# Transmittal

Date: December 1, 2017 Reference No.: 620518 / Chevron 94115

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

Subject: ADEC File ID 2100.26.012

| No. of Copies | Description/Title | Drawing No./ Document Ref. | Issue |
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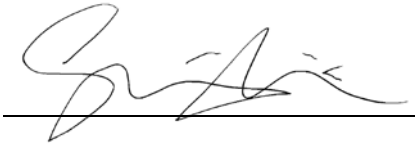
Remarks:

Should you have any questions or require additional information, please contact Siobhan Pritchard at (720) 974-0935

Copy to: Dan Carrier (*electronic copy*)
Kurt Imig

Completed by: Siobhan Pritchard [Please Print] Signed: 

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# Second Semiannual 2017 Groundwater Monitoring Report

Former Chevron-Branded Service Station 94115
11460 Old Seward Highway
Anchorage, Alaska
ADEC File ID: 2100.26.012
Hazard ID: 24094

Chevron Environmental Management Company

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

620518 | 95 | 2SA17 | Report No 44 | December 1, 2017

# Second Semiannual 2017 Groundwater Monitoring Report

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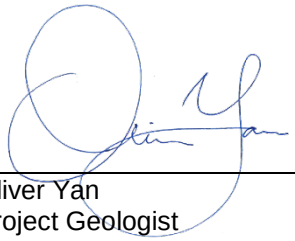
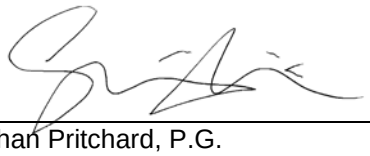
Jeffrey Cloud
Chemist



Oliver Yan
Project Geologist



Siobhan Pritchard, P.G.
Senior Project Geologist

# Table of Contents



# Figure Index



# Table Index

# Appendix Index



# Acronyms and Abbreviations

| | |
|---|---|
| AAC | Alaska Administrative Code |
| ADEC | Alaska Department of Environmental Conservation |
| COPCs | contaminants of potential concern |
| CSM | conceptual site model |
| DRO | diesel range organics |
| EPA | Environmental Protection Agency |
| ft btoc | feet below top of casing |
| GRO | gasoline range organics |
| mg/L | milligrams per liter |
| mg/kg | milligrams per kilogram |
| No | number |
| PAHs | polynuclear aromatic hydrocarbons |
| P.G. | Professional Geologist |
| USTs | underground storage tanks |
| VOC | volatile organic compound |

# 1. Introduction

GHD is submitting this *Second Semiannual 2017 Groundwater Monitoring Report* to the Alaska Department of Environmental Conservation (ADEC) on behalf of Chevron Environmental Management Company (Chevron) for the former Chevron-branded service station 94115. GHD performed monitoring and sampling in accordance with the ADEC's August 2017 *Field Sampling Guidance*. 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 11460 Old Seward Highway in a mixed commercial and residential area of Anchorage, Alaska (Figure 1). The property's legal description is T12N, R3W, Section 19, and Parcel 7. The latitude and longitude are 61.11702° north and 149.86357° west. The site is a former Chevron-branded service station currently occupied by BB's Coffee Shop. The station operated from 1963 to 2008. Station facilities included three gasoline underground storage tanks (USTs), product lines and dispensers, a station building including three service bays, a used oil aboveground storage tank, a propane tank, office, storage shed and two storage trailers. All station facilities were removed and the service station demolished in January 2008.

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

Two onsite wells are monitored and sampled semiannually and three offsite wells are monitored and sampled quarterly (Figure 2). Two offsite potable water wells are located directly north (PSW29-1) and west (Wilson-1) of the site property. One potable water well is sampled semiannually. 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. Historical static groundwater depths have ranged between 31.40 to 45.48 feet below top of casing (ft btoc) according to groundwater data from 1995 to present. Static groundwater depths ranged from 39.09 (MW-15RR) to 43.29 ft btoc (MW-17) on September 14, 2017. Groundwater flow was to the north with a gradient of 0.01 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 |

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

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

# 2. Groundwater Monitoring and Sampling

GHD gauged and sampled groundwater monitoring wells MW-11R, MW-15RR, MW-16, MW-17, MW-18, and MW-19 on September 14, 2017, with the exception of MW-16 which was not sampled per the approved sampling plan. GHD was unable to locate wells MW-1R and MW-4R. Grab groundwater sample was collected from offsite potable well PSW29-1 on September 14, 2017. GHD monitoring data package is presented in Appendix C.

## 2.1 Low Flow Purging and Sampling

Each monitoring well was opened and the cap removed to allow groundwater levels to stabilize and equilibrate, prior to gauging. Depth to groundwater and total well depth was measured and recorded with a water level meter capable of 0.01 foot accuracy. A QED™ Sample Pro bladder pump with a self-contained compressor and control unit was used to purge groundwater from the well. Clean, disposable Teflon lined tubing and a bladder was used to purge the well and collect samples to minimize the risk of volatile contaminant absorption by the sampling equipment. Drawdown of the water table was continuously monitored during purging with a water level meter and the flow rate of the pump was adjusted so that drawdown was limited to 0.1 meter, or 0.3 feet. The intake of the pump was set as close as possible to the soil/groundwater interface and caution was exercised to ensure that the water table was within the screened interval of the well. Water quality parameters were continuously monitored during purging using a multi-parameter water quality meter equipped with a flow through cell and a turbidity meter. Water quality parameters

were recorded every 3 to 5 minutes until a minimum of three (minimum of four if using temperature as an indicator) of the parameters listed below stabilized. A grab-groundwater sample was collected upon stabilization. Water quality parameters are considered stable when three successive readings are within the following ADEC limits:

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

## 2.2 Data Quality

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

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

## 2.3 Purged Groundwater Disposal

Approximately 4.1 gallons of purged groundwater were filtered through granular activated carbon and purged to the ground surface near the northeast corner of the property to ensure no offsite runoff.

# 3. Results and Findings

## 3.1 Groundwater Analytical Methods

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

- DRO by Alaska Series Method AK102
- GRO by Alaska Series Method AK101
- Full Scan VOC's by SW-846 8260B and Environmental Protection Agency (EPA) Method 524.2

## 3.2 Groundwater Sampling Results

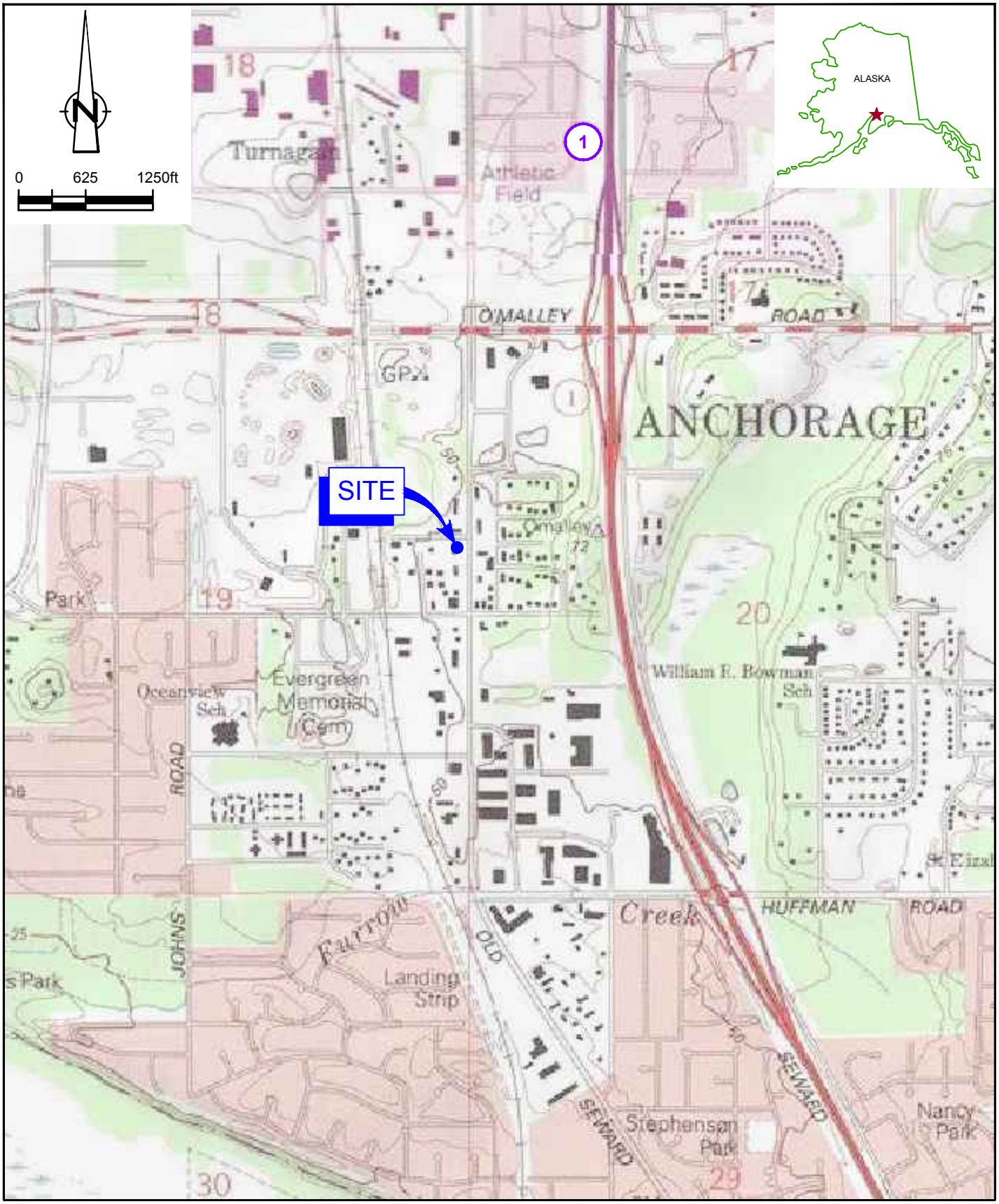
No DRO, GRO or VOCs were detected above ADEC Table C Groundwater Cleanup Levels in any of the collected samples. No hydrocarbon concentrations were detected in the potable well sample from PSW29-1. MW-11R contained the highest concentrations of DRO (0.079 milligrams per liter (mg/L)) and GRO (0.091 mg/L). Current groundwater analytical data is presented in Table 1. Historical groundwater analytical data is presented in Table 2. Historical polynuclear aromatic hydrocarbons (PAH) analytical data is presented in Table 3. The laboratory analytical report is presented in Appendix D. 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 Data Review Checklist and memorandum are presented in Appendix F.

# 4. Conclusions

No petroleum hydrocarbons were detected above ADEC Table C Groundwater Cleanup Levels in any wells. Petroleum hydrocarbons have not been detected above cleanup levels in seven consecutive sampling events. Based on review of historical groundwater monitoring data, hydrocarbon concentrations in groundwater are stable and continue to be below cleanup levels. Furthermore, previous soil exceedances have been confirmed below migration to groundwater cleanup levels; therefore there is no risk to human health or the environment. GHD submitted the June 13, 2017 *Cleanup Complete Request* report to ADEC and in a September 28, 2017 correspondence, ADEC recommended the site for closure. GHD has suspended all groundwater monitoring and sampling. As requested, GHD will prepare and submit a *Well Decommissioning Work Plan* to ADEC. Once approved, GHD will schedule well decommissioning of all onsite and offsite wells.

# Figures




SOURCE: TOPO! MAPS

FORMER CHEVRON-BRANDED SERVICE STATION 94115
11460 OLD SEWARD HIGHWAY
ANCHORAGE, ALASKA

620518-95
Nov 1, 2017

VICINITY MAP

FIGURE 1

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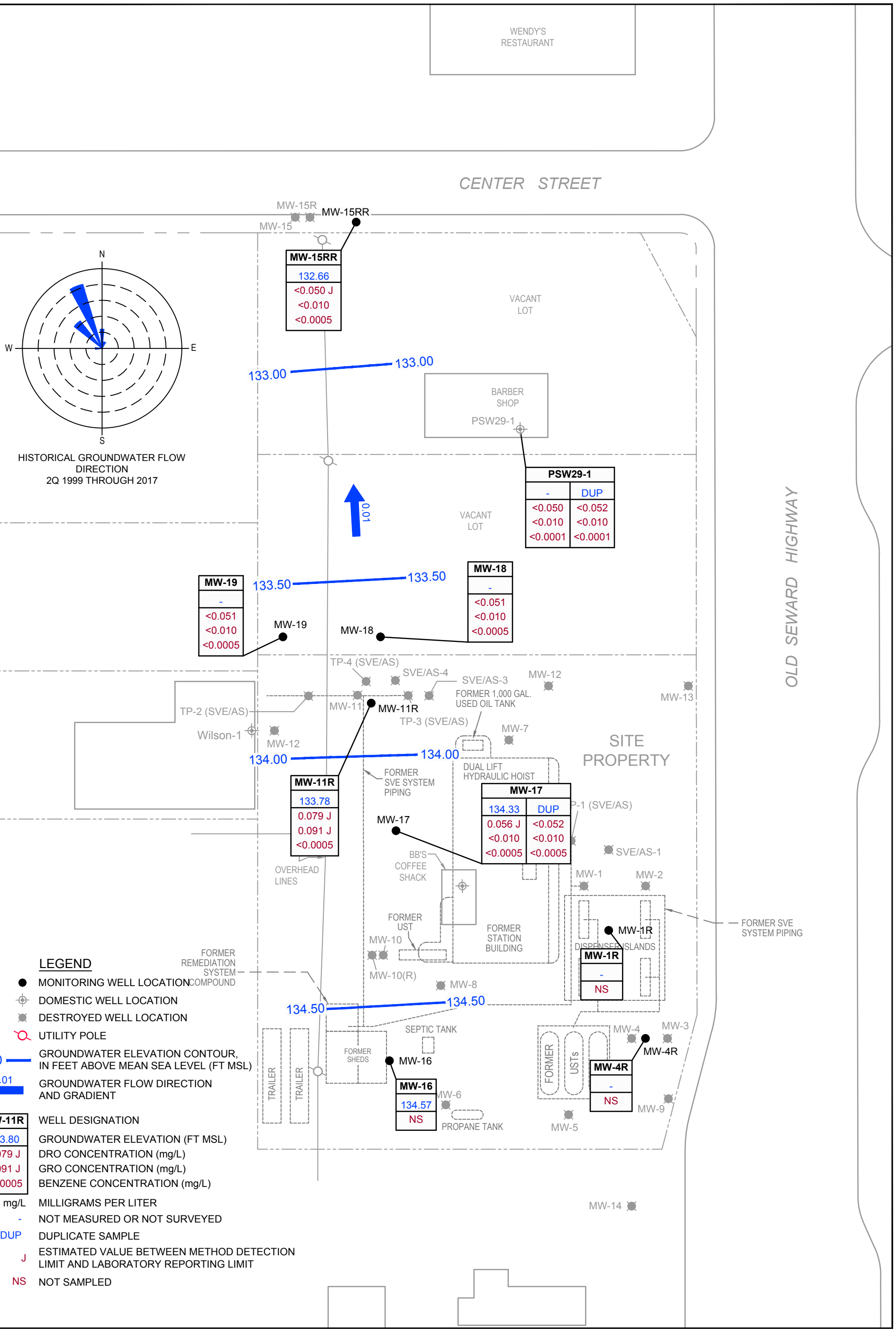


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FORMER CHEVRON-BRANDED SERVICE STATION 94115
11460 OLD SEWARD HIGHWAY
ANCHORAGE, ALASKA

# GROUNDWATER ELEVATION CONTOUR AND HYDROCARBON CONCENTRATION MAP - SEPTEMBER 14, 2017

620518-95

Dec 7, 2017

FIGURE 2

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# Tables

**Table 1**

**Current Groundwater Analytical Results**
**Former Chevron-Branded Service Station 94115**
**11460 Old Seward Highway**
**Anchorage, Alaska**

| | | | | | HYDROCARBONS | | PRIMARY VOCS | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Location** | **Date** | **TOC** | **DTW** | **GWE** | **DRO** | **GRO** | **Benzene** | **Toluene** | **Ethylbenzene** | **Total Xylenes** |
| | **Units** | **ft msl** | **ft btoc** | **ft msl** | **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** |
| MW-1R | 09/14/2017[1] | 178.46 | - | - | - | - | - | - | - | - |
| MW-4R | 09/14/2017[1] | 177.72 | - | - | - | - | - | - | - | - |
| MW-11R | 09/14/2017 | 176.91 | 43.13 | 133.78 | 0.079 J | 0.091 J | <0.0005 | <0.0005 | <0.0005 | <0.0005 |
| MW-15RR | 09/14/2017 | 171.75 | 39.09 | 132.66 | <0.050 J | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0005 |
| MW-16 | 09/14/2017[3] | 177.05 | 42.48 | 134.57 | - | - | - | - | - | - |
| MW-17 | 09/14/2017 | 177.62 | 43.29 | 134.33 | 0.056 J / <0.052 | <0.010 / <0.010 | <0.0005 / <0.0005 | <0.0005 / <0.0005 | <0.0005 / <0.0005 | <0.0005 / <0.0005 |
| MW-18 | 09/14/2017 | - | 42.61 | - | <0.051 | <0.010 | <0.0005 | <0.0005 | 0.0007 J | <0.0005 |
| MW-19 | 09/14/2017 | - | 42.86 | - | <0.051 | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0005 |
| PSW29-1 | 09/14/2017[4] | - | - | - | <0.050 / <0.052 | <0.010 / <0.010 | <0.0001 / <0.0001 | <0.0001 / <0.0001 | <0.0001 / <0.0001 | <0.0003 / <0.0003 |
| Trip Blank | 09/14/2017 | - | - | - | - | <0.010 | <0.0001 / < 0.0005 | 0.0003 J / 0.0006 J | <0.0001 / <0.0005 | <0.0003 / <0.0005 |

**Table 1**

**Current Groundwater Analytical Results**
**Former Chevron-Branded Service Station 94115**
**11460 Old Seward Highway**
**Anchorage, Alaska**

**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 Environmental Protection Agency (EPA) Method 8021B or 8260B or 524.2

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

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

J = Estimated Concentration

R = Rejected

- = Not Measured/Not Analyzed

<x = Constituent not detected above x milligrams per liter

x / y = Sample Results / Blind Duplicate Results

[1] = Unable to Locate

[2] = Well Obstruction

[3] = Gauge only

[4] = Faucet

**Table 2**

**Historical Groundwater Analytical Results**
**Former Chevron-Branded Service Station 94115**
**11460 Old Seward Highway**
**Anchorage, Alaska**

| | | | | | HYDROCARBONS | | | PRIMARY VOCS | | | | | ADDITIONAL VOCS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | Date | TOC | DTW | GWE | TPH | DRO | GRO | Benzene | Toluene | Ethylbenzene | Total Xylenes | MTBE | HVOC |
| | Units | ft msl | ft btoc | ft msl | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l |
| | ADEC Groundwater Cleanup Levels 2016[a] | | | | 1.5 | 1.5 | 2.2 | 0.0046 | 1.1 | 0.015 | 0.19 | 0.14 | |
| MW-1 | 12/21/1994 | - | 42.53 | - | - | - | - | - | - | - | - | - | - |
| MW-1 | 03/14/1995 | - | 43.60 | - | - | - | - | - | - | - | - | - | - |
| MW-1 | 06/21/1995 | - | 42.24 | - | - | - | - | - | - | - | - | - | - |
| MW-1 | 09/06/1995 | - | 41.87 | - | - | - | - | - | - | - | - | - | - |
| MW-1 | 11/15/1995 | - | 41.47 | - | - | - | - | - | - | - | - | - | - |
| MW-1 | 01/29/1996 | - | 41.68 | - | - | - | **350** | **1.0** | **9.0** | **4.0** | **28** | - | - |
| MW-1 | 06/02/1996 | - | 42.11 | - | - | - | - | - | - | - | - | - | - |
| MW-1 | 08/22/1996 | - | 42.54 | - | - | - | - | - | - | - | - | - | - |
| MW-1 | 10/17/1996 | - | 42.69 | - | - | - | - | - | - | - | - | - | - |
| MW-1 | 04/28/1997 | - | 43.49 | - | - | - | - | - | - | - | - | - | - |
| MW-1 | 09/06/1997 | - | 43.22 | - | - | - | - | - | - | - | - | - | - |
| MW-1 | 04/15/1998 | - | 43.26 | - | - | - | 0.922 | 0.000960 | 0.00111 | 0.0116 | 0.0935 | - | - |
| MW-1 | 09/22/1998 | 178.43 | 43.00 | 135.43 | - | - | - | - | - | - | - | - | - |
| MW-1 | 05/01/1999 | 178.43 | DRY | - | - | - | - | - | - | - | - | - | - |
| MW-1 | 10/16/1999 | 178.43 | DRY | - | - | - | - | - | - | - | - | - | - |
| MW-1 | 05/16/2000 | 178.43 | DRY | - | - | - | - | - | - | - | - | - | - |
| MW-1 | 09/26/2000 | 178.43 | DRY | - | - | - | - | - | - | - | - | - | - |
| MW-1 | 05/08/2001 | 178.43 | DRY | - | - | - | - | - | - | - | - | - | - |
| MW-1 | 10/01/2001 | 178.43 | DRY | - | - | - | - | - | - | - | - | - | - |
| MW-1 | 05/07/2002 | 178.43 | DRY | - | - | - | - | - | - | - | - | - | - |
| MW-1 | 10/01/2002 | 178.43 | DRY | - | - | - | - | - | - | - | - | - | - |
| MW-1 | 06/02/2003 | 178.43 | DRY | - | - | - | - | - | - | - | - | - | - |
| MW-1 | 10/04/2003 | 178.75 | DRY | - | - | - | - | - | - | - | - | - | - |
| MW-1 | 06/02/2004 | 178.75 | DRY | - | - | - | - | - | - | - | - | - | - |
| MW-1 | 09/20/2004* | 178.75 | DRY @ 42.58 | | - | - | - | - | - | - | - | - | - |
| MW-1 | 05/12/2005* | 178.75 | DRY @ 47.57 | | - | - | - | - | - | - | - | - | - |
| MW-1 | 09/24/2005 | 178.75 | DRY @ 42.55 | | - | - | - | - | - | - | - | - | - |
| MW-1 | 05/14/2006 | 178.75 | Inaccessible | | - | - | - | - | - | - | - | - | - |
| MW-1 | 09/25/2006 | 178.75 | DRY @ 42.75 | | - | - | - | - | - | - | - | - | - |
| MW-1 | 05/18/2007 | 178.75 | Inaccessible | | - | - | - | - | - | - | - | - | - |
| MW-1 | 09/25/2007 | 178.75 | DRY @ 42.61 | | - | - | - | - | - | - | - | - | - |
| MW-1 | 01/01/2008 | Destroyed 01/2008 | | - | - | - | - | - | - | - | - | - | - |
| MW-1R | 06/09/2008 | 178.46 | 43.16 | 135.30 | - | 0.03 | <0.01 | <0.001 | <0.001 | <0.001 | <0.002 | - | - |
| MW-1R | 08/11/2008 | 178.46 | 43.16 | 135.30 | - | 0.049 | <0.01 | <0.001 | <0.001 | <0.001 | <0.002 | - | - |
| MW-1R | 10/30/2008 | 178.46 | 43.06 | 135.40 | - | 0.070 | <0.01 | <0.001 | <0.001 | <0.001 | <0.002 | - | - |
| MW-1R | 02/20/2009 | 178.46 | 43.35 | 135.11 | - | <0.049 | <0.01 | <0.001 | <0.001 | <0.001 | <0.002 | - | - |
| MW-1R | 05/11/2009 | 178.46 | 43.55 | 134.91 | - | 0.079 | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | - | - |
| MW-1R | 09/13/2009 | 178.46 | 43.79 | 134.67 | - | <0.049 | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | - | - |
| MW-1R | 10/07/2009 | 178.46 | 43.87 | 134.59 | - | - | - | - | - | - | - | - | - |
| MW-1R | 05/05/2010 | 178.46 | 43.87 | 134.59 | - | <0.051 | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | - | - |
| MW-1R | 07/22/2010 | 178.46 | 43.59 | 134.87 | - | - | - | - | - | - | - | - | - |
| MW-1R | 11/01/2010 | 178.46 | 43.81 | 134.65 | - | - | - | - | - | - | - | - | - |
| MW-1R | 05/24/2011 | 178.46 | 44.31 | 134.15 | - | - | - | - | - | - | - | - | - |
| MW-1R | 10/06/2011 | 178.46 | 44.70 | 133.76 | - | - | - | - | - | - | - | - | - |
| MW-1R | 10/31/2011 | 178.46 | 44.78 | 133.68 | - | - | - | - | - | - | - | - | - |
| MW-1R | 05/28/2012 | 178.46 | 44.27 | 134.19 | - | - | - | - | - | - | - | - | - |
| MW-1R | 08/03/2012 | 178.46 | 43.90 | 134.56 | - | - | - | - | - | - | - | - | - |
| MW-1R | 11/04/2012 | 178.46 | 43.48 | 134.98 | - | - | - | - | - | - | - | - | - |
| MW-1R | 03/26/2013 | 178.46 | Couldn't locate | | - | - | - | - | - | - | - | - | - |
| MW-1R | 06/08/2013 | 178.46 | 42.58 | 135.88 | - | - | - | - | - | - | - | - | - |
| MW-1R | 08/18/2013 | 178.46 | 42.45 | 136.01 | - | - | - | - | - | - | - | - | - |
| MW-1R | 11/05/2013 | 178.46 | 41.83 | 136.63 | - | - | - | - | - | - | - | - | - |
| MW-1R | 03/25/2014 | 178.46 | 41.24 | 137.22 | - | - | - | - | - | - | - | - | - |
| MW-1R | 05/06/2014 | 178.46 | 41.14 | 137.32 | - | - | - | - | - | - | - | - | - |
| MW-1R | 11/08/2014 | 178.46 | 40.90 | 137.56 | - | - | - | - | - | - | - | - | - |

**Table 2**

**Historical Groundwater Analytical Results**
**Former Chevron-Branded Service Station 94115**
**11460 Old Seward Highway**
**Anchorage, Alaska**

| | | | | | HYDROCARBONS | | | PRIMARY VOCS | | | | | ADDITIONAL VOCS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | Date | TOC | DTW | GWE | TPH | DRO | GRO | Benzene | Toluene | Ethylbenzene | Total Xylenes | MTBE | HVOC |
| | Units | ft msl | ft btoc | ft msl | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l |
| | ADEC Groundwater Cleanup Levels 2016[a] | | | | 1.5 | 1.5 | 2.2 | 0.0046 | 1.1 | 0.015 | 0.19 | 0.14 | |
| MW-1R | 06/08/2015 | 178.46 | 41.72 | 136.74 | - | - | - | - | - | - | - | - | - |
| MW-1R | 11/12/2015[3] | 178.46 | 41.71 | 136.75 | - | - | - | - | - | - | - | - | - |
| MW-1R | 03/11/2016 | 178.46 | 42.11 | 136.35 | - | - | - | - | - | - | - | - | - |
| MW-1R | 05/13/2016 | 178.46 | 42.44 | 136.02 | - | - | - | - | - | - | - | - | - |
| MW-1R | 08/16/2016 | 178.46 | Couldn't locate | | - | - | - | - | - | - | - | - | - |
| MW-1R | 10/13/2016 | 178.46 | Couldn't locate | | - | - | - | - | - | - | - | - | - |
| MW-1R | 04/24/2017 | 178.46 | Couldn't locate | | | - | - | - | - | - | - | - | |
| MW-1R | 09/14/2017 | 178.46 | Couldn't locate | | | - | - | - | - | - | - | - | |
| MW-2 | 04/01/1992 | - | - | - | **110.0** | - | **79.0** | 0.002 | 0.002 | ND | 0.022 | - | - |
| MW-2 | 07/01/1992** | - | - | - | 0.6 | 0.40 | 0.604 | 0.00045 | ND | ND | 0.0091 | - | - |
| MW-2 | 10/01/1992** | - | - | 57.66 | **1.6** | 1.20 | 0.306 | ND | ND | ND | - | - | - |
| MW-2 | 05/01/1993** | - | - | 57.31 | ND | - | 0.29 | ND | ND | ND | 0.002 | - | - |
| MW-2 | 08/01/1993** | - | - | 56.96 | ND | - | 0.11 | 0.0007 | 0.0008 | ND | 0.001 | - | - |
| MW-2 | 11/01/1993** | - | - | 57.23 | ND | - | 0.13 | ND | ND | ND | ND | - | - |
| MW-2 | 01/01/2008 | Destroyed 01/2008 | | - | - | - | - | - | - | - | - | - | - |
| MW-3 | 05/01/1993** | - | - | 57.83 | ND | - | **5.5** | **0.86** | 0.61 | **0.78** | **2.4** | - | - |
| MW-3 | 01/01/2008 | Destroyed 01/2008 | | - | - | - | - | - | - | - | - | - | - |
| MW-4 | 05/01/1993** | 98.77 | 41.04 | 57.73 | 1.0 | ND | **33.0** | **6.9** | **16.0** | **2.4** | **5.1** | - | - |
| MW-4 | 12/21/1994 | 98.77 | 42.12 | 56.65 | - | - | **3.4** | **0.9** | 0.072 | **0.35** | **0.27** | - | - |
| MW-4 | 03/14/1995 | 98.77 | 42.93 | 55.84 | - | - | **8.4** | **1.2** | 0.64 | **0.9** | **0.6** | - | - |
| MW-4 | 06/21/1995 | 98.77 | 41.87 | 56.90 | - | - | **3.7** | **1.4** | 0.018 | **0.18** | 0.055 | - | - |
| MW-4 | 09/06/1995 | 98.77 | 41.63 | 57.14 | - | - | **3.5** | **1.0** | ND | **0.032** | 0.0024 | - | - |
| MW-4 | 11/15/1995 | 98.77 | 41.25 | 57.52 | - | - | **2.9** | **0.91** | ND | 0.0059 | ND | - | - |
| MW-4 | 01/29/1996 | 98.77 | 41.43 | 57.34 | - | - | **6.4** | **0.48** | ND | **0.063** | 0.0025 | - | - |
| MW-4 | 06/02/1996 | 98.77 | 41.87 | 56.90 | - | - | **9.96** | **2.77** | <0.0005 | **0.0767** | <0.001 | - | - |
| MW-4 | 08/22/1996 | 98.77 | 42.21 | 56.56 | - | - | 0.94 | **0.306** | <0.0025 | 0.00485 | <0.005 | - | - |
| MW-4 | 10/17/1996 | 98.77 | 42.40 | 56.37 | - | - | 0.174 | **0.0691** | <0.0005 | <0.0005 | <0.001 | - | - |
| MW-4 | 04/28/1997 | 98.77 | 43.10 | 55.67 | - | - | 0.362 | **0.189** | <0.0005 | <0.0005 | <0.001 | - | - |
| MW-4 | 09/06/1997 | 98.77 | 42.92 | 55.85 | - | - | **2.88** | **1.89** | <0.0005 | <0.0005 | <0.001 | - | - |
| MW-4 | 04/15/1998 | 98.77 | 42.91 | 55.86 | - | - | <0.05 | 0.00271 | <0.0005 | <0.0005 | <0.001 | - | - |
| MW-4 | 01/01/2008 | Destroyed 01/2008 | | - | - | - | - | - | - | - | - | - | - |
| MW-4R | 06/09/2008 | 177.72 | 41.99 | 135.73 | - | 0.04 | <0.01 | <0.001 | <0.001 | <0.001 | <0.002 | - | - |
| MW-4R | 08/11/2008 | 177.72 | 41.99 | 135.73 | - | 0.072 | <0.01 | 0.001 | <0.001 | <0.001 | <0.002 | - | - |
| MW-4R | 10/30/2008 | 177.72 | 41.87 | 135.85 | - | 0.085 | <0.01 | <0.001 | <0.001 | <0.001 | <0.002 | - | - |
| MW-4R | 02/20/2009 | 177.72 | 42.17 | 135.55 | - | 0.066 | <0.01 | <0.001 | <0.001 | <0.001 | <0.002 | - | - |
| MW-4R | 05/11/2009 | 177.72 | 42.37 | 135.35 | - | <0.053 | 0.47 | <0.0025 | <0.0025 | <0.0025 | <0.0075 | - | - |
| MW-4R | 09/13/2009 | 177.72 | 42.61 | 135.11 | - | <0.050 | <0.010 | 0.0008 J | <0.0005 | <0.0005 | <0.0015 | - | - |
| MW-4R | 10/07/2009 | 177.72 | 42.67 | 135.05 | - | - | - | - | - | - | - | - | - |
| MW-4R | 05/05/2010 | 177.72 | 42.64 | 135.08 | - | 0.053 J | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | - | - |
| MW-4R | 07/22/2010 | 177.72 | 43.85 | 133.87 | - | - | - | - | - | - | - | - | - |
| MW-4R | 11/01/2010 | 177.72 | 42.69 | 135.03 | - | - | - | - | - | - | - | - | - |
| MW-4R | 05/24/2011 | 177.72 | 43.19 | 134.53 | - | - | - | - | - | - | - | - | - |
| MW-4R | 10/06/2011 | 177.72 | 43.56 | 134.16 | - | - | - | - | - | - | - | - | - |
| MW-4R | 10/31/2011 | 177.72 | 43.53 | 134.19 | - | - | - | - | - | - | - | - | - |
| MW-4R | 05/28/2012 | 177.72 | Couldn't Locate | | - | - | - | - | - | - | - | - | - |
| MW-4R | 08/03/2012 | 177.72 | 42.78 | 134.94 | - | - | - | - | - | - | - | - | - |
| MW-4R | 11/04/2012 | 177.72 | 42.36 | 135.36 | - | - | - | - | - | - | - | - | - |
| MW-4R | 03/26/2013 | 177.72 | Couldn't Locate | | - | - | - | - | - | - | - | - | - |
| MW-4R | 06/08/2013 | 177.72 | 41.51 | 136.21 | - | - | - | - | - | - | - | - | - |
| MW-4R | 08/18/2013 | 177.72 | 41.50 | 136.22 | - | - | - | - | - | - | - | - | - |
| MW-4R | 11/05/2013 | 177.72 | 40.78 | 136.94 | - | - | - | - | - | - | - | - | - |
| MW-4R | 03/25/2014 | 177.72 | 40.20 | 137.52 | - | - | - | - | - | - | - | - | - |

