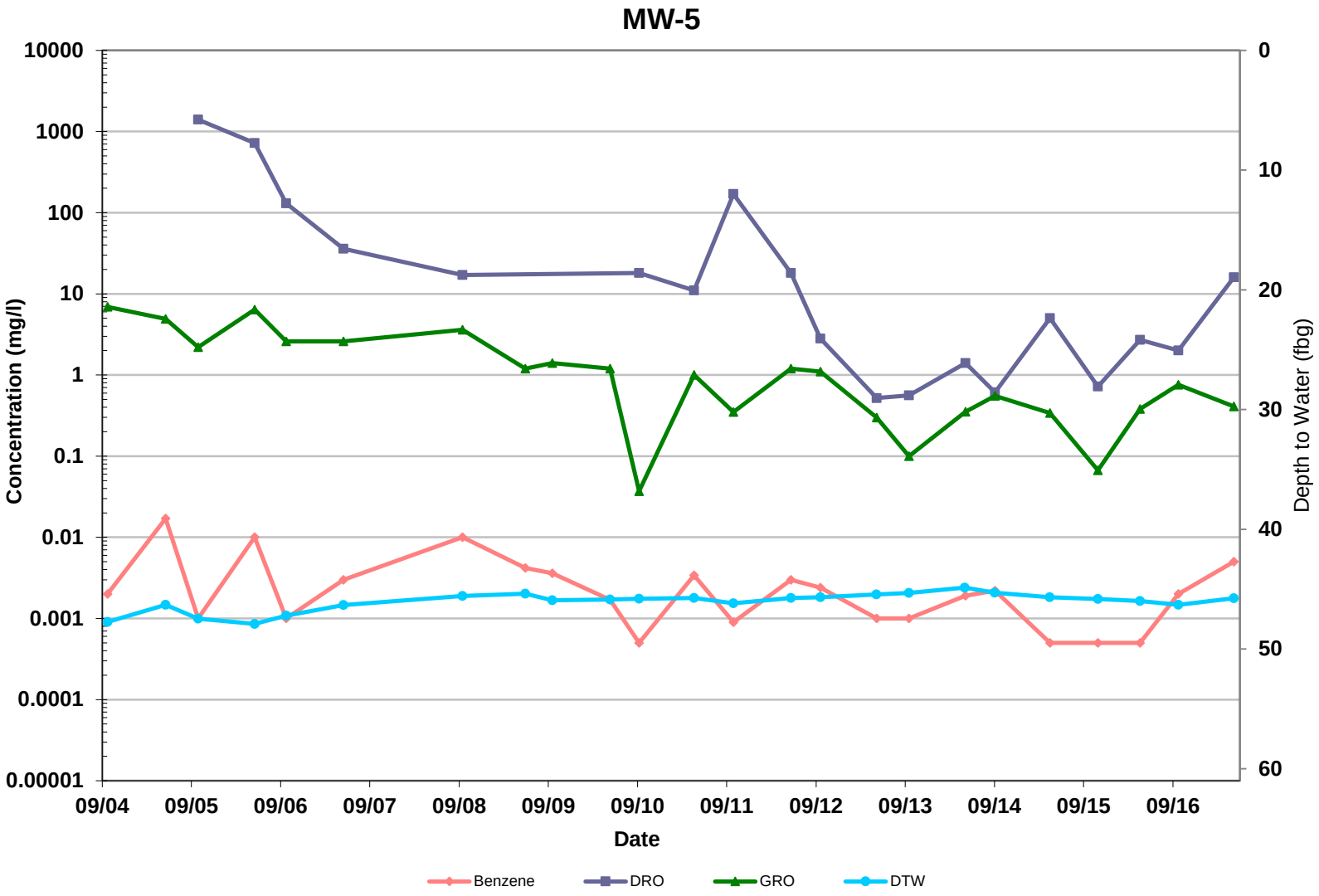
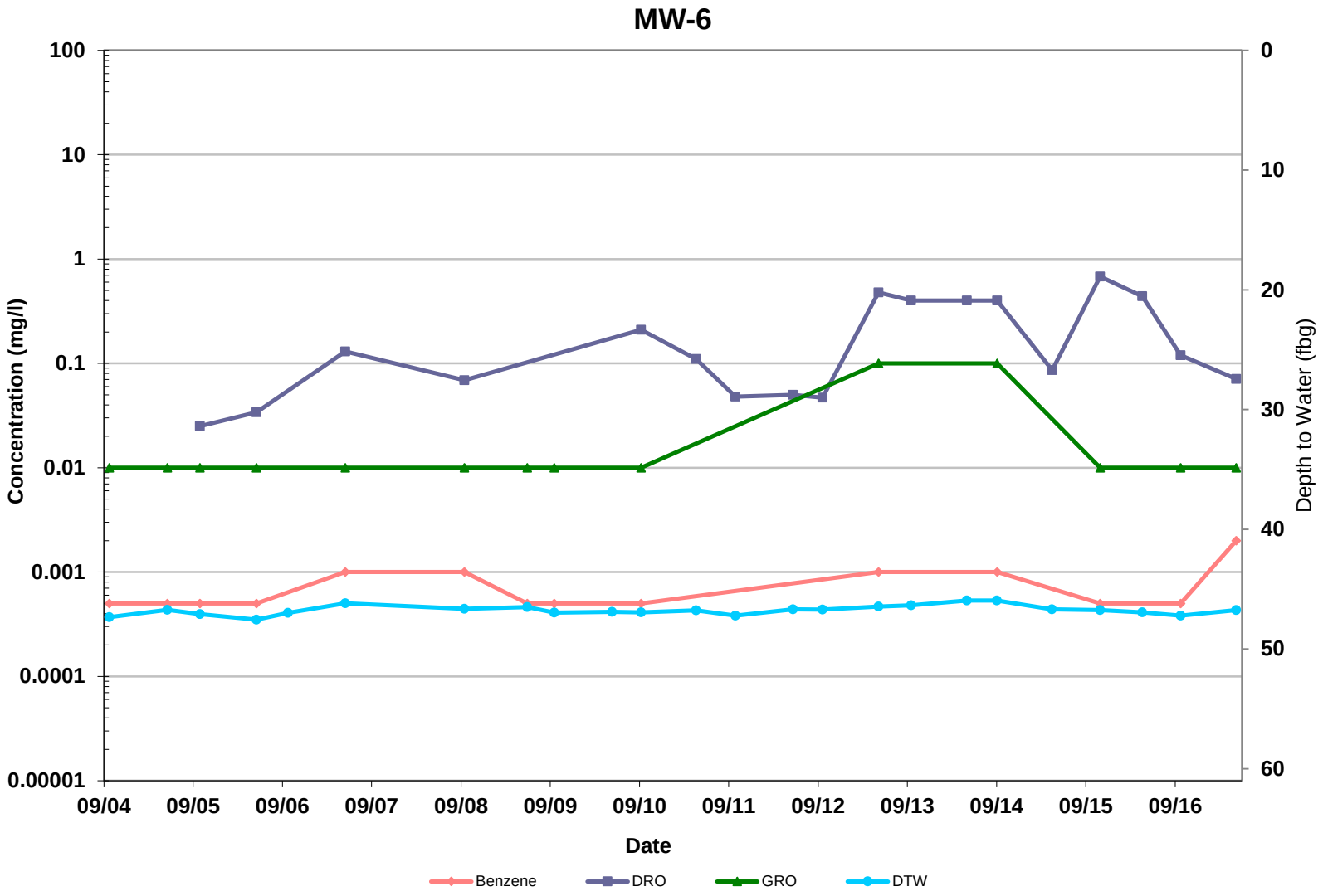
Appendix E
Petroleum Hydrocarbon Concentration Graphs



Former Chevron-Branded Service Station 96097
303 W. Fireweed Ln.
Anchorage, Alaska

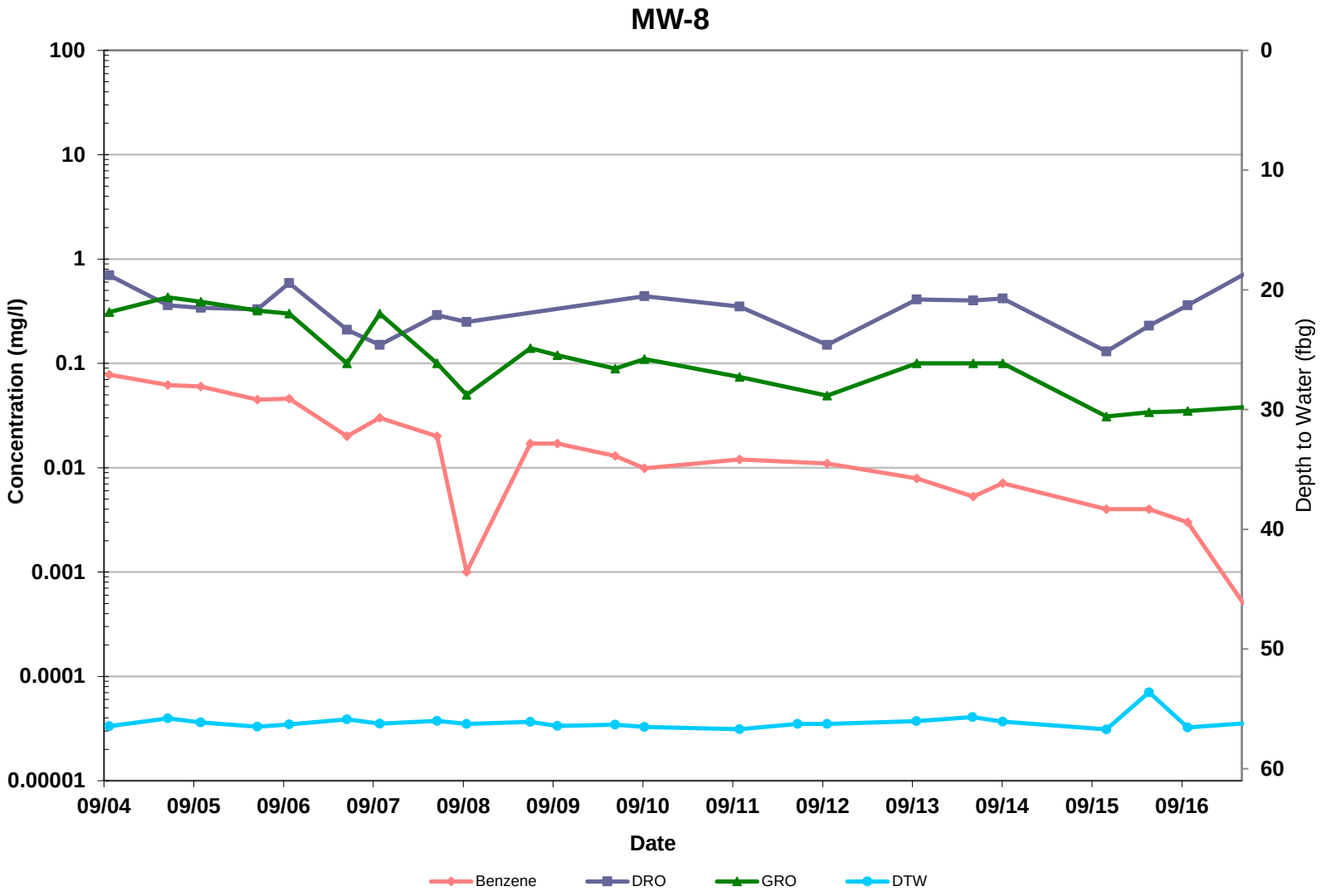


Former Chevron-Branded Service Station 96097
303 W. Fireweed Ln.
Anchorage, Alaska