**Table 2**

**Historical Groundwater Analytical Results**
**Former Chevron-Branded Service Station 94115**
**11460 Old Seward Highway**
**Anchorage, Alaska**

| | | | | | HYDROCARBONS | | | PRIMARY VOCS | | | | | ADDITIONAL VOCS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | Date | TOC | DTW | GWE | TPH | DRO | GRO | Benzene | Toluene | Ethylbenzene | Total Xylenes | MTBE | HVOC |
| | Units | ft msl | ft btoc | ft msl | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l |
| | ADEC Groundwater Cleanup Levels 2016[a] | | | | 1.5 | 1.5 | 2.2 | 0.0046 | 1.1 | 0.015 | 0.19 | 0.14 | |
| MW-4R | 05/06/2014 | 177.72 | 40.09 | 137.63 | - | - | - | - | - | - | - | - | - |
| MW-4R | 11/08/2014 | 177.72 | 39.89 | 137.83 | - | - | - | - | - | - | - | - | - |
| MW-4R | 06/08/2015 | 177.72 | 40.64 | 137.08 | - | - | - | - | - | - | - | - | - |
| MW-4R | 11/13/2015[2] | 177.72 | Couldn't Locate | | - | - | - | - | - | - | - | - | - |
| MW-4R | 03/11/2016 | 177.72 | Couldn't Locate | | - | - | - | - | - | - | - | - | - |
| MW-4R | 05/13/2016 | 177.72 | Couldn't Locate | | - | - | - | - | - | - | - | - | - |
| MW-4R | 08/16/2016 | 177.72 | Couldn't Locate | | - | - | - | - | - | - | - | - | - |
| MW-4R | 10/13/2016 | 177.72 | Couldn't Locate | | - | - | - | - | - | - | - | - | - |
| MW-4R | 04/24/2017 | 177.72 | Couldn't Locate | | | - | - | - | - | - | - | - | |
| MW-4R | 09/14/2017 | 177.72 | Couldn't Locate | | | - | - | - | - | - | - | - | |
| MW-5 | 05/01/1993** | - | - | - | **3.0** | - | **110** | **37.0** | **51.0** | **3.7** | **17.0** | - | - |
| MW-5 | 08/01/1993** | - | - | - | ND | - | **36.0** | **5.7** | **10.0** | **0.76** | **3.7** | - | - |
| MW-5 | 11/01/1993** | - | - | - | ND | - | **7.3** | **2.3** | **1.9** | **0.27** | **1.2** | - | - |
| MW-5 | 03/01/1994** | - | - | - | ND | - | 0.680 | **0.31** | 0.0056 | **0.026** | 0.049 | - | - |
| MW-5 | 06/01/1994** | - | - | - | ND | - | **8.0** | **4.1** | 0.230 | **0.040** | 0.054 | - | - |
| MW-5 | 08/17/1994 | - | 41.33 | - | ND | - | **21.0** | **5.6** | **5.3** | **0.470** | **1.3** | - | - |
| MW-5 | 06/21/1995 | - | 41.49 | - | - | - | **26.0** | **5.5** | **3.9** | **0.460** | **1.4** | - | - |
| MW-5 | 09/06/1995 | - | 41.24 | - | - | - | 0.89 | **0.25** | 0.0043 | 0.014 | 0.045 | - | - |
| MW-5 | 11/15/1995 | - | 40.88 | - | - | - | 0.47 | **0.12** | ND | **0.019** | 0.0057 | - | - |
| MW-5 | 01/29/1996 | - | 41.06 | - | - | - | 0.32 | **0.11** | ND | 0.011 | 0.0027 | - | - |
| MW-5 | 06/02/1996 | - | 41.56 | - | - | - | **10.6** | **2.0** | **1.28** | **0.128** | **0.327** | - | - |
| MW-5 | 08/22/1996 | - | 41.87 | - | - | - | **2.54** | **0.635** | 0.075 | **0.0307** | 0.0857 | - | - |
| MW-5 | 10/17/1996 | - | 42.03 | - | - | - | <0.05 | **0.00682** | <0.0005 | 0.000564 | <0.001 | - | - |
| MW-5 | 04/28/1997 | - | 42.73 | - | - | - | <0.05 | <0.0005 | <0.0005 | <0.0005 | <0.001 | - | - |
| MW-5 | 09/06/1997 | - | 42.48 | - | - | - | <0.05 | <0.0005 | <0.0005 | <0.0005 | <0.001 | - | - |
| MW-5 | 04/15/1998 | - | 42.54 | - | - | - | <0.05 | <0.0005 | <0.0005 | <0.0005 | <0.001 | - | - |
| MW-5 | 01/01/2008 | Destroyed 01/2008 | | - | - | - | - | - | - | - | - | - | - |
| MW-7 | 05/01/1993** | 98.67 | 41.70 | 56.97 | - | - | - | - | - | - | - | - | - |
| MW-7 | 12/21/1994 | 98.67 | 42.84 | 55.83 | - | - | ND | 0.0008 | ND | ND | ND | - | - |
| MW-7 | 03/14/1995 | 98.67 | 43.82 | 54.85 | - | - | 0.350 | 0.00097 | 0.0039 | 0.01 | 0.068 | - | - |
| MW-7 | 06/21/1995 | 98.67 | 42.60 | 56.07 | - | - | ND | 0.00067 | ND | ND | ND | - | - |
| MW-7 | 09/06/1995 | 98.67 | 42.32 | 56.35 | - | - | ND | ND | ND | ND | ND | - | - |
| MW-7 | 11/15/1995 | 98.67 | 41.93 | 56.74 | - | - | ND | 0.0011 | ND | ND | ND | - | - |
| MW-7 | 01/29/1996 | 98.67 | 42.19 | 56.48 | - | - | ND | ND | ND | ND | ND | - | - |
| MW-7 | 06/02/1996 | 98.67 | 42.62 | 56.05 | - | - | - | - | - | - | - | - | - |
| MW-7 | 08/22/1996 | 98.67 | 42.99 | 55.68 | - | - | - | - | - | - | - | - | - |
| MW-7 | 10/17/1996 | 98.67 | 43.16 | 55.51 | - | - | - | - | - | - | - | - | - |
| MW-7 | 04/28/1997 | 98.67 | 43.91 | 54.76 | - | - | - | - | - | - | - | - | - |
| MW-7 | 09/06/1997 | 98.67 | 43.67 | 55.00 | - | - | - | - | - | - | - | - | - |
| MW-7 | 04/15/1998 | 98.67 | 43.75 | 54.92 | - | - | **3.380** | **0.0823** | 0.798 | **0.358** | **0.633** | - | - |
| MW-7 | 05/01/1999 | 98.67 | 44.04 | 54.63 | - | - | **2.64 / 3.29** | **0.0105 / 0.0132** | 0.704 / 0.823 | **0.145 / 0.171** | **0.377 / 0.45** | <0.05 / <0.05 | - |
| MW-7 | 10/16/1999 | 98.67 | 43.84 | 54.83 | - | - | **7.2** | <0.025 | **2.11** | **0.354** | **1.15** | <0.2 | - |
| MW-7 | 05/16/2000 | 98.67 | 43.65 | 55.02 | - | - | 0.657 / 0.635 | <0.0005 / <0.0005 | <0.0005 / <0.0005 | <0.0005 / <0.0005 | **0.215 / 0.22** | <0.002 / <0.002 | - |
| MW-7 | 09/26/2000 | 98.67 | 43.96 | 54.71 | - | - | 0.196 | <0.0004 | <0.0005 | <0.0005 | <0.001 | <0.001 | - |
| MW-7 | 05/08/2001 | 98.67 | 44.41 | 54.26 | - | - | <0.05 | <0.0002 | <0.0005 | <0.0005 | 0.00127 | <0.001 | - |
| MW-7 | 10/01/2001 | 98.67 | 44.89 | 53.78 | - | - | <0.05 | <0.0002 | <0.0005 | <0.0005 | <0.001 | <0.001 | - |
| MW-7 | 05/07/2002 | 98.67 | Inaccessible | | - | - | - | - | - | - | - | - | - |
| MW-7 | 10/01/2002 | 98.67 | Inaccessible | | - | - | - | - | - | - | - | - | - |
| MW-7 | 12/06/2002 | 98.67 | 44.61 | 54.06 | - | - | <0.01 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - |
| MW-7 | 06/02/2003 | 98.67 | 44.98 | 53.69 | - | - | <0.01 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.002 | - |
| MW-7 | 10/04/2003 | 178.48 | 45.48 | 133.00 | - | - | <0.01 / <0.01 | <0.0005 / <0.0005 | <0.0005 / <0.0005 | <0.0005 / <0.0005 | <0.0005 / <0.0005 | <0.002 / <0.002 | - |
| MW-7 | 06/02/2004 | 178.48 | 44.90 | 133.58 | - | - | - | - | - | - | - | - | - |
| MW-7 | 09/20/2004* | 178.48 | 44.69 | 133.79 | - | - | - | - | - | - | - | - | - |
| MW-7 | 05/12/2005* | 178.48 | 43.18 | 135.30 | - | - | - | - | - | - | - | - | - |

**Table 2**

**Historical Groundwater Analytical Results**
**Former Chevron-Branded Service Station 94115**
**11460 Old Seward Highway**
**Anchorage, Alaska**

| | | | | | HYDROCARBONS | | | PRIMARY VOCS | | | | | ADDITIONAL VOCS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | Date | TOC | DTW | GWE | TPH | DRO | GRO | Benzene | Toluene | Ethylbenzene | Total Xylenes | MTBE | HVOC |
| | Units | ft msl | ft btoc | ft msl | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l |
| | ADEC Groundwater Cleanup Levels 2016[a] | | | | 1.5 | 1.5 | 2.2 | 0.0046 | 1.1 | 0.015 | 0.19 | 0.14 | |
| MW-7 | 09/24/2005 | 178.48 | 43.15 | 135.33 | - | - | - | - | - | - | - | - | - |
| MW-7 | 05/14/2006 | 178.48 | 43.43 | 135.05 | - | - | - | - | - | - | - | - | - |
| MW-7 | 09/25/2006 | 178.48 | 43.20 | 135.28 | - | - | - | - | - | - | - | - | - |
| MW-7 | 05/18/2007 | 178.48 | 43.37 | 135.11 | - | - | - | - | - | - | - | - | - |
| MW-7 | 09/25/2007 | 178.48 | 43.64 | 134.84 | - | - | - | - | - | - | - | - | - |
| MW-7 | 01/01/2008 | Destroyed 01/2008 | | - | - | - | - | - | - | - | - | - | - |
| MW-8 | 05/01/1993** | 98.04 | 40.80 | 57.24 | **5.0** | - | **55.0** | **17.0** | **25.0** | **2.2** | **6.5** | - | - |
| MW-8 | 12/21/1994 | 98.04 | 41.95 | 56.09 | - | - | **140.0** | **5.0** | **1.1** | **0.59** | **0.6** | - | - |
| MW-8 | 06/21/1995 | 98.04 | 41.64 | 56.40 | - | - | **23.0** | **5.3** | **4.4** | **0.56** | **0.81** | - | - |
| MW-8 | 09/06/1995 | 98.04 | 41.37 | 56.67 | - | - | **3.4** | **0.62** | 0.28 | **0.056** | 0.07 | - | - |
| MW-8 | 11/15/1995 | 98.04 | 40.99 | 57.05 | - | - | **26.0** | **3.6** | **4.8** | **0.66** | **1.1** | - | - |
| MW-8 | 01/29/1996 | 98.04 | 41.26 | 56.78 | - | - | **12.0** | **3.0** | **1.3** | **0.53** | **0.46** | - | - |
| MW-8 | 06/02/1996 | 98.04 | 41.73 | 56.31 | - | - | **117.0** | **17.7** | **18.1** | **1.77** | **1.99** | - | - |
| MW-8 | 08/22/1996 | 98.04 | 42.03 | 56.01 | - | - | **14.0** | **3.46** | 0.876 | **0.36** | **0.287** | - | - |
| MW-8 | 10/17/1996 | 98.04 | 42.25 | 55.79 | - | - | 0.748 | **0.221** | <0.0005 | **0.0161** | 0.00679 | - | - |
| MW-8 | 04/28/1997 | 98.04 | 42.91 | 55.13 | - | - | <0.05 / <0.05 | 0.000697 / 0.000829 | <0.0005 / <0.0005 | <0.0005 / <0.0005 | <0.001 / <0.001 | - | - |
| MW-8 | 09/06/1997 | 98.04 | 42.60 | 55.44 | - | - | <0.05 | <0.0005 | <0.0005 | <0.0005 | 0.0025 | - | - |
| MW-8 | 03/14/1998 | 98.04 | 42.83 | 55.21 | - | - | **16.0** | **5.2** | 0.36 | **0.51** | **0.36** | - | - |
| MW-8 | 04/15/1998 | 98.04 | 42.75 | 55.29 | - | - | <0.05 | <0.0005 | <0.0005 | <0.0005 | <0.001 | - | - |
| MW-8 | 01/01/2008 | Destroyed 01/2008 | | - | - | - | - | - | - | - | - | - | - |
| MW-9 | 06/01/1992** | - | - | - | **4.2** | ND | **33.0** | **4.4** | **13** | **1.6** | **6.7** | - | - |
| MW-9 | 07/01/1992** | - | - | - | **3.2** | ND | **47.0** | **3.7** | **11** | **1.4** | **5.5** | - | - |
| MW-9 | 10/01/1992** | 98.84 | 40.33 | 58.51 | **2.80** | 0.8 | **19.0** | **4.5** | **4.7** | **6.0** | **2.0** | - | - |
| MW-9 | 05/01/1993** | 98.84 | 40.69 | 58.15 | ND | - | **9.4** | **1.6** | **4.6** | **0.72** | **1.8** | - | - |
| MW-9 | 08/01/1993** | 98.84 | 40.95 | 57.89 | ND | - | **6.9** | **1.3** | **1.6** | **0.35** | **0.77** | - | - |
| MW-9 | 11/01/1993** | 98.84 | 40.85 | 57.99 | ND | - | **7.5** | **3.4** | **1.5** | **0.41** | **0.58** | - | - |
| MW-9 | 03/01/1994** | 98.84 | 41.08 | 57.76 | ND | - | **4.9** | **1.8** | 0.55 | **0.24** | **0.26** | - | - |
| MW-9 | 06/01/1994** | 98.84 | 40.69 | 58.15 | ND | - | **4.4** | **1.1** | 0.57 | **0.27** | **0.33** | - | - |
| MW-9 | 08/17/1994 | 98.84 | 41.31 | 57.53 | **10.0** | - | **5.4** | **1.1** | **1.1** | **0.37** | **0.46** | - | - |
| MW-9 | 12/21/1994 | 98.84 | 41.75 | 57.09 | - | - | 0.66 | **0.29** | 0.0042 | **0.029** | 0.016 | - | - |
| MW-9 | 03/14/1995 | 98.84 | 42.61 | 56.23 | - | - | 1.7 | **0.55** | ND | **0.061** | 0.004 | - | - |
| MW-9 | 06/21/1995 | 98.84 | 41.50 | 57.34 | - | - | **14.0** | **4.5** | **1.8** | **0.13** | **0.34** | - | - |
| MW-9 | 09/06/1995 | 98.84 | 41.25 | 57.59 | - | - | **22.0** | **5.8** | **2.1** | **0.35** | **0.38** | - | - |
| MW-9 | 11/15/1995 | 98.84 | 40.86 | 57.98 | - | - | **4.6** | **1.4** | 0.043 | **0.023** | 0.008 | - | - |
| MW-9 | 01/29/1996 | 98.84 | 41.06 | 57.78 | - | - | 1.5 | **0.62** | 0.0012 | 0.0059 | ND | - | - |
| MW-9 | 06/02/1996 | 98.84 | 41.44 | 57.40 | - | - | <0.05 | 0.000908 | 0.000726 | <0.0005 | <0.001 | - | - |
| MW-9 | 08/22/1996 | 98.84 | 41.85 | 56.99 | - | - | <0.05 | <0.0005 | 0.00108 | <0.0005 | 0.00244 | - | - |
| MW-9 | 10/17/1996 | 98.84 | 42.14 | 56.70 | - | - | 0.224 | **0.0932** | <0.0005 | <0.0005 | <0.001 | - | - |
| MW-9 | 04/28/1997 | 98.84 | 42.73 | 56.11 | - | - | <0.05 | **0.00472** | <0.0005 | <0.0005 | <0.001 | - | - |
| MW-9 | 09/06/1997 | 98.84 | 42.55 | 56.29 | - | - | 1.26 | **0.782** | 0.0517 | 0.00263 | 0.00594 | - | - |
| MW-9 | 04/15/1998 | 98.84 | 42.50 | 56.34 | - | - | 0.241 | **0.142** | 0.00163 | 0.000955 | 0.00186 | - | - |
| MW-9 | 09/23/1998 | 178.64 | 42.22 | 136.42 | - | - | <0.05 | <0.0005 | <0.0005 | <0.0005 | <0.001 | - | - |
| MW-9 | 05/01/1999 | 178.64 | 42.88 | 135.76 | - | - | 0.826 | **0.211** | 0.0006 | **0.0322** | 0.0151 | <0.005 | - |
| MW-9 | 10/16/1999 | 178.64 | 42.68 | 135.96 | - | - | <0.05 | <0.0005 | 0.00368 | <0.0005 | 0.00061 | <0.005 | - |
| MW-9 | 05/16/2000 | 178.64 | 42.52 | 136.12 | - | - | <0.08 | <0.0005 | <0.0005 | <0.0005 | <0.001 | <0.002 | - |
| MW-9 | 09/26/2000 | 178.64 | 42.75 | 135.89 | - | - | <0.05 / <0.05 | <0.0002 / <0.0002 | <0.0005 / <0.0005 | <0.0005 / <0.0005 | <0.001 / <0.001 | <0.001 / <0.001 | - |
| MW-9 | 05/08/2001 | 178.64 | 43.27 | 135.37 | - | - | <0.05 | 0.000288 | <0.0005 | <0.0005 | <0.001 | <0.001 | - |
| MW-9 | 10/01/2001 | 178.64 | 43.64 | 135.00 | - | - | <0.05 | <0.0002 | <0.0005 | <0.0005 | <0.001 | <0.001 | - |
| MW-9 | 05/07/2002 | 178.64 | 43.92 | 134.72 | - | - | <0.05 / <0.05 | <0.0002 / <0.0002 | 0.000869 / <0.0005 | <0.0005 / <0.0005 | <0.001 / <0.001 | <0.001 / <0.001 | - |
| MW-9 | 10/01/2002 | 178.64 | 44.00 | 134.64 | - | - | - | - | - | - | - | - | - |
| MW-9 | 12/06/2002 | 178.64 | 43.31 | 135.33 | - | - | <0.001 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - |
| MW-9 | 06/02/2003 | 178.64 | 43.55 | 135.09 | - | - | <0.001 / <0.001 | <0.0005 / <0.0005 | <0.0005 / <0.0005 | <0.0005 / <0.0005 | <0.0005 / <0.0005 | <0.002 / <0.002 | - |
| MW-9 | 10/04/2003 | 178.64 | 44.05 | 134.59 | - | - | <0.001 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.002 | - |
| MW-9 | 06/02/2004 | 178.64 | 43.51 | 135.13 | - | - | - | - | - | - | - | - | - |

**Table 2**

**Historical Groundwater Analytical Results**
**Former Chevron-Branded Service Station 94115**
**11460 Old Seward Highway**
**Anchorage, Alaska**

| | | | | | HYDROCARBONS | | | PRIMARY VOCS | | | | | ADDITIONAL VOCS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | Date | TOC | DTW | GWE | TPH | DRO | GRO | Benzene | Toluene | Ethylbenzene | Total Xylenes | MTBE | HVOC |
| | Units | ft msl | ft btoc | ft msl | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l |
| | ADEC Groundwater Cleanup Levels 2016[a] | | | | 1.5 | 1.5 | 2.2 | 0.0046 | 1.1 | 0.015 | 0.19 | 0.14 | |
| MW-9 | 09/20/2004* | 178.64 | 43.25 | 135.39 | - | - | - | - | - | - | - | - | - |
| MW-9 | 05/12/2005* | 178.64 | 41.80 | 136.84 | - | - | - | - | - | - | - | - | - |
| MW-9 | 09/24/2005 | 178.64 | 41.82 | 136.82 | - | - | - | - | - | - | - | - | - |
| MW-9 | 05/14/2006 | 178.64 | 42.12 | 136.52 | - | - | - | - | - | - | - | - | - |
| MW-9 | 09/25/2006 | 178.64 | 41.88 | 136.76 | - | - | - | - | - | - | - | - | - |
| MW-9 | 05/18/2007 | 178.64 | 42.12 | 136.52 | - | - | - | - | - | - | - | - | - |
| MW-9 | 09/25/2007 | 178.64 | 42.40 | 136.24 | - | - | - | - | - | - | - | - | - |
| MW-9 | 01/01/2008 | Destroyed 01/2008 | | - | - | - | - | - | - | - | - | - | - |
| MW-10 | 06/01/1992** | - | - | - | ND | ND | **5.0** | **3.3** | 0.004 | **0.044** | 0.06 | - | - |
| MW-10 | 07/01/1992** | - | - | - | **3.5** | 0.90 | **4.4** | **1.8** | 0.143 | **0.042** | 0.056 | - | - |
| MW-10 | 10/01/1992** | 96.97 | 39.69 | 57.28 | **1.60** | 0.30 | **3.62** | **1.1** | 1.1 | **0.900** | **0.24** | - | - |
| MW-10 | 05/01/1993** | 96.97 | 39.95 | 57.02 | ND | - | **11.0** | **6.3** | **3.1** | **0.310** | **0.61** | - | - |
| MW-10 | 08/01/1993** | 96.97 | 40.40 | 56.57 | ND | - | **12.0** | **3.3** | **2.6** | **0.260** | **0.79** | - | - |
| MW-10 | 11/01/1993** | 96.97 | 40.17 | 56.80 | ND | - | **6.8** | **2.2** | **2.4** | **0.22** | **0.53** | - | - |
| MW-10 | 03/01/1994** | 96.97 | 40.42 | 56.55 | ND | - | **3.0** | **1.4** | 0.68 | **0.098** | 0.11 | - | - |
| MW-10 | 06/01/1994** | 96.97 | 40.10 | 56.87 | ND | - | **3.1** | **1.1** | 0.400 | **0.092** | 0.093 | - | - |
| MW-10 | 08/17/1994 | 96.97 | 40.73 | 56.24 | ND | - | 1.9 | **0.95** | 0.065 | **0.049** | 0.043 | - | - |
| MW-10 | 12/21/1994 | 96.97 | 41.10 | 55.87 | - | - | **4.7** | **2.1** | 0.740 | **0.120** | 0.091 | - | - |
| MW-10 | 03/14/1995 | 96.97 | 42.30 | 54.67 | - | - | **7.1** | **1.9** | 0.580 | **0.093** | 0.1 | - | - |
| MW-10 | 06/21/1995 | 96.97 | 40.80 | 56.17 | - | - | **5.9** | **2.4** | 0.077 | **0.040** | ND | - | - |
| MW-10 | 09/06/1995 | 96.97 | 40.53 | 56.44 | - | - | 1.7 | **0.51** | 0.024 | **0.022** | 0.015 | - | - |
| MW-10 | 11/15/1995 | 96.97 | - | - | - | - | - | - | - | - | - | - | - |
| MW-10 | 01/29/1996 | 96.97 | - | - | - | - | - | - | - | - | - | - | - |
| MW-10 | 06/02/1996 | 96.97 | 40.88 | 56.09 | - | - | <0.05 | **0.0249** | <0.0005 | 0.00196 | <0.001 | - | - |
| MW-10 | 08/22/1996 | 96.97 | 41.20 | 55.77 | - | - | 0.344 | **0.107** | 0.00886 | 0.00267 | 0.00981 | - | - |
| MW-10 | 10/17/1996 | 96.97 | 41.40 | 55.57 | - | - | 0.509 | **0.167** | 0.0439 | 0.00568 | 0.00535 | - | - |
| MW-10 | 04/28/1997 | 96.97 | 42.10 | 54.87 | - | - | <0.05 | 0.00256 | <0.0005 | <0.0005 | <0.001 | - | - |
| MW-10 | 09/06/1997 | 96.97 | 41.70 | 55.27 | - | - | <0.05 | 0.00201 | <0.0005 | <0.0005 | <0.001 | - | - |
| MW-10 | 04/15/1998 | 96.97 | 41.89 | 55.08 | - | - | - | - | - | - | - | - | - |
| MW-10 | 09/23/1998 | 176.78 | 41.56 | 135.22 | - | - | <0.05 | <0.0005 | <0.0005 | <0.0005 | <0.001 | - | - |
| MW-10 | 05/01/1999* | 176.78 | 42.20 | 134.58 | - | - | - | - | - | - | - | - | - |
| MW-10 | 10/16/1999 | 176.78 | 42.03 | 134.75 | - | - | <0.05 | <0.0005 | 0.00128 | <0.0005 | <0.0005 | <0.005 | - |
| MW-10 | 05/16/2000 | 176.78 | Inaccessible | | - | - | - | - | - | - | - | - | - |
| MW-10 | 09/26/2000 | 176.78 | 42.20 | 134.58 | - | - | <0.05 | <0.0002 | <0.0005 | <0.0005 | <0.001 | <0.001 | - |
| MW-10 | 05/08/2001 | 176.78 | 42.62 | 134.16 | - | - | <0.05 | 0.000486 | <0.0005 | <0.0005 | <0.001 | <0.001 | - |
| MW-10 | 10/01/2001 | 176.78 | - | - | - | - | - | - | - | - | - | - | - |
| MW-10 | 05/07/2002 | 176.78 | - | - | - | - | - | - | - | - | - | - | - |
| MW-10 | 10/01/2002 | 176.78 | - | - | - | - | - | - | - | - | - | - | - |
| MW-10 | 12/06/2002 | 176.78 | 42.79 | 133.99 | - | - | <0.01 / <0.01 | <0.0005 / <0.0005 | <0.0005 / <0.0005 | <0.0005 / <0.0005 | <0.0005 / <0.0005 | <0.0005 / <0.0005 | - |
| MW-10 | 06/02/2003 | 176.78 | Inaccessible | | - | - | - | - | - | - | - | - | - |
| MW-10 | 01/01/2008 | Destroyed 01/2008 | | - | - | - | - | - | - | - | - | - | - |
| MW-10R | 10/04/2003 | 176.66 | 43.54 | 133.12 | - | - | <0.01 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.002 | - |
| MW-10R | 06/02/2004 | 176.66 | 42.95 | 133.71 | - | - | - | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - | - |
| MW-10R | 09/20/2004* | 176.66 | 42.75 | 133.94 | - | - | - | <0.0005 / <0.0005 | <0.0005 / <0.0005 | <0.0005 / <0.0005 | <0.0005 / <0.0005 | - | - |
| MW-10R | 05/12/2005* | 176.66 | Inaccessible | | - | - | - | - | - | - | - | - | - |
| MW-10R | 09/24/2005 | 176.66 | Inaccessible | | - | - | - | - | - | - | - | - | - |
| MW-10R | 05/14/2006 | 176.66 | 41.52 | 135.14 | - | - | - | <0.005 / <0.005 | <0.005 / <0.005 | <0.005 / <0.005 | <0.0015 / <0.0015 | - | - |
| MW-10R | 09/25/2006 | 176.66 | 41.17 | 135.49 | - | - | - | <0.005 | <0.005 | <0.005 | <0.0015 | - | - |
| MW-10R | 03/29/2007 | 176.66 | 41.46 | 135.20 | - | - | - | <0.005 / <0.005 | <0.005 / <0.005 | <0.005 / <0.005 | <0.0015 / <0.0015 | - | - |
| MW-10R | 05/18/2007 | 176.66 | 41.43 | 135.23 | - | - | - | <0.001 | <0.001 | <0.001 | <0.002 | - | - |
| MW-10R | 09/25/2007 | 176.66 | 41.69 | 134.97 | - | - | - | <0.001 | <0.001 | <0.001 | <0.002 | - | - |
| MW-10R | 01/01/2008 | Destroyed 01/2008 | | - | - | - | - | - | - | - | - | - | - |
| MW-11 | 06/01/1992** | - | - | - | **18.50** | 1.13 | **82.0** | **15.0** | **70.0** | **2.8** | **13.0** | - | - |

**Table 2**

**Historical Groundwater Analytical Results**
**Former Chevron-Branded Service Station 94115**
**11460 Old Seward Highway**
**Anchorage, Alaska**

| | | | | | HYDROCARBONS | | | PRIMARY VOCS | | | | | ADDITIONAL VOCS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | Date | TOC | DTW | GWE | TPH | DRO | GRO | Benzene | Toluene | Ethylbenzene | Total Xylenes | MTBE | HVOC |
| | Units | ft msl | ft btoc | ft msl | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l |
| | ADEC Groundwater Cleanup Levels 2016[a] | | | | 1.5 | 1.5 | 2.2 | 0.0046 | 1.1 | 0.015 | 0.19 | 0.14 | |
| MW-11 | 07/01/1992** | - | - | - | **15.10** | **3.50** | **19.0** | **20.0** | **44.0** | **3.6** | **16.0** | - | - |
| MW-11 | 10/01/1992** | 96.60 | 39.85 | 56.75 | **270.0** | **2.00** | **180.0** | **28.0** | **65.0** | **4.5** | **22.0** | - | - |
| MW-11 | 05/01/1993** | 96.60 | 40.08 | 56.52 | **6.0** | - | **64.0** | **12.0** | **32.0** | **2.7** | **13.0** | - | - |
| MW-11 | 08/01/1993** | 96.60 | 40.64 | 55.96 | ND | - | **140.0** | **1.5** | **44.0** | **3.6** | **17.0** | - | - |
| MW-11 | 11/01/1993** | 96.60 | 40.29 | 56.31 | **17.0** | - | **170.0** | **26.0** | **66.0** | **5.5** | **24.0** | - | - |
| MW-11 | 03/01/1994** | 96.60 | 40.63 | 55.97 | **9.40** | - | **170.0** | **16.0** | **57.0** | **4.4** | **18.0** | - | - |
| MW-11 | 06/01/1994** | 96.60 | 40.27 | 56.33 | **10.0** | - | **90.0** | **15.0** | **66.0** | **4.7** | **21.0** | - | - |
| MW-11 | 08/17/1994 | 96.60 | 40.83 | 55.77 | **15.0** | - | **180.0** | **13.0** | **59.0** | **4.8** | **23.0** | - | - |
| MW-11 | 12/21/1994 | 96.60 | 41.30 | 55.30 | - | - | **170.0** | **10.0** | **43.0** | **4.1** | **18.0** | - | - |
| MW-11 | 03/14/1995 | 96.60 | 42.73 | 53.87 | - | - | **110.0** | **6.0** | **33.0** | **2.0** | **9.2** | - | - |
| MW-11 | 06/21/1995 | 96.60 | 40.96 | 55.64 | - | - | **140.0** | **8.2** | **38.0** | **2.9** | **12.0** | - | - |
| MW-11 | 09/06/1995 | 96.60 | 40.70 | 55.90 | - | - | **130.0** | **5.7** | **27.0** | **2.7** | **11.0** | - | - |
| MW-11 | 11/15/1995 | 96.60 | 40.35 | 56.25 | - | - | **220.0** | **7.9** | **46.0** | **3.7** | **18.0** | - | - |
| MW-11 | 01/29/1996 | 96.60 | 40.60 | 56.00 | - | - | **180.0 / 190.0** | **9.6 / 9.6** | **55.0 / 54.0** | **4.3 / 4.3** | **20.0 / 20.0** | - | - |
| MW-11 | 06/02/1996 | 96.60 | 41.09 | 55.51 | - | - | **255.0 / 277.0** | **9.7 / 10.8** | **56.0 / 55.1** | **4.52 / 4.96** | **20.1 / 22.2** | - | - |
| MW-11 | 08/22/1996 | 96.60 | 41.40 | 55.20 | - | - | **317.0** | **16.8** | **51.6** | **5.7** | **26.8** | - | - |
| MW-11 | 10/17/1996 | 96.60 | 41.57 | 55.03 | - | - | **336.0 / 350.0** | **20.0 / 20.1** | **96.4 / 101.0** | **7.05 / 7.63** | **32.0 / 34.6** | - | - |
| MW-11 | 04/28/1997 | 96.60 | 42.34 | 54.26 | - | - | **207.0** | **10.0** | **57.2** | **5.91** | **26.8** | - | - |
| MW-11 | 09/06/1997 | 96.60 | 41.88 | 54.72 | - | - | **152.0 / 151.0** | **1.79 / 1.65** | **73.4 / 64.6** | **6.77 / 5.8** | **30.4 / 25.8** | - | - |
| MW-11 | 04/15/1998 | 96.60 | 42.14 | 54.46 | - | - | **167.0** | **7.24** | **55.5** | **5.62** | **26.3** | - | - |
| MW-11 | 09/23/1998 | 176.39 | 42.00 | 134.39 | - | - | **165.0** | **4.69** | **60.3** | **5.49** | **24.7** | - | - |
| MW-11 | 05/01/1999 | 176.39 | 42.37 | 134.02 | - | - | **131.0** | **2.71** | **28.2** | **3.06** | **14.5** | <0.001 | - |
| MW-11 | 10/16/1999 | 176.39 | 42.15 | 134.24 | - | - | **168.0 / 166.0** | **0.86 / 0.95** | **44.6 / 49.8** | **3.6 / 5.08** | **17.5 / 24.0** | <0.0025 / <0.0025 | - |
| MW-11 | 05/16/2000 | 176.39 | 42.02 | 134.37 | - | - | **134.0** | **1.5** | **36.8** | **3.16** | **20.8** | <0.001 | - |
| MW-11 | 09/26/2000 | 176.39 | 42.48 | 133.91 | - | - | **9.23** | <0.01 | 0.664 | **0.206** | **3.31** | <0.05 | - |
| MW-11 | 05/08/2001 | 176.39 | 42.87 | 133.52 | - | - | **28.6** | **0.675** | **6.54** | **0.720** | **7.04** | <0.1 | - |
| MW-11 | 10/01/2001 | 176.39 | 43.22 | 133.17 | - | - | **41.0** | **0.024** | **7.03** | **1.76** | **12.2** | <0.025 | - |
| MW-11 | 05/07/2002 | 176.39 | 43.74 | 132.67 | - | - | **48.1** | <0.02 | **5.83** | **2.09** | **13.4** | <0.1 | - |
| MW-11 | 10/01/2002 | 176.39 | Inaccessible | | - | - | - | - | - | - | - | - | - |
| MW-11 | 12/06/2002 | 176.39 | 43.08 | 133.31 | - | - | **26.0** | **0.07** | 0.75 | **1.20** | **6.90** | <0.002 | - |
| MW-11 | 06/02/2003 | 176.39 | 43.61 | 132.78 | - | - | **69.0** | **0.011** | **2.60** | **2.80** | **22.0** | <0.002 | - |
| MW-11 | 10/04/2003 | 176.82 | 44.09 | 132.73 | - | - | **21.0** | 0.003 | 0.68 | **0.61** | **6.80** | <0.003 | - |
| MW-11 | 06/02/2004 | 176.82 | 43.25 | 133.57 | - | - | **25.0** | **0.005** | 0.075 | **1.20** | **7.40** | - | - |
| MW-11 | 09/20/2004* | 176.82 | 43.12 | 133.70 | - | - | **35.0** | <0.005 | 0.13 | **1.30** | **12.0** | - | - |
| MW-11 | 05/12/2005* | 176.82 | 41.61 | 135.21 | - | - | 0.15 / 0.29 | <0.0005 / <0.0005 | 0.003 / 0.004 | 0.001 / 0.003 | 0.031 / 0.043 | - | - |
| MW-11 | 09/24/2005 | 176.82 | 42.24 | 134.58 | - | - | 0.33 / 0.43 | <0.0005 / <0.0005 | 0.079 / 0.025 | 0.008 / 0.003 | 0.089 / 0.026 | - | - |
| MW-11 | 05/14/2006 | 176.82 | - | - | - | - | - | - | - | - | - | - | - |
| MW-11 | 09/27/2006 | 176.82 | 41.55 | 135.27 | - | - | 1.70 | 0.0027 | <0.0005 | **0.017** | **0.440** | - | - |
| MW-11 | 05/18/2007 | 176.82 | 41.79 | 135.06 | - | - | **3.20 / 3.5** | 0.003 / 0.004 | 0.01 / 0.01 | **0.02 / 0.02** | **1.2 / 1.2** | - | - |
| MW-11 | 09/25/2007 | 176.82 | 42.06 | 134.76 | - | - | 2.0 / 2.1 | 0.004 / 0.004 | 0.002 / 0.002 | 0.007 / 0.007 | **0.8 / 0.8** | - | - |
| MW-11 | 01/01/2008 | Destroyed 01/2008 | | - | - | - | - | - | - | - | - | - | - |
| MW-11R | 06/09/2008 | 176.91 | 42.67 | 134.24 | - | **5.20 / 5.60** | **14 / 11** | <0.02 / <0.02 | 0.007 / 0.007 | **0.3 / 0.4** | **2.9 / 3.1** | - | - |
| MW-11R | 08/11/2008 | 176.91 | 42.68 | 134.23 | - | **2.70 / 2.40** | **4.1 / 4.8** | **0.01 / 0.01** | 0.003 / 0.004 | **0.2 / 0.2** | **1.2 / 1.2** | - | - |
| MW-11R | 10/30/2008 | 176.91 | 42.60 | 134.31 | - | **2.00** / 1.40 | **5.6 / 5.8** | **0.02 / 0.02** | 0.004 / 0.004 | **0.2 / 0.3** | **1.5 / 1.5** | - | - |
| MW-11R | 02/20/2009 | 176.91 | 42.90 | 134.01 | - | **2.9 / 3.2** | **13 / 7.9** | <0.05 / <0.005 | 0.008 / 0.005 | **0.5 / 0.3** | **4.0 / 2.5** | - | - |
| MW-11R | 05/11/2009 | 176.91 | 42.41 | 134.50 | - | **2.1 / 2.2** | **9.5 / 7.6** | <0.0025 / <0.0025 | 0.0045 / 0.0035 | **0.36 / 0.29** | **2.8 / 2.3** | - | - |
| MW-11R | 09/13/2009 | 176.91 | 43.52 | 133.39 | - | **1.7 / 1.8** | **6.9 / 7.0** | <0.040 / <0.040 | 0.0043 / 0.0039 | **0.29 / 0.28** | **2.3 / 2.4** | - | - |
| MW-11R | 10/07/2009 | 176.91 | 43.44 | 133.47 | - | 1.5 / **1.6** | **5.7 / 6.5** | <0.010 / <0.010 | 0.0035 / 0.0033 | **0.22 / 0.26** | **2.0 / 2.3** | - | - |
| MW-11R | 02/25/2010 | 176.91 | 43.54 | 133.37 | - | 0.96 J / 1.0 J | **5.0 / 5.1** | <0.0050 / <0.0050 | 0.0021 / 0.0022 | **0.14 / 0.15** | **1.3 / 1.3** | - | - |
| MW-11R | 05/05/2010 | 176.91 | 43.48 | 133.43 | - | **3.1 J / 2.0 J** | **19 / 18** | <0.060 / <0.10 | 0.011 / 0.010 | **0.58 / 0.56** | **4.3 / 4.2** | - | - |
| MW-11R | 07/22/2010 | 176.91 | 42.74 | 134.17 | - | **2.7 / 3.2 J** | **15 / 15** | <0.050 / <0.020 | 0.011 / 0.011 | **0.32 / 0.33** | **3.1 / 3.3** | - | - |
| MW-11R | 11/01/2010 | 176.91 | 43.44 | 133.47 | - | **3.0 J / 3.2 J** | **12 / 12** | <0.025 / <0.020 | 0.0076 J / 0.0079 J | **0.14 / 0.14** | **1.6 / 1.6** | - | - |
| MW-11R | 03/01/2011 | 176.91 | 43.87 | 133.04 | - | - | - | - | - | - | - | - | - |
| MW-11R | 03/03/2011 | - | - | - | - | **2.3 J / 2.5 J** | **12 / 10** | <0.050 / <0.030 | 0.011 / 0.0096 J | **0.20 / 0.16** | **1.9 / 1.6** | - | - |
| MW-11R | 05/24/2011 | 176.91 | 43.97 | 132.94 | - | **1.6 / 2.6 J** | **7.5 / 8.1** | <0.030 / **0.026** | 0.0065 J / 0.0096 J | **0.070 / 0.077** | **1.7 / 1.7** | - | - |

**Table 2**

**Historical Groundwater Analytical Results**
**Former Chevron-Branded Service Station 94115**
**11460 Old Seward Highway**
**Anchorage, Alaska**

| Location | Date | TOC | DTW | GWE | HYDROCARBONS | | | PRIMARY VOCS | | | | | ADDITIONAL VOCS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | TPH | DRO | GRO | Benzene | Toluene | Ethylbenzene | Total Xylenes | MTBE | HVOC |
| | Units | ft msl | ft btoc | ft msl | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l |
| | ADEC Groundwater Cleanup Levels 2016[a] | | | | 1.5 | 1.5 | 2.2 | 0.0046 | 1.1 | 0.015 | 0.19 | 0.14 | |
| MW-11R | 10/06/2011 | 176.91 | 44.35 | 132.56 | - | 0.17 J / 0.098 J | 0.20 / 0.20 | <0.0030 / <0.0030 | <0.0005 / <0.0005 | <0.0005 / <0.0005 | 0.010 / 0.0080 | - | - |
| MW-11R | 11/01/2011 | 176.91 | 44.44 | 132.47 | - | 0.22 J / 0.18 J | 0.026 J / 0.052 J | <0.0005 / <0.0005 | <0.0005 / <0.0005 | <0.0005 / <0.0005 | <0.0015 / 0.0019 J | - | - |
| MW-11R | 03/23/2012 | 176.91 | 44.72 | 132.19 | - | 0.090 J / 0.077 J | <0.010 / <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | - | - |
| MW-11R | 05/28/2012 | 176.91 | 43.83 | 133.08 | - | 1.3 / 1.3 | 0.41 / 0.38 | 0.0022 / 0.0024 | <0.0005 / <0.0005 | <0.0005 / <0.0005 | 0.014 / 0.014 | - | - |
| MW-11R | 08/03/2012 | 176.91 | 43.53 | 133.38 | - | 1.4 / 1.2 | 0.79 / 1.1 | <0.0030 / <0.0050 | <0.0005 / 0.0007 J | 0.0009 J / 0.0013 J | 0.030 / 0.041 | - | - |
| MW-11R | 11/04/2012 | 176.91 | 43.11 | 133.80 | - | **1.8 J /** 0.093 J | **2.7 / 2.4** | <0.010 / <0.010 | 0.0017 J / 0.0016 J | 0.0047 / 0.0042 | 0.067 / 0.062 | - | - |
| MW-11R | 03/26/2013 | 176.91 | 42.50 | 134.41 | - | - | - | - | - | - | - | - | - |
| MW-11R | 03/27/2013 | - | - | - | - | **2.2 / 2.7** | 1.8 / 1.1 | <0.00061 J / 0.00026 J | 0.0013 / 0.00061 J | 0.0069 J / 0.0031 J | 0.093 J / 0.044 J | - | - |
| MW-11R | 06/08/2013 | 176.91 | 42.21 | 134.70 | - | **1.7 / 1.7** | 0.74 / 0.69 | 0.00060 J / 0.00059 J | 0.00076 J / 0.00072 J | 0.0037 / 0.0035 | 0.025 / 0.024 | - | - |
| MW-11R[HS] | 06/08/2013 | 176.91 | 42.21 | 134.70 | - | 0.87 J / **1.9 J** | 0.48 J / 0.88 J | <0.00024 / 0.00037 J | <0.00023 / 0.00055 J | 0.00056 J / 0.0015 | 0.0073 J / 0.019 J | - | - |
| MW-11R | 08/18/2013 | 176.91 | 42.09 | 134.82 | - | - | - | - | - | - | - | - | - |
| MW-11R | 08/19/2013 | - | - | - | - | 1.2 J / **1.7 J** | 0.65 / 0.63 | 0.00080 J / 0.00042 J | 0.00073 J / 0.00043 J | 0.00074 J / 0.00031 J | 0.0068 J / 0.0020 J | - | - |
| MW-11R | 11/05/2013 | 176.91 | 41.37 | 135.54 | - | 0.59 / 0.80 | 0.11 / 0.11 | 0.00032 J / 0.00033 J | <0.00023 / 0.00024 J | <0.00024 / <0.00024 | <0.00072 / <0.00072 | - | - |
| MW-11R | 03/25/2014 | 176.91 | Inaccessible | | - | - | - | - | - | - | - | - | - |
| MW-11R | 05/06/2014 | 176.91 | 40.69 | 136.22 | - | 0.75 / 0.60 | <0.050 / <0.050 | 0.00024 J / 0.00023 J | <0.00011 / <0.00011 | <0.00016 / <0.00016 | <0.00040 / <0.00040 | - | - |
| MW-11R[HS] | 05/06/2014 | 176.91 | 40.69 | 136.22 | - | 0.42 J / 0.58 | <0.050 / <0.050 | <0.00015 / <0.00015 | <0.00011 / <0.00011 | <0.00016 / <0.00016 | <0.00040 / <0.00040 | - | - |
| MW-11R | 11/08/2014 | 176.91 | 40.41 | 136.50 | - | 0.38 J/0.42 J | <0.050/<0.050 | <0.00015/<0.00015 | <0.00011/<0.00011 | <0.00016/<0.00016 | <0.00040/<0.00040 | - | - |
| MW-11R | 06/08/2015 | 176.91 | 41.30 | 135.61 | - | 0.18 J / 0.18 J | 0.041 J / 0.044 J | 0.0006 J / 0.0006 J | <0.0005 / <0.0005 | <0.0005 / <0.0005 | <0.0015 / <0.0015 | - | - |
| MW-11R | 11/13/2015 | 176.91 | 41.16 | 135.75 | - | 0.12 J / 0.11 J | 0.012 J / 0.025 J | <0.0005 / <0.0005 | <0.0005 / <0.0005 | <0.0005 / <0.0005 | <0.0005 / <0.0005 | - | - |
| MW-11R | 03/11/2016 | 176.91 | 41.68 | 135.23 | - | - | - | - | - | - | - | - | - |
| MW-11R | 05/13/2016 | 176.91 | 42.02 | 134.89 | - | 0.14 J | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - | - |
| MW-11R | 08/16/2016 | 176.91 | 42.58 | 134.33 | | 0.23 J | 0.17 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - | - |
| MW-11R | 10/13/2016 | 176.91 | 42.43 | 134.48 | | 0.21 J | 0.13 | <0.0005 | <0.0005 | <0.0005 | 0.0007 J | - | - |
| MW-11R | 04/24/2017 | 176.91 | 43.10 | 133.81 | | 0.13 J | 0.037 J | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - |
| MW-11R | 09/14/2017 | 176.91 | 43.13 | 133.78 | | 0.079 J | 0.091 J | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - |
| MW-12 | 07/01/1992** | - | - | - | 0.8 | 0.10 | 0.034 | 0.0021 | 0.0054 | 0.00067 | 0.0035 | - | - |
| MW-12 | 05/01/1993** | - | - | 56.89 | ND | - | ND | ND | ND | ND | 0.002 | - | - |
| MW-12 | 08/01/1993** | - | - | 56.47 | ND | - | ND | ND | ND | ND | ND | - | - |
| MW-12 | 01/01/2008 | Destroyed 01/2008 | | - | - | - | - | - | - | - | - | - | - |
| MW-13 | 06/01/1992** | - | - | - | ND | ND | ND | ND | ND | ND | ND | - | - |
| MW-13 | 10/01/1992** | - | - | 57.43 | ND | ND | ND | ND | ND | ND | ND | - | - |
| MW-13 | 05/01/1993** | - | - | 57.13 | ND | - | ND | 0.001 | ND | ND | ND | - | - |
| MW-13 | 08/01/1993** | - | - | 56.79 | ND | - | ND | 0.001 | ND | ND | ND | - | - |
| MW-13 | 11/01/1993** | - | - | 57.16 | ND | - | ND | ND | ND | ND | ND | - | - |
| MW-13 | 01/01/2008** | Destroyed 01/2008 | | - | - | - | - | - | - | - | - | - | - |
| MW-14 | 06/01/1992** | - | - | - | ND | ND | 0.371 | **0.186** | 0.011 | 0.002 | 0.021 | - | - |
| MW-14 | 07/01/1992** | - | - | - | ND | ND | 0.262 | **0.114** | 0.0012 | ND | 0.004 | - | - |
| MW-14 | 10/01/1992** | - | - | 58.54 | ND | ND | 0.262 | **0.0106** | 0.0012 | ND | 0.004 | - | - |
| MW-14 | 05/01/1993** | - | - | 58.22 | ND | - | ND | **0.006** | ND | ND | ND | - | - |
| MW-14 | 11/15/1995 | - | Inaccessible | | - | - | - | - | - | - | - | - | - |
| MW-14 | 01/01/2008 | Destroyed 01/2008 | | - | - | - | - | - | - | - | - | - | - |
| MW-15 | 06/21/1995 | 88.14 | 34.66 | 53.48 | - | - | 0.34 | **0.016** | 0.0017 | 0.0011 | 0.042 | - | - |
| MW-15 | 09/06/1995 | 88.14 | 34.55 | 53.59 | - | - | ND | ND | ND | ND | ND | - | - |
| MW-15 | 11/15/1995 | 88.14 | 34.27 | 53.87 | - | - | ND | ND | ND | ND | ND | - | - |
| MW-15 | 01/29/1996 | 88.14 | 34.72 | 53.42 | - | - | ND | ND | ND | ND | ND | - | - |
| MW-15 | 06/02/1996 | 88.14 | 35.10 | 53.04 | - | - | <0.05 | <0.0005 | <0.0005 | <0.0005 | <0.001 | - | - |
| MW-15 | 08/22/1996 | 88.14 | 35.43 | 52.71 | - | - | <0.05 | <0.0005 | <0.0005 | <0.0005 | <0.001 | - | - |
| MW-15 | 10/17/1996 | 88.14 | 35.77 | 52.37 | - | - | <0.05 | <0.0005 | <0.0005 | <0.0005 | <0.001 | - | - |
| MW-15 | 04/28/1997 | 88.14 | 36.15 | 51.99 | - | - | <0.05 | <0.0005 | <0.0005 | <0.0005 | <0.001 | - | - |
| MW-15 | 09/06/1997 | 88.14 | 36.03 | 52.11 | - | - | <0.05 | <0.0005 | <0.0005 | <0.0005 | <0.001 | - | - |
| MW-15 | 04/15/1998 | 88.14 | - | - | - | - | - | - | - | - | - | - | - |
| MW-15 | 04/30/1998 | 88.14 | - | - | - | - | <0.05 | <0.0005 | <0.0005 | <0.0005 | <0.001 | - | - |

**Table 2**

**Historical Groundwater Analytical Results**
**Former Chevron-Branded Service Station 94115**
**11460 Old Seward Highway**
**Anchorage, Alaska**

| | | | | | HYDROCARBONS | | | PRIMARY VOCS | | | | | ADDITIONAL VOCS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | Date | TOC | DTW | GWE | TPH | DRO | GRO | Benzene | Toluene | Ethylbenzene | Total Xylenes | MTBE | HVOC |
| | Units | ft msl | ft btoc | ft msl | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l |
| ADEC Groundwater Cleanup Levels 2016[a] | | | | | 1.5 | 1.5 | 2.2 | 0.0046 | 1.1 | 0.015 | 0.19 | 0.14 | |
| MW-15 | 09/23/1998 | 167.48 | 35.39 | 132.09 | - | - | <0.05 | <0.0005 | 0.000867 | <0.0005 | 0.00163 | - | - |
| MW-15 | 05/01/1999 | 167.48 | 35.78 | 131.70 | - | - | <0.05 | <0.0005 | 0.00067 | <0.0005 | 0.00055 | <0.005 | - |
| MW-15 | 10/16/1999 | 167.48 | 35.58 | 131.90 | - | - | 0.380 | 0.00264 | 0.120 | 0.0126 | 0.0622 | <0.005 | - |
| MW-15 | 05/16/2000 | 167.48 | 35.45 | 132.03 | - | - | <0.08 | <0.0005 | <0.0005 | <0.0005 | <0.001 | <0.002 | - |
| MW-15 | 09/26/2000 | 167.48 | 35.69 | 131.79 | - | - | <0.05 | <0.0002 | <0.0005 | <0.0005 | <0.001 | <0.001 | - |
| MW-15 | 05/08/2001 | 167.48 | 36.25 | 131.23 | - | - | <0.05 | <0.0002 | <0.0005 | <0.0005 | <0.001 | <0.001 | - |
| MW-15 | 10/01/2001 | 167.48 | 36.92 | 130.56 | - | - | <0.05 / <0.05 | <0.0002 / <0.0002 | <0.0005 / <0.0005 | <0.0005 / <0.0005 | <0.001 / <0.001 | <0.001 / <0.001 | - |
| MW-15 | 05/07/2002 | 167.48 | Obstruction | | - | - | - | - | - | - | - | - | - |
| MW-15 | 10/01/2002 | 167.48 | Obstruction | | - | - | - | - | - | - | - | - | - |
| MW-15 | 06/02/2003 | 167.48 | Obstruction | | - | - | - | - | - | - | - | - | - |
| MW-15 | 01/01/2008 | Destroyed 01/2008 | | - | - | - | - | - | - | - | - | - | - |
| MW-15R | 10/04/2003 | 171.75 | 40.92 | 130.83 | - | - | <0.01 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.002 | - |
| MW-15R | 06/02/2004 | 171.75 | 40.37 | 131.38 | - | - | - | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - | - |
| MW-15R | 09/20/2004* | 171.75 | 40.21 | 131.54 | - | - | - | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - | - |
| MW-15R | 05/12/2005* | 171.75 | 38.71 | 133.04 | - | - | - | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - | - |
| MW-15R | 09/24/2005 | 171.75 | Inaccessible | | - | - | - | - | - | - | - | - | - |
| MW-15R | 05/14/2006 | 171.75 | Inaccessible | | - | - | - | - | - | - | - | - | - |
| MW-15R | 09/25/2006 | 171.75 | 38.57 | 133.18 | - | - | - | <0.0005 / <0.0005 | <0.0005 / <0.0005 | <0.0005 / <0.0005 | <0.0015 / <0.0015 | - | - |
| MW-15R | 05/18/2007 | 171.75 | 38.60 | 133.15 | - | - | - | <0.001 | <0.001 | <0.001 | <0.002 | - | - |
| MW-15R | 09/25/2007 | 171.75 | 38.94 | 132.81 | - | - | - | <0.001 | <0.001 | <0.001 | <0.002 | - | - |
| MW-15R | 06/18/2008 | 171.75 | 39.00 | 132.75 | - | - | - | <0.001 / <0.001 | <0.001 / <0.001 | <0.001 / <0.001 | <0.002 / <0.002 | - | - |
| MW-15R | 08/11/2008 | 171.75 | 39.08 | 132.67 | - | <0.048 | <0.01 | <0.001 | <0.001 | <0.001 | <0.002 | - | - |
| MW-15R | 10/30/2008 | 171.75 | 39.06 | 132.69 | - | - | - | <0.001 | <0.001 | <0.001 | <0.002 | - | - |
| MW-15R | 02/20/2009 | 171.75 | 39.35 | 132.40 | - | <0.049 | <0.01 | <0.001 | <0.001 | <0.001 | <0.002 | - | - |
| MW-15R | 05/11/2009 | 171.75 | 39.44 | 132.31 | - | <0.050 | 0.011 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | - | - |
| MW-15R | 11/01/2010 | 171.75 | 39.79 | 131.96 | - | <0.052 | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | - | - |
| MW-15RR | 03/01/2011 | 171.75 | 40.11 | 131.64 | - | - | - | - | - | - | - | - | - |
| MW-15RR | 03/03/2011 | - | - | - | - | 0.060 J | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | - | - |
| MW-15RR | 05/24/2011 | 171.75 | 40.14 | 131.61 | - | 0.65 | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | - | - |
| MW-15RR | 10/06/2011 | 171.75 | 45.20 | 126.55 | - | 0.16 J | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | - | - |
| MW-15RR | 11/01/2011 | 171.75 | 40.62 | 131.13 | - | <0.25 | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | - | - |
| MW-15RR | 03/23/2012 | 171.75 | 40.87 | 130.88 | - | 0.35 | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | - | - |
| MW-15RR | 05/28/2012 | 171.75 | 40.04 | 131.71 | - | 0.68 | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | - | - |
| MW-15RR | 08/03/2012 | 171.75 | 39.79 | 131.96 | - | 0.15 J | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | - | - |
| MW-15RR | 11/04/2012 | 171.75 | 39.37 | 132.38 | - | 0.15 J | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | - | - |
| MW-15RR | 03/26/2013 | 171.75 | 38.57 | 133.18 | - | - | - | - | - | - | - | - | - |
| MW-15RR | 03/27/2013 | - | - | - | - | <0.26 J | <0.0070 | <0.000062 | <0.000077 | <0.000081 | <0.00022 | - | - |
| MW-15RR | 06/08/2013 | 171.75 | 38.26 | 133.49 | - | 0.088 J | <0.050 | <0.00024 | <0.00023 | <0.00024 | <0.00072 | - | - |
| MW-15RR[HS] | 06/08/2013 | 171.75 | 38.26 | 133.49 | - | 0.26 J | <0.050 | <0.00024 | <0.00023 | <0.00024 | <0.00072 | - | - |
| MW-15RR | 08/18/2013 | 171.75 | 38.22 | 133.53 | - | - | - | - | - | - | - | - | - |
| MW-15RR | 08/19/2013 | - | - | - | - | 0.51 | <0.050 | <0.00024 | <0.00023 | <0.00024 | <0.00072 | - | - |
| MW-15RR | 11/05/2013 | 171.75 | 37.62 | 134.13 | - | 0.32 J | <0.050 | <0.00024 | <0.00023 | <0.00024 | <0.00072 | - | - |
| MW-15RR | 03/25/2014 | 171.75 | Couldn't Locate | | - | - | - | - | - | - | - | - | - |
| MW-15RR | 05/06/2014 | 171.75 | 36.82 | 134.93 | - | 0.24 J | <0.050 | <0.00015 | <0.00011 | <0.00016 | <0.00040 | - | - |
| MW-15RR[HS] | 05/06/2014 | 171.75 | 36.82 | 134.93 | - | 0.26 J | <0.050 | <0.00015 | <0.00011 | <0.00016 | <0.00040 | - | - |
| MW-15RR | 11/08/2014 | 171.75 | 36.53 | 135.22 | - | 0.11 J | <0.050 | <0.00015 | <0.00011 | <0.00016 | <0.00040 | - | - |
| MW-15RR | 06/08/2015 | 171.75 | 31.40 | 140.35 | - | **1.7** | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | - | - |
| MW-15RR | 11/12/2015 | 171.75 | 37.09 | 134.66 | - | 0.12 J | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - | - |
| MW-15RR | 03/11/2016 | 171.75 | 37.82 | 133.93 | - | <0.055 | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - | - |
| MW-15RR | 05/13/2016 | 171.75 | 38.10 | 133.65 | - | 0.27 | 0.075 J | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - | - |
| MW-15RR | 08/16/2016 | 171.75 | 38.54 | 133.21 | | <0.052 | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - | - |
| MW-15RR | 10/13/2016 | 171.75 | 38.44 | 133.31 | | 0.060 J | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - | - |
| MW-15RR | 04/24/2017 | 171.75 | 39.06 | 132.69 | | <0.050 / <0.057 | <0.010 / <0.010 | <0.0005 / <0.0005 | <0.0005 / <0.0005 | <0.0005 / <0.0005 | <0.0005 / <0.0005 | <0.0005 / <0.0005 | - |
| MW-15RR | 09/14/2017 | 171.75 | 39.09 | 132.66 | | <0.050 J | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - |

**Table 2**

**Historical Groundwater Analytical Results**
**Former Chevron-Branded Service Station 94115**
**11460 Old Seward Highway**
**Anchorage, Alaska**

| | | | | | HYDROCARBONS | | | PRIMARY VOCS | | | | | ADDITIONAL VOCS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | Date | TOC | DTW | GWE | TPH | DRO | GRO | Benzene | Toluene | Ethylbenzene | Total Xylenes | MTBE | HVOC |
| | Units | ft msl | ft btoc | ft msl | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l |
| ADEC Groundwater Cleanup Levels 2016[a] | | | | | 1.5 | 1.5 | 2.2 | 0.0046 | 1.1 | 0.015 | 0.19 | 0.14 | |
| MW-16 | 06/09/2008 | 177.05 | 42.00 | 135.05 | - | 0.038 | <0.01 | 0.002 | <0.001 | <0.001 | <0.002 | - | - |
| MW-16 | 08/11/2008 | 177.05 | 41.99 | 135.06 | - | 0.079 | 0.01 | 0.001 | <0.001 | <0.001 | <0.002 | - | - |
| MW-16 | 10/30/2008 | 177.05 | 41.89 | 135.16 | - | 0.10 | <0.1 | <0.001 | <0.001 | <0.001 | <0.002 | - | - |
| MW-16 | 02/20/2009 | 177.05 | 42.25 | 134.80 | - | <0.049 | <0.01 | <0.001 | <0.001 | <0.001 | <0.002 | - | - |
| MW-16 | 05/11/2009 | 177.05 | 43.06 | 134.64 | - | <0.050 | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | - | - |
| MW-16 | 09/13/2009 | 177.05 | 42.59 | 134.46 | - | 0.16 J | 0.018 J | <0.0005 | <0.0005 | <0.0005 | <0.0015 | - | - |
| MW-16 | 10/07/2009 | 177.05 | 42.72 | 134.33 | - | - | - | - | - | - | - | - | - |
| MW-16 | 02/25/2010 | 177.05 | 42.75 | 134.30 | - | - | - | - | - | - | - | - | - |
| MW-16 | 05/05/2010 | 177.05 | 42.65 | 134.40 | - | 0.053 J | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | - | - |
| MW-16 | 07/22/2010 | 177.05 | 42.76 | 134.29 | - | - | - | - | - | - | - | - | - |
| MW-16 | 11/01/2010 | 177.05 | 42.72 | 134.33 | - | - | - | - | - | - | - | - | - |
| MW-16 | 03/01/2011 | 177.05 | 43.10 | 133.95 | - | - | - | - | - | - | - | - | - |
| MW-16 | 05/24/2011 | 177.05 | 43.24 | 133.81 | - | - | - | - | - | - | - | - | - |
| MW-16 | 10/16/2011 | 177.05 | 43.61 | 133.44 | - | - | - | - | - | - | - | - | - |
| MW-16 | 10/31/2011 | 177.05 | 43.69 | 133.36 | - | - | - | - | - | - | - | - | - |
| MW-16 | 05/28/2012 | 177.05 | 43.13 | 133.92 | - | - | - | - | - | - | - | - | - |
| MW-16 | 08/03/2012 | 177.05 | 42.83 | 134.22 | - | - | - | - | - | - | - | - | - |
| MW-16 | 11/04/2012 | 177.05 | 42.31 | 134.74 | - | - | - | - | - | - | - | - | - |
| MW-16 | 03/26/2013 | 177.05 | 41.78 | 135.27 | - | - | - | - | - | - | - | - | - |
| MW-16 | 06/08/2013 | 177.05 | 41.49 | 135.56 | - | - | - | - | - | - | - | - | - |
| MW-16 | 08/18/2013 | 177.05 | 41.38 | 135.67 | - | - | - | - | - | - | - | - | - |
| MW-16 | 11/05/2013 | 177.05 | 40.64 | 136.41 | - | - | - | - | - | - | - | - | - |
| MW-16 | 03/25/2014 | 177.05 | Inaccessible | | - | - | - | - | - | - | - | - | - |
| MW-16 | 05/06/2014 | 177.05 | 40.01 | 137.04 | - | - | - | - | - | - | - | - | - |
| MW-16 | 11/08/2014 | 177.05 | 39.79 | 137.26 | - | - | - | - | - | - | - | - | - |
| MW-16 | 06/08/2015 | 177.05 | 40.67 | 136.38 | - | - | - | - | - | - | - | - | - |
| MW-16 | 11/12/2015 | 177.05 | 41.50 | 135.55 | - | - | - | - | - | - | - | - | - |
| MW-16 | 03/11/2016 | 177.05 | - | - | - | - | - | - | - | - | - | - | - |
| MW-16 | 05/13/2016 | 177.05 | 41.38 | 135.67 | - | - | - | - | - | - | - | - | - |
| MW-16 | 08/16/2016 | 177.05 | 41.01 | 136.04 | - | - | - | - | - | - | - | - | - |
| MW-16 | 10/13/2016 | 177.05 | 41.80 | 135.25 | - | - | - | - | - | - | - | - | - |
| MW-16 | 04/24/2017 | 177.05 | - | - | | - | - | - | - | - | - | - | - |
| MW-16 | 09/14/2017 | 177.05 | 42.48 | 134.57 | | - | - | - | - | - | - | - | - |
| MW-17 | 11/01/2010 | 177.62 | 43.65 | 133.97 | - | 0.066 J | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | - | - |
| MW-17 | 03/01/2011 | 177.62 | 44.03 | 133.59 | - | - | - | - | - | - | - | - | - |
| MW-17 | 03/03/2011 | - | - | - | - | 0.097 J | 0.012 J | <0.0005 | <0.0005 | <0.0005 | <0.0015 | - | - |
| MW-17 | 05/24/2011 | 177.62 | 44.14 | 133.48 | - | 0.085 J | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | - | - |
| MW-17 | 10/06/2011 | 177.62 | 44.53 | 133.09 | - | <0.50 | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | - | - |
| MW-17 | 11/01/2011 | 177.62 | 44.59 | 133.03 | - | <0.048 | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | - | - |
| MW-17 | 03/23/2012 | 177.62 | 44.88 | 132.74 | - | <0.054 | 0.020 J | <0.0005 | <0.0005 | <0.0005 | <0.0015 | - | - |
| MW-17 | 05/28/2012 | 177.62 | 44.03 | 133.59 | - | **2.0** | 0.070 J | <0.0005 | <0.0005 | <0.0005 | 0.0018 J | - | - |
| MW-17 | 08/03/2012 | 177.62 | 43.74 | 133.88 | - | 0.17 J | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | - | - |
| MW-17 | 11/04/2012 | 177.62 | 43.25 | 134.37 | - | **2.0** | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | - | - |
| MW-17 | 03/26/2013 | 177.62 | 42.65 | 134.97 | - | - | - | - | - | - | | - | - |
| MW-17 | 03/27/2013 | - | - | - | - | <0.15 J | <0.015 J | <0.000062 | <0.000077 | <0.000081 | <0.00022 | - | - |
| MW-17 | 06/08/2013 | 177.62 | 42.37 | 135.25 | - | 0.17 J | <0.050 | <0.00024 | <0.00023 | <0.00024 | <0.00072 | - | - |
| MW-17 | 06/08/2013[HS] | 177.62 | 42.37 | 135.25 | - | 0.54 | <0.050 | <0.00024 | <0.00023 | <0.00024 | <0.00072 | - | - |
| MW-17 | 08/18/2013 | 177.62 | 42.25 | 135.37 | - | - | - | - | - | - | - | - | - |
| MW-17 | 08/19/2013 | - | - | - | - | 0.80 | <0.050 | <0.00024 | <0.00023 | <0.00024 | <0.00072 | - | - |
| MW-17 | 11/05/2013 | 177.62 | 41.51 | 136.11 | - | 0.33 J | <0.050 | <0.00024 | <0.00023 | <0.00024 | <0.00072 | - | - |
| MW-17 | 03/25/2014 | 177.62 | 41.00 | 136.62 | - | <0.22 / <0.21 | <0.050 / <0.050 | <0.00024 / <0.00024 | <0.00023 J / <0.00023 | <0.00024 / <0.00024 | <0.00072 / <0.00072 | - | - |
| MW-17 | 05/06/2014 | 177.62 | 40.86 | 136.76 | - | 0.083 J | <0.050 | <0.00015 | <0.00011 | <0.00016 | <0.00040 | - | - |
| MW-17[HS] | 05/06/2014 | 177.62 | 40.86 | 136.76 | - | 0.88 | <0.050 | <0.00015 | <0.00011 | <0.00016 | <0.00040 | - | - |
| MW-17 | 11/08/2014 | 177.62 | 40.60 | 137.02 | - | 0.089 J | <0.050 | <0.00015 | <0.00011 | <0.00016 | <0.00040 | - | - |

**Table 2**

**Historical Groundwater Analytical Results**
**Former Chevron-Branded Service Station 94115**
**11460 Old Seward Highway**
**Anchorage, Alaska**

| | | | | | HYDROCARBONS | | | PRIMARY VOCS | | | | | ADDITIONAL VOCS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | Date | TOC | DTW | GWE | TPH | DRO | GRO | Benzene | Toluene | Ethylbenzene | Total Xylenes | MTBE | HVOC |
| | Units | ft msl | ft btoc | ft msl | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l |
| | ADEC Groundwater Cleanup Levels 2016[a] | | | | 1.5 | 1.5 | 2.2 | 0.0046 | 1.1 | 0.015 | 0.19 | 0.14 | |
| MW-17 | 06/08/2015 | 177.62 | 41.48 | 136.14 | - | 0.16 J | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | - | - |
| MW-17 | 11/13/2015 | 177.62 | 41.39 | 136.23 | - | <0.052 | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - | - |
| MW-17 | 03/11/2016 | 177.62 | 41.86 | 135.76 | - | - | - | - | - | - | - | - | - |
| MW-17 | 05/13/2016 | 177.62 | 42.21 | 135.41 | - | - | - | - | - | - | - | - | - |
| MW-17 | 08/16/2016 | 177.62 | Couldn't Locate | | - | - | - | - | - | - | - | - | - |
| MW-17 | 10/13/2016 | 177.62 | 42.62 | 135.00 | | <0.052 | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - | - |
| MW-17 | 04/26/2017 | 177.62 | 43.27 | 134.35 | | 0.94 J / 0.53 J | 0.042 J | <0.0005 / <0.0005 | <0.0005 / <0.0005 | <0.0005 / <0.0005 | <0.0005 / <0.0005 | <0.0005 / <0.0005 | - |
| MW-17 | 09/14/2017 | 177.62 | 43.29 | 134.33 | | 0.056 J / <0.052 | <0.010 / <0.010 | <0.0005 / <0.0005 | <0.0005 / <0.0005 | <0.0005 / <0.0005 | <0.0005 / <0.0005 | <0.0005 / <0.0005 | - |
| MW-18 | 06/09/2015 | - | 40.79 | - | - | 1.4 | 0.45 | 0.0019 J | <0.0005 | **0.022** | 0.037 | - | - |
| MW-18 | 11/12/2015 | - | 40.64 | - | - | 1.4 | 0.71 | 0.002 | <0.0005 | **0.067** | 0.13 | - | - |
| MW-18 | 03/11/2016 | - | 41.15 | - | - | 0.22 J / 0.26 J | 0.14 / 0.14 | <0.0005 / <0.0005 | <0.0005 / <0.0005 | 0.003 / 0.003 | 0.042 / 0.047 | - | - |
| MW-18 | 05/13/2016 | - | 41.51 | - | - | 0.32 / 0.31 | 0.022 J / 0.048 J | <0.0005 / <0.0005 | <0.0005 / <0.0005 | 0.003 / 0.002 | 0.014 J / 0.007 J | - | - |
| MW-18 | 08/16/2016 | - | 42.02 | - | | 0.066 J / 0.065 J | 0.018 J / 0.016 J | 0.0006 J / 0.0007 J | <0.0005 / <0.0005 | 0.0006 J / 0.0006 J | 0.001 / 0.001 | - | - |
| MW-18 | 10/13/2016 | - | 41.92 | - | | 0.11 J | 0.041 J | 0.0007 J | <0.0005 | 0.001 | 0.007 | - | - |
| MW-18 | 04/24/2017 | - | 42.59 | - | | 0.075 J | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - |
| MW-18 | 09/14/2017 | - | 42.61 | - | | <0.051 | <0.010 | <0.0005 | <0.0005 | 0.0007 J | <0.0005 | <0.0005 | - |
| MW-19 | 06/09/2015 | - | 41.05 | - | - | <0.055 | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | - | - |
| MW-19 | 11/12/2015 | - | 39.88 | - | - | <0.052 | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - | - |
| MW-19 | 03/11/2016 | - | 41.41 | - | - | 0.13 J | 0.026 J | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - | - |
| MW-19 | 05/13/2016 | - | 41.77 | - | - | 0.053 J | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - | - |
| MW-19 | 08/16/2016 | - | 42.31 | - | | R | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - | - |
| MW-19 | 10/13/2016 | - | 42.16 | - | | <0.050 / <0.051 | <0.010 / <0.010 | <0.0005 / <0.0005 | <0.0005 / <0.0005 | <0.0005 / <0.0005 | <0.0005 / <0.0005 | - | - |
| MW-19 | 04/24/2017 | - | 42.85 | - | | <0.051 | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - |
| MW-19 | 09/14/2017 | - | 42.86 | - | | <0.051 | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - |
| PSW29-1 | 08/11/2008 | - | - | - | - | - | - | - | - | - | - | - | ND |
| PSW29-1 | 10/30/2008 | - | - | - | - | - | - | - | - | - | - | - | ND |
| PSW29-1 | 02/20/2009 | - | - | - | - | - | - | - | - | - | - | - | ND |
| PSW29-1 | 05/11/2009 | - | - | - | - | - | - | - | - | - | - | - | 0.0003 |
| PSW29-1 | 09/13/2009 | - | - | - | - | - | - | - | - | - | - | - | ND/ND |
| PSW29-1 | 10/07/2009 | - | - | - | - | - | - | - | - | - | - | - | ND/ND |
| PSW29-1 | 02/25/2010 | - | - | - | - | - | - | - | - | - | - | - | ND/0.0002 J |
| PSW29-1 | 05/05/2010 | - | - | - | - | - | - | - | - | - | - | - | ND/ND |
| PSW29-1 | 07/22/2010 | - | - | - | - | - | - | - | - | - | - | - | ND/ND |
| PSW29-1 | 11/02/2010 | - | - | - | - | - | - | <0.0001 | <0.0001 | <0.0001 | <0.0003 | - | 0.0004 J / 0.0004 J |
| PSW29-1 | 11/04/2010 | - | - | - | - | - | <0.010 | <0.0001 | <0.0001 | <0.0001 | <0.0003 | - | ND |
| PSW29-1 | 11/01/2011 | - | - | - | - | <0.048 | <0.010 | <0.0001 | <0.0001 | <0.0001 | <0.0003 | - | ND |
| PSW29-1 | 03/23/2012 | - | - | - | - | <0.049 | <0.010 | <0.0001 | <0.0001 | <0.0001 | <0.0003 | - | ND |
| PSW29-1 | 05/28/2012 | - | - | - | - | 0.12 J | <0.010 | <0.0001 | <0.0001 | <0.0001 | <0.0003 | | ND |
| PSW29-1 | 08/03/2012 | - | - | - | - | <0.048 | <0.010 | <0.0001 | <0.0001 | <0.0001 | <0.0003 | | ND |
| PSW29-1 | 11/06/2012 | - | - | - | - | <0.048 | <0.010 | <0.0001 / <0.0001 | <0.0001 / <0.0001 | <0.0001 / <0.0001 | <0.0003 / <0.0003 | - | ND |
| PSW29-1 | 03/26/2013 | - | - | - | - | <0.050 J | <0.0070 | <0.000047/<0.000047 | <0.000065/<0.000065 | <0.000078/<0.000078 | <0.00027/<0.00027 | - | ND/ND |
| PSW29-1 | 06/08/2013 | - | - | - | - | <0.044 / <0.044 | <0.050 / <0.050 | <0.00024 / <0.00024 | <0.00022 / <0.00022 | <0.00021 / <0.00021 | <0.00075 / <0.00075 | - | ND/ND |
| PSW29-1 | 08/19/2013 | - | - | - | - | <0.10 | <0.050 | <0.00024 / <0.00024 | <0.00022 / <0.00022 | <0.00021 / <0.00021 | <0.00075 / <0.00075 | - | ND/ND |
| PSW29-1 | 03/25/2014 | - | - | - | - | <0.22 | <0.050 | <0.00024 / <0.00024 / <0.00024 | <0.00023 / <0.00022 / <0.00022 | <0.00024 / <0.00021 / <0.00021 | <0.00072 / <0.00075 / <0.00075 | - | ND/ND |
| PSW29-1 | 05/06/2014 | - | - | - | - | <0.063 | <0.050 | <0.000073 / <0.0001<5J / <0.000073 | <0.00011 / <0.00011 / <0.00011 | <0.000096 / <0.00016 / <0.000096 | <0.00020 / <0.00040 / <0.00020 | - | - |
| PSW29-1 | 11/08/2014 | - | - | - | - | 0.12 J | <0.050 | <0.000073 UJ | <0.00011 | <0.000096 UJ | <0.00021 | - | - |
| PSW29-1 | 06/08/2015 | - | - | - | | <0.051 | <0.010 | <0.0001 / <0.0001 | <0.0001 / <0.0001 | <0.0001 / <0.0001 | - | - | - |
| PSW29-1 | 11/12/2015 | - | - | - | - | <0.051 | - | <0.0001 / <0.0001 | <0.0001 / <0.0001 | <0.0001 / <0.0001 | <0.0003 | - | ND/ND |
| PSW29-1 | 05/13/2016 | - | - | - | - | <0.051 | <0.010 | <0.1 / <0.1 | <0.1 / <0.1 | <0.1 / <0.1 | - | - | - |
| PSW29-1 | 08/16/2016 | - | - | - | - | R | <0.010 / <0.010 | <0.0001 / <0.0001 | <0.0001 / <0.0001 | <0.0001 / <0.0001 | <0.0003 / <0.0003 | - | - |
| PSW29-1 | 10/13/2016 | - | - | - | - | <0.051 | <0.010 | <0.0001 / <0.0001 | <0.0001 / <0.0001 | <0.0001 / <0.0001 | <0.0003 / <0.0003 | - | - |
| PSW29-1 | 04/24/2017 | - | - | - | | <0.051 | - | <0.0001 / <0.0001 | <0.0001 / <0.0001 | <0.0001 / <0.0001 | <0.0003 / <0.0003 | - | - |
| PSW29-1 | 09/14/2017[4] | - | - | - | | <0.050 / <0.052 | <0.010 / <0.010 | <0.0001 / <0.0001 | <0.0001 / <0.0001 | <0.0001 / <0.0001 | <0.0003 / <0.0003 | - | - |