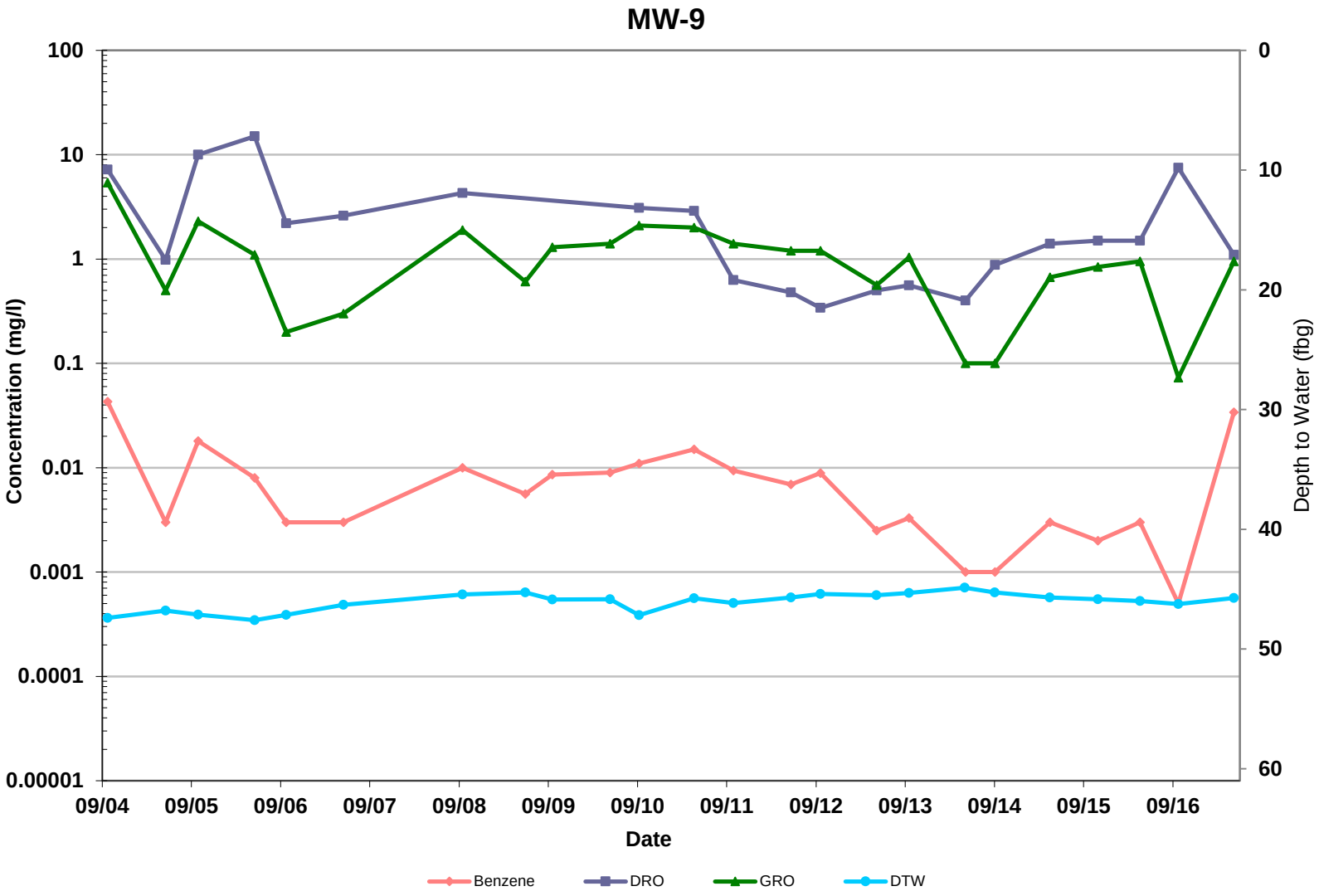


GHD

Former Chevron-Branded Service Station 96097
303 W. Fireweed Ln.
Anchorage, Alaska