**Table 2**

**Historical Groundwater Analytical Results**
**Former Chevron-Branded Service Station 94115**
**11460 Old Seward Highway**
**Anchorage, Alaska**

| | | | | | HYDROCARBONS | | | PRIMARY VOCS | | | | | ADDITIONAL VOCS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | Date | TOC | DTW | GWE | TPH | DRO | GRO | Benzene | Toluene | Ethylbenzene | Total Xylenes | MTBE | HVOC |
| | Units | ft msl | ft btoc | ft msl | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l |
| ADEC Groundwater Cleanup Levels 2016[a] | | | | | 1.5 | 1.5 | 2.2 | 0.0046 | 1.1 | 0.015 | 0.19 | 0.14 | |
| PSW29-1-PRE | 04/19/2011 | - | - | - | - | <0.049 | <0.010 | <0.0001 | <0.0001 | <0.0001 | <0.0003 | - | 0.0004 J |
| PSW29-1-PRE | 05/24/2011 | - | - | - | - | <0.050 | <0.010 | <0.0001 | <0.0001 | <0.0001 | <0.0003 | - | ND |
| PSW29-1-PRE | 10/06/2011 | - | - | - | | <0.048 | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | - | ND |
| PSW29-1-POST | 04/19/2011 | - | - | - | - | <0.048 | <0.010 | <0.0001 | <0.0001 | <0.0001 | <0.0003 | - | 0.0004 J |
| PSW29-1-POST | 05/24/2011 | - | - | - | - | <0.047 | <0.010 | <0.0001 | <0.0001 | <0.0001 | <0.0003 | - | ND |
| PSW29-1-POST | 10/06/2011 | - | - | - | - | <0.051 | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | - | ND |
| PSW29-1-POST | 11/05/2013 | - | - | - | - | <0.20 / <0.20 | <0.050 / <0.050 | <0.00024 / <0.00024 | <0.00023 / <0.00023 | <0.00024 / <0.00024 | <0.00072 / <0.00072 | - | ND |
| Wilson-1 | 08/11/2008 | - | - | - | - | - | - | - | - | - | - | - | ND |
| Wilson-1 | 10/30/2008 | - | - | - | - | - | - | - | - | - | - | - | ND |
| Wilson-1 | 02/20/2009 | - | - | - | - | - | - | - | - | - | - | - | ND |
| Wilson-1 | 05/11/2009 | - | - | - | - | - | - | - | - | - | - | - | ND / 0.0007 J |
| Wilson-1 | 06/08/2015 | - | - | - | - | - | - | <0.0001 | <0.0001 | <0.0001 | - | - | - |
| Wilson-1 | 11/13/2015 | - | - | - | - | - | - | - | - | - | - | - | ND |
| Trip Blank | 01/29/1996 | - | - | - | - | - | ND | ND | ND | ND | ND | - | - |
| Trip Blank | 06/02/1996 | - | - | - | - | - | <0.05 | <0.0005 | <0.0005 | <0.0005 | <0.001 | - | - |
| Trip Blank | 08/22/1996 | - | - | - | - | - | <0.05 | <0.0005 | <0.0005 | <0.0005 | <0.001 | - | - |
| Trip Blank | 10/17/1996 | - | - | - | - | - | <0.05 | <0.0005 | 0.00116 | <0.0005 | 0.00107 | - | - |
| Trip Blank | 04/28/1997 | - | - | - | - | - | <0.05 | <0.0005 | <0.0005 | <0.0005 | <0.001 | - | - |
| Trip Blank | 09/06/1997 | - | - | - | - | - | <0.05 | <0.0005 | <0.0005 | <0.0005 | <0.001 | - | - |
| Trip Blank | 04/15/1998 | - | - | - | - | - | <0.05 | <0.0005 | <0.0005 | <0.0005 | <0.001 | - | - |
| Trip Blank | 09/23/1998 | - | - | - | - | - | <0.05 | <0.0005 | <0.0005 | <0.0005 | <0.001 | - | - |
| Trip Blank | 04/30/1999* | - | - | - | - | - | <0.05 | 0.00125 | 0.00109 | 0.00152 | 0.0019 | <0.005 | - |
| Trip Blank | 10/16/1999 | - | - | - | - | - | <0.05 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.005 | - |
| Trip Blank | 05/16/2000 | - | - | - | - | - | <0.08 | <0.0005 | <0.0005 | <0.0005 | <0.001 | <0.002 | - |
| Trip Blank | 09/26/2000** | - | - | - | - | - | <0.05 | <0.0002 | <0.0005 | <0.0005 | <0.001 | <0.001 | - |
| Trip Blank | 05/08/2001 | - | - | - | - | - | <0.05 | - | - | - | - | - | - |
| Trip Blank | 10/01/2001 | - | - | - | - | - | <0.05 | <0.0002 | <0.0005 | <0.0005 | <0.001 | <0.001 | - |
| Trip Blank | 05/07/2002 | - | - | - | - | - | <0.05 | <0.0002 | <0.0005 | <0.0005 | <0.001 | <0.001 | - |
| Trip Blank | 12/06/2002 | - | - | - | - | - | <0.01 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - |
| Trip Blank | 06/02/2003 | - | - | - | - | - | <0.01 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.002 | - |
| Trip Blank | 10/04/2003 | - | - | - | - | - | <0.01 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.002 | - |
| Trip Blank | 06/02/2004 | - | - | - | - | - | <0.01 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - | - |
| Trip Blank | 09/20/2004* | - | - | - | - | - | <0.01 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - | - |
| Trip Blank | 05/12/2005* | - | - | - | - | - | <0.01 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.002 | - |
| Trip Blank | 09/24/2005 | - | - | - | - | - | <0.01 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - | - |
| Trip Blank | 05/14/2006 | - | - | - | - | - | <0.01 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | - | - |
| Trip Blank | 09/25/2006 | - | - | - | - | - | <0.01 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | - | - |
| Trip Blank | 05/18/2007 | - | - | - | - | - | <0.01 | <0.001 | <0.001 | <0.001 | <0.002 | - | - |
| Trip Blank | 09/25/2007 | - | - | - | - | - | <0.01 | <0.001 | <0.001 | <0.001 | <0.002 | - | - |
| Trip Blank | 05/21/2008 | - | - | - | - | - | <0.01 | <0.001 | <0.001 | <0.001 | <0.002 | - | - |
| Trip Blank | 08/11/2008 | - | - | - | - | - | <0.01 | <0.0005 | <0.0005 | <0.0005 | <0.002 | - | ND |
| Trip Blank | 10/30/2008 | - | - | - | - | - | <0.01 | <0.001 | <0.001 | <0.001 | <0.002 | - | 0.0009 |
| Trip Blank | 02/13/2009 | - | - | - | - | - | <0.01 | <0.001 | <0.001 | <0.001 | <0.002 | - | 0.0002 |
| Trip Blank | 04/29/2009 | - | - | - | - | - | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | - | ND |
| Trip Blank | 09/13/2009 | - | - | - | - | - | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | - | ND |
| Trip Blank | 10/07/2009 | - | - | - | - | - | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | - | ND |
| Trip Blank | 02/25/2010 | - | - | - | - | - | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | - | ND |
| Trip Blank | 05/05/2010 | - | - | - | - | - | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | - | ND |
| Trip Blank | 07/22/2010 | - | - | - | - | - | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | - | ND |
| Trip Blank | 11/01/2010 | - | - | - | - | - | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | - | ND |
| Trip Blank | 11/04/2010 | - | - | - | - | - | <0.010 | <0.0001 | <0.0001 | <0.0001 | <0.0003 | - | ND |

**Table 2**

**Historical Groundwater Analytical Results**
**Former Chevron-Branded Service Station 94115**
**11460 Old Seward Highway**
**Anchorage, Alaska**

| | | | | | HYDROCARBONS | | | PRIMARY VOCS | | | | | ADDITIONAL VOCS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | Date | TOC | DTW | GWE | TPH | DRO | GRO | Benzene | Toluene | Ethylbenzene | Total Xylenes | MTBE | HVOC |
| | Units | ft msl | ft btoc | ft msl | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l | mg/l |
| **ADEC Groundwater Cleanup Levels 2016[a]** | | | | | **1.5** | **1.5** | **2.2** | **0.0046** | **1.1** | **0.015** | **0.19** | **0.14** | |
| Trip Blank | 03/03/2011 | - | - | - | - | - | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | - | - |
| Trip Blank | 04/19/2011 | - | - | - | - | - | <0.010 | <0.0001 | <0.0001 | <0.0001 | <0.0003 | - | ND |
| Trip Blank | 05/24/2011 | - | - | - | - | - | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | - | ND |
| Trip Blank | 10/06/2011 | - | - | - | - | - | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | - | ND |
| Trip Blank | 11/01/2011 | - | - | - | - | - | <0.010 | <0.0005 / <0.0001 | <0.0005 / <0.0001 | <0.0005 / <0.0001 | <0.0015 / <0.0003 | - | ND |
| Trip Blank | 03/23/2012 | - | - | - | - | - | <0.010 | <0.0005 / <0.0001 | <0.0005 / <0.0001 | <0.0005 / <0.0001 | <0.0015 / <0.0003 | - | ND |
| Trip Blank | 05/28/2012 | - | - | - | - | - | <0.010 | <0.0005 / <0.0001 | <0.0005 / <0.0001 | <0.0005 / <0.0001 | <0.0015 / <0.0003 | - | ND |
| Trip Blank | 08/03/2012 | - | - | - | - | - | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | - | - |
| Trip Blank | 11/04/2012 | - | - | - | - | - | <0.010 | <0.0001 / <0.0005 | <0.0001 / <0.0005 | <0.0001 / <0.0005 | <0.0015 | - | ND |
| Trip Blank | 03/26/2013 | - | - | - | - | - | - | <0.000047 | <0.000065 | <0.000078 | <0.00027 | - | ND |
| Trip Blank | 03/27/2013 | - | - | - | - | - | <0.0070 | <0.000062 | <0.000077 | <0.000081 | <0.00022 | - | - |
| Trip Blank | 06/08/2013 | - | - | - | - | - | <0.050 | <0.00024 / <0.00024 | <0.00023 / <0.00022 | <0.00024 / <0.00021 | <0.00072 / <0.00075 | - | ND |
| Trip Blank | 08/19/2013 | - | - | - | - | - | <0.050 | <0.00024 / <0.00024 | <0.00023 / <0.00022 | <0.00024 / <0.00021 | <0.00072 / <0.00075 | - | ND |
| Trip Blank | 11/08/2013 | - | - | - | - | - | <0.050 | <0.00024 | <0.00023 | <0.00024 | <0.00072 | - | ND |
| Trip Blank-1 | 03/25/2014 | - | - | - | - | - | <0.050 | <0.00024 | <0.00023 | <0.00024 | <0.00072 | - | ND |
| Trip Blank-2 | 03/25/2014 | - | - | - | - | - | <0.050 | <0.00024 / <0.00024 | <0.00023 / <0.00022 | <0.00024 / <0.00021 | <0.00072 / <0.00075 | - | ND |
| Trip Blank | 05/06/2014 | - | - | - | - | - | - | <0.00015 | <0.00011 | <0.00016 | <0.00040 | - | - |
| Trip Blank | 06/08/2015 | - | - | - | - | - | <0.010 | <0.0005 / <0.0001 | <0.0005 / <0.0001 | <0.0001 / <0.0005 | <0.0015 | - | - |
| Trip Blank | 11/13/2015 | - | - | - | - | - | <0.010 | <0.0001 / <0.0005 | <0.0001 / <0.0005 | <0.0005 / <0.0001 | <0.0005 | - | ND |
| Trip Blank | 03/11/2016 | - | - | - | - | - | <0.10 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - | - |
| Trip Blank | 05/13/2016 | - | - | - | - | - | <0.10 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - | - |
| Trip Blank | 08/16/2016 | - | - | - | | - | <0.010 | <0.0005 / <0.0001 | <0.0005 / <0.0001 | <0.0005 / <0.0001 | <0.0005 / <0.0003 | - | - |
| Trip Blank | 10/13/2016 | - | - | - | | - | <0.010 | <0.0005 / <0.0001 | <0.0005 / <0.0001 | <0.0005 / <0.0001 | <0.0005 / <0.0003 | - | - |
| Trip Blank | 04/24/2017 | - | - | - | | - | <0.010 | <0.0005 / <0.0001 | <0.0005 / <0.0001 | <0.0005 / <0.0001 | <0.0005 / <0.0003 | <0.0005 | - |
| Trip Blank | 09/14/2017 | - | - | - | | - | <0.010 | <0.0001 / < 0.0005 | 0.0003 J / 0.0006 J | <0.0001 / <0.0005 | <0.0003 / <0.0005 | <0.0005 | - |

**Notes and Abbreviations**

TOC = Top of Casing
DTW = Depth to Water
GWE = Groundwater Elevation
TPH = Total Petroleum Hydrocarbons
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 Environmental Protection Agency (EPA) Method 8021B or 8260B or SW-E46 8021B
Total Xylenes = Sum of m-, o-, and p-xylenes
MTBE = Methyl Tertiary-Butyl Ether
HVOC = Halogenated Volatile Organic Compounds by EPA Method 524.2
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
J = Estimated Concentration.
ND = Not detected above laboratory method detection limits
R = Rejected
- = Not Measured/Not Analyzed
* = Sample date defaulted to first date listed in historical data table
<x = Constituent not detected above x milligrams per liter
x / y = Sample Results / Blind Duplicate Results
** = Sample date accurate to month and year only
Groundwater data from 1992 through 2007 provided by Gettler-Ryan, Inc.
HS = collected via hydrosleeve

**Table 3**

**Historical Groundwater Analytical PAHs Results**
**Former Chevron-Branded Service Station 94115**
**11460 Old Seward Highway**
**Anchorage, Alaska**

| | | PAHs | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Location | Date | Acenaphthylene | Acenaphthene | Anthracene | Benzo(a)anthracene | Benzo(a)pyrene | Benzo(b)fluoranthene | Benzo(g,h,i)perylene | Benzo(k)fluoranthene |
| | Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| **ADEC Groundwater Cleanup Levels 2016[a]** | | **0.26** | **0.53** | **0.043** | **0.00012** | **0.000034** | **0.00034** | **0.00026** | **0.00080** |
| MW-11RR | 10/13/2016 | <0.0000098 | 0.000028 J | <0.0000098 | <0.0000098 | <0.0000098 | <0.0000098 | <0.0000098 | <0.0000098 |
| MW-15RR | 10/13/2016 | <0.0000097 | <0.0000097 | <0.0000097 | <0.0000097 | <0.0000097 | 0.000013 J | 0.000014 J | <0.0000097 |
| MW-17 | 10/13/2016 | <0.0000094/ <0.0000096 | <0.0000094/ <0.0000096 | <0.0000094/ <0.0000096 | <0.0000094/ <0.0000096 | <0.0000094/ <0.0000096 | <0.0000094/ <0.0000096 | <0.0000094/ <0.0000096 | <0.0000094/ <0.0000096 |
| MW-18 | 10/13/2016 | <0.0000095 | <0.0000095 | <0.0000095 | <0.0000095 | <0.0000095 | <0.0000095 | <0.0000095 | <0.0000095 |
| MW-19 | 10/13/2016 | <0.0000098 | <0.0000098 | <0.0000098 | <0.0000098 | <0.0000098 | <0.0000098 | <0.0000098 | <0.0000098 |

**Table 3**

**Historical Groundwater Analytical PAHs Results**
**Former Chevron-Branded Service Station 94115**
**11460 Old Seward Highway**
**Anchorage, Alaska**

| | | PAHs | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Location | Date | Chrysene | Dibenz(a,h)anthracene | Fluoranthene | Fluorene | Indeno(1,2,3-cd)pyrene | Naphthalene | Phenanthrene | Pyrene |
| | Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| **ADEC Groundwater Cleanup Levels 2016[a]** | | **0.0020** | **0.000034** | **0.26** | **0.29** | **0.00019** | **0.0017** | **0.17** | **0.12** |
| MW-11RR | 10/13/2016 | <0.0000098 | <0.0000098 | <0.0000098 | 0.00021 | <0.0000098 | 0.00058 | 0.000081 | <0.0000098 |
| MW-15RR | 10/13/2016 | 0.000010 J | <0.0000097 | <0.0000097 | <0.0000097 | 0.000010 J | <0.000029 | <0.000029 | <0.0000097 |
| MW-17 | 10/13/2016 | <0.0000094/ <0.0000096 | <0.0000094/ <0.0000096 | <0.0000094/ <0.0000096 | <0.0000094/ <0.0000096 | <0.0000094/ <0.0000096 | <0.000028/ 0.000039 J | <0.000028/ <0.000029 | <0.0000094/ <0.0000096 |
| MW-18 | 10/13/2016 | <0.0000095 | <0.0000095 | <0.0000095 | <0.0000095 | <0.0000095 | <0.000029 | <0.000029 | <0.0000095 |
| MW-19 | 10/13/2016 | <0.0000098 | <0.0000098 | <0.0000098 | <0.0000098 | <0.0000098 | <0.000029 | <0.000029 | <0.0000098 |

**Notes and Abbreviations**

PAHs = Polycyclic Aromatic Hydrocarbons
mg/L = Milligrams per Liter
J = Estimated value
- = Not Measured/Not Analyzed
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
x / y = Sample Results / Blind Duplicate Results
<x = Constituent not detected above x milligrams per liter

# Appendix A
# Site Photographs

1. View of site facing west

2. View of site facing southwest

3. View of site facing north

4. View of site facing northwest

5. View of site and barber facing south

# Appendix B
# Human Health Conceptual Site Model Scoping and Graphics Forms

Print Form

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

**Site Name:** Chevron 94115

**File Number:** 2100.26.012

**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, summary text about the CSM and a graphic depicting exposure pathways should be submitted with the site characterization work plan and updated as needed in later reports.

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

## 1. General Information:

**Sources** *(check potential sources at the site)*

- ☒ USTs
- ☐ ASTs
- ☒ Dispensers/fuel loading racks
- ☐ Drums
- ☐ Vehicles
- ☐ Landfills
- ☐ Transformers
- ☐ Other:

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

- ☒ Spills
- ☒ Leaks
- ☐ Direct discharge
- ☐ Burning
- ☐ Other:

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

- ☐ Surface soil (0-2 feet bgs*)
- ☒ Subsurface soil (>2 feet bgs)
- ☐ Air
- ☐ Sediment
- ☐ Groundwater
- ☐ Surface water
- ☐ Biota
- ☐ Other:

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

- ☒ Residents (adult or child)
- ☒ Commercial or industrial worker
- ☒ Construction worker
- ☐ Subsistence harvester (i.e. gathers wild foods)
- ☐ Subsistence consumer (i.e. eats wild foods)
- ☒ Site visitor
- ☒ Trespasser
- ☒ Recreational user
- ☐ Farmer
- ☐ Other:

* bgs - below ground surface

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

a) Direct Contact -

1. Incidental Soil Ingestion

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

*If the box is checked, label this pathway complete:* Incomplete

Comments:

2. Dermal Absorption of Contaminants from Soil

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

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

*If both boxes are checked, label this pathway complete:* Incomplete

Comments:

b) Ingestion -

1. Ingestion of Groundwater

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

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

*If both boxes are checked, label this pathway complete:* Incomplete

Comments:

2. Ingestion of Surface Water

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

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

*If both boxes are checked, label this pathway complete:* Incomplete

Comments:

3. Ingestion of Wild and Farmed Foods

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

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

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

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

Comments:

c) Inhalation-

1. Inhalation of Outdoor Air

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

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

*If both boxes are checked, label this pathway complete:* Incomplete

Comments:

2. Inhalation of Indoor Air

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

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

*If both boxes are checked, label this pathway complete:* Incomplete

Comments:

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

**Dermal Exposure to Contaminants in Groundwater and Surface Water**

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

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

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

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

Comments:

**Inhalation of Volatile Compounds in Tap Water**

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

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

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

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

Comments:

**Inhalation of Fugitive Dust**

Inhalation of fugitive dust may be a complete pathway if:

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

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

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

Comments:

**Direct Contact with Sediment**

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

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

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

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

Comments:

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

# HUMAN HEALTH CONCEPTUAL SITE MODEL GRAPHIC FORM

*Site:* Chevron 94115
File ID: 2100.026.12

*Completed By:* GHD Service Inc
*Date Completed:* 6/7/17

***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 | ☑ soil | ☐ Incidental Soil Ingestion | | | | | | | |
| | ☐ Migration to groundwater — check groundwater | | ☐ Dermal Absorption of Contaminants from Soil | | | | | | | |
| | ☐ Volatilization — check air | | ☐ Inhalation of Fugitive Dust | | | | | | | |
| | ☐ Uptake by plants or animals — check biota | | | | | | | | | |
| | ☐ Other (list): | | | | | | | | | |
| ☐ Ground-water | ☐ Direct release to groundwater — check groundwater | ☑ groundwater | ☐ Ingestion of Groundwater | | | | | | | |
| | ☐ Volatilization — check air | | ☐ Dermal Absorption of Contaminants in Groundwater | | | | | | | |
| | ☐ Flow to surface water body — check surface water | | ☐ Inhalation of Volatile Compounds in Tap 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 | ☑ air | ☐ Inhalation of Outdoor Air | | | | | | | |
| | ☐ Volatilization — check air | | ☐ Inhalation of Indoor Air | | | | | | | |
| | ☐ Sedimentation — check sediment | | ☐ Inhalation of Fugitive Dust | | | | | | | |
| | ☐ Uptake by plants or animals — check biota | | | | | | | | | |
| | ☐ Other (list): | | | | | | | | | |
| ☐ Sediment | ☐ Direct release to sediment — check sediment | ☐ surface water | ☐ Ingestion of Surface Water | | | | | | | |
| | ☐ Resuspension, runoff, or erosion — check surface water | | ☐ Dermal Absorption of Contaminants in Surface Water | | | | | | | |
| | ☐ Uptake by plants or animals — check biota | | ☐ Inhalation of Volatile Compounds in Tap Water | | | | | | | |
| | ☐ Other (list): | | | | | | | | | |
| | | ☐ sediment | ☐ Direct Contact with Sediment | | | | | | | |
| | | ☐ biota | ☐ Ingestion of Wild or Farmed Foods | | | | | | | |

Revised, 10/01/2010

# Appendix C
# Monitoring Data Package

# DAILY FIELD REPORT

| | | |
|---|---|---|
| Project Name: CENC 94115 | GHD Project Manager: J. PRITCHARD | Field Rep: O. YAN / T. WEAVER. |
| Project Number: 620518 | Date: 09/19/17 | Site Address: 11460 OLD SEWARD HWY ANCHORAGE, AK |
| Scope of Work: Perform gw monitoring / sampling | | |
| Initial Weather Conditions: Cloudy & 50° | | |
| Equipment: YSI METER; WATER LEVEL METER. | | |

| Time | Activity/Comments | SWA |
|---|---|---|
| 07:40 | DROP OFF SAMPLES @ FEDEX FOR 9901M | |
| 0815 | MOB TO TTT TO PICK UP RENTAL | |
| 0835 | CONDUCT TAILGATE ONSITE | |
| 0845 | SET UP @ MW-15RR; LOW-FLOW PURGE SAMPLING | |
| 0930 | Sample MW-15RR | |
| 0945 | Sample PSW29-1 ; COLLECT DUP-1 | |
| 1010 | MOB TO ONSITE → SET UP @ MW-19. → LOW-FLOW PURGE SAMPLING | |
| | ↳ Sample well @ 1048 | |
| 1100 | SET UP @ MW-18.; LOW-FLOW PURGE SAMPLING | |
| | ↳ COLLECT SAMPLE @ 1135 | |
| 1145 | SET UP @ MW-1 ; TAKE LUNCH BREAK | |
| 1206 | START SET-UP FOR MW-1 LF PURGE SAMPLING | |
| 1210 | START W/ LF PURGE ; SAMPLE WELL @ 1242 | |
| 1255 | SET UP @ MW-12; USE 0.85-INCH BLADDER PUMP. ; LF PURGE SAMPLING → DO | |
| | ↳ COLLECT SAMPLE @ 1335 → COLLECT DUP-2 | |
| 1355 | CLEAN UP, PACK TRUCK & MOB TO STORAGE SHED | |
| 1425 | DROP OFF TTT RENTAL @ TTT ; HEAD BACK TO OFFICE | |
| 1440 | ARRIVE BACK @ OFFICE. | |
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| SWA Key: | A: Person or People | B: Equipment | C: Environmental |
|---|---|---|---|
| | D: Procedures/Processes/JSA-review/revise | E: Visitors | |

Operational Mileage: Start _____ End _____ Total _____

# Groundwater Monitoring Field Sheet

Project Name: 94115 (ADEC File ID: 2100.26.012)
Project Number: 620518
Field Staff: O. Yan / T. Weaver
Date: 9/14/17

| Well ID | Time | DTW (ft - btoc) | DTB (ft-btoc) | DTP (ft-btoc) | Product Thickness (feet) | Amount of Product Removed (feet) | Casing Diameter (inches) | PID (ppm) | Comments |
|---|---|---|---|---|---|---|---|---|---|
| MW-1R | UNABLE TO LOCATE | | | | BURIED | | 2" | — | * gauge only |
| MW-4R | UNABLE TO LOCATE → BURIED. | | | | | | 2" | | * gauge only |
| MW-11R | 1142 | 43.17 | 48.16 | — | — | — | 2" | — | add PAH/VOC sampling 2Q17 |
| MW-15RR | 857 | 39.09 | 48.34 | — | — | — | 2" | — | add PAH/VOC sampling 2Q17 |
| MW-16 | 1339 | 42.49 | 52.39 | — | — | — | 2" | — | * gauge only |
| MW-17 | 1250 | 43.29 | 53.99 | — | — | — | 2" | — | add PAH/VOC sampling 2Q17 |
| MW-18 | 1045 | 42.61 | 50.92 | — | — | — | 2" | — | add PAH/VOC sampling 2Q17 |
| MW-19 | 1013 | 42.84 | 50.60 | — | — | — | 2" | — | add PAH/VOC sampling 2Q17 |
| PSW29-1 | — | — | — | — | — | — | 2" | — | Faucet |
| | | | | | | | | | |
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GAC Filtered Water Volume: 4.1 gallons

Volume logged on *Portable GAC Volume Tracking Log?* ☒

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. 620518 PM Siobhan Pritchard Well ID MW-11R Date 9/14/17 Page 1 of 5

Site ID / Location 94115 / 11460 Old Seward Highway, Anchorage, Alaska (ADEC 2100.026.012)

Screen Setting (ft-btoc) 40 Casing Diameter (in.) 2" Well Material x PVC ___ SS

Static Water Level (ft-btoc) 43.11 Total Depth (ft-btoc) 48.16 Water Column / Gallons in Well 5.05 / 0.808

Sampled by O. Yan, T. Weaver

Sample ID MW-11R-W-170914 Dup ID ___

Sample Time 1242 Start ___ End ___

**No-Purge Method** / **Low-Flow Sampling** / **Low Flow Method**

Sampler Length (in) 36 ☐ Sampler (ft-btoc) ___

Weights Top ☐ Bottom ☐ Position Supended ☐ Bottom set ☐

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

Pump type Bladder ☒ Other ☐ Pump Intake (ft-btoc) 43.50

Flow rate (ml/minute) 100 Volumes Purged 0.80 gal

Did well Dewater? Yes ☐ No ☒ Purge Time: Start 1210 End 1240

| 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1215 | 5 | 100 | 43.22 | 0.10 | 7.57 | 0.766 | 14.24 | 7.36 | 100.9 | 11.3 | Clear |
| 1220 | 10 | 100 | 43.23 | 0.70 | 7.57 | 0.780 | 13.82 | 7.43 | 102.0 | 8.48 | " " |
| 1225 | 15 | 100 | 43.22 | 0.35 | 7.81 | 0.778 | 12.94 | 7.40 | 102.5 | 8.98 | " " |
| 1230 | 20 | 100 | 43.20 | 0.45 | 7.31 | 0.784 | 11.38 | 7.13 | 104.1 | 6.14 | " " |
| 1235 | 25 | 100 | 43.20 | 0.60 | 7.01 | 0.780 | 9.10 | 7.04 | 105.5 | 5.50 | " " |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
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**Constituents Sampled**

| | | Container | Number | Preservative |
|---|---|---|---|---|
| VOCs 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 ☐ | | | | |
| EDB (8011) ☐ | | | | |

**Well Casing Volumes**

Gallons/Foot: 1" = 0.04; 1.25" = 0.06; 1.5" = 0.09; 2" = 0.16 (circled); 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. 620518 PM Siobhan Pritchard Well ID MW-15RR Date 9/14/17 Page 2 of 5

Site ID / Location 94115 / 11460 Old Seward Highway, Anchorage, Alaska (ADEC 2100.026.012)

Screen Setting (ft-btoc) 35 Casing Diameter (in.) 2" Well Material x PVC ___ SS

Static Water Level (ft-btoc) 39.09 Total Depth (ft-btoc) 46.34 Water Column / Gallons in Well 9.25 / 1.48

Sampled by O. Yan, T. Weaver

Sample ID MW-15RR-W-170914 Dup ID ___

Sample Time 0930 Start 0902 End 0927

**No-Purge Method**

Sampler Length (in) 36 ☐ Sampler (ft-btoc) ___

Weights Top ☐ Bottom ☐ Position Supended ☐ Bottom set ☐

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

**Low-Flow Sampling**

**Low Flow Method**

Pump type Bladder ☒ Other ☐ Pump Intake (ft-btoc) 39.40

Flow rate (ml/minute) 100 Volumes Purged 1.10 GAL

Did well Dewater? Yes ☐ No ☒ Purge Time: Start 0902 End 0932

| 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 907 | 100 | 39.13 | 0.05 | 8.46 | 0.707 | 10.66 | 6.94 | 107.7 | 45 | CLEAR |
| 10 | 0912 | 100 | 39.12 | 0.25 | 8.07 | 0.706 | 10.42 | 6.96 | 100.0 | 55.8 | " " |
| 15 | 0917 | 100 | 39.21 | 0.5 | 7.71 | 0.705 | 10.12 | 6.95 | 93.9 | 39.6 | " " |
| 20 | 0922 | 100 | 39.22 | 0.75 | 7.52 | 0.703 | 10.02 | 7.00 | 90.9 | 20 | " " |
| 25 | 0927 | 100 | 39.22 | 0.95 | 7.46 | 0.701 | 10.04 | 7.04 | 99.3 | | " " |
| | | | ✓ | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

**Constituents Sampled**

| | | Container | Number | Preservative |
|---|---|---|---|---|
| VOCs 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 | ☐ | | | |
| EDB (8011) | ☐ | | | |

**Well Casing Volumes**

Gallons/Foot: 1" = 0.04; 1.25" = 0.06; 1.5" = 0.09; 2" = 0.16 (circled); 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: OKAY → HOLE IN WELL LID

Well Completion: Flush Mount (circled) / Stick Up

Well Locked at Arrival: Yes (circled) / No (circled)

Well Locked at Departure: Yes (circled) / No

**Additional Notes**

NEEDS WELL LID REPAIR.

42.86 / 50.60

# Groundwater Sampling Form

Project No. 620518 PM Siobhan Pritchard Well ID MW-17 Date 9/14/17 Page 3 of 5

Site ID / Location 94115 / 11460 Old Seward Highway, Anchorage, Alaska (ADEC 2100.026.012)

Screen Setting (ft-btoc) 17 Casing Diameter (in.) 2" Well Material x PVC SS

Static Water Level (ft-btoc) 43.29 Total Depth (ft-btoc) 53.47 Water Column / Gallons in Well 10.2 / 1.632

Sampled by O. Yan, T. Weaver

Sample ID MW-17-W-179/4 Dup ID DUP-2-W-190/4

Sample Time 1335 Start End

**No-Purge Method**

Sampler Length (in) 36 Sampler (ft-btoc)

Weights Top Bottom Position Supended Bottom set

Was Teflon Baler used to collect non volatile samples Yes No

**Low-Flow Sampling**

**Low Flow Method**

Pump type Bladder Other Pump Intake (ft-btoc) 43.60

Flow rate (ml/minute) 40-60 Volumes Purged 0.7 Gal

Did well Dewater? Yes No Purge Time: Start 1302 End 1332

| 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1307 | 5 | 40-60 | 43.29 | 0.05 | 10.23 | 0.708 | 13.92 | 7.46 | 93.4 | 6.55 | CLEAR. |
| 1312 | 10 | 40-60 | 43.33 | 0.1 | 8.62 | 0.736 | 4.11 | 7.29 | 89.5 | 4.16 | " " |
| 1317 | 15 | 40-60 | 43.33 | 0.2 | 8.24 | 0.737 | 3.28 | 7.25 | 100.6 | 4.47 | " " |
| 1322 | 20 | 40-60 | 43.32 | 0.35 | 8.04 | 0.739 | 3.02 | 7.17 | 100.6 | 4.44 | " " |
| 1327 | 25 | 40-60 | 43.32 | 0.5 | 8.04 | 0.739 | 3.00 | 7.13 | 100.9 | 2.08 | " " |

**Constituents Sampled**

| | | Container | Number | Preservative |
|---|---|---|---|---|
| VOCs by 8260 | 8021 | 40 mL voa | 3 / 3 | HCl |
| HVOCs by 8260 | | | | |
| GRO by AK 101 | | 40 mL voa | 3 / 3 | HCl |
| DRO by AK 102 | | 250 mL amber | 2 / 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 | | | | |
| EDB (8011) | | | | |

**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: OKAY + WELL BOX MISSING; BOLT SECURED.

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. 620518 PM Siobhan Pritchard Well ID MW-18 Date 9/14/12 Page 4 of 5

Site ID / Location 94115 / 11460 Old Seward Highway, Anchorage, Alaska (ADEC 2100.026.012)

Screen Setting (ft-btoc) 37-52 Casing Diameter (in.) 2" Well Material x PVC ___ SS

Static Water Level (ft-btoc) 42.61 Total Depth (ft-btoc) 50.92 Water Column / Gallons in Well 8.31 / 1.329

Sampled by O. Yan, T. Weaver

Sample ID MW-18-W-170914 Dup ID

Sample Time 1135 Start ___ End ___

**No-Purge Method** / **Low-Flow Sampling**

Sampler Length (in) 36 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) 43.00

Flow rate (ml/minute) 100 Volumes Purged 0.70 Gal

Did well Dewater? Yes ___ No ■ Purge Time: Start 1102 End 1132

| 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1107 | 5 | 100 | 42.63 | 0.10 | 9.65 | 0.750 | 58.68 | 7.67 | 93.2 | 51.1 | Clear |
| 1112 | 10 | 100 | 42.65 | 0.15 | 8.59 | 0.762 | 13.55 | 7.86 | 95.0 | 49.2 | " " |
| 1117 | 15 | 100 | 42.70 | 0.25 | 8.57 | 0.763 | 13.53 | 7.91 | 95.3 | 47.9 | " " |
| 1122 | 20 | 100 | 42.71 | 0.40 | 8.44 | 0.765 | 13.40 | 7.96 | 95.0 | 40.6 | " " |
| 1127 | 25 | 100 | 42.71 | 0.50 | 8.36 | 0.765 | 13.32 | 7.98 | 95.0 | 32.7 | " " |
| | | | | | | | | | | | |
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| | | | | | | | | | | | |

**Constituents Sampled**

| | | Container | Number | Preservative |
|---|---|---|---|---|
| VOCs 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 | ☐ | | | |
| EDB (8011) | ☐ | | | |

**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. 620518 PM Siobhan Pritchard Well ID MW-19 Date 9/14/17 Page 5 of 5

Site ID / Location 94115 / 11460 Old Seward Highway, Anchorage, Alaska (ADEC 2100.026.012)

Screen Setting (ft-btoc) 39-85 Casing Diameter (in.) 2" Well Material X PVC SS

Static Water Level (ft-btoc) 42.85 Total Depth (ft-btoc) 50.60 Water Column / Gallons in Well 7.74 / 1.238

Sampled by O. Yan, T. Weaver

Sample ID MW-19-W470914 Dup ID

Sample Time 1048 Start End

**No-Purge Method**

Sampler Length (in) 36 ☐ Sampler (ft-btoc)

Weights Top ☐ Bottom ☐ Position Supended ☐ Bottom set ☐

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

**Low-Flow Sampling** — Low Flow Method

Pump type Bladder ☒ Other ☐ Pump Intake (ft-btoc) 43.10

Flow rate (ml/minute) 100 Volumes Purged 0.80 GAL

Did well Dewater? Yes ☐ No ☒ Purge Time: Start 1016 End 1046

| 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1021 | 5 | 100 | 42.88 | 0.10 | 10.12 | 0.701 | 5.56 | 6.93 | 93.0 | 35.7 | Clear |
| 1026 | 10 | 100 | 42.89 | 0.25 | 8.34 | 0.721 | 3.68 | 6.84 | 94.8 | 22.0 | " " |
| 1031 | 15 | 100 | 42.89 | 0.40 | 7.28 | 0.728 | 3.75 | 6.75 | 97.4 | 13.2 | " " |
| 1036 | 20 | 100 | 42.90 | 0.55 | 7.09 | 0.735 | 4.21 | 6.77 | 96.6 | 11.2 | " " |
| 1041 | 25 | 100 | 42.90 | 0.65 | 7.00 | 0.738 | 4.51 | 6.80 | 96.7 | 13.3Y | " " |
| | | | | | | | | | | | |
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**Constituents Sampled**

| | | Container | Number | Preservative |
|---|---|---|---|---|
| VOCs 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 | ☐ | | | |
| EDB (8011) | ☐ | | | |

**Well Casing Volumes**

Gallons/Foot: 1" = 0.04; 1.25" = 0.06; 1.5" = 0.09; 2" = 0.16 (circled); 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

Condition of Well: Good

Well Completion: Flush Mount (circled) / Stick Up

Well Locked at Arrival: Yes (circled) / No

Well Locked at Departure: Yes (circled) / No

**Additional Notes**

# TTT Environmental

*The preferred source for instrument Rentals, Sales, Service, and Supplies!*

**CALIBRATION/INSPECTION REPORT**

Calibration Date: 9/11/2017
Report Date (check-out): 9/11/2017

Company Name: GHD
Rental Description: YSI 556

S/O #:
Serial #: 556-10.D100478

## CALIBRATION*

| Sensor | Zero Value | Calibration* | | | | |
|---|---|---|---|---|---|---|
| | | Desired reading | Instrument reading | | mV | Slope/Gain |
| Spec. Conductivity/Cond. | na | 1.413 @25 C | 1.413 @ 21.65 | C | 1.413/1238/ | 0.998 |
| pH | na | 7.000 @25 C | 7.02 @ 20.66 | C | 1.6 | |
| pH | na | 4.01 @25 C | 4.00 @ 20.83 | C | 172.6 | 171 |
| pH | na | 10.000 @25 C | 10.06 @ 20.96 | C | -172.6 | 174 |
| ORP | na | 220mV @25 C | 240 @ 20.85 | C | 2.6 | |
| D.O. | na | 100% @25 C | 99.8 % 19.99 | C | B.P. =29.86 | 0.904 |
| | | | 9.39 Mg/L | | | |

* Calibrated per manufacturer specifications

## CALIBRATION SOLUTION INFORMATION

| Components | Conc. | Lot # | Manuf. | Accuracy | Fill Date | Exp. Date |
|---|---|---|---|---|---|---|
| Specific Conductivity | 100% | RW1 | OAKTON | +/- 1% | na | 10/1/2017 |
| pH | 7.00 | 12J2S | YSI | +/- 0.01 | na | 11/1/2017 |
| pH | 4.01@25C | 13A1R | YSI | +/- 0.01 | na | 10/1/2017 |
| pH | 10.00@25C | 13B3T | YSI | +/- 0.01 | na | 10/1/2017 |
| ORP | 220mV | 4118 | Hanna | - | na | 2/1/2019 |

Calibrated by: Steve Ziegler

Signature:

## INSTRUMENT INSPECTION

| Item | Pre-rental Check-out | Post-rental Check-in ("Damaged" or "No" may indicate customer charge) | |
|---|---|---|---|
| Inspect all instrument components for cracks, damage, etc: | | No Damage | Damaged |
| Meter (battery cover screws) & cable?: | | No Damage | Damaged |
| Cable is plugged into handheld?: | Yes | Yes | No |
| Instrument powers on/off properly?: | Yes | Yes | No |
| Battery power bar (lower right hand corner) shows at least 30%?: | Yes | | |
| Display/LCD contrast is correct and no black streaks in LCD screen exist?: | Yes | Yes | No |
| All display readings are positive (excluding pHmV & ORP)?: | Yes | Yes | No |
| Probe inspection?: | | No Damage | Damaged |
| Probe transport cup is attached & contains 1/4" tap water or pH 4 buffer?: | Yes | Yes | No |
| Calibrated within the last 10 days?: | Yes | | |
| Rental checklist completed?: | Yes | Yes | |

Comments:

Signature (Check-out):

Signature (Check-in):

Phone: (907) 770-9044 Fax: (907) 770-9046 Email: info@tttenviro.com www.tttenviro.com

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



**Control number:**
**Date (mm/dd/yyyy):** 9/14/17
**User (print name):** YAN, OLIVER

**Project number:** 620518
**Project name:** CEMC 94415

**Location:** 11460 OLD SEWARD HWY. 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-15RR | 9/14/17 | 0857 | — | 39.01 | — | Good |
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**Filing:** Field file

**Project number:** 62051Y

**Name:** Oliver Hoz. (please print)

**Date (mm/dd/yyyy):** 9/14/17

**Signature:**

# Appendix D
# Laboratory Analytical Report

**ANALYSIS REPORT**

Prepared by:

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

Prepared for:

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Report Date: October 10, 2017

**Project: 94115**

Account #: 10880
Group Number: 1851337
PO Number: 0015241701
Release Number: CARRIER
State of Sample Origin: AK

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| | | |
|---|---|---|
| Electronic Copy To | GHD | Attn: Jon Williams |
| 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

## SAMPLE INFORMATION

| Client Sample Description | Collection Information | ELLE# |
|---|---|---|
| MW-15RR-W-170914 Grab Groundwater | 09/14/2017 09:30 | 9213188 |
| MW-19-W-170914 Grab Groundwater | 09/14/2017 10:48 | 9213189 |
| MW-18-W-170914 Grab Groundwater | 09/14/2017 11:35 | 9213190 |
| MW-11R-W-170914 Grab Groundwater | 09/14/2017 12:42 | 9213191 |
| MW-17-W-170914 Grab Groundwater | 09/14/2017 13:35 | 9213192 |
| PSW29-1-W-170914 Grab Groundwater | 09/14/2017 09:45 | 9213193 |
| DUP-1-WD-170914 Grab Groundwater | 09/14/2017 | 9213194 |
| DUP-2-WD-170914 Grab Groundwater | 09/14/2017 | 9213195 |
| QA-1-T-170914 Water | 09/14/2017 | 9213196 |
| DUP-A-WD-170914 Grab Groundwater | 09/14/2017 | 9217340 |
| DUP-A-WD-170914 Grab Groundwater | 09/14/2017 | 9217341 |
| DUP-B-WD-170914 Grab Groundwater | 09/14/2017 | 9217344 |
| DUP-B-WD-170914 Grab Groundwater | 09/14/2017 | 9217345 |

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

Project Name: 94115
LL Group #: 1851337

**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.

For dual column analyses, the surrogate (for multi-surrogate tests, at least one surrogate) must be within the acceptance limits on at least one of the two columns.

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

**Analysis Specific Comments:**

SW-846 8260B, GC/MS Volatiles

Batch #: 4172652AA (Sample number(s): 9213188-9213191 UNSPK: P216347)

The recovery(ies) for the following analyte(s) in the MS and/or MSD exceeded the acceptance window indicating a positive bias: 1,1,2-Trichloroethane

Batch #: W172652AA (Sample number(s): 9213192, 9213195-9213196 UNSPK: P216659)

The recovery(ies) for the following analyte(s) in the MS and/or MSD exceeded the acceptance window indicating a positive bias: Cyclohexane, Methylcyclohexane

The relative percent difference(s) for the following analyte(s) in the MS/MSD were outside acceptance windows: Methyl Acetate

AK 102-SV 4/8/02, GC Petroleum Hydrocarbons

Sample #s: 9213188, 9213189, 9213190, 9213191, 9213192, 9213193

The recovery for a target analyte in the Laboratory Control Spike(s) is outside the method acceptance limits as noted on the QC Summary. Since the recovery is within our statistically derived limits the data is reported.

Sample #s: 9217340, 9217341, 9217344, 9217345

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Sufficient sample was not available to repeat the analysis.

Batch #: 172610026A (Sample number(s): 9213188-9213193)

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD were below the acceptance window: DRO C10-C25

Batch #: 172630014A (Sample number(s): 9217340-9217341, 9217344-9217345)

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD were below the acceptance window: DRO C10-C25

The relative percent difference(s) for the following analyte(s) in the LCS/LCSD were outside acceptance windows: DRO C10-C25. When the individual % recovery is within the acceptance limits, the data is reported.

**Sample Description:** MW-15RR-W-170914 Grab Groundwater
Facility# 94115
11460 Old Seward Hwy - Anchorage, AK

**ELLE Sample # WW 9213188**
**ELLE Group # 1851337**
**Account # 10880**

**Project Name: 94115**

Collected: 09/14/2017 09:30 by OY

Submitted: 09/16/2017 09:45
Reported: 10/10/2017 11:38

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

ANC15

| 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 | |
| 10335 | Acetone | 67-64-1 | N.D. | 0.006 | 0.020 | 1 |
| 10335 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Bromoform | 75-25-2 | N.D. | 0.0005 | 0.004 | 1 |
| 10335 | Bromomethane | 74-83-9 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 2-Butanone | 78-93-3 | N.D. | 0.003 | 0.010 | 1 |
| 10335 | Carbon Disulfide | 75-15-0 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | Carbon Tetrachloride | 56-23-5 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Chlorobenzene | 108-90-7 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Chloroethane | 75-00-3 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Chloroform | 67-66-3 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Chloromethane | 74-87-3 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Cyclohexane | 110-82-7 | N.D. | 0.002 | 0.005 | 1 |
| 10335 | 1,2-Dibromo-3-chloropropane | 96-12-8 | N.D. | 0.002 | 0.005 | 1 |
| 10335 | Dibromochloromethane | 124-48-1 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,2-Dibromoethane | 106-93-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,2-Dichlorobenzene | 95-50-1 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | 1,3-Dichlorobenzene | 541-73-1 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | 1,4-Dichlorobenzene | 106-46-7 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | Dichlorodifluoromethane | 75-71-8 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,1-Dichloroethane | 75-34-3 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,2-Dichloroethane | 107-06-2 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,1-Dichloroethene | 75-35-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | cis-1,2-Dichloroethene | 156-59-2 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | trans-1,2-Dichloroethene | 156-60-5 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,2-Dichloropropane | 78-87-5 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | cis-1,3-Dichloropropene | 10061-01-5 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | trans-1,3-Dichloropropene | 10061-02-6 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Ethylbenzene | 100-41-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Freon 113 | 76-13-1 | N.D. | 0.002 | 0.010 | 1 |
| 10335 | 2-Hexanone | 591-78-6 | N.D. | 0.003 | 0.010 | 1 |
| 10335 | Isopropylbenzene | 98-82-8 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | Methyl Acetate | 79-20-9 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | Methyl Tertiary Butyl Ether | 1634-04-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 4-Methyl-2-pentanone | 108-10-1 | N.D. | 0.003 | 0.010 | 1 |
| 10335 | Methylcyclohexane | 108-87-2 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | Methylene Chloride | 75-09-2 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Styrene | 100-42-5 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Toluene | 108-88-3 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,2,4-Trichlorobenzene | 120-82-1 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | 1,1,1-Trichloroethane | 71-55-6 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,1,2-Trichloroethane | 79-00-5 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Trichloroethene | 79-01-6 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Trichlorofluoromethane | 75-69-4 | 0.001 | 0.0005 | 0.001 | 1 |
| 10335 | Vinyl Chloride | 75-01-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Xylene (Total) | 1330-20-7 | N.D. | 0.0005 | 0.001 | 1 |

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

**Sample Description:** MW-15RR-W-170914 Grab Groundwater
Facility# 94115
11460 Old Seward Hwy - Anchorage, AK

**ELLE Sample # WW 9213188**
**ELLE Group # 1851337**
**Account # 10880**

**Project Name: 94115**

Collected: 09/14/2017 09:30 by OY

Submitted: 09/16/2017 09:45
Reported: 10/10/2017 11:38

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

ANC15

| CAT No. | Analysis Name | CAS Number | Result | Method Detection Limit* | Limit of Quantitation | Dilution Factor |
|---|---|---|---|---|---|---|
| **GC Volatiles** | **AK 101** | | **mg/l** | **mg/l** | **mg/l** | |
| 01438 | TPH-GRO AK water C6-C10 | n.a. | 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. | N.D. | 0.050 | 0.25 | 1 |

The recovery for a target analyte in the Laboratory Control Spike(s) is outside the method acceptance limits as noted on the QC Summary. Since the recovery is within our statistically derived limits the data is reported.

## Sample Comments

State of Alaska Lab Certification No. UST-061

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 |
|---|---|---|---|---|---|---|---|
| 10335 | TCL 4.3 VOCs | SW-846 8260B | 1 | 4172652AA | 09/22/2017 22:07 | Patrick T Herres | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | 4172652AA | 09/22/2017 22:07 | Patrick T Herres | 1 |
| 01438 | TPH-GRO AK water C6-C10 | AK 101 | 1 | 17263A53A | 09/20/2017 16:32 | Brett W Kenyon | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 17263A53A | 09/20/2017 16:32 | Brett W Kenyon | 1 |
| 13025 | AK 102-SV DRO | AK 102-SV 4/8/02 | 1 | 172610026A | 09/20/2017 12:48 | Tyler O Griffin | 1 |
| 13027 | Mini-Ext. AK 102-SV DRO | AK 102/AK 103 04/08/02 | 1 | 172610026A | 09/19/2017 10:00 | Bradley W VanLeuven | 1 |

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

**Sample Description:** MW-19-W-170914 Grab Groundwater
Facility# 94115
11460 Old Seward Hwy - Anchorage, AK

**ELLE Sample # WW 9213189**
**ELLE Group # 1851337**
**Account # 10880**

**Project Name: 94115**

Collected: 09/14/2017 10:48 by OY

Submitted: 09/16/2017 09:45
Reported: 10/10/2017 11:38

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

ANC19

| 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 | |
| 10335 | Acetone | 67-64-1 | N.D. | 0.006 | 0.020 | 1 |
| 10335 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Bromoform | 75-25-2 | N.D. | 0.0005 | 0.004 | 1 |
| 10335 | Bromomethane | 74-83-9 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 2-Butanone | 78-93-3 | N.D. | 0.003 | 0.010 | 1 |
| 10335 | Carbon Disulfide | 75-15-0 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | Carbon Tetrachloride | 56-23-5 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Chlorobenzene | 108-90-7 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Chloroethane | 75-00-3 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Chloroform | 67-66-3 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Chloromethane | 74-87-3 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Cyclohexane | 110-82-7 | N.D. | 0.002 | 0.005 | 1 |
| 10335 | 1,2-Dibromo-3-chloropropane | 96-12-8 | N.D. | 0.002 | 0.005 | 1 |
| 10335 | Dibromochloromethane | 124-48-1 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,2-Dibromoethane | 106-93-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,2-Dichlorobenzene | 95-50-1 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | 1,3-Dichlorobenzene | 541-73-1 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | 1,4-Dichlorobenzene | 106-46-7 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | Dichlorodifluoromethane | 75-71-8 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,1-Dichloroethane | 75-34-3 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,2-Dichloroethane | 107-06-2 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,1-Dichloroethene | 75-35-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | cis-1,2-Dichloroethene | 156-59-2 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | trans-1,2-Dichloroethene | 156-60-5 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,2-Dichloropropane | 78-87-5 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | cis-1,3-Dichloropropene | 10061-01-5 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | trans-1,3-Dichloropropene | 10061-02-6 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Ethylbenzene | 100-41-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Freon 113 | 76-13-1 | N.D. | 0.002 | 0.010 | 1 |
| 10335 | 2-Hexanone | 591-78-6 | N.D. | 0.003 | 0.010 | 1 |
| 10335 | Isopropylbenzene | 98-82-8 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | Methyl Acetate | 79-20-9 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | Methyl Tertiary Butyl Ether | 1634-04-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 4-Methyl-2-pentanone | 108-10-1 | N.D. | 0.003 | 0.010 | 1 |
| 10335 | Methylcyclohexane | 108-87-2 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | Methylene Chloride | 75-09-2 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Styrene | 100-42-5 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Toluene | 108-88-3 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,2,4-Trichlorobenzene | 120-82-1 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | 1,1,1-Trichloroethane | 71-55-6 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,1,2-Trichloroethane | 79-00-5 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Trichloroethene | 79-01-6 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Trichlorofluoromethane | 75-69-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Vinyl Chloride | 75-01-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Xylene (Total) | 1330-20-7 | N.D. | 0.0005 | 0.001 | 1 |

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

**Sample Description:** MW-19-W-170914 Grab Groundwater
Facility# 94115
11460 Old Seward Hwy - Anchorage, AK

**ELLE Sample # WW 9213189**
**ELLE Group # 1851337**
**Account # 10880**

**Project Name: 94115**

Collected: 09/14/2017 10:48 by OY

Submitted: 09/16/2017 09:45
Reported: 10/10/2017 11:38

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

ANC19

| CAT No. | Analysis Name | CAS Number | Result | Method Detection Limit* | Limit of Quantitation | Dilution Factor |
|---|---|---|---|---|---|---|
| **GC Volatiles** | **AK 101** | | **mg/l** | **mg/l** | **mg/l** | |
| 01438 | TPH-GRO AK water C6-C10 | n.a. | 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. | N.D. | 0.051 | 0.25 | 1 |

The recovery for a target analyte in the Laboratory Control Spike(s) is outside the method acceptance limits as noted on the QC Summary. Since the recovery is within our statistically derived limits the data is reported.

## Sample Comments

State of Alaska Lab Certification No. UST-061

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 |
|---|---|---|---|---|---|---|---|
| 10335 | TCL 4.3 VOCs | SW-846 8260B | 1 | 4172652AA | 09/22/2017 22:29 | Patrick T Herres | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | 4172652AA | 09/22/2017 22:29 | Patrick T Herres | 1 |
| 01438 | TPH-GRO AK water C6-C10 | AK 101 | 1 | 17263A53A | 09/20/2017 17:00 | Brett W Kenyon | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 17263A53A | 09/20/2017 17:00 | Brett W Kenyon | 1 |
| 13025 | AK 102-SV DRO | AK 102-SV 4/8/02 | 1 | 172610026A | 09/20/2017 13:12 | Tyler O Griffin | 1 |
| 13027 | Mini-Ext. AK 102-SV DRO | AK 102/AK 103 04/08/02 | 1 | 172610026A | 09/19/2017 10:00 | Bradley W VanLeuven | 1 |

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

**Sample Description:** MW-18-W-170914 Grab Groundwater
Facility# 94115
11460 Old Seward Hwy - Anchorage, AK

**ELLE Sample # WW 9213190**
**ELLE Group # 1851337**
**Account # 10880**

**Project Name: 94115**

Collected: 09/14/2017 11:35 by OY

Submitted: 09/16/2017 09:45
Reported: 10/10/2017 11:38

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

ANC18

| 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 | |
| 10335 | Acetone | 67-64-1 | N.D. | 0.006 | 0.020 | 1 |
| 10335 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Bromoform | 75-25-2 | N.D. | 0.0005 | 0.004 | 1 |
| 10335 | Bromomethane | 74-83-9 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 2-Butanone | 78-93-3 | N.D. | 0.003 | 0.010 | 1 |
| 10335 | Carbon Disulfide | 75-15-0 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | Carbon Tetrachloride | 56-23-5 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Chlorobenzene | 108-90-7 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Chloroethane | 75-00-3 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Chloroform | 67-66-3 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Chloromethane | 74-87-3 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Cyclohexane | 110-82-7 | N.D. | 0.002 | 0.005 | 1 |
| 10335 | 1,2-Dibromo-3-chloropropane | 96-12-8 | N.D. | 0.002 | 0.005 | 1 |
| 10335 | Dibromochloromethane | 124-48-1 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,2-Dibromoethane | 106-93-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,2-Dichlorobenzene | 95-50-1 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | 1,3-Dichlorobenzene | 541-73-1 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | 1,4-Dichlorobenzene | 106-46-7 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | Dichlorodifluoromethane | 75-71-8 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,1-Dichloroethane | 75-34-3 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,2-Dichloroethane | 107-06-2 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,1-Dichloroethene | 75-35-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | cis-1,2-Dichloroethene | 156-59-2 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | trans-1,2-Dichloroethene | 156-60-5 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,2-Dichloropropane | 78-87-5 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | cis-1,3-Dichloropropene | 10061-01-5 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | trans-1,3-Dichloropropene | 10061-02-6 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Ethylbenzene | 100-41-4 | 0.0007 J | 0.0005 | 0.001 | 1 |
| 10335 | Freon 113 | 76-13-1 | N.D. | 0.002 | 0.010 | 1 |
| 10335 | 2-Hexanone | 591-78-6 | N.D. | 0.003 | 0.010 | 1 |
| 10335 | Isopropylbenzene | 98-82-8 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | Methyl Acetate | 79-20-9 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | Methyl Tertiary Butyl Ether | 1634-04-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 4-Methyl-2-pentanone | 108-10-1 | N.D. | 0.003 | 0.010 | 1 |
| 10335 | Methylcyclohexane | 108-87-2 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | Methylene Chloride | 75-09-2 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Styrene | 100-42-5 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Toluene | 108-88-3 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,2,4-Trichlorobenzene | 120-82-1 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | 1,1,1-Trichloroethane | 71-55-6 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,1,2-Trichloroethane | 79-00-5 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Trichloroethene | 79-01-6 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Trichlorofluoromethane | 75-69-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Vinyl Chloride | 75-01-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Xylene (Total) | 1330-20-7 | N.D. | 0.0005 | 0.001 | 1 |

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

**Sample Description:** MW-18-W-170914 Grab Groundwater
Facility# 94115
11460 Old Seward Hwy - Anchorage, AK

**ELLE Sample # WW 9213190**
**ELLE Group # 1851337**
**Account # 10880**

**Project Name: 94115**

Collected: 09/14/2017 11:35 by OY

Submitted: 09/16/2017 09:45
Reported: 10/10/2017 11:38

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

ANC18

| CAT No. | Analysis Name | CAS Number | Result | Method Detection Limit* | Limit of Quantitation | Dilution Factor |
|---|---|---|---|---|---|---|
| **GC Volatiles** | **AK 101** | | mg/l | mg/l | mg/l | |
| 01438 | TPH-GRO AK water C6-C10 | n.a. | 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. | N.D. | 0.051 | 0.25 | 1 |

The recovery for a target analyte in the Laboratory Control Spike(s) is outside the method acceptance limits as noted on the QC Summary. Since the recovery is within our statistically derived limits the data is reported.

## Sample Comments

State of Alaska Lab Certification No. UST-061

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 |
|---|---|---|---|---|---|---|---|
| 10335 | TCL 4.3 VOCs | SW-846 8260B | 1 | 4172652AA | 09/22/2017 22:52 | Patrick T Herres | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | 4172652AA | 09/22/2017 22:52 | Patrick T Herres | 1 |
| 01438 | TPH-GRO AK water C6-C10 | AK 101 | 1 | 17263A53A | 09/20/2017 17:55 | Brett W Kenyon | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 17263A53A | 09/20/2017 17:55 | Brett W Kenyon | 1 |
| 13025 | AK 102-SV DRO | AK 102-SV 4/8/02 | 1 | 172610026A | 09/20/2017 13:36 | Tyler O Griffin | 1 |
| 13027 | Mini-Ext. AK 102-SV DRO | AK 102/AK 103 04/08/02 | 1 | 172610026A | 09/19/2017 10:00 | Bradley W VanLeuven | 1 |

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

**Sample Description:** MW-11R-W-170914 Grab Groundwater
Facility# 94115
11460 Old Seward Hwy - Anchorage, AK

**ELLE Sample # WW 9213191**
**ELLE Group # 1851337**
**Account # 10880**

**Project Name: 94115**

Collected: 09/14/2017 12:42 by OY

Submitted: 09/16/2017 09:45
Reported: 10/10/2017 11:38

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

ANC11

| 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 | |
| 10335 | Acetone | 67-64-1 | N.D. | 0.006 | 0.020 | 1 |
| 10335 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Bromoform | 75-25-2 | N.D. | 0.0005 | 0.004 | 1 |
| 10335 | Bromomethane | 74-83-9 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 2-Butanone | 78-93-3 | N.D. | 0.003 | 0.010 | 1 |
| 10335 | Carbon Disulfide | 75-15-0 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | Carbon Tetrachloride | 56-23-5 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Chlorobenzene | 108-90-7 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Chloroethane | 75-00-3 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Chloroform | 67-66-3 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Chloromethane | 74-87-3 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Cyclohexane | 110-82-7 | N.D. | 0.002 | 0.005 | 1 |
| 10335 | 1,2-Dibromo-3-chloropropane | 96-12-8 | N.D. | 0.002 | 0.005 | 1 |
| 10335 | Dibromochloromethane | 124-48-1 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,2-Dibromoethane | 106-93-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,2-Dichlorobenzene | 95-50-1 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | 1,3-Dichlorobenzene | 541-73-1 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | 1,4-Dichlorobenzene | 106-46-7 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | Dichlorodifluoromethane | 75-71-8 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,1-Dichloroethane | 75-34-3 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,2-Dichloroethane | 107-06-2 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,1-Dichloroethene | 75-35-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | cis-1,2-Dichloroethene | 156-59-2 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | trans-1,2-Dichloroethene | 156-60-5 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,2-Dichloropropane | 78-87-5 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | cis-1,3-Dichloropropene | 10061-01-5 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | trans-1,3-Dichloropropene | 10061-02-6 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Ethylbenzene | 100-41-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Freon 113 | 76-13-1 | N.D. | 0.002 | 0.010 | 1 |
| 10335 | 2-Hexanone | 591-78-6 | N.D. | 0.003 | 0.010 | 1 |
| 10335 | Isopropylbenzene | 98-82-8 | 0.002 J | 0.001 | 0.005 | 1 |
| 10335 | Methyl Acetate | 79-20-9 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | Methyl Tertiary Butyl Ether | 1634-04-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 4-Methyl-2-pentanone | 108-10-1 | N.D. | 0.003 | 0.010 | 1 |
| 10335 | Methylcyclohexane | 108-87-2 | 0.002 J | 0.001 | 0.005 | 1 |
| 10335 | Methylene Chloride | 75-09-2 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Styrene | 100-42-5 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Toluene | 108-88-3 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,2,4-Trichlorobenzene | 120-82-1 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | 1,1,1-Trichloroethane | 71-55-6 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,1,2-Trichloroethane | 79-00-5 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Trichloroethene | 79-01-6 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Trichlorofluoromethane | 75-69-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Vinyl Chloride | 75-01-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Xylene (Total) | 1330-20-7 | N.D. | 0.0005 | 0.001 | 1 |

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

**Sample Description:** MW-11R-W-170914 Grab Groundwater
Facility# 94115
11460 Old Seward Hwy - Anchorage, AK

**ELLE Sample # WW 9213191**
**ELLE Group # 1851337**
**Account # 10880**

**Project Name: 94115**

Collected: 09/14/2017 12:42 by OY

Submitted: 09/16/2017 09:45
Reported: 10/10/2017 11:38

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

ANC11

| CAT No. | Analysis Name | CAS Number | Result | Method Detection Limit* | Limit of Quantitation | Dilution Factor |
|---|---|---|---|---|---|---|
| **GC Volatiles** | **AK 101** | | **mg/l** | **mg/l** | **mg/l** | |
| 01438 | TPH-GRO AK water C6-C10 | n.a. | 0.091 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. | 0.079 J | 0.050 | 0.25 | 1 |

The recovery for a target analyte in the Laboratory Control Spike(s) is outside the method acceptance limits as noted on the QC Summary. Since the recovery is within our statistically derived limits the data is reported.

## Sample Comments

State of Alaska Lab Certification No. UST-061

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 |
|---|---|---|---|---|---|---|---|
| 10335 | TCL 4.3 VOCs | SW-846 8260B | 1 | 4172652AA | 09/22/2017 23:15 | Patrick T Herres | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | 4172652AA | 09/22/2017 23:15 | Patrick T Herres | 1 |
| 01438 | TPH-GRO AK water C6-C10 | AK 101 | 1 | 17263A53A | 09/20/2017 18:23 | Brett W Kenyon | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 17263A53A | 09/20/2017 18:23 | Brett W Kenyon | 1 |
| 13025 | AK 102-SV DRO | AK 102-SV 4/8/02 | 1 | 172610026A | 09/20/2017 14:00 | Tyler O Griffin | 1 |
| 13027 | Mini-Ext. AK 102-SV DRO | AK 102/AK 103 04/08/02 | 1 | 172610026A | 09/19/2017 10:00 | Bradley W VanLeuven | 1 |

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

**Sample Description:** MW-17-W-170914 Grab Groundwater
Facility# 94115
11460 Old Seward Hwy - Anchorage, AK

**ELLE Sample # WW 9213192**
**ELLE Group # 1851337**
**Account # 10880**

**Project Name: 94115**

Collected: 09/14/2017 13:35 by OY

Submitted: 09/16/2017 09:45
Reported: 10/10/2017 11:38

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

ANC17

| 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 | |
| 10335 | Acetone | 67-64-1 | N.D. | 0.006 | 0.020 | 1 |
| 10335 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Bromoform | 75-25-2 | N.D. | 0.0005 | 0.004 | 1 |
| 10335 | Bromomethane | 74-83-9 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 2-Butanone | 78-93-3 | N.D. | 0.003 | 0.010 | 1 |
| 10335 | Carbon Disulfide | 75-15-0 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | Carbon Tetrachloride | 56-23-5 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Chlorobenzene | 108-90-7 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Chloroethane | 75-00-3 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Chloroform | 67-66-3 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Chloromethane | 74-87-3 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Cyclohexane | 110-82-7 | N.D. | 0.002 | 0.005 | 1 |
| 10335 | 1,2-Dibromo-3-chloropropane | 96-12-8 | N.D. | 0.002 | 0.005 | 1 |
| 10335 | Dibromochloromethane | 124-48-1 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,2-Dibromoethane | 106-93-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,2-Dichlorobenzene | 95-50-1 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | 1,3-Dichlorobenzene | 541-73-1 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | 1,4-Dichlorobenzene | 106-46-7 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | Dichlorodifluoromethane | 75-71-8 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,1-Dichloroethane | 75-34-3 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,2-Dichloroethane | 107-06-2 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,1-Dichloroethene | 75-35-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | cis-1,2-Dichloroethene | 156-59-2 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | trans-1,2-Dichloroethene | 156-60-5 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,2-Dichloropropane | 78-87-5 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | cis-1,3-Dichloropropene | 10061-01-5 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | trans-1,3-Dichloropropene | 10061-02-6 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Ethylbenzene | 100-41-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Freon 113 | 76-13-1 | N.D. | 0.002 | 0.010 | 1 |
| 10335 | 2-Hexanone | 591-78-6 | N.D. | 0.003 | 0.010 | 1 |
| 10335 | Isopropylbenzene | 98-82-8 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | Methyl Acetate | 79-20-9 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | Methyl Tertiary Butyl Ether | 1634-04-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 4-Methyl-2-pentanone | 108-10-1 | N.D. | 0.003 | 0.010 | 1 |
| 10335 | Methylcyclohexane | 108-87-2 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | Methylene Chloride | 75-09-2 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Styrene | 100-42-5 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Toluene | 108-88-3 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,2,4-Trichlorobenzene | 120-82-1 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | 1,1,1-Trichloroethane | 71-55-6 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,1,2-Trichloroethane | 79-00-5 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Trichloroethene | 79-01-6 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Trichlorofluoromethane | 75-69-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Vinyl Chloride | 75-01-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Xylene (Total) | 1330-20-7 | N.D. | 0.0005 | 0.001 | 1 |

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

**Sample Description:** MW-17-W-170914 Grab Groundwater
Facility# 94115
11460 Old Seward Hwy - Anchorage, AK

**ELLE Sample # WW 9213192**
**ELLE Group # 1851337**
**Account # 10880**

**Project Name: 94115**

Collected: 09/14/2017 13:35 by OY

Submitted: 09/16/2017 09:45
Reported: 10/10/2017 11:38

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

ANC17

| CAT No. | Analysis Name | CAS Number | Result | Method Detection Limit* | Limit of Quantitation | Dilution Factor |
|---|---|---|---|---|---|---|
| **GC Volatiles** | **AK 101** | | **mg/l** | **mg/l** | **mg/l** | |
| 01438 | TPH-GRO AK water C6-C10 | n.a. | 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. | 0.056 J | 0.053 | 0.26 | 1 |

The recovery for a target analyte in the Laboratory Control Spike(s) is outside the method acceptance limits as noted on the QC Summary. Since the recovery is within our statistically derived limits the data is reported.