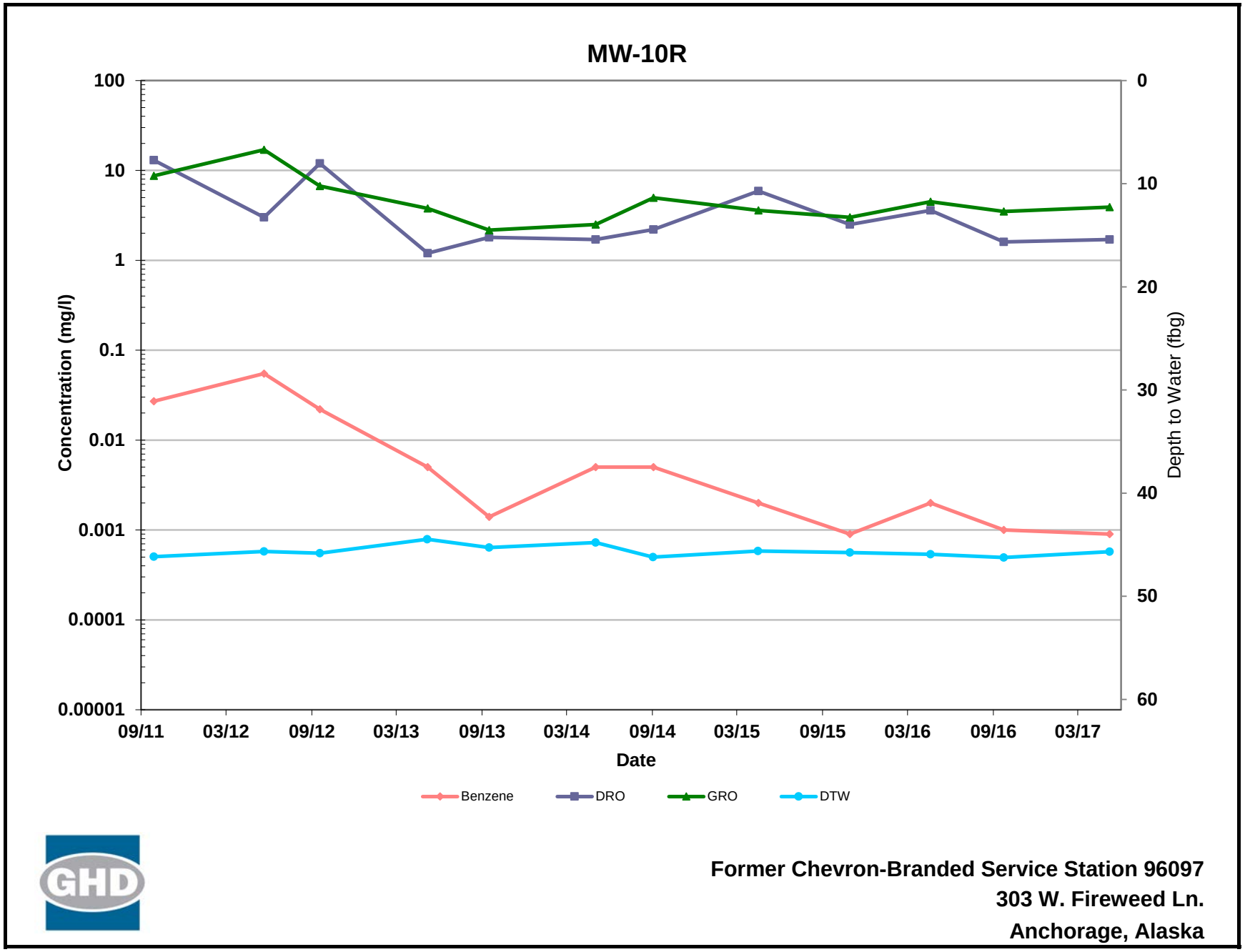


Former Chevron-Branded Service Station 96097
303 W. Fireweed Ln.
Anchorage, Alaska