## Sample Comments

State of Alaska Lab Certification No. UST-061

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 |
|---|---|---|---|---|---|---|---|
| 10335 | TCL 4.3 VOCs | SW-846 8260B | 1 | W172652AA | 09/23/2017 06:08 | Patrick T Herres | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | W172652AA | 09/23/2017 06:08 | Patrick T Herres | 1 |
| 01438 | TPH-GRO AK water C6-C10 | AK 101 | 1 | 17263A53A | 09/20/2017 18:50 | Brett W Kenyon | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 17263A53A | 09/20/2017 18:50 | Brett W Kenyon | 1 |
| 13025 | AK 102-SV DRO | AK 102-SV 4/8/02 | 1 | 172610026A | 09/20/2017 14:24 | Tyler O Griffin | 1 |
| 13027 | Mini-Ext. AK 102-SV DRO | AK 102/AK 103 04/08/02 | 1 | 172610026A | 09/19/2017 10:00 | Bradley W VanLeuven | 1 |

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

**Sample Description:** PSW29-1-W-170914 Grab Groundwater
Facility# 94115
11460 Old Seward Hwy - Anchorage, AK

**ELLE Sample # WW 9213193**
**ELLE Group # 1851337**
**Account # 10880**

**Project Name: 94115**

Collected: 09/14/2017 09:45 by OY

Submitted: 09/16/2017 09:45
Reported: 10/10/2017 11:38

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

ANC29

| CAT No. | Analysis Name | CAS Number | Result | Method Detection Limit* | Limit of Quantitation | Dilution Factor |
|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **EPA 524.2** | | **mg/l** | **mg/l** | **mg/l** | |
| 03648 | Benzene | 71-43-2 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | Bromodichloromethane | 75-27-4 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | Bromoform | 75-25-2 | N.D. | 0.0002 | 0.0005 | 1 |
| 03648 | Bromomethane | 74-83-9 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | Carbon Tetrachloride | 56-23-5 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | Chlorobenzene | 108-90-7 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | Chloroethane | 75-00-3 | N.D. | 0.0002 | 0.0005 | 1 |
| 03648 | Chloroform | 67-66-3 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | Chloromethane | 74-87-3 | N.D. | 0.0002 | 0.0005 | 1 |
| 03648 | Dibromochloromethane | 124-48-1 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | 1,2-Dibromoethane | 106-93-4 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | Dibromomethane | 74-95-3 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | 1,2-Dichlorobenzene | 95-50-1 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | 1,3-Dichlorobenzene | 541-73-1 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | 1,4-Dichlorobenzene | 106-46-7 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | Dichlorodifluoromethane | 75-71-8 | N.D. | 0.0002 | 0.0005 | 1 |
| 03648 | 1,1-Dichloroethane | 75-34-3 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | 1,2-Dichloroethane | 107-06-2 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | 1,1-Dichloroethene | 75-35-4 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | cis-1,2-Dichloroethene | 156-59-2 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | trans-1,2-Dichloroethene | 156-60-5 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | 1,2-Dichloropropane | 78-87-5 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | cis-1,3-Dichloropropene | 10061-01-5 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | trans-1,3-Dichloropropene | 10061-02-6 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | Ethylbenzene | 100-41-4 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | Freon 113 | 76-13-1 | N.D. | 0.0002 | 0.0005 | 1 |
| 03648 | Methylene Chloride | 75-09-2 | N.D. | 0.0003 | 0.0005 | 1 |
| 03648 | 1,1,2,2-Tetrachloroethane | 79-34-5 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | Tetrachloroethene | 127-18-4 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | Toluene | 108-88-3 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | 1,2,4-Trichlorobenzene | 120-82-1 | N.D. | 0.0002 | 0.0005 | 1 |
| 03648 | 1,1,1-Trichloroethane | 71-55-6 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | 1,1,2-Trichloroethane | 79-00-5 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | Trichloroethene | 79-01-6 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | Trichlorofluoromethane | 75-69-4 | N.D. | 0.0002 | 0.0005 | 1 |
| 03648 | 1,2,3-Trichloropropane | 96-18-4 | N.D. | 0.0002 | 0.0005 | 1 |
| 03648 | Vinyl Chloride | 75-01-4 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | m+p-Xylene | 179601-23-1 | N.D. | 0.0002 | 0.0005 | 1 |
| 03648 | o-Xylene | 95-47-6 | N.D. | 0.0001 | 0.0005 | 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. | N.D. | 0.050 | 0.25 | 1 |
| | The recovery for a target analyte in the Laboratory | | | | | |

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

**Sample Description:** PSW29-1-W-170914 Grab Groundwater
Facility# 94115
11460 Old Seward Hwy - Anchorage, AK

**ELLE Sample # WW 9213193**
**ELLE Group # 1851337**
**Account # 10880**

**Project Name: 94115**

Collected: 09/14/2017 09:45 by OY

Submitted: 09/16/2017 09:45
Reported: 10/10/2017 11:38

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

ANC29

| CAT No. | Analysis Name | CAS Number | Result | Method Detection Limit* | Limit of Quantitation | Dilution Factor |
|---|---|---|---|---|---|---|

Control Spike(s) is outside the method acceptance limits as noted on the QC Summary. Since the recovery is within our statistically derived limits the data is reported.

## Sample Comments

State of Alaska Lab Certification No. UST-061

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 |
|---|---|---|---|---|---|---|---|
| 03648 | 524.2 AK HVOCs + BTEX | EPA 524.2 | 1 | K172631AA | 09/20/2017 13:59 | Joshua S Hess | 1 |
| 01438 | TPH-GRO AK water C6-C10 | AK 101 | 1 | 17264A53A | 09/21/2017 13:47 | Brett W Kenyon | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 17264A53A | 09/21/2017 13:47 | Brett W Kenyon | 1 |
| 13025 | AK 102-SV DRO | AK 102-SV 4/8/02 | 1 | 172610026A | 09/20/2017 14:49 | Tyler O Griffin | 1 |
| 13027 | Mini-Ext. AK 102-SV DRO | AK 102/AK 103 04/08/02 | 1 | 172610026A | 09/19/2017 10:00 | Bradley W VanLeuven | 1 |

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

**Sample Description:** DUP-1-WD-170914 Grab Groundwater
Facility# 94115
11460 Old Seward Hwy - Anchorage, AK

**ELLE Sample # WW 9213194**
**ELLE Group # 1851337**
**Account # 10880**

**Project Name: 94115**

Collected: 09/14/2017 by OY

Submitted: 09/16/2017 09:45
Reported: 10/10/2017 11:38

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

D1ANC

| CAT No. | Analysis Name | CAS Number | Result | Method Detection Limit* | Limit of Quantitation | Dilution Factor |
|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **EPA 524.2** | | **mg/l** | **mg/l** | **mg/l** | |
| 03648 | Benzene | 71-43-2 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | Bromodichloromethane | 75-27-4 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | Bromoform | 75-25-2 | N.D. | 0.0002 | 0.0005 | 1 |
| 03648 | Bromomethane | 74-83-9 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | Carbon Tetrachloride | 56-23-5 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | Chlorobenzene | 108-90-7 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | Chloroethane | 75-00-3 | N.D. | 0.0002 | 0.0005 | 1 |
| 03648 | Chloroform | 67-66-3 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | Chloromethane | 74-87-3 | N.D. | 0.0002 | 0.0005 | 1 |
| 03648 | Dibromochloromethane | 124-48-1 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | 1,2-Dibromoethane | 106-93-4 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | Dibromomethane | 74-95-3 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | 1,2-Dichlorobenzene | 95-50-1 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | 1,3-Dichlorobenzene | 541-73-1 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | 1,4-Dichlorobenzene | 106-46-7 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | Dichlorodifluoromethane | 75-71-8 | N.D. | 0.0002 | 0.0005 | 1 |
| 03648 | 1,1-Dichloroethane | 75-34-3 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | 1,2-Dichloroethane | 107-06-2 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | 1,1-Dichloroethene | 75-35-4 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | cis-1,2-Dichloroethene | 156-59-2 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | trans-1,2-Dichloroethene | 156-60-5 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | 1,2-Dichloropropane | 78-87-5 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | cis-1,3-Dichloropropene | 10061-01-5 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | trans-1,3-Dichloropropene | 10061-02-6 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | Ethylbenzene | 100-41-4 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | Freon 113 | 76-13-1 | N.D. | 0.0002 | 0.0005 | 1 |
| 03648 | Methylene Chloride | 75-09-2 | N.D. | 0.0003 | 0.0005 | 1 |
| 03648 | 1,1,2,2-Tetrachloroethane | 79-34-5 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | Tetrachloroethene | 127-18-4 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | Toluene | 108-88-3 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | 1,2,4-Trichlorobenzene | 120-82-1 | N.D. | 0.0002 | 0.0005 | 1 |
| 03648 | 1,1,1-Trichloroethane | 71-55-6 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | 1,1,2-Trichloroethane | 79-00-5 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | Trichloroethene | 79-01-6 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | Trichlorofluoromethane | 75-69-4 | N.D. | 0.0002 | 0.0005 | 1 |
| 03648 | 1,2,3-Trichloropropane | 96-18-4 | N.D. | 0.0002 | 0.0005 | 1 |
| 03648 | Vinyl Chloride | 75-01-4 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | m+p-Xylene | 179601-23-1 | N.D. | 0.0002 | 0.0005 | 1 |
| 03648 | o-Xylene | 95-47-6 | N.D. | 0.0001 | 0.0005 | 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 |

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

**Sample Description: DUP-1-WD-170914 Grab Groundwater**
**Facility# 94115**
**11460 Old Seward Hwy - Anchorage, AK**

**ELLE Sample # WW 9213194**
**ELLE Group # 1851337**
**Account # 10880**

**Project Name: 94115**

Collected: 09/14/2017 by OY

Submitted: 09/16/2017 09:45
Reported: 10/10/2017 11:38

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

D1ANC

## 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 |
|---|---|---|---|---|---|---|---|
| 03648 | 524.2 AK HVOCs + BTEX | EPA 524.2 | 1 | K172631AA | 09/20/2017 14:24 | Joshua S Hess | 1 |
| 01438 | TPH-GRO AK water C6-C10 | AK 101 | 1 | 17264A53A | 09/21/2017 14:14 | Brett W Kenyon | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 17264A53A | 09/21/2017 14:14 | Brett W Kenyon | 1 |

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

**Sample Description:** DUP-2-WD-170914 Grab Groundwater
Facility# 94115
11460 Old Seward Hwy - Anchorage, AK

**ELLE Sample # WW 9213195**
**ELLE Group # 1851337**
**Account # 10880**

**Project Name: 94115**

Collected: 09/14/2017 by OY

Submitted: 09/16/2017 09:45
Reported: 10/10/2017 11:38

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

D2ANC

| 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 | |
| 10335 | Acetone | 67-64-1 | N.D. | 0.006 | 0.020 | 1 |
| 10335 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Bromoform | 75-25-2 | N.D. | 0.0005 | 0.004 | 1 |
| 10335 | Bromomethane | 74-83-9 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 2-Butanone | 78-93-3 | N.D. | 0.003 | 0.010 | 1 |
| 10335 | Carbon Disulfide | 75-15-0 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | Carbon Tetrachloride | 56-23-5 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Chlorobenzene | 108-90-7 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Chloroethane | 75-00-3 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Chloroform | 67-66-3 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Chloromethane | 74-87-3 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Cyclohexane | 110-82-7 | N.D. | 0.002 | 0.005 | 1 |
| 10335 | 1,2-Dibromo-3-chloropropane | 96-12-8 | N.D. | 0.002 | 0.005 | 1 |
| 10335 | Dibromochloromethane | 124-48-1 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,2-Dibromoethane | 106-93-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,2-Dichlorobenzene | 95-50-1 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | 1,3-Dichlorobenzene | 541-73-1 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | 1,4-Dichlorobenzene | 106-46-7 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | Dichlorodifluoromethane | 75-71-8 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,1-Dichloroethane | 75-34-3 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,2-Dichloroethane | 107-06-2 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,1-Dichloroethene | 75-35-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | cis-1,2-Dichloroethene | 156-59-2 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | trans-1,2-Dichloroethene | 156-60-5 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,2-Dichloropropane | 78-87-5 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | cis-1,3-Dichloropropene | 10061-01-5 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | trans-1,3-Dichloropropene | 10061-02-6 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Ethylbenzene | 100-41-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Freon 113 | 76-13-1 | N.D. | 0.002 | 0.010 | 1 |
| 10335 | 2-Hexanone | 591-78-6 | N.D. | 0.003 | 0.010 | 1 |
| 10335 | Isopropylbenzene | 98-82-8 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | Methyl Acetate | 79-20-9 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | Methyl Tertiary Butyl Ether | 1634-04-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 4-Methyl-2-pentanone | 108-10-1 | N.D. | 0.003 | 0.010 | 1 |
| 10335 | Methylcyclohexane | 108-87-2 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | Methylene Chloride | 75-09-2 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Styrene | 100-42-5 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Toluene | 108-88-3 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,2,4-Trichlorobenzene | 120-82-1 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | 1,1,1-Trichloroethane | 71-55-6 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,1,2-Trichloroethane | 79-00-5 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Trichloroethene | 79-01-6 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Trichlorofluoromethane | 75-69-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Vinyl Chloride | 75-01-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Xylene (Total) | 1330-20-7 | N.D. | 0.0005 | 0.001 | 1 |

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

**Sample Description:** DUP-2-WD-170914 Grab Groundwater
Facility# 94115
11460 Old Seward Hwy - Anchorage, AK

**ELLE Sample # WW 9213195**
**ELLE Group # 1851337**
**Account # 10880**

**Project Name: 94115**

Collected: 09/14/2017 by OY

Submitted: 09/16/2017 09:45
Reported: 10/10/2017 11:38

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

D2ANC

| CAT No. | Analysis Name | CAS Number | Result | Method Detection Limit* | Limit of Quantitation | Dilution Factor |
|---|---|---|---|---|---|---|
| **GC Volatiles** | **AK 101** | | mg/l | mg/l | mg/l | |
| 01438 | TPH-GRO AK water C6-C10 | n.a. | 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 |
|---|---|---|---|---|---|---|---|
| 10335 | TCL 4.3 VOCs | SW-846 8260B | 1 | W172652AA | 09/23/2017 06:32 | Patrick T Herres | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | W172652AA | 09/23/2017 06:32 | Patrick T Herres | 1 |
| 01438 | TPH-GRO AK water C6-C10 | AK 101 | 1 | 17264A53A | 09/21/2017 14:42 | Brett W Kenyon | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 17264A53A | 09/21/2017 14:42 | Brett W Kenyon | 1 |

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

**Sample Description:** QA-1-T-170914 Water
Facility# 94115
11460 Old Seward Hwy - Anchorage, AK

**ELLE Sample # WW 9213196**
**ELLE Group # 1851337**
**Account # 10880**

**Project Name: 94115**

Collected: 09/14/2017

Submitted: 09/16/2017 09:45
Reported: 10/10/2017 11:38

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

ANCTB

| CAT No. | Analysis Name | CAS Number | Result | Method Detection Limit* | Limit of Quantitation | Dilution Factor |
|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **EPA 524.2** | | **mg/l** | **mg/l** | **mg/l** | |
| 03648 | Benzene | 71-43-2 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | Bromodichloromethane | 75-27-4 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | Bromoform | 75-25-2 | N.D. | 0.0002 | 0.0005 | 1 |
| 03648 | Bromomethane | 74-83-9 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | Carbon Tetrachloride | 56-23-5 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | Chlorobenzene | 108-90-7 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | Chloroethane | 75-00-3 | N.D. | 0.0002 | 0.0005 | 1 |
| 03648 | Chloroform | 67-66-3 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | Chloromethane | 74-87-3 | N.D. | 0.0002 | 0.0005 | 1 |
| 03648 | Dibromochloromethane | 124-48-1 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | 1,2-Dibromoethane | 106-93-4 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | Dibromomethane | 74-95-3 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | 1,2-Dichlorobenzene | 95-50-1 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | 1,3-Dichlorobenzene | 541-73-1 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | 1,4-Dichlorobenzene | 106-46-7 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | Dichlorodifluoromethane | 75-71-8 | N.D. | 0.0002 | 0.0005 | 1 |
| 03648 | 1,1-Dichloroethane | 75-34-3 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | 1,2-Dichloroethane | 107-06-2 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | 1,1-Dichloroethene | 75-35-4 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | cis-1,2-Dichloroethene | 156-59-2 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | trans-1,2-Dichloroethene | 156-60-5 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | 1,2-Dichloropropane | 78-87-5 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | cis-1,3-Dichloropropene | 10061-01-5 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | trans-1,3-Dichloropropene | 10061-02-6 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | Ethylbenzene | 100-41-4 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | Freon 113 | 76-13-1 | N.D. | 0.0002 | 0.0005 | 1 |
| 03648 | Methylene Chloride | 75-09-2 | N.D. | 0.0003 | 0.0005 | 1 |
| 03648 | 1,1,2,2-Tetrachloroethane | 79-34-5 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | Tetrachloroethene | 127-18-4 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | Toluene | 108-88-3 | 0.0003 J | 0.0001 | 0.0005 | 1 |
| 03648 | 1,2,4-Trichlorobenzene | 120-82-1 | N.D. | 0.0002 | 0.0005 | 1 |
| 03648 | 1,1,1-Trichloroethane | 71-55-6 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | 1,1,2-Trichloroethane | 79-00-5 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | Trichloroethene | 79-01-6 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | Trichlorofluoromethane | 75-69-4 | N.D. | 0.0002 | 0.0005 | 1 |
| 03648 | 1,2,3-Trichloropropane | 96-18-4 | N.D. | 0.0002 | 0.0005 | 1 |
| 03648 | Vinyl Chloride | 75-01-4 | N.D. | 0.0001 | 0.0005 | 1 |
| 03648 | m+p-Xylene | 179601-23-1 | N.D. | 0.0002 | 0.0005 | 1 |
| 03648 | o-Xylene | 95-47-6 | N.D. | 0.0001 | 0.0005 | 1 |
| **GC/MS Volatiles** | **SW-846 8260B** | | **mg/l** | **mg/l** | **mg/l** | |
| 10335 | Acetone | 67-64-1 | N.D. | 0.006 | 0.020 | 1 |
| 10335 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Bromoform | 75-25-2 | N.D. | 0.0005 | 0.004 | 1 |
| 10335 | Bromomethane | 74-83-9 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 2-Butanone | 78-93-3 | N.D. | 0.003 | 0.010 | 1 |
| 10335 | Carbon Disulfide | 75-15-0 | N.D. | 0.001 | 0.005 | 1 |

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

**Sample Description:** QA-1-T-170914 Water
Facility# 94115
11460 Old Seward Hwy - Anchorage, AK

**ELLE Sample # WW 9213196**
**ELLE Group # 1851337**
**Account # 10880**

**Project Name: 94115**

Collected: 09/14/2017

Submitted: 09/16/2017 09:45
Reported: 10/10/2017 11:38

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

ANCTB

| 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** | |
| 10335 | Carbon Tetrachloride | 56-23-5 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Chlorobenzene | 108-90-7 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Chloroethane | 75-00-3 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Chloroform | 67-66-3 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Chloromethane | 74-87-3 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Cyclohexane | 110-82-7 | N.D. | 0.002 | 0.005 | 1 |
| 10335 | 1,2-Dibromo-3-chloropropane | 96-12-8 | N.D. | 0.002 | 0.005 | 1 |
| 10335 | Dibromochloromethane | 124-48-1 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,2-Dibromoethane | 106-93-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,2-Dichlorobenzene | 95-50-1 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | 1,3-Dichlorobenzene | 541-73-1 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | 1,4-Dichlorobenzene | 106-46-7 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | Dichlorodifluoromethane | 75-71-8 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,1-Dichloroethane | 75-34-3 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,2-Dichloroethane | 107-06-2 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,1-Dichloroethene | 75-35-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | cis-1,2-Dichloroethene | 156-59-2 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | trans-1,2-Dichloroethene | 156-60-5 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,2-Dichloropropane | 78-87-5 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | cis-1,3-Dichloropropene | 10061-01-5 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | trans-1,3-Dichloropropene | 10061-02-6 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Ethylbenzene | 100-41-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Freon 113 | 76-13-1 | N.D. | 0.002 | 0.010 | 1 |
| 10335 | 2-Hexanone | 591-78-6 | N.D. | 0.003 | 0.010 | 1 |
| 10335 | Isopropylbenzene | 98-82-8 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | Methyl Acetate | 79-20-9 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | Methyl Tertiary Butyl Ether | 1634-04-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 4-Methyl-2-pentanone | 108-10-1 | N.D. | 0.003 | 0.010 | 1 |
| 10335 | Methylcyclohexane | 108-87-2 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | Methylene Chloride | 75-09-2 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Styrene | 100-42-5 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Toluene | 108-88-3 | 0.0006 J | 0.0005 | 0.001 | 1 |
| 10335 | 1,2,4-Trichlorobenzene | 120-82-1 | N.D. | 0.001 | 0.005 | 1 |
| 10335 | 1,1,1-Trichloroethane | 71-55-6 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 1,1,2-Trichloroethane | 79-00-5 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Trichloroethene | 79-01-6 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Trichlorofluoromethane | 75-69-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | Vinyl Chloride | 75-01-4 | N.D. | 0.0005 | 0.001 | 1 |
| 10335 | 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 |

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

**Sample Description:** **QA-1-T-170914 Water**
**Facility# 94115**
**11460 Old Seward Hwy - Anchorage, AK**

**ELLE Sample # WW 9213196**
**ELLE Group # 1851337**
**Account # 10880**

**Project Name: 94115**

Collected: 09/14/2017

Submitted: 09/16/2017 09:45
Reported: 10/10/2017 11:38

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

ANCTB

## 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 |
|---|---|---|---|---|---|---|---|
| 03648 | 524.2 AK HVOCs + BTEX | EPA 524.2 | 1 | K172631AA | 09/20/2017 14:49 | Joshua S Hess | 1 |
| 10335 | TCL 4.3 VOCs | SW-846 8260B | 1 | W172652AA | 09/22/2017 22:39 | Patrick T Herres | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | W172652AA | 09/22/2017 22:39 | Patrick T Herres | 1 |
| 01438 | TPH-GRO AK water C6-C10 | AK 101 | 1 | 17264A53A | 09/21/2017 11:29 | Brett W Kenyon | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 17264A53A | 09/21/2017 11:29 | Brett W Kenyon | 1 |

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

**Sample Description:** DUP-A-WD-170914 Grab Groundwater
Facility# 94115
11460 Old Seward Hwy - Anchorage, AK

**ELLE Sample # WW 9217340**
**ELLE Group # 1851337**
**Account # 10880**

**Project Name: 94115**

Collected: 09/14/2017 by OY

Submitted: 09/16/2017 09:45
Reported: 10/10/2017 11:38

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

DAANC

| CAT No. | Analysis Name | CAS Number | Result | Method Detection Limit* | Limit of Quantitation | Dilution Factor |
|---|---|---|---|---|---|---|
| **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 |

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Sufficient sample was not available to repeat the analysis.

## 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 |
|---|---|---|---|---|---|---|---|
| 13025 | AK 102-SV DRO | AK 102-SV 4/8/02 | 1 | 172630014A | 09/20/2017 18:58 | Tyler O Griffin | 1 |
| 13027 | Mini-Ext. AK 102-SV DRO | AK 102/AK 103 04/08/02 | 1 | 172630014A | 09/20/2017 12:00 | Bradley W VanLeuven | 1 |

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

**Sample Description:** DUP-A-WD-170914 Grab Groundwater
Facility# 94115
11460 Old Seward Hwy - Anchorage, AK

**ELLE Sample # WW 9217341**
**ELLE Group # 1851337**
**Account # 10880**

**Project Name: 94115**

Collected: 09/14/2017 by OY

Submitted: 09/16/2017 09:45
Reported: 10/10/2017 11:38

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

DA-NC

| CAT No. | Analysis Name | CAS Number | Result | Method Detection Limit* | Limit of Quantitation | Dilution Factor |
|---|---|---|---|---|---|---|
| **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 |

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Sufficient sample was not available to repeat the analysis.

## 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 |
|---|---|---|---|---|---|---|---|
| 13025 | AK 102-SV DRO | AK 102-SV 4/8/02 | 1 | 172630014A | 09/20/2017 19:23 | Tyler O Griffin | 1 |
| 13027 | Mini-Ext. AK 102-SV DRO | AK 102/AK 103 04/08/02 | 1 | 172630014A | 09/20/2017 12:00 | Bradley W VanLeuven | 1 |

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

**Sample Description: DUP-B-WD-170914 Grab Groundwater**
**Facility# 94115**
**11460 Old Seward Hwy - Anchorage, AK**

**ELLE Sample # WW 9217344**
**ELLE Group # 1851337**
**Account # 10880**

**Project Name: 94115**

Collected: 09/14/2017 by OY

Submitted: 09/16/2017 09:45
Reported: 10/10/2017 11:38

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

DBANC

| CAT No. | Analysis Name | CAS Number | Result | Method Detection Limit* | Limit of Quantitation | Dilution Factor |
|---|---|---|---|---|---|---|
| **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 |

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Sufficient sample was not available to repeat the analysis.

## 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 |
|---|---|---|---|---|---|---|---|
| 13025 | AK 102-SV DRO | AK 102-SV 4/8/02 | 1 | 172630014A | 09/20/2017 20:35 | Tyler O Griffin | 1 |
| 13027 | Mini-Ext. AK 102-SV DRO | AK 102/AK 103 04/08/02 | 1 | 172630014A | 09/20/2017 12:00 | Bradley W VanLeuven | 1 |

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

**Sample Description:** DUP-B-WD-170914 Grab Groundwater
Facility# 94115
11460 Old Seward Hwy - Anchorage, AK

**ELLE Sample # WW 9217345**
**ELLE Group # 1851337**
**Account # 10880**

**Project Name: 94115**

Collected: 09/14/2017 by OY

Submitted: 09/16/2017 09:45
Reported: 10/10/2017 11:38

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

DB-NC

| CAT No. | Analysis Name | CAS Number | Result | Method Detection Limit* | Limit of Quantitation | Dilution Factor |
|---|---|---|---|---|---|---|
| **GC Petroleum Hydrocarbons** | **AK 102-SV 4/8/02** | | **mg/l** | **mg/l** | **mg/l** | |
| 13025 | DRO C10-C25 | n.a. | N.D. | 0.050 | 0.25 | 1 |

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Sufficient sample was not available to repeat the analysis.

## 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 |
|---|---|---|---|---|---|---|---|
| 13025 | AK 102-SV DRO | AK 102-SV 4/8/02 | 1 | 172630014A | 09/20/2017 20:59 | Tyler O Griffin | 1 |
| 13027 | Mini-Ext. AK 102-SV DRO | AK 102/AK 103 04/08/02 | 1 | 172630014A | 09/20/2017 12:00 | Bradley W VanLeuven | 1 |

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

# Quality Control Summary

Client Name: ChevronTexaco
Reported: 10/10/2017 11:38

Group Number: 1851337

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: 4172652AA | Sample number(s): 9213188-9213191 | | |
| Acetone | N.D. | 0.006 | 0.020 |
| Benzene | N.D. | 0.0005 | 0.001 |
| Bromodichloromethane | N.D. | 0.0005 | 0.001 |
| Bromoform | N.D. | 0.0005 | 0.004 |
| Bromomethane | N.D. | 0.0005 | 0.001 |
| 2-Butanone | N.D. | 0.003 | 0.010 |
| Carbon Disulfide | N.D. | 0.001 | 0.005 |
| Carbon Tetrachloride | N.D. | 0.0005 | 0.001 |
| Chlorobenzene | N.D. | 0.0005 | 0.001 |
| Chloroethane | N.D. | 0.0005 | 0.001 |
| Chloroform | N.D. | 0.0005 | 0.001 |
| Chloromethane | N.D. | 0.0005 | 0.001 |
| Cyclohexane | N.D. | 0.002 | 0.005 |
| 1,2-Dibromo-3-chloropropane | N.D. | 0.002 | 0.005 |
| Dibromochloromethane | N.D. | 0.0005 | 0.001 |
| 1,2-Dibromoethane | N.D. | 0.0005 | 0.001 |
| 1,2-Dichlorobenzene | N.D. | 0.001 | 0.005 |
| 1,3-Dichlorobenzene | N.D. | 0.001 | 0.005 |
| 1,4-Dichlorobenzene | N.D. | 0.001 | 0.005 |
| Dichlorodifluoromethane | N.D. | 0.0005 | 0.001 |
| 1,1-Dichloroethane | N.D. | 0.0005 | 0.001 |
| 1,2-Dichloroethane | N.D. | 0.0005 | 0.001 |
| 1,1-Dichloroethene | N.D. | 0.0005 | 0.001 |
| cis-1,2-Dichloroethene | N.D. | 0.0005 | 0.001 |
| trans-1,2-Dichloroethene | N.D. | 0.0005 | 0.001 |
| 1,2-Dichloropropane | N.D. | 0.0005 | 0.001 |
| cis-1,3-Dichloropropene | N.D. | 0.0005 | 0.001 |
| trans-1,3-Dichloropropene | N.D. | 0.0005 | 0.001 |
| Ethylbenzene | N.D. | 0.0005 | 0.001 |
| Freon 113 | N.D. | 0.002 | 0.010 |
| 2-Hexanone | N.D. | 0.003 | 0.010 |
| Isopropylbenzene | N.D. | 0.001 | 0.005 |
| Methyl Acetate | N.D. | 0.001 | 0.005 |
| Methyl Tertiary Butyl Ether | N.D. | 0.0005 | 0.001 |
| 4-Methyl-2-pentanone | N.D. | 0.003 | 0.010 |
| Methylcyclohexane | N.D. | 0.001 | 0.005 |
| Methylene Chloride | N.D. | 0.0005 | 0.001 |
| Styrene | N.D. | 0.001 | 0.005 |
| 1,1,2,2-Tetrachloroethane | N.D. | 0.0005 | 0.001 |
| Tetrachloroethene | N.D. | 0.0005 | 0.001 |

*- 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: 10/10/2017 11:38

Group Number: 1851337

## Method Blank (continued)

| Analysis Name | Result | MDL** | LOQ |
|---|---|---|---|
| | mg/l | mg/l | mg/l |
| Toluene | N.D. | 0.0005 | 0.001 |
| 1,2,4-Trichlorobenzene | N.D. | 0.001 | 0.005 |
| 1,1,1-Trichloroethane | N.D. | 0.0005 | 0.001 |
| 1,1,2-Trichloroethane | N.D. | 0.0005 | 0.001 |
| Trichloroethene | N.D. | 0.0005 | 0.001 |
| Trichlorofluoromethane | N.D. | 0.0005 | 0.001 |
| Vinyl Chloride | N.D. | 0.0005 | 0.001 |
| Xylene (Total) | N.D. | 0.0005 | 0.001 |
| Batch number: K172631AA | Sample number(s): 9213193-9213194,9213196 | | |
| Benzene | N.D. | 0.0001 | 0.0005 |
| Bromodichloromethane | N.D. | 0.0001 | 0.0005 |
| Bromoform | N.D. | 0.0002 | 0.0005 |
| Bromomethane | N.D. | 0.0001 | 0.0005 |
| Carbon Tetrachloride | N.D. | 0.0001 | 0.0005 |
| Chlorobenzene | N.D. | 0.0001 | 0.0005 |
| Chloroethane | N.D. | 0.0002 | 0.0005 |
| Chloroform | N.D. | 0.0001 | 0.0005 |
| Chloromethane | N.D. | 0.0002 | 0.0005 |
| Dibromochloromethane | N.D. | 0.0001 | 0.0005 |
| 1,2-Dibromoethane | N.D. | 0.0001 | 0.0005 |
| Dibromomethane | N.D. | 0.0001 | 0.0005 |
| 1,2-Dichlorobenzene | N.D. | 0.0001 | 0.0005 |
| 1,3-Dichlorobenzene | N.D. | 0.0001 | 0.0005 |
| 1,4-Dichlorobenzene | N.D. | 0.0001 | 0.0005 |
| Dichlorodifluoromethane | N.D. | 0.0002 | 0.0005 |
| 1,1-Dichloroethane | N.D. | 0.0001 | 0.0005 |
| 1,2-Dichloroethane | N.D. | 0.0001 | 0.0005 |
| 1,1-Dichloroethene | N.D. | 0.0001 | 0.0005 |
| cis-1,2-Dichloroethene | N.D. | 0.0001 | 0.0005 |
| trans-1,2-Dichloroethene | N.D. | 0.0001 | 0.0005 |
| 1,2-Dichloropropane | N.D. | 0.0001 | 0.0005 |
| cis-1,3-Dichloropropene | N.D. | 0.0001 | 0.0005 |
| trans-1,3-Dichloropropene | N.D. | 0.0001 | 0.0005 |
| Ethylbenzene | N.D. | 0.0001 | 0.0005 |
| Freon 113 | N.D. | 0.0002 | 0.0005 |
| Methylene Chloride | N.D. | 0.0003 | 0.0005 |
| 1,1,2,2-Tetrachloroethane | N.D. | 0.0001 | 0.0005 |
| Tetrachloroethene | N.D. | 0.0001 | 0.0005 |
| Toluene | N.D. | 0.0001 | 0.0005 |
| 1,2,4-Trichlorobenzene | N.D. | 0.0002 | 0.0005 |
| 1,1,1-Trichloroethane | N.D. | 0.0001 | 0.0005 |
| 1,1,2-Trichloroethane | N.D. | 0.0001 | 0.0005 |
| Trichloroethene | N.D. | 0.0001 | 0.0005 |
| Trichlorofluoromethane | N.D. | 0.0002 | 0.0005 |
| 1,2,3-Trichloropropane | N.D. | 0.0002 | 0.0005 |
| Vinyl Chloride | N.D. | 0.0001 | 0.0005 |
| m+p-Xylene | N.D. | 0.0002 | 0.0005 |
| o-Xylene | N.D. | 0.0001 | 0.0005 |

*- 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: 10/10/2017 11:38

Group Number: 1851337

## Method Blank (continued)

| Analysis Name | Result | MDL** | LOQ |
|---|---|---|---|
| | mg/l | mg/l | mg/l |
| Batch number: W172652AA | Sample number(s): 9213192,9213195-9213196 | | |
| Acetone | N.D. | 0.006 | 0.020 |
| Benzene | N.D. | 0.0005 | 0.001 |
| Bromodichloromethane | N.D. | 0.0005 | 0.001 |
| Bromoform | N.D. | 0.0005 | 0.004 |
| Bromomethane | N.D. | 0.0005 | 0.001 |
| 2-Butanone | N.D. | 0.003 | 0.010 |
| Carbon Disulfide | N.D. | 0.001 | 0.005 |
| Carbon Tetrachloride | N.D. | 0.0005 | 0.001 |
| Chlorobenzene | N.D. | 0.0005 | 0.001 |
| Chloroethane | N.D. | 0.0005 | 0.001 |
| Chloroform | N.D. | 0.0005 | 0.001 |
| Chloromethane | N.D. | 0.0005 | 0.001 |
| Cyclohexane | N.D. | 0.002 | 0.005 |
| 1,2-Dibromo-3-chloropropane | N.D. | 0.002 | 0.005 |
| Dibromochloromethane | N.D. | 0.0005 | 0.001 |
| 1,2-Dibromoethane | N.D. | 0.0005 | 0.001 |
| 1,2-Dichlorobenzene | N.D. | 0.001 | 0.005 |
| 1,3-Dichlorobenzene | N.D. | 0.001 | 0.005 |
| 1,4-Dichlorobenzene | N.D. | 0.001 | 0.005 |
| Dichlorodifluoromethane | N.D. | 0.0005 | 0.001 |
| 1,1-Dichloroethane | N.D. | 0.0005 | 0.001 |
| 1,2-Dichloroethane | N.D. | 0.0005 | 0.001 |
| 1,1-Dichloroethene | N.D. | 0.0005 | 0.001 |
| cis-1,2-Dichloroethene | N.D. | 0.0005 | 0.001 |
| trans-1,2-Dichloroethene | N.D. | 0.0005 | 0.001 |
| 1,2-Dichloropropane | N.D. | 0.0005 | 0.001 |
| cis-1,3-Dichloropropene | N.D. | 0.0005 | 0.001 |
| trans-1,3-Dichloropropene | N.D. | 0.0005 | 0.001 |
| Ethylbenzene | N.D. | 0.0005 | 0.001 |
| Freon 113 | N.D. | 0.002 | 0.010 |
| 2-Hexanone | N.D. | 0.003 | 0.010 |
| Isopropylbenzene | N.D. | 0.001 | 0.005 |
| Methyl Acetate | N.D. | 0.001 | 0.005 |
| Methyl Tertiary Butyl Ether | N.D. | 0.0005 | 0.001 |
| 4-Methyl-2-pentanone | N.D. | 0.003 | 0.010 |
| Methylcyclohexane | N.D. | 0.001 | 0.005 |
| Methylene Chloride | N.D. | 0.0005 | 0.001 |
| Styrene | N.D. | 0.001 | 0.005 |
| 1,1,2,2-Tetrachloroethane | N.D. | 0.0005 | 0.001 |
| Tetrachloroethene | N.D. | 0.0005 | 0.001 |
| Toluene | N.D. | 0.0005 | 0.001 |
| 1,2,4-Trichlorobenzene | N.D. | 0.001 | 0.005 |
| 1,1,1-Trichloroethane | N.D. | 0.0005 | 0.001 |
| 1,1,2-Trichloroethane | N.D. | 0.0005 | 0.001 |
| Trichloroethene | N.D. | 0.0005 | 0.001 |
| Trichlorofluoromethane | N.D. | 0.0005 | 0.001 |
| Vinyl Chloride | N.D. | 0.0005 | 0.001 |
| Xylene (Total) | N.D. | 0.0005 | 0.001 |

*- 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: 10/10/2017 11:38

Group Number: 1851337

## Method Blank (continued)

| Analysis Name | Result mg/l | MDL** mg/l | LOQ mg/l |
|---|---|---|---|
| Batch number: 17263A53A | Sample number(s): 9213188-9213192 | | |
| TPH-GRO AK water C6-C10 | N.D. | 0.010 | 0.10 |
| Batch number: 17264A53A | Sample number(s): 9213193-9213196 | | |
| TPH-GRO AK water C6-C10 | N.D. | 0.010 | 0.10 |
| Batch number: 172610026A | Sample number(s): 9213188-9213193 | | |
| DRO C10-C25 | N.D. | 0.050 | 0.25 |
| Batch number: 172630014A | Sample number(s): 9217340-9217341,9217344-9217345 | | |
| 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: 4172652AA | Sample number(s): 9213188-9213191 | | | | | | | | |
| Acetone | 0.150 | 0.124 | | | 83 | | 44-177 | | |
| Benzene | 0.0200 | 0.0173 | | | 87 | | 78-120 | | |
| Bromodichloromethane | 0.0200 | 0.0172 | | | 86 | | 71-120 | | |
| Bromoform | 0.0200 | 0.0151 | | | 76 | | 59-120 | | |
| Bromomethane | 0.0200 | 0.0160 | | | 80 | | 44-139 | | |
| 2-Butanone | 0.150 | 0.132 | | | 88 | | 53-140 | | |
| Carbon Disulfide | 0.0200 | 0.0160 | | | 80 | | 65-128 | | |
| Carbon Tetrachloride | 0.0200 | 0.0178 | | | 89 | | 68-128 | | |
| Chlorobenzene | 0.0200 | 0.0174 | | | 87 | | 80-120 | | |
| Chloroethane | 0.0200 | 0.0147 | | | 73 | | 52-127 | | |
| Chloroform | 0.0200 | 0.0180 | | | 90 | | 80-120 | | |
| Chloromethane | 0.0200 | 0.0150 | | | 75 | | 57-120 | | |
| Cyclohexane | 0.0200 | 0.0153 | | | 77 | | 67-121 | | |
| 1,2-Dibromo-3-chloropropane | 0.0200 | 0.0172 | | | 86 | | 64-120 | | |
| Dibromochloromethane | 0.0200 | 0.0170 | | | 85 | | 71-120 | | |
| 1,2-Dibromoethane | 0.0200 | 0.0177 | | | 88 | | 75-120 | | |
| 1,2-Dichlorobenzene | 0.0200 | 0.0169 | | | 85 | | 80-120 | | |
| 1,3-Dichlorobenzene | 0.0200 | 0.0172 | | | 86 | | 80-120 | | |
| 1,4-Dichlorobenzene | 0.0200 | 0.0172 | | | 86 | | 80-120 | | |
| Dichlorodifluoromethane | 0.0200 | 0.0147 | | | 73 | | 47-124 | | |
| 1,1-Dichloroethane | 0.0200 | 0.0173 | | | 87 | | 80-120 | | |
| 1,2-Dichloroethane | 0.0200 | 0.0181 | | | 91 | | 73-124 | | |
| 1,1-Dichloroethene | 0.0200 | 0.0182 | | | 91 | | 76-124 | | |
| cis-1,2-Dichloroethene | 0.0200 | 0.0181 | | | 91 | | 80-120 | | |
| trans-1,2-Dichloroethene | 0.0200 | 0.0181 | | | 90 | | 80-120 | | |
| 1,2-Dichloropropane | 0.0200 | 0.0175 | | | 88 | | 80-120 | | |
| cis-1,3-Dichloropropene | 0.0200 | 0.0173 | | | 87 | | 75-120 | | |
| trans-1,3-Dichloropropene | 0.0200 | 0.0169 | | | 84 | | 76-120 | | |

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
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: 10/10/2017 11:38

Group Number: 1851337

## LCS/LCSD (continued)

| 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 |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | 0.0200 | 0.0169 | | | 84 | | 78-120 | | |
| Freon 113 | 0.0200 | 0.0184 | | | 92 | | 68-137 | | |
| 2-Hexanone | 0.100 | 0.0658 | | | 66 | | 60-134 | | |
| Isopropylbenzene | 0.0200 | 0.0165 | | | 83 | | 80-120 | | |
| Methyl Acetate | 0.0200 | 0.0176 | | | 88 | | 61-137 | | |
| Methyl Tertiary Butyl Ether | 0.0200 | 0.0164 | | | 82 | | 75-120 | | |
| 4-Methyl-2-pentanone | 0.100 | 0.0827 | | | 83 | | 67-128 | | |
| Methylcyclohexane | 0.0200 | 0.0173 | | | 87 | | 66-126 | | |
| Methylene Chloride | 0.0200 | 0.0169 | | | 84 | | 80-120 | | |
| Styrene | 0.0200 | 0.0171 | | | 85 | | 80-120 | | |
| 1,1,2,2-Tetrachloroethane | 0.0200 | 0.0167 | | | 84 | | 72-120 | | |
| Tetrachloroethene | 0.0200 | 0.0172 | | | 86 | | 80-129 | | |
| Toluene | 0.0200 | 0.0170 | | | 85 | | 80-120 | | |
| 1,2,4-Trichlorobenzene | 0.0200 | 0.0161 | | | 80 | | 70-120 | | |
| 1,1,1-Trichloroethane | 0.0200 | 0.0165 | | | 83 | | 67-120 | | |
| 1,1,2-Trichloroethane | 0.0200 | 0.0172 | | | 86 | | 80-120 | | |
| Trichloroethene | 0.0200 | 0.0179 | | | 90 | | 80-120 | | |
| Trichlorofluoromethane | 0.0200 | 0.0173 | | | 86 | | 52-143 | | |
| Vinyl Chloride | 0.0200 | 0.0153 | | | 77 | | 63-121 | | |
| Xylene (Total) | 0.0600 | 0.0505 | | | 84 | | 80-120 | | |
| Batch number: K172631AA | Sample number(s): 9213193-9213194,9213196 | | | | | | | | |
| Benzene | 0.00500 | 0.00451 | | | 90 | | 70-130 | | |
| Bromodichloromethane | 0.00500 | 0.00449 | | | 90 | | 70-130 | | |
| Bromoform | 0.00500 | 0.00406 | | | 81 | | 70-130 | | |
| Bromomethane | 0.00200 | 0.00214 | | | 107 | | 70-130 | | |
| Carbon Tetrachloride | 0.00500 | 0.00479 | | | 96 | | 70-130 | | |
| Chlorobenzene | 0.00500 | 0.00458 | | | 92 | | 70-130 | | |
| Chloroethane | 0.00200 | 0.00208 | | | 104 | | 70-130 | | |
| Chloroform | 0.00500 | 0.00476 | | | 95 | | 70-130 | | |
| Chloromethane | 0.00200 | 0.00219 | | | 109 | | 70-130 | | |
| Dibromochloromethane | 0.00500 | 0.00448 | | | 90 | | 70-130 | | |
| 1,2-Dibromoethane | 0.00500 | 0.00464 | | | 93 | | 70-130 | | |
| Dibromomethane | 0.00500 | 0.00470 | | | 94 | | 70-130 | | |
| 1,2-Dichlorobenzene | 0.00500 | 0.00457 | | | 91 | | 70-130 | | |
| 1,3-Dichlorobenzene | 0.00500 | 0.00453 | | | 91 | | 70-130 | | |
| 1,4-Dichlorobenzene | 0.00500 | 0.00459 | | | 92 | | 70-130 | | |
| Dichlorodifluoromethane | 0.00200 | 0.00239 | | | 120 | | 70-130 | | |
| 1,1-Dichloroethane | 0.00500 | 0.00462 | | | 92 | | 70-130 | | |
| 1,2-Dichloroethane | 0.00500 | 0.00463 | | | 93 | | 70-130 | | |
| 1,1-Dichloroethene | 0.00500 | 0.00512 | | | 102 | | 70-130 | | |
| cis-1,2-Dichloroethene | 0.00500 | 0.00479 | | | 96 | | 70-130 | | |
| trans-1,2-Dichloroethene | 0.00500 | 0.00484 | | | 97 | | 70-130 | | |
| 1,2-Dichloropropane | 0.00500 | 0.00471 | | | 94 | | 70-130 | | |
| cis-1,3-Dichloropropene | 0.00500 | 0.00412 | | | 82 | | 70-130 | | |
| trans-1,3-Dichloropropene | 0.00500 | 0.00419 | | | 84 | | 70-130 | | |
| Ethylbenzene | 0.00500 | 0.00465 | | | 93 | | 70-130 | | |
| Freon 113 | 0.00500 | 0.00490 | | | 98 | | 70-130 | | |

*- 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: 10/10/2017 11:38

Group Number: 1851337

## LCS/LCSD (continued)

| 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 |
|---|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 0.00500 | 0.00493 | | | 99 | | 70-130 | | |
| 1,1,2,2-Tetrachloroethane | 0.00500 | 0.00462 | | | 92 | | 70-130 | | |
| Tetrachloroethene | 0.00500 | 0.00451 | | | 90 | | 70-130 | | |
| Toluene | 0.00500 | 0.00458 | | | 92 | | 70-130 | | |
| 1,2,4-Trichlorobenzene | 0.00500 | 0.00443 | | | 89 | | 70-130 | | |
| 1,1,1-Trichloroethane | 0.00500 | 0.00477 | | | 95 | | 70-130 | | |
| 1,1,2-Trichloroethane | 0.00500 | 0.00481 | | | 96 | | 70-130 | | |
| Trichloroethene | 0.00500 | 0.00451 | | | 90 | | 70-130 | | |
| Trichlorofluoromethane | 0.00200 | 0.00210 | | | 105 | | 70-130 | | |
| 1,2,3-Trichloropropane | 0.00500 | 0.00484 | | | 97 | | 70-130 | | |
| Vinyl Chloride | 0.00200 | 0.00222 | | | 111 | | 70-130 | | |
| m+p-Xylene | 0.0100 | 0.00924 | | | 92 | | 70-130 | | |
| o-Xylene | 0.00500 | 0.00445 | | | 89 | | 70-130 | | |
| Batch number: W172652AA | Sample number(s): 9213192,9213195-9213196 | | | | | | | | |
| Acetone | 0.150 | 0.0810 | | | 54 | | 44-177 | | |
| Benzene | 0.0200 | 0.0193 | | | 96 | | 78-120 | | |
| Bromodichloromethane | 0.0200 | 0.0193 | | | 97 | | 71-120 | | |
| Bromoform | 0.0200 | 0.0185 | | | 92 | | 59-120 | | |
| Bromomethane | 0.0200 | 0.0155 | | | 77 | | 44-139 | | |
| 2-Butanone | 0.150 | 0.0839 | | | 56 | | 53-140 | | |
| Carbon Disulfide | 0.0200 | 0.0145 | | | 72 | | 65-128 | | |
| Carbon Tetrachloride | 0.0200 | 0.0185 | | | 92 | | 68-128 | | |
| Chlorobenzene | 0.0200 | 0.0196 | | | 98 | | 80-120 | | |
| Chloroethane | 0.0200 | 0.0164 | | | 82 | | 52-127 | | |
| Chloroform | 0.0200 | 0.0176 | | | 88 | | 80-120 | | |
| Chloromethane | 0.0200 | 0.0153 | | | 77 | | 57-120 | | |
| Cyclohexane | 0.0200 | 0.0217 | | | 109 | | 67-121 | | |
| 1,2-Dibromo-3-chloropropane | 0.0200 | 0.0182 | | | 91 | | 64-120 | | |
| Dibromochloromethane | 0.0200 | 0.0191 | | | 96 | | 71-120 | | |
| 1,2-Dibromoethane | 0.0200 | 0.0195 | | | 98 | | 75-120 | | |
| 1,2-Dichlorobenzene | 0.0200 | 0.0194 | | | 97 | | 80-120 | | |
| 1,3-Dichlorobenzene | 0.0200 | 0.0193 | | | 97 | | 80-120 | | |
| 1,4-Dichlorobenzene | 0.0200 | 0.0196 | | | 98 | | 80-120 | | |
| Dichlorodifluoromethane | 0.0200 | 0.0192 | | | 96 | | 47-124 | | |
| 1,1-Dichloroethane | 0.0200 | 0.0166 | | | 83 | | 80-120 | | |
| 1,2-Dichloroethane | 0.0200 | 0.0183 | | | 91 | | 73-124 | | |
| 1,1-Dichloroethene | 0.0200 | 0.0180 | | | 90 | | 76-124 | | |
| cis-1,2-Dichloroethene | 0.0200 | 0.0174 | | | 87 | | 80-120 | | |
| trans-1,2-Dichloroethene | 0.0200 | 0.0169 | | | 85 | | 80-120 | | |
| 1,2-Dichloropropane | 0.0200 | 0.0198 | | | 99 | | 80-120 | | |
| cis-1,3-Dichloropropene | 0.0200 | 0.0182 | | | 91 | | 75-120 | | |
| trans-1,3-Dichloropropene | 0.0200 | 0.0185 | | | 92 | | 76-120 | | |
| Ethylbenzene | 0.0200 | 0.0200 | | | 100 | | 78-120 | | |
| Freon 113 | 0.0200 | 0.0196 | | | 98 | | 68-137 | | |
| 2-Hexanone | 0.100 | 0.0967 | | | 97 | | 60-134 | | |
| Isopropylbenzene | 0.0200 | 0.0202 | | | 101 | | 80-120 | | |
| Methyl Acetate | 0.0200 | 0.0218 | | | 109 | | 61-137 | | |

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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
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: 10/10/2017 11:38

Group Number: 1851337

## LCS/LCSD (continued)

| 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 |
|---|---|---|---|---|---|---|---|---|---|
| Methyl Tertiary Butyl Ether | 0.0200 | 0.0158 | | | 79 | | 75-120 | | |
| 4-Methyl-2-pentanone | 0.100 | 0.0790 | | | 79 | | 67-128 | | |
| Methylcyclohexane | 0.0200 | 0.0229 | | | 115 | | 66-126 | | |
| Methylene Chloride | 0.0200 | 0.0161 | | | 80 | | 80-120 | | |
| Styrene | 0.0200 | 0.0201 | | | 101 | | 80-120 | | |
| 1,1,2,2-Tetrachloroethane | 0.0200 | 0.0188 | | | 94 | | 72-120 | | |
| Tetrachloroethene | 0.0200 | 0.0194 | | | 97 | | 80-129 | | |
| Toluene | 0.0200 | 0.0197 | | | 99 | | 80-120 | | |
| 1,2,4-Trichlorobenzene | 0.0200 | 0.0195 | | | 97 | | 70-120 | | |
| 1,1,1-Trichloroethane | 0.0200 | 0.0167 | | | 84 | | 67-120 | | |
| 1,1,2-Trichloroethane | 0.0200 | 0.0205 | | | 103 | | 80-120 | | |
| Trichloroethene | 0.0200 | 0.0193 | | | 96 | | 80-120 | | |
| Trichlorofluoromethane | 0.0200 | 0.0196 | | | 98 | | 52-143 | | |
| Vinyl Chloride | 0.0200 | 0.0169 | | | 84 | | 63-121 | | |
| Xylene (Total) | 0.0600 | 0.0596 | | | 99 | | 80-120 | | |
| | **mg/l** | **mg/l** | **mg/l** | **mg/l** | | | | | |
| Batch number: 17263A53A | Sample number(s): 9213188-9213192 | | | | | | | | |
| TPH-GRO AK water C6-C10 | 1.10 | 1.07 | 1.10 | 1.08 | 97 | 98 | 60-120 | 1 | 20 |
| Batch number: 17264A53A | Sample number(s): 9213193-9213196 | | | | | | | | |
| TPH-GRO AK water C6-C10 | 1.10 | 1.09 | | | 100 | | 60-120 | | |
| | **mg/l** | **mg/l** | **mg/l** | **mg/l** | | | | | |
| Batch number: 172610026A | Sample number(s): 9213188-9213193 | | | | | | | | |
| DRO C10-C25 | 4.00 | 2.10 | 4.00 | 2.22 | 53* | 56* | 75-125 | 6 | 20 |
| Batch number: 172630014A | Sample number(s): 9217340-9217341,9217344-9217345 | | | | | | | | |
| DRO C10-C25 | 4.00 | 0.244 | 4.00 | 0.363 | 6* | 9* | 75-125 | 39* | 20 |

## MS/MSD

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

| Analysis Name | Unspiked Conc mg/l | MS Spike Added mg/l | MS Conc mg/l | MSD Spike Added mg/l | MSD Conc mg/l | MS %Rec | MSD %Rec | MS/MSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 4172652AA | Sample number(s): 9213188-9213191 UNSPK: P216347 | | | | | | | | | |
| Acetone | N.D. | 0.150 | 0.136 | 0.150 | 0.131 | 90 | 87 | 44-177 | 4 | 30 |
| Benzene | N.D. | 0.0200 | 0.0204 | 0.0200 | 0.0194 | 102 | 97 | 78-120 | 5 | 30 |
| Bromodichloromethane | N.D. | 0.0200 | 0.0197 | 0.0200 | 0.0188 | 98 | 94 | 71-120 | 5 | 30 |
| Bromoform | N.D. | 0.0200 | 0.0156 | 0.0200 | 0.0151 | 78 | 75 | 59-120 | 3 | 30 |
| Bromomethane | N.D. | 0.0200 | 0.0189 | 0.0200 | 0.0179 | 95 | 90 | 44-139 | 5 | 30 |
| 2-Butanone | N.D. | 0.150 | 0.140 | 0.150 | 0.135 | 94 | 90 | 53-140 | 4 | 30 |
| Carbon Disulfide | N.D. | 0.0200 | 0.0195 | 0.0200 | 0.0184 | 97 | 92 | 65-128 | 6 | 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: 10/10/2017 11:38

Group Number: 1851337

## MS/MSD (continued)

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

| Analysis Name | Unspiked Conc mg/l | MS Spike Added mg/l | MS Conc mg/l | MSD Spike Added mg/l | MSD Conc mg/l | MS %Rec | MSD %Rec | MS/MSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Carbon Tetrachloride | N.D. | 0.0200 | 0.0218 | 0.0200 | 0.0207 | 109 | 104 | 68-128 | 5 | 30 |
| Chlorobenzene | N.D. | 0.0200 | 0.0197 | 0.0200 | 0.0190 | 98 | 95 | 80-120 | 3 | 30 |
| Chloroethane | N.D. | 0.0200 | 0.0177 | 0.0200 | 0.0169 | 88 | 85 | 52-127 | 4 | 30 |
| Chloroform | N.D. | 0.0200 | 0.0210 | 0.0200 | 0.0200 | 105 | 100 | 80-120 | 5 | 30 |
| Chloromethane | N.D. | 0.0200 | 0.0179 | 0.0200 | 0.0170 | 89 | 85 | 57-120 | 5 | 30 |
| Cyclohexane | 0.0304 | 0.0200 | 0.0499 | 0.0200 | 0.0442 | 97 | 69 | 67-121 | 12 | 30 |
| 1,2-Dibromo-3-chloropropane | N.D. | 0.0200 | 0.0187 | 0.0200 | 0.0186 | 94 | 93 | 64-120 | 1 | 30 |
| Dibromochloromethane | N.D. | 0.0200 | 0.0178 | 0.0200 | 0.0172 | 89 | 86 | 71-120 | 3 | 30 |
| 1,2-Dibromoethane | N.D. | 0.0200 | 0.0192 | 0.0200 | 0.0187 | 96 | 93 | 75-120 | 3 | 30 |
| 1,2-Dichlorobenzene | N.D. | 0.0200 | 0.0186 | 0.0200 | 0.0184 | 93 | 92 | 80-120 | 1 | 30 |
| 1,3-Dichlorobenzene | N.D. | 0.0200 | 0.0189 | 0.0200 | 0.0183 | 94 | 91 | 80-120 | 3 | 30 |
| 1,4-Dichlorobenzene | N.D. | 0.0200 | 0.0189 | 0.0200 | 0.0184 | 95 | 92 | 80-120 | 3 | 30 |
| Dichlorodifluoromethane | N.D. | 0.0200 | 0.0185 | 0.0200 | 0.0172 | 92 | 86 | 47-124 | 7 | 30 |
| 1,1-Dichloroethane | N.D. | 0.0200 | 0.0205 | 0.0200 | 0.0196 | 103 | 98 | 80-120 | 5 | 30 |
| 1,2-Dichloroethane | N.D. | 0.0200 | 0.0205 | 0.0200 | 0.0195 | 103 | 97 | 73-124 | 5 | 30 |
| 1,1-Dichloroethene | N.D. | 0.0200 | 0.0227 | 0.0200 | 0.0220 | 113 | 110 | 76-124 | 3 | 30 |
| cis-1,2-Dichloroethene | N.D. | 0.0200 | 0.0210 | 0.0200 | 0.0201 | 105 | 100 | 80-120 | 4 | 30 |
| trans-1,2-Dichloroethene | N.D. | 0.0200 | 0.0217 | 0.0200 | 0.0206 | 108 | 103 | 80-120 | 5 | 30 |
| 1,2-Dichloropropane | N.D. | 0.0200 | 0.0204 | 0.0200 | 0.0193 | 102 | 97 | 80-120 | 5 | 30 |
| cis-1,3-Dichloropropene | N.D. | 0.0200 | 0.0192 | 0.0200 | 0.0187 | 96 | 94 | 75-120 | 2 | 30 |
| trans-1,3-Dichloropropene | N.D. | 0.0200 | 0.0184 | 0.0200 | 0.0181 | 92 | 91 | 76-120 | 2 | 30 |
| Ethylbenzene | N.D. | 0.0200 | 0.0198 | 0.0200 | 0.0190 | 99 | 95 | 78-120 | 4 | 30 |
| Freon 113 | N.D. | 0.0200 | 0.0231 | 0.0200 | 0.0218 | 116 | 109 | 68-137 | 6 | 30 |
| 2-Hexanone | N.D. | 0.100 | 0.0712 | 0.100 | 0.0690 | 71 | 69 | 60-134 | 3 | 30 |
| Isopropylbenzene | 0.00620 | 0.0200 | 0.0258 | 0.0200 | 0.0238 | 98 | 88 | 80-120 | 8 | 30 |
| Methyl Acetate | N.D. | 0.0200 | 0.0185 | 0.0200 | 0.0175 | 92 | 88 | 61-137 | 5 | 30 |
| Methyl Tertiary Butyl Ether | N.D. | 0.0200 | 0.0183 | 0.0200 | 0.0177 | 92 | 88 | 75-120 | 4 | 30 |
| 4-Methyl-2-pentanone | N.D. | 0.100 | 0.0895 | 0.100 | 0.0865 | 89 | 87 | 67-128 | 3 | 30 |
| Methylcyclohexane | 0.0312 | 0.0200 | 0.0541 | 0.0200 | 0.0460 | 114 | 74 | 66-126 | 16 | 30 |
| Methylene Chloride | N.D. | 0.0200 | 0.0194 | 0.0200 | 0.0186 | 97 | 93 | 80-120 | 4 | 30 |
| Styrene | N.D. | 0.0200 | 0.0190 | 0.0200 | 0.0185 | 95 | 92 | 80-120 | 3 | 30 |
| 1,1,2,2-Tetrachloroethane | N.D. | 0.0200 | 0.0180 | 0.0200 | 0.0173 | 90 | 87 | 72-120 | 4 | 30 |
| Tetrachloroethene | N.D. | 0.0200 | 0.0203 | 0.0200 | 0.0196 | 101 | 98 | 80-129 | 4 | 30 |
| Toluene | N.D. | 0.0200 | 0.0195 | 0.0200 | 0.0189 | 98 | 95 | 80-120 | 3 | 30 |
| 1,2,4-Trichlorobenzene | N.D. | 0.0200 | 0.0178 | 0.0200 | 0.0171 | 89 | 85 | 70-120 | 4 | 30 |
| 1,1,1-Trichloroethane | N.D. | 0.0200 | 0.0200 | 0.0200 | 0.0189 | 100 | 95 | 67-120 | 5 | 30 |
| 1,1,2-Trichloroethane | N.D. | 0.0200 | 0.0262 | 0.0200 | 0.0246 | 131* | 123* | 80-120 | 6 | 30 |
| Trichloroethene | N.D. | 0.0200 | 0.0212 | 0.0200 | 0.0205 | 106 | 102 | 80-120 | 4 | 30 |
| Trichlorofluoromethane | N.D. | 0.0200 | 0.0221 | 0.0200 | 0.0207 | 111 | 103 | 52-143 | 7 | 30 |
| Vinyl Chloride | N.D. | 0.0200 | 0.0190 | 0.0200 | 0.0178 | 95 | 89 | 63-121 | 7 | 30 |
| Xylene (Total) | N.D. | 0.0600 | 0.0587 | 0.0600 | 0.0562 | 98 | 94 | 80-120 | 4 | 30 |
| Batch number: W172652AA | Sample number(s): 9213192,9213195-9213196 UNSPK: P216659 | | | | | | | | | |
| Acetone | N.D. | 0.150 | 0.0933 | 0.150 | 0.102 | 62 | 68 | 44-177 | 8 | 30 |
| Benzene | N.D. | 0.0200 | 0.0212 | 0.0200 | 0.0212 | 106 | 106 | 78-120 | 0 | 30 |
| Bromodichloromethane | N.D. | 0.0200 | 0.0203 | 0.0200 | 0.0204 | 101 | 102 | 71-120 | 0 | 30 |

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
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: 10/10/2017 11:38

Group Number: 1851337

## MS/MSD (continued)

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

| Analysis Name | Unspiked Conc mg/l | MS Spike Added mg/l | MS Conc mg/l | MSD Spike Added mg/l | MSD Conc mg/l | MS %Rec | MSD %Rec | MS/MSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Bromoform | N.D. | 0.0200 | 0.0188 | 0.0200 | 0.0191 | 94 | 96 | 59-120 | 2 | 30 |
| Bromomethane | N.D. | 0.0200 | 0.0168 | 0.0200 | 0.0165 | 84 | 83 | 44-139 | 1 | 30 |
| 2-Butanone | N.D. | 0.150 | 0.116 | 0.150 | 0.115 | 77 | 77 | 53-140 | 1 | 30 |
| Carbon Disulfide | N.D. | 0.0200 | 0.0167 | 0.0200 | 0.0189 | 84 | 94 | 65-128 | 12 | 30 |
| Carbon Tetrachloride | N.D. | 0.0200 | 0.0205 | 0.0200 | 0.0210 | 103 | 105 | 68-128 | 2 | 30 |
| Chlorobenzene | N.D. | 0.0200 | 0.0212 | 0.0200 | 0.0212 | 106 | 106 | 80-120 | 0 | 30 |
| Chloroethane | N.D. | 0.0200 | 0.0172 | 0.0200 | 0.0174 | 86 | 87 | 52-127 | 1 | 30 |
| Chloroform | N.D. | 0.0200 | 0.0216 | 0.0200 | 0.0215 | 108 | 107 | 80-120 | 1 | 30 |
| Chloromethane | N.D. | 0.0200 | 0.0174 | 0.0200 | 0.0174 | 87 | 87 | 57-120 | 0 | 30 |
| Cyclohexane | N.D. | 0.0200 | 0.0242 | 0.0200 | 0.0247 | 121 | 124* | 67-121 | 2 | 30 |
| 1,2-Dibromo-3-chloropropane | N.D. | 0.0200 | 0.0185 | 0.0200 | 0.0186 | 92 | 93 | 64-120 | 1 | 30 |
| Dibromochloromethane | N.D. | 0.0200 | 0.0199 | 0.0200 | 0.0199 | 99 | 100 | 71-120 | 0 | 30 |
| 1,2-Dibromoethane | N.D. | 0.0200 | 0.0203 | 0.0200 | 0.0202 | 102 | 101 | 75-120 | 1 | 30 |
| 1,2-Dichlorobenzene | N.D. | 0.0200 | 0.0201 | 0.0200 | 0.0206 | 100 | 103 | 80-120 | 2 | 30 |
| 1,3-Dichlorobenzene | N.D. | 0.0200 | 0.0204 | 0.0200 | 0.0208 | 102 | 104 | 80-120 | 2 | 30 |
| 1,4-Dichlorobenzene | N.D. | 0.0200 | 0.0206 | 0.0200 | 0.0209 | 103 | 104 | 80-120 | 1 | 30 |
| Dichlorodifluoromethane | N.D. | 0.0200 | 0.0219 | 0.0200 | 0.0220 | 110 | 110 | 47-124 | 0 | 30 |
| 1,1-Dichloroethane | N.D. | 0.0200 | 0.0215 | 0.0200 | 0.0212 | 108 | 106 | 80-120 | 2 | 30 |
| 1,2-Dichloroethane | N.D. | 0.0200 | 0.0206 | 0.0200 | 0.0206 | 103 | 103 | 73-124 | 0 | 30 |
| 1,1-Dichloroethene | N.D. | 0.0200 | 0.0216 | 0.0200 | 0.0235 | 108 | 118 | 76-124 | 9 | 30 |
| cis-1,2-Dichloroethene | N.D. | 0.0200 | 0.0220 | 0.0200 | 0.0215 | 110 | 108 | 80-120 | 2 | 30 |
| trans-1,2-Dichloroethene | N.D. | 0.0200 | 0.0211 | 0.0200 | 0.0218 | 105 | 109 | 80-120 | 3 | 30 |
| 1,2-Dichloropropane | N.D. | 0.0200 | 0.0213 | 0.0200 | 0.0211 | 106 | 105 | 80-120 | 1 | 30 |
| cis-1,3-Dichloropropene | N.D. | 0.0200 | 0.0197 | 0.0200 | 0.0195 | 98 | 97 | 75-120 | 1 | 30 |
| trans-1,3-Dichloropropene | N.D. | 0.0200 | 0.0194 | 0.0200 | 0.0195 | 97 | 97 | 76-120 | 0 | 30 |
| Ethylbenzene | N.D. | 0.0200 | 0.0218 | 0.0200 | 0.0220 | 109 | 110 | 78-120 | 1 | 30 |
| Freon 113 | N.D. | 0.0200 | 0.0227 | 0.0200 | 0.0257 | 114 | 128 | 68-137 | 12 | 30 |
| 2-Hexanone | N.D. | 0.100 | 0.0963 | 0.100 | 0.0965 | 96 | 96 | 60-134 | 0 | 30 |
| Isopropylbenzene | N.D. | 0.0200 | 0.0221 | 0.0200 | 0.0224 | 110 | 112 | 80-120 | 1 | 30 |
| Methyl Acetate | N.D. | 0.0200 | 0.0164 | 0.0200 | 0.0231 | 82 | 116 | 61-137 | 34* | 30 |
| Methyl Tertiary Butyl Ether | N.D. | 0.0200 | 0.0193 | 0.0200 | 0.0196 | 96 | 98 | 75-120 | 2 | 30 |
| 4-Methyl-2-pentanone | N.D. | 0.100 | 0.102 | 0.100 | 0.100 | 102 | 100 | 67-128 | 1 | 30 |
| Methylcyclohexane | N.D. | 0.0200 | 0.0256 | 0.0200 | 0.0263 | 128* | 131* | 66-126 | 2 | 30 |
| Methylene Chloride | N.D. | 0.0200 | 0.0191 | 0.0200 | 0.0202 | 96 | 101 | 80-120 | 5 | 30 |
| Styrene | N.D. | 0.0200 | 0.0217 | 0.0200 | 0.0218 | 109 | 109 | 80-120 | 1 | 30 |
| 1,1,2,2-Tetrachloroethane | N.D. | 0.0200 | 0.0195 | 0.0200 | 0.0195 | 98 | 97 | 72-120 | 0 | 30 |
| Tetrachloroethene | N.D. | 0.0200 | 0.0217 | 0.0200 | 0.0219 | 108 | 109 | 80-129 | 1 | 30 |
| Toluene | N.D. | 0.0200 | 0.0217 | 0.0200 | 0.0218 | 108 | 109 | 80-120 | 1 | 30 |
| 1,2,4-Trichlorobenzene | N.D. | 0.0200 | 0.0189 | 0.0200 | 0.0195 | 95 | 97 | 70-120 | 3 | 30 |
| 1,1,1-Trichloroethane | N.D. | 0.0200 | 0.0188 | 0.0200 | 0.0188 | 94 | 94 | 67-120 | 0 | 30 |
| 1,1,2-Trichloroethane | N.D. | 0.0200 | 0.0210 | 0.0200 | 0.0211 | 105 | 106 | 80-120 | 0 | 30 |
| Trichloroethene | N.D. | 0.0200 | 0.0212 | 0.0200 | 0.0212 | 106 | 106 | 80-120 | 0 | 30 |
| Trichlorofluoromethane | N.D. | 0.0200 | 0.0207 | 0.0200 | 0.0215 | 103 | 107 | 52-143 | 4 | 30 |
| Vinyl Chloride | N.D. | 0.0200 | 0.0193 | 0.0200 | 0.0194 | 97 | 97 | 63-121 | 0 | 30 |
| Xylene (Total) | N.D. | 0.0600 | 0.0645 | 0.0600 | 0.0650 | 108 | 108 | 80-120 | 1 | 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: 10/10/2017 11:38

Group Number: 1851337

## MS/MSD (continued)

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

| Analysis Name | Unspiked Conc mg/l | MS Spike Added mg/l | MS Conc mg/l | MSD Spike Added mg/l | MSD Conc mg/l | MS %Rec | MSD %Rec | MS/MSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|---|
| Batch number: 17264A53A | Sample number(s): 9213193-9213196 UNSPK: P215910 | | | | | | | | | |
| TPH-GRO AK water C6-C10 | 0.0854 | 1.10 | 1.31 | 1.10 | 1.32 | 111 | 113 | 60-120 | 1 | 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. For dual column analyses, the surrogate (at least one surrogate for multi-surrogate tests) must be within the acceptance limits on at least one of the two columns.

Analysis Name: TCL 4.3 VOCs
Batch number: 4172652AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 9213188 | 102 | 101 | 97 | 98 |
| 9213189 | 103 | 103 | 97 | 100 |
| 9213190 | 102 | 100 | 96 | 99 |
| 9213191 | 102 | 100 | 96 | 99 |
| Blank | 103 | 101 | 96 | 98 |
| LCS | 101 | 100 | 97 | 101 |
| MS | 102 | 101 | 98 | 102 |
| MSD | 102 | 102 | 98 | 102 |
| Limits: | 80-120 | 80-120 | 80-120 | 80-120 |

Analysis Name: 524.2 AK HVOCs + BTEX
Batch number: K172631AA

| | 4-Bromofluorobenzene | 1,2-Dichlorobenzene-d4 |
|---|---|---|
| 9213193 | 96 | 107 |
| 9213194 | 96 | 105 |
| 9213196 | 97 | 106 |
| Blank | 96 | 104 |
| LCS | 104 | 107 |
| Limits: | 80-120 | 80-120 |

Analysis Name: TCL 4.3 VOCs
Batch number: W172652AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 9213192 | 101 | 104 | 101 | 97 |
| 9213195 | 100 | 105 | 100 | 99 |
| 9213196 | 100 | 105 | 100 | 97 |
| Blank | 97 | 101 | 101 | 98 |

*- 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: 10/10/2017 11:38

Group Number: 1851337

## 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. For dual column analyses, the surrogate (at least one surrogate for multi-surrogate tests) must be within the acceptance limits on at least one of the two columns.