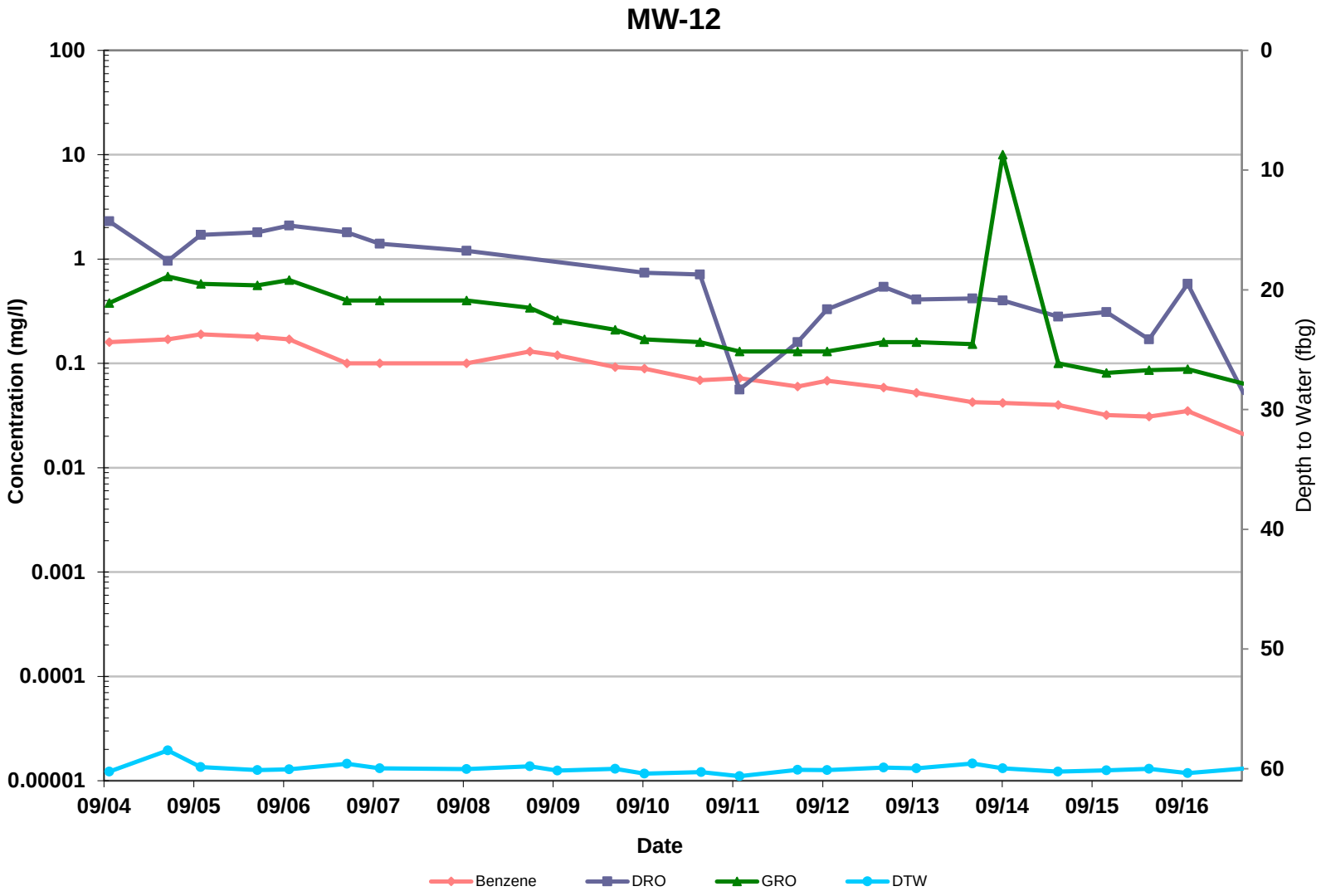
GHD

Former Chevron-Branded Service Station 96097
303 W. Fireweed Ln.
Anchorage, Alaska