Analysis Name: TCL 4.3 VOCs
Batch number: W172652AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| LCS | 97 | 94 | 103 | 101 |
| MS | 101 | 100 | 103 | 100 |
| MSD | 100 | 100 | 102 | 101 |
| Limits: | 80-120 | 80-120 | 80-120 | 80-120 |

Analysis Name: TPH-GRO AK water C6-C10
Batch number: 17263A53A

| | Trifluorotoluene-F |
|---|---|
| 9213188 | 119 |
| 9213189 | 102 |
| 9213190 | 92 |
| 9213191 | 91 |
| 9213192 | 96 |
| Blank | 110 |
| LCS | 109 |
| LCSD | 105 |
| Limits: | 60-120 |

Analysis Name: TPH-GRO AK water C6-C10
Batch number: 17264A53A

| | Trifluorotoluene-F |
|---|---|
| 9213193 | 98 |
| 9213194 | 111 |
| 9213195 | 94 |
| 9213196 | 96 |
| Blank | 95 |
| LCS | 109 |
| MS | 113 |
| MSD | 112 |
| Limits: | 60-120 |

Analysis Name: AK 102-SV DRO
Batch number: 172610026A

| | Orthoterphenyl |
|---|---|
| 9213188 | 77 |
| 9213189 | 65 |
| 9213190 | 71 |
| 9213191 | 76 |

*- 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: 10/10/2017 11:38

Group Number: 1851337

## 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. For dual column analyses, the surrogate (at least one surrogate for multi-surrogate tests) must be within the acceptance limits on at least one of the two columns.

Analysis Name: AK 102-SV DRO
Batch number: 172610026A

| | Orthoterphenyl |
|---|---|
| 9213192 | 77 |
| 9213193 | 62 |
| Blank | 75 |
| LCS | 87 |
| LCSD | 90 |
| Limits: | 50-150 |

Analysis Name: AK 102-SV DRO
Batch number: 172630014A

| | Orthoterphenyl |
|---|---|
| 9217340 | 89 |
| 9217341 | 87 |
| 9217344 | 89 |
| 9217345 | 87 |
| Blank | 75 |
| LCS | 76 |
| LCSD | 85 |
| 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. # 10860 | For Eurofins Lancaster Laboratories Environmental use only: Group # 165137 Sample # 423188-96

Instructions on reverse side correspond with circled numbers.

## 1 Client Information

| | |
|---|---|
| Facility # | CHEVRON 94115 |
| WBS | 08.02 |
| Site Address | 11460 OLD SEWARD HWY, ANCHORAGE, AK |
| Chevron PM | DAN CARRIER |
| Lead Consultant | GHD SERVICES INC. |
| Consultant/Office | 645 G STREET, STE. 901 ANCHORAGE, AK |
| Consultant Project Mgr. | SIOBHAN PRITCHARD |
| Consultant Phone # | (720) 974-0976 |
| Sampler | O. YAN / T. WEAVER |

SCR #: _____

## 4 Matrix

Soil | Sediment | Water | Ground | Potable | Surface | NPDES | Oil | Air

## 5 Analyses Requested

| 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 | BTEX + HVOCs (524.2) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-15RR-W-170914 | 9/14/17 | 0930 | X | | 8 | | X | | X | X | | | | |
| MW-19-W-170914 | | 1048 | X | | 8 | | X | | X | X | | | | |
| MW-18-W-170914 | | 1135 | X | | 8 | | X | | X | X | | | | |
| MW-11R-W-170914 | | 1242 | X | | 8 | | X | | X | X | | | | |
| MW-17-W-170914 | | 1335 | X | | 8 | | X | | X | X | | | | |
| PJW29-1-W-170914 | | 0945 | X | | 9 | | | | X | X | | | | X |
| DUP-1-W-170914 | | — | X | | 9 | | | | X | X | | | | X |
| DUP-2-W-170914 | ↓ | — | X | | 8 | | X | | X | X | | | | |
| QA-1-W-170914 | — | — | | | 6 | | X | | X | | | | | X |
| | | | | | | | | | X 09 | 9/14/17 | | | | |

## 6 Remarks

email results to: siobhan.pritchard@ghd.com

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

## 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: _____

## 9

| Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|
| | 9/15/17 | 0700 | | | |
| Relinquished by | Date | Time | Received by | Date | Time |
| | | | | | |

Relinquished by Commercial Carrier: UPS _____ FedEx X Other _____

Received by: _____ Date: 9/16/17 Time: 995

Temperature Upon Receipt 1.4-2.2 °C

Custody Seals Intact? Yes No

eurofins | Lancaster Laboratories Environmental

# Sample Administration Receipt Documentation Log

Doc Log ID: 194685

Group Number(s): 1851337

Client: Chevron

## Delivery and Receipt Information

| | | | |
|---|---|---|---|
| Delivery Method: | Fed Ex | Arrival Timestamp: | 09/16/2017 9:45 |
| Number of Packages: | 3 | Number of Projects: | 2 |
| State/Province of Origin: | AK | | |

## Arrival Condition Summary

| | | | |
|---|---|---|---|
| Shipping Container Sealed: | Yes | Sample IDs on COC match Containers: | No |
| Custody Seal Present: | Yes | Sample Date/Times match COC: | Yes |
| Custody Seal Intact: | No | VOA Vial Headspace ≥ 6mm: | No |
| Samples Chilled: | Yes | Total Trip Blank Qty: | 6 |
| 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 13:59 on 09/16/2017*

## 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 | DT42-01 | 1.5 | DT | Wet | Y | Bagged | N |
| 2 | DT42-01 | 2.2 | DT | Wet | Y | Bagged | N |
| 3 | DT42-01 | 1.4 | DT | Wet | Y | Bagged | N |

## Sample ID Discrepancy Details

| Sample ID on COC | Sample ID on Label | Comments |
|---|---|---|
| Dup-2-W-170914 | Dup-1-W-170914 | |



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.** | non-detect |
| **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. |

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

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

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

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

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

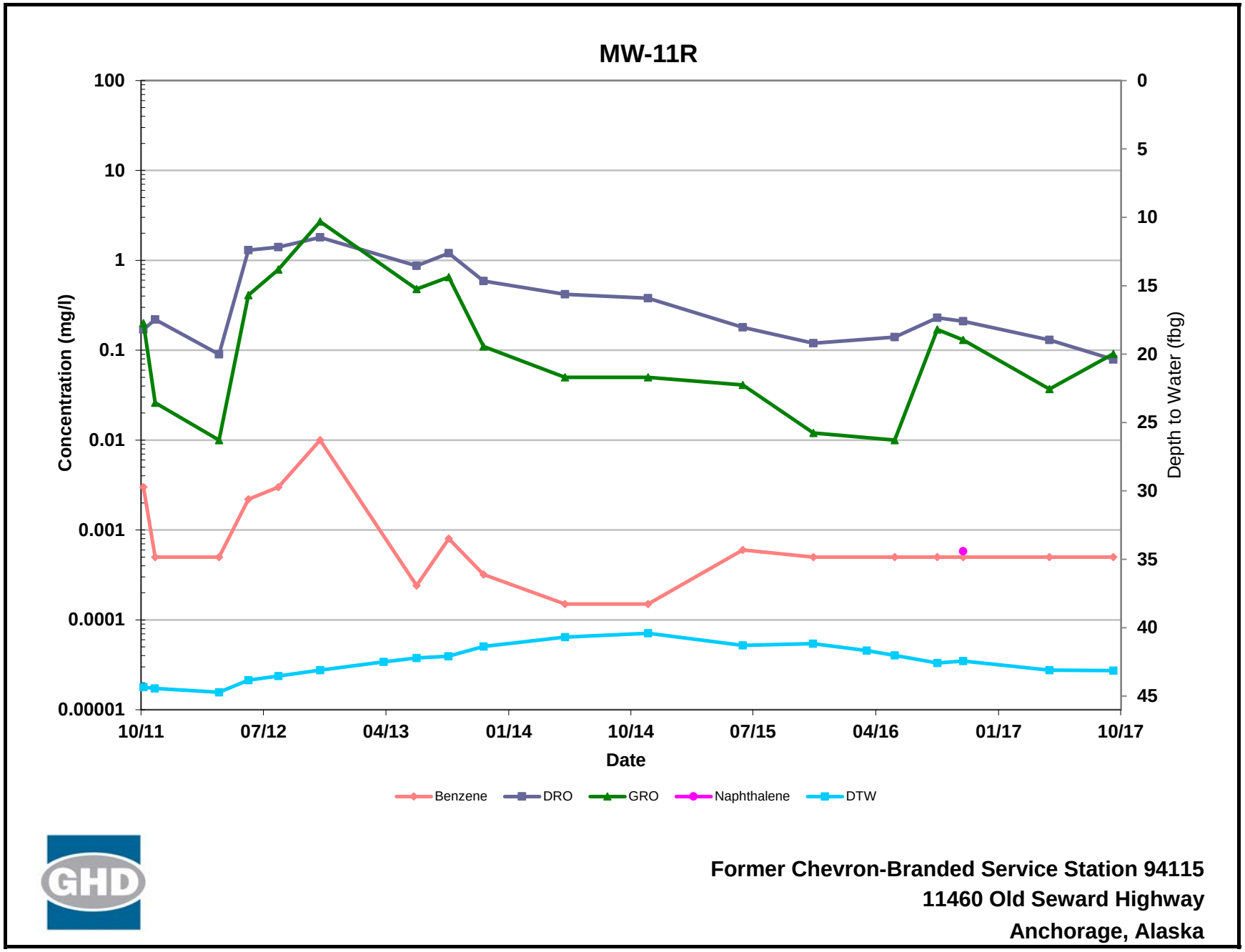
**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED,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

# Data Qualifiers

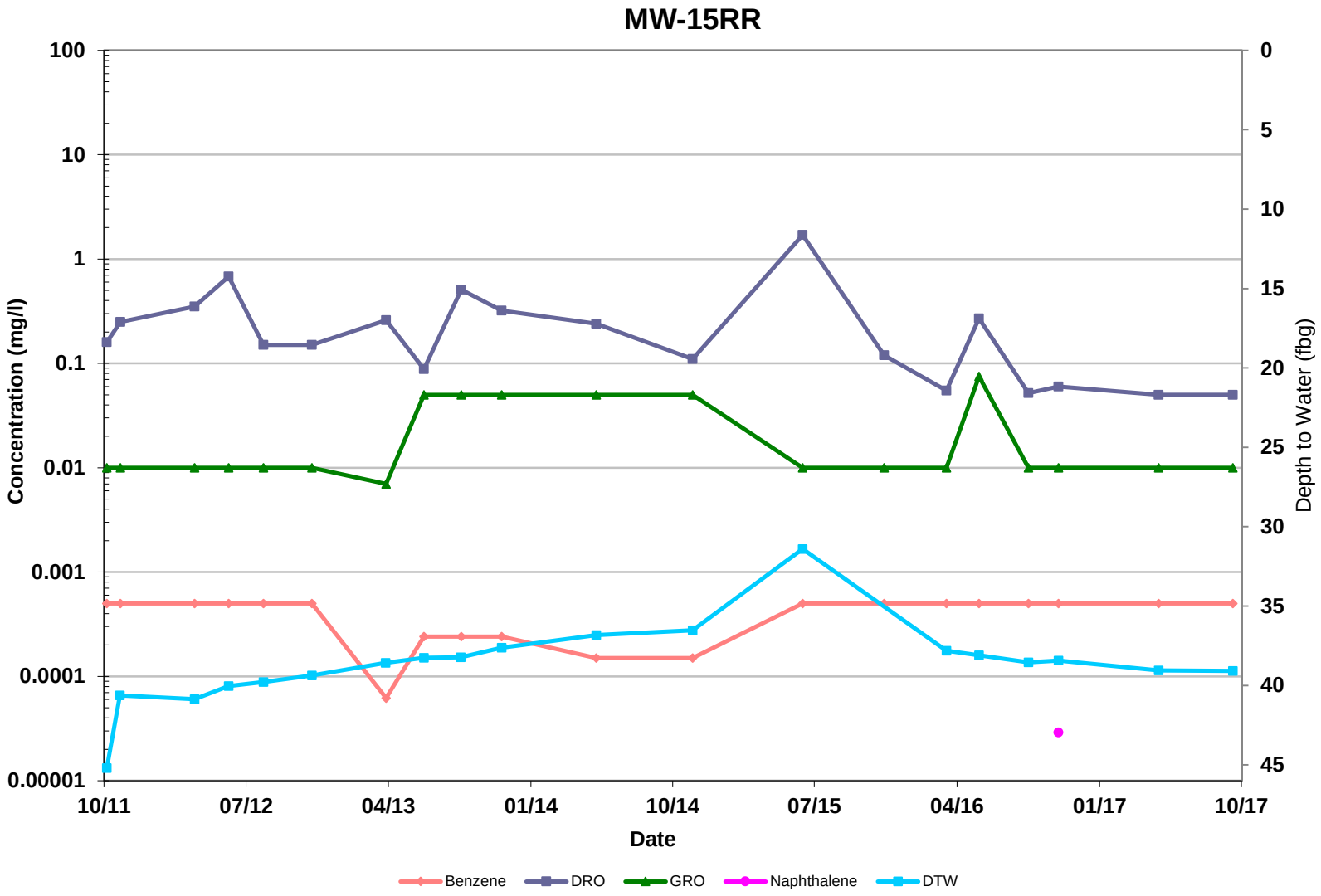
| Qualifier | Definition |
|---|---|
| C | Result confirmed by reanalysis |
| D1 | Indicates for dual column analyses that the result is reported from column 1 |
| D2 | Indicates for dual column analyses that the result is reported from column 2 |
| E | Concentration exceeds the calibration range |
| 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. |
| Z | Laboratory Defined - see analysis report |

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

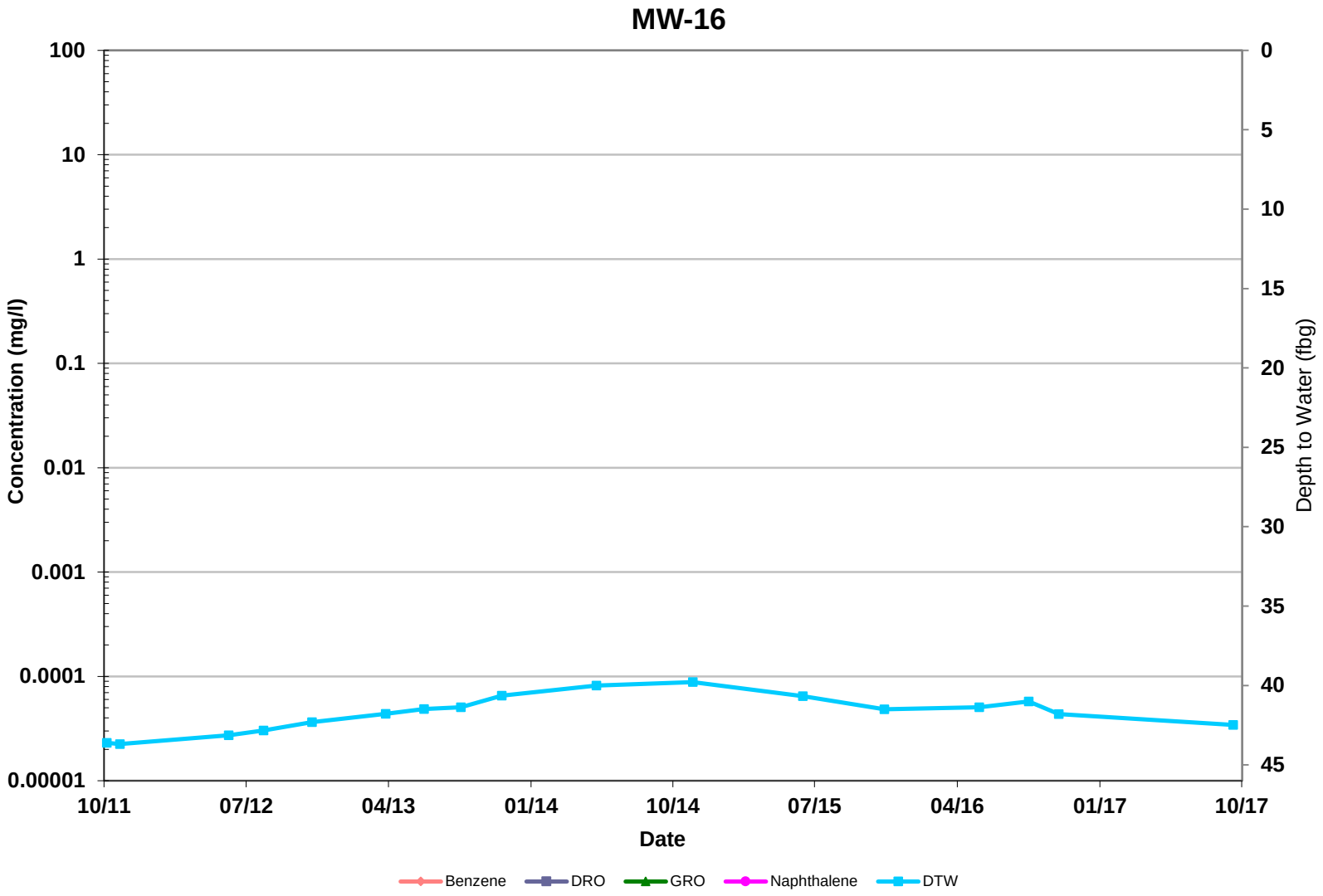
# Appendix E
# Petroleum Hydrocarbon Concentration Graphs




**Former Chevron-Branded Service Station 94115**
**11460 Old Seward Highway**
**Anchorage, Alaska**

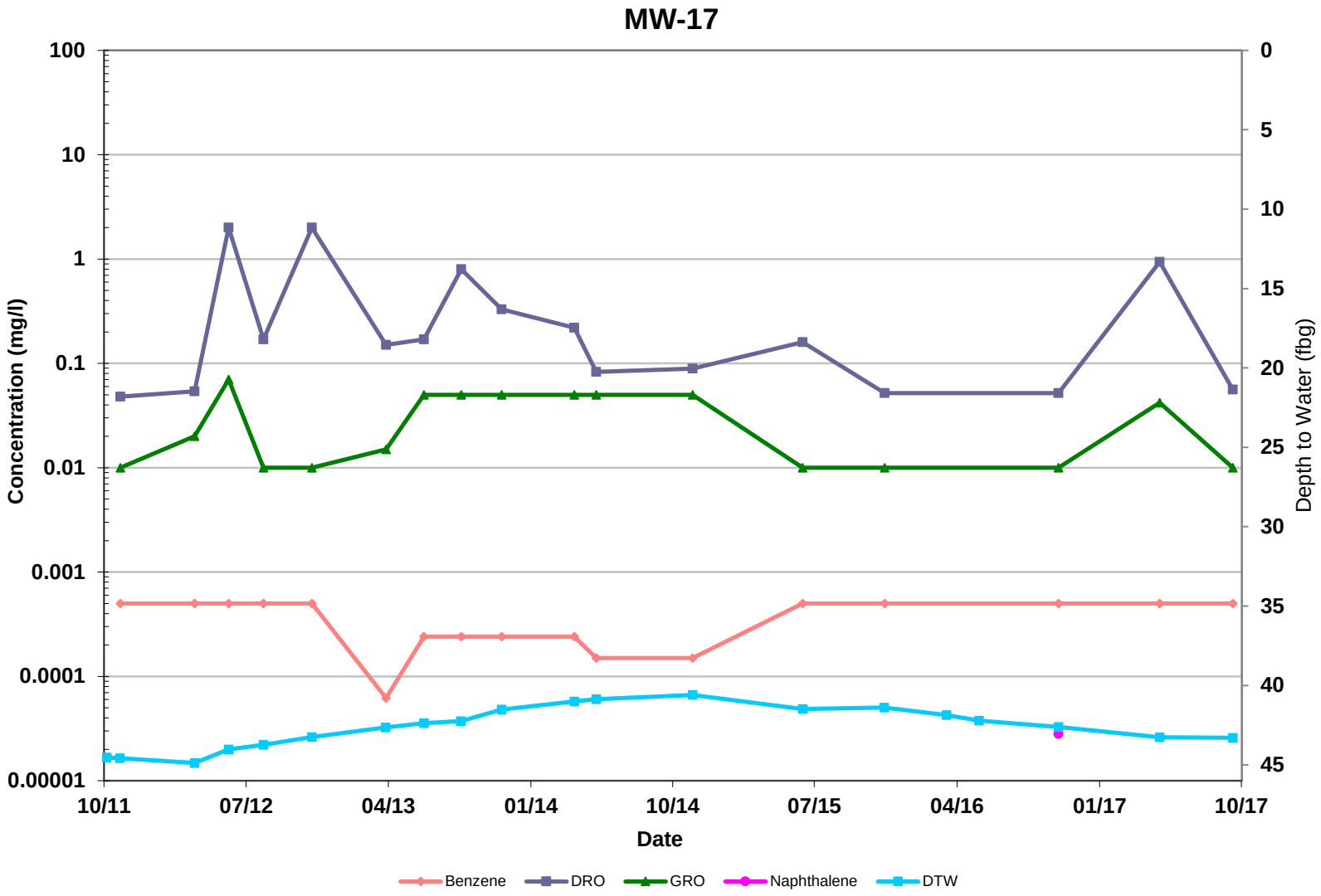



**Former Chevron-Branded Service Station 94115**
**11460 Old Seward Highway**
**Anchorage, Alaska**



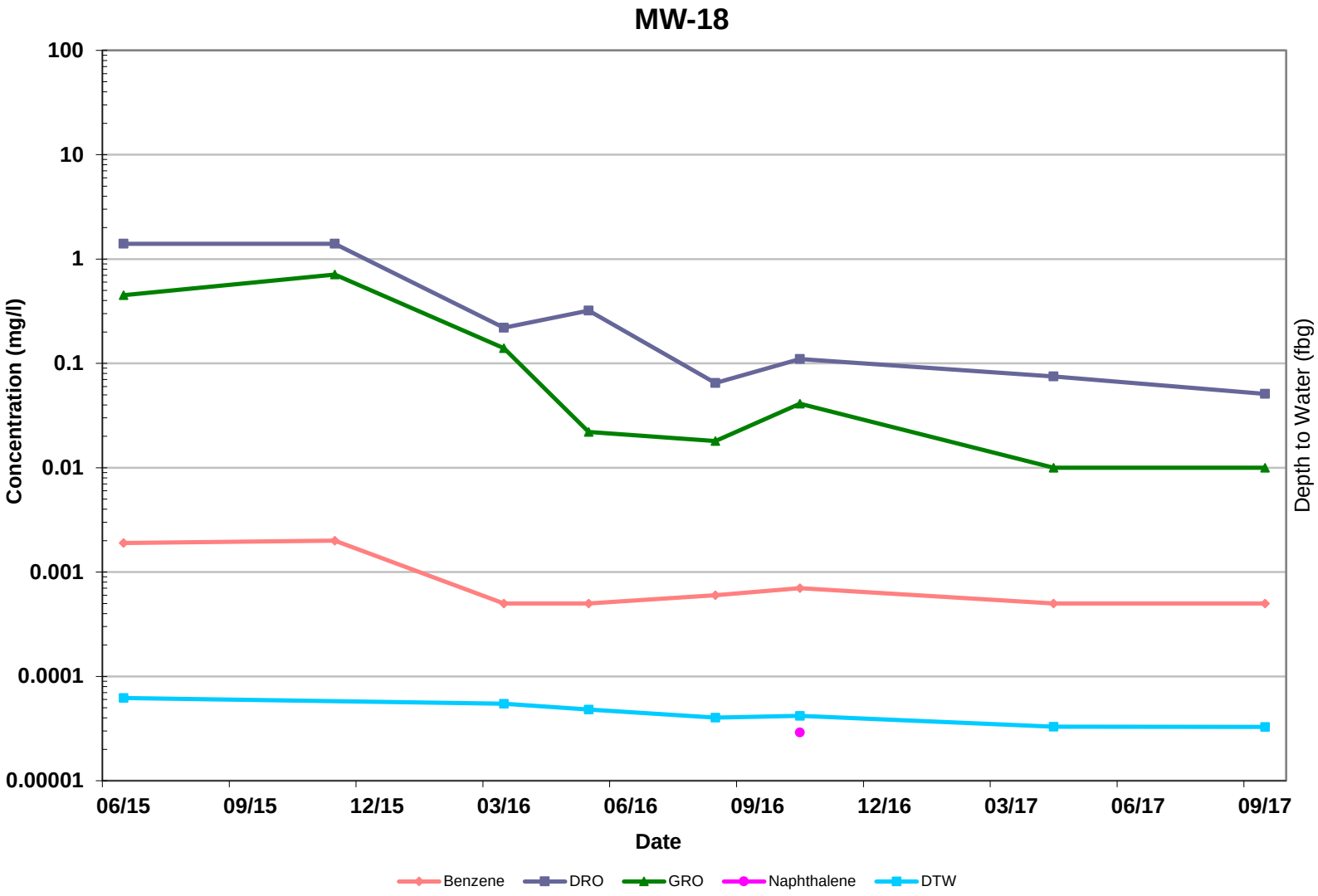

GHD

**Former Chevron-Branded Service Station 94115**
**11460 Old Seward Highway**
**Anchorage, Alaska**

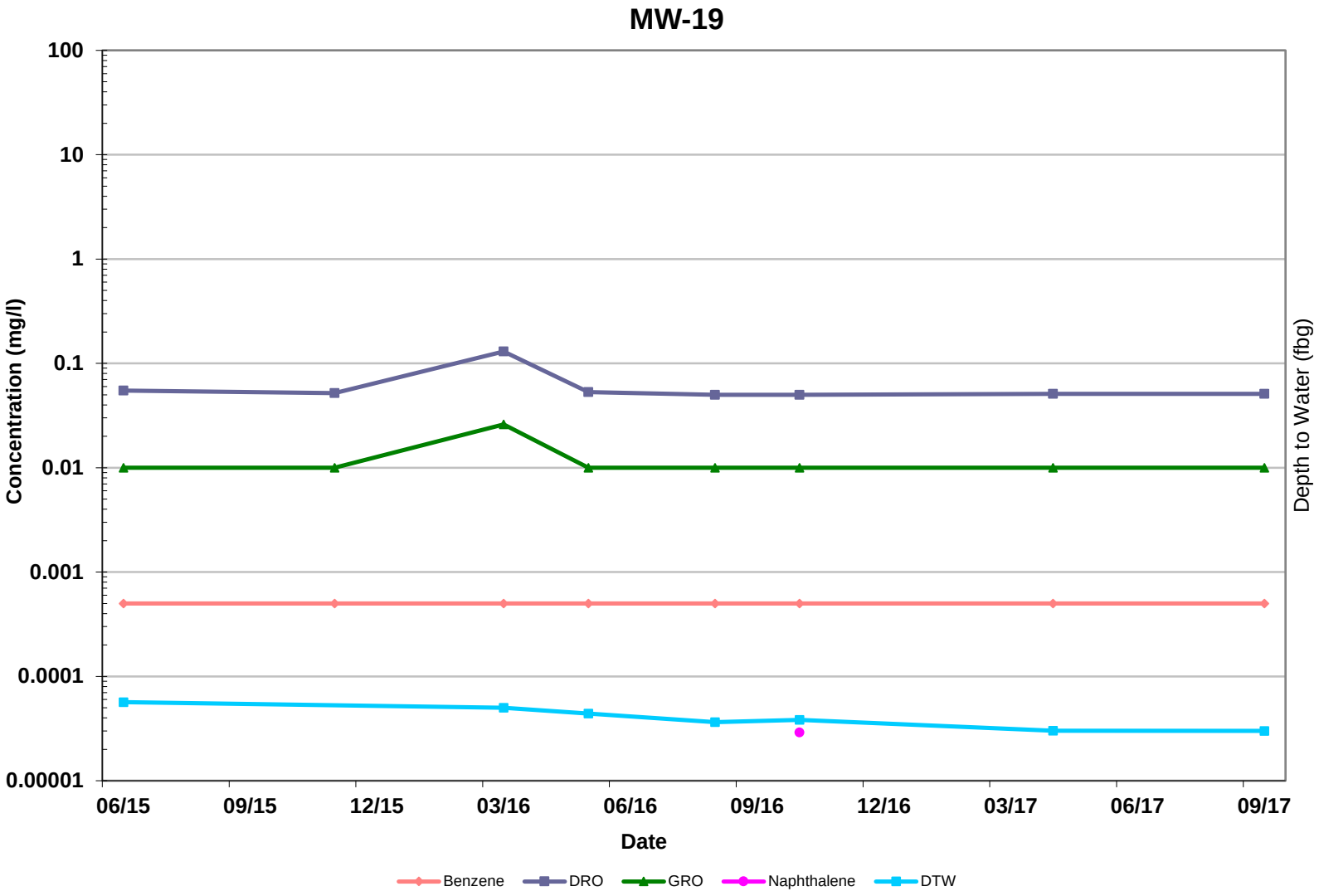



GHD

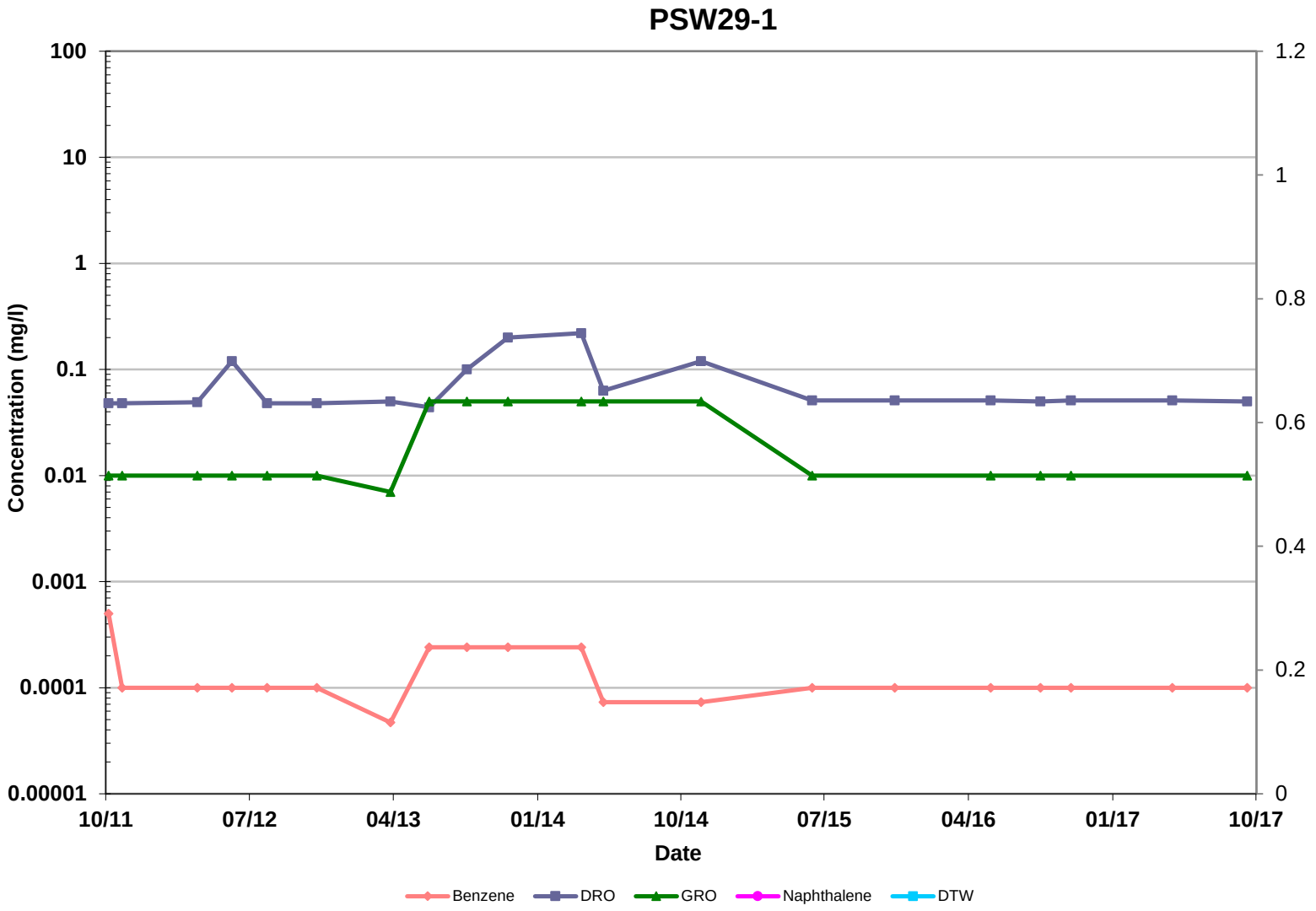
**Former Chevron-Branded Service Station 94115**
**11460 Old Seward Highway**
**Anchorage, Alaska**




**Former Chevron-Branded Service Station 94115**
**11460 Old Seward Highway**
**Anchorage, Alaska**




**Former Chevron-Branded Service Station 94115**
**11460 Old Seward Highway**
**Anchorage, Alaska**




**Former Chevron-Branded Service Station 94115**
**11460 Old Seward Highway**
**Anchorage, Alaska**

# Appendix F
# ADEC Laboratory Data Review Checklist and Memorandum

# Laboratory Data Review Checklist

Completed by:

J Cloud

Title:

Project Chemist

Date:

October 27, 2017

CS Report Name:

Second Semiannual 2017 Groundwater Monitoring Report

Report Date:

October 10, 2017

Consultant Firm:

GHD Services Inc.

Laboratory Name:

Eurofins Lancaster Laboratories Environmental

Laboratory Report Number:

1851337

ADEC File Number:

2100.26.012

Hazard Identification Number:

24094

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 tranferred

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:

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:

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:

One of the method AK102 LCS/LCSD sets had low DRO recoveries and the one had extremely low DRO recoveries

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:

One of the method AK102 LCS/LCSD sets had a high DRO RPD

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

Comments:

All samples for DRO analysis

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

◉ Yes ○ No Comments:

vii. Data quality or usability affected?

Comments:

The DRO results for samples MW-15RR, MW-19, MW-18, MW-11R, MW-17 and PSW29 were qualified as estimated due to the implied low bias. The DRO results for samples DUP-A and DUP-B were rejected due to the poor analytical efficiency demonstrated

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:

Toluene was present at low concentrations

iv. If above LOQ, what samples are affected?

Comments:

No affected samples

v. Data quality or usability affected?

Comments:

The associated sample results were non-detect and were not impacted. No qualfication of the data was deemed necessary.

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:

iv. Data quality or usability affected?

Comments:

None

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

November 2, 2017

| | | | |
|---|---|---|---|
| To: | ADEC | Ref. No.: | 620518 |
| From: | Jeffrey Cloud | Tel: | 206-914-3141 |
| cc: | Siobhan Pritchard | | |

**Subject:** **QA/QC Review**
**ChevronTexaco Site 94115**
**Job # 1851337**
**September 2017**

## 1. Introduction

This document details a reduced validation of analytical results for groundwater samples collected in Anchorage, Alaska during September 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), 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.

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 and LCS/LCSD contained all analytes of interest. All LCS and LCS/LCSD recoveries and RPDs were within associated control limits, demonstrating acceptable analytical accuracy and precision (where applicable) with a few exceptions. Where low recoveries were found the DRO results for samples MW-15RR, MW-19, MW-18, MW-11R, MW-17 and PSW29 were qualified as estimated due to the implied low bias. Where extremely low recoveries were found the DRO results for samples DUP-A and DUP-B were rejected due to the poor analytical efficiency demonstrated.

## 6. Field QA/QC Samples

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

### *Trip Blank Sample Analysis*

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

### *Field Duplicate Sample Analysis*

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

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

## 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 exceptions and qualifications noted herein.