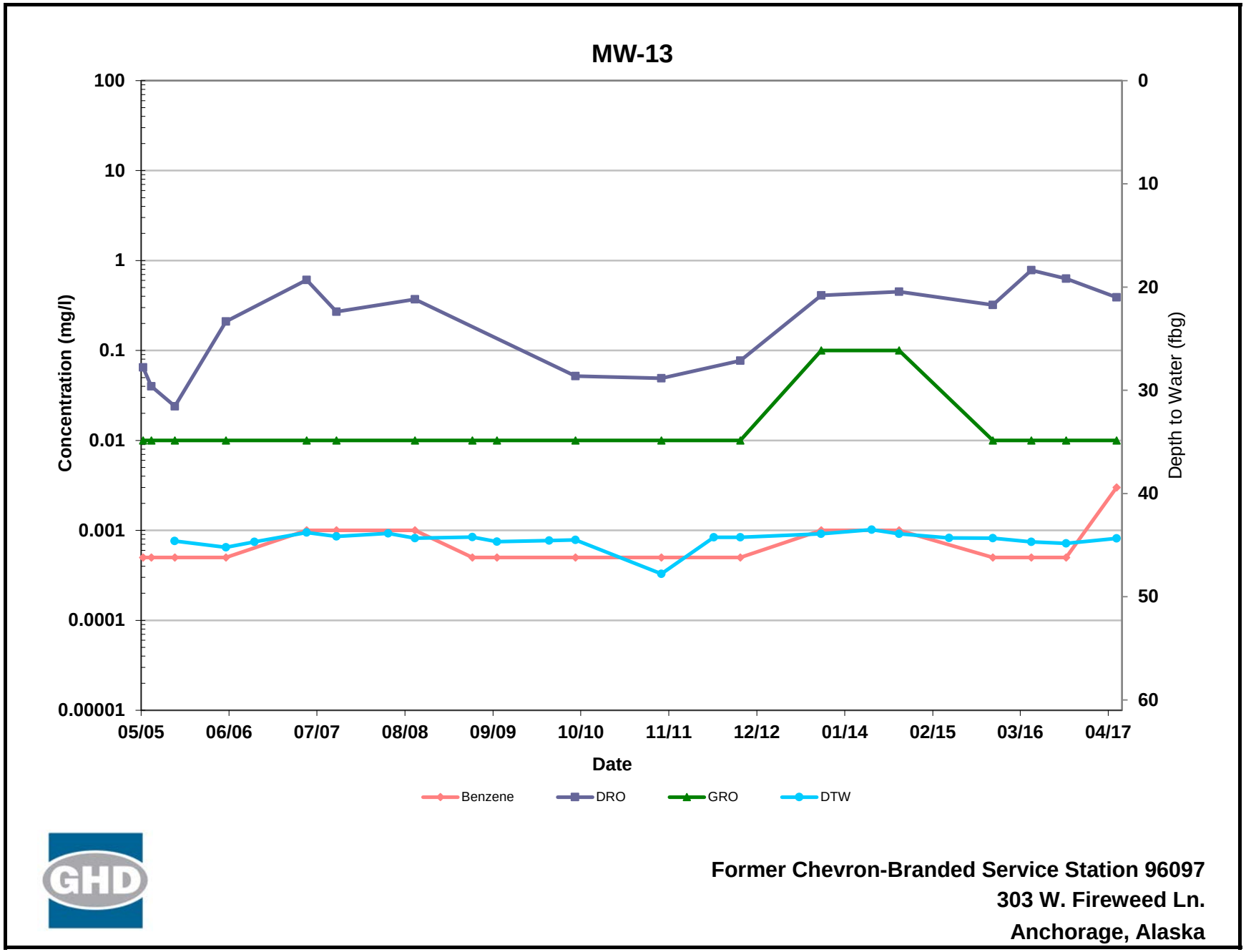
GHD

Former Chevron-Branded Service Station 96097
303 W. Fireweed Ln.
Anchorage, Alaska

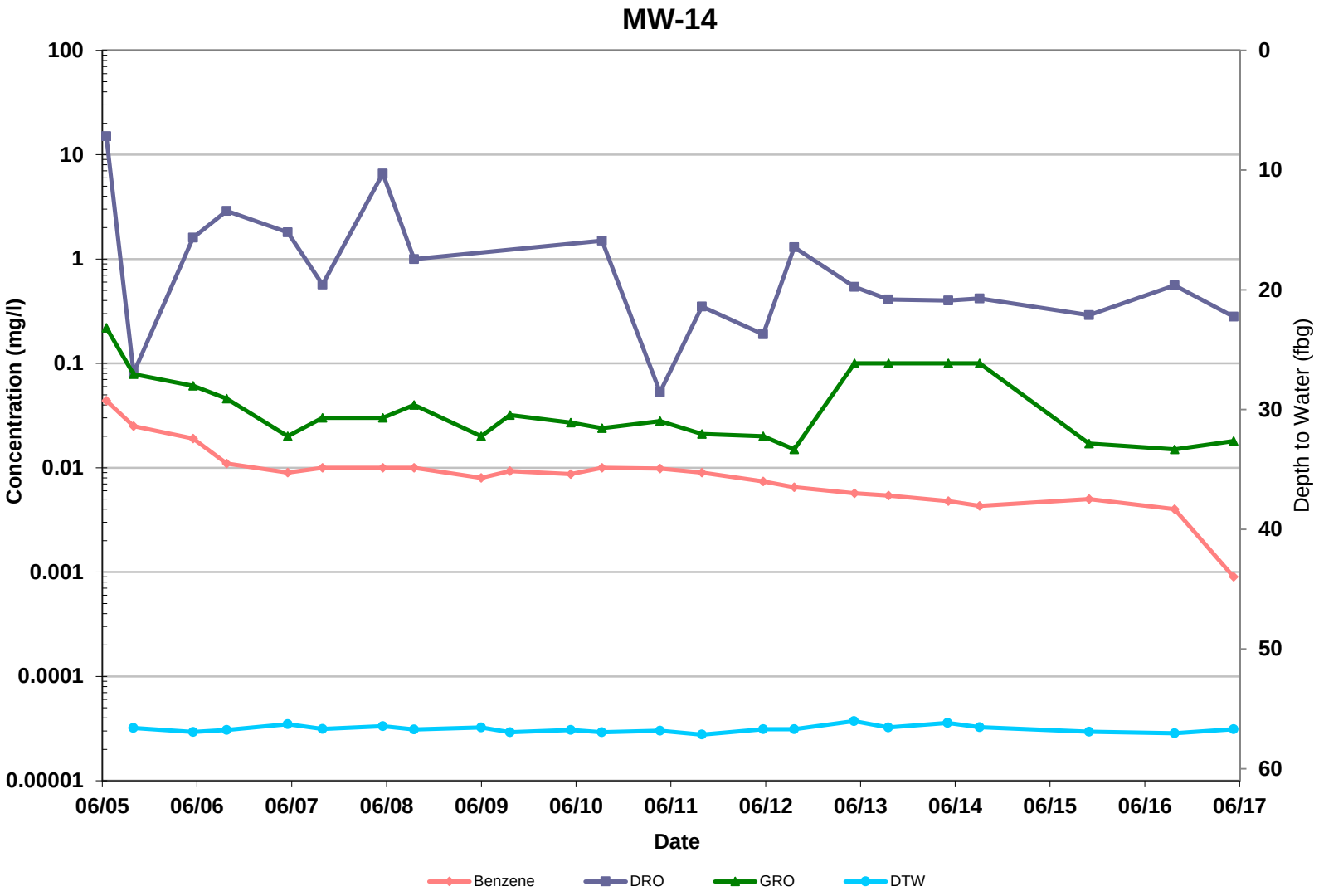


GHD

Former Chevron-Branded Service Station 96097
303 W. Fireweed Ln.
Anchorage, Alaska

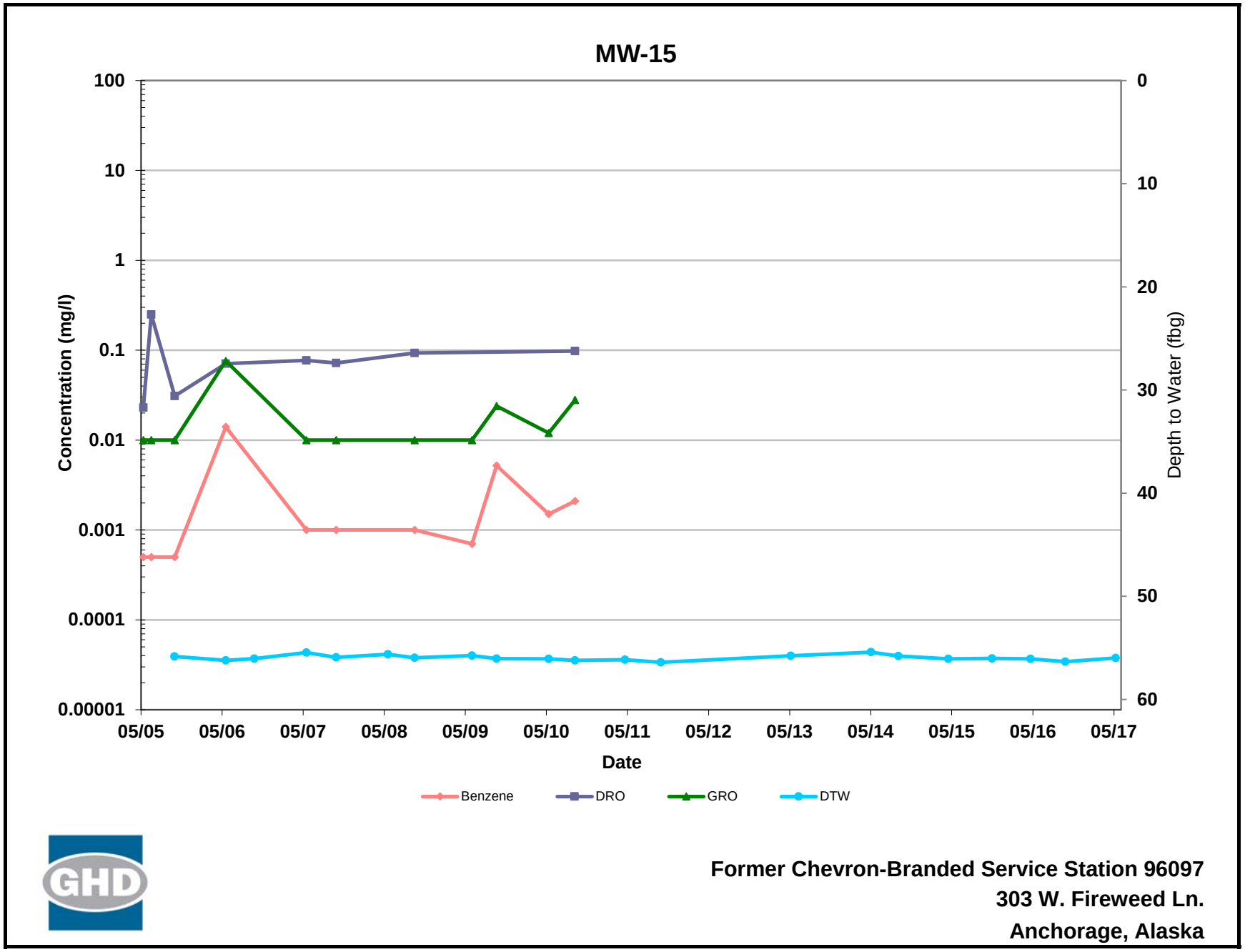


Former Chevron-Branded Service Station 96097
303 W. Fireweed Ln.
Anchorage, Alaska



GHD

Former Chevron-Branded Service Station 96097
303 W. Fireweed Ln.
Anchorage, Alaska



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Former Chevron-Branded Service Station 96097
303 W. Fireweed Ln.
Anchorage, Alaska

Appendix F
ADEC Laboratory Data Review Checklist and Memorandum

Laboratory Data Review Checklist

Completed by:

J Cloud

Title:

Project Chemist

Date:

May 08, 2017

CS Report Name:

First Semiannual 2017 Groundwater Monitoring Report

Report Date:

May 24, 2017

Consultant Firm:

GHD Services Inc.

Laboratory Name:

Eurofins Lancaster Laboratories Environmental

Laboratory Report Number:

1799538

ADEC File Number:

2100.26.007

Hazard Identification Number:

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:

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

      (•) Yes ( ) No Comments:

   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:

      No discrepancies

e. Data quality or usability affected?

Comments:

None

4. Case Narrative

a. Present and understandable?

(•) Yes ( ) No Comments:

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

( ) Yes (•) No Comments:

No discrepancies

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:

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:

None

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 metals/inorganics

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)

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

Where R_1 = Sample Concentration
R_2 = Field Duplicate Concentration

○ Yes ◉ No Comments:

Several analytes had high RPDs

iv. Data quality or usability affected?

Comments:

The benzene, toluene, ethylbenzene, benzo(a)anthracene, phenanthrene and DRO results for samples MW-5 and DUP-1 were qualified as estimated due to variability

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:

Not collected

ii. If above LOQ, what samples are affected?

Comments:

Not collected

iii. Data quality or usability affected?

Comments:

Not collected

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

a. Defined and appropriate?

◉ Yes ○ No Comments:

Memorandum

June 22, 2017

To:	ADEC	Ref. No.:	062328
From:	Jeffrey Cloud	Tel:	206-914-3141
cc:	Siobhan Pritchard		

Subject: **QA/QC Review**
ChevronTexaco Site 96097
Job # 1799538
May 2017

1. Introduction

This document details a reduced validation of analytical results for groundwater samples collected in Anchorage, Alaska during May 2017. 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 (LCS) 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 document entitled "USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review", USEPA 540-R-08-01, June 2008 subsequently 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.

All samples were properly preserved, delivered on ice, and stored by the laboratory at the required temperature (0-6°C).

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 - Organic Analyses

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 volatile organic compound (VOC), semivolatile organic compound (SVOC), gasoline range organics (GRO) and diesel range organics (DRO) analysis were spiked with the appropriate number of surrogate compounds prior to sample extraction and/or analysis.

Each individual surrogate compound is expected to meet the associated control limits with the exception of SVOC analyses. According to the "Guidelines" for SVOC analyses, up to one outlying surrogate in the base/neutral or acid fractions is acceptable as long as the recovery is at least 10 percent.

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/LCSD were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

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

6. Field QA/QC Samples

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

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, one field duplicate sample was collected and submitted "blind" to the laboratory. The RPDs associated with the duplicate sample 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 with a few exceptions. The benzene, toluene, ethylbenzene, benzo(a)anthracene, phenanthrene and DRO results for samples MW-5 and DUP-1 were qualified as estimated due to variability.

7. Analyte Reporting

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

8. Conclusion

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