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SUBJECT

2019 First Semi-Annual Groundwater Monitoring Report
Former Chevron Bulk Plant No. 1001838
Astoria, Oregon
ECSI No. 1402

DATE
November 25, 2019

LOCATION
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INTRODUCTION

This 2019 First Semi-Annual Groundwater Monitoring Report (report) has been prepared by Arcadis U.S., Inc. (Arcadis) on behalf of Chevron Environmental Management Company (Chevron) for the Former Chevron Bulk Plant No. 1001838 (site), located at 10 Fifth Street, Astoria, Oregon. The site is listed in the Oregon Department of Environmental Quality (DEQ) Environmental Cleanup Site Information (ECSI) database (ECSI ID No.1402). A site location map is provided as Figure 1. This report presents the results of the semi-annual groundwater monitoring and sampling event, conducted March 12 and 13, 2019.

Site Description

The site consists of two city blocks, bordered to the north by Riverwalk Drive, to the south by Marine Drive (US Highway 30), to the east by Sixth Street, and to the west by Fourth Street (Figure 2). Fifth Street separates the two site parcels. A warehouse was formerly located east of Fifth Street and a tank yard was previously located west of Fifth Street. The eastern parcel is currently occupied by two facilities: a Chevron-branded service station and a commercial card-lock fuelling facility. The western parcel is currently occupied by a two-story office building and a surface parking lot.

Hydrogeologic Setting

Surface topography at the site is generally flat. The site is paved with asphalt and drainage is directed to street gutters and the city storm sewer. Subsurface soils encountered at the site generally consist of a heterogeneous mix of silts, sands, silty to sandy gravel, and cobbles.

Depth to groundwater and groundwater flow direction are influenced by seasonal effects and tidal fluctuations in the Columbia River, which is located approximately 20 feet north of the site. Historical depths to groundwater have ranged from 0.8 to 13.9 feet below the ground surface (bgs) under low and high tide influences. During the first semi-annual 2019 monitoring event, depth to groundwater ranged from 7.61 to

10.90 feet bgs reflecting the range of groundwater elevations resulting from low and high tide effects.

GROUNDWATER MONITORING AND SAMPLING

Groundwater monitoring is performed at the site to maintain records of changes in groundwater quality and to verify compliance with applicable regulatory requirements. Groundwater monitoring activities are conducted in accordance with the DEQ approved Groundwater Monitoring Optimization Plan (Arcadis 2010) and the reductions to the monitoring program recommended in the 2015 Second Semi-Annual Groundwater Monitoring Report (Arcadis 2016a) and the 2016 First Semi-Annual Groundwater Monitoring Report (Arcadis 2016b).

Objectives of the groundwater monitoring program include:

- monitoring groundwater quality for volatile organic compounds (VOCs), polynuclear aromatic hydrocarbons (PAHs), total petroleum hydrocarbons (TPH), total metals, and dissolved metals;
- evaluating groundwater quality relative to historical data to identify concentration trends;
- Monitoring and recovery of separate phase hydrocarbon (SPH) in site monitoring wells.

Groundwater monitoring events are currently conducted on a semi-annual basis at the site. The current groundwater monitoring program consists of:

- measuring depth-to-water and SPH thickness in monitoring wells MW-3B, MW-4B, MW-12, and MW-14 through MW-25,
- inspection of oil-absorbent socks in monitoring wells MW-3B, MW-4B, MW-15, MW-18, MW-19, MW-22, MW-23, and MW-24,
- replacing of oil-absorbent socks with observed SPH impacts,
- and chemical analysis of groundwater samples collected from wells MW-3B, MW-4B, MW-12, MW-15, MW-18, MW-19, MW-20, MW-22, and MW-24, unless SPH is measured in any of these wells during the sampling event. Wells containing SPH are excluded from the groundwater sampling program during each semi-annual sampling event where SPH is present.

Field Activities

The first semi-annual 2019 groundwater monitoring event (this event) was conducted by Gettler-Ryan, Inc. of Dublin, California (Gettler-Ryan) on March 12 and 13, 2019. The event consisted of depth-to-water and SPH thickness measurements and groundwater sample collection from wells not containing SPH. The following eight wells, shown on Figure 2, were sampled during this event:

- two monitoring wells on the former warehouse parcel (MW-4B and MW-12)
- five monitoring wells along the riverbank area (MW-18, MW-19, MW-20, MW-22, and MW-24)
- one monitoring well on the former tank yard parcel (MW-15)

Monitoring well MW-3B was not sampled during this event due to the presence of SPH in the well.

Depth-to-Water and SPH Thickness Measurements

Depth-to-water and SPH thickness in each well was measured using an electronic oil-water interface probe. Depth-to-water measurements were obtained during both high and low tide events and are reported in Table

1. Measurements were read from the north side of the top of the inner well casing and recorded on groundwater sampling logs (Appendix A).

Groundwater Sample Collection

Each sampled well was purged with a peristaltic pump using low-flow sampling techniques prior to collecting analytical samples, in accordance with the Gettler–Ryan SOP for Low-Flow Purging and Sampling (included in Appendix A).

QA/QC sampling is performed as part of the groundwater monitoring program to confirm the accuracy and repeatability of the laboratory analyses. During this event, QA/QC sampling consisted of collecting a blind duplicate sample from monitoring well MW-22. Laboratory analytical results for the blind duplicate sample are presented alongside the results for the parent sample in Tables 2 through 4. In general, the duplicate sample analytical results were consistent with those of the parent sample.

Samples were packed on ice and shipped under appropriate chain-of-custody protocols to Eurofins Lancaster Laboratories Environmental in Lancaster, Pennsylvania. Groundwater samples were analyzed for the following:

- Benzene, Toluene, Ethylbenzene, and total Xylenes (BTEX) using United States Environmental Protection Agency (USEPA) Method 8260B
- PAHs using USEPA Method 8270C selected ion monitoring (SIM)
- TPH in the gasoline range (TPH-G) using Northwest Method NWTPH-Gx
- TPH in the diesel range (TPH-D) and heavy oil-range (TPH-O) using Northwest Method NWTPH-Dx with 10-gram column silica gel cleanup
- total and dissolved metals using USEPA 6000/7000 series method

Investigation Derived Waste Management

Waste generated during this event was handled as follows:

- Water from monitoring wells and decontamination activities was containerized and transported off site for disposal by Gettler-Ryan, in accordance with applicable regulations.
- Spent absorbent monitoring well socks removed from wells were placed in an Oregon Department of Transportation-approved steel 55-gallon drum and stored onsite pending waste characterization and disposal at a Chevron-approved offsite disposal facility.
- General waste, such as disposable sampling supplies and personal protective equipment, was placed in heavy-weight garbage bags or other appropriate containers and disposed of as municipal waste.

RESULTS AND DISCUSSION

This section summarizes the results of the March 2019 groundwater monitoring activities. Laboratory analytical reports and chain of custody documentation are included in Appendix B.

Groundwater Elevations and Observed SPH Thickness

Groundwater potentiometric surface maps based on this event's high tide and low tide water level

measurements are included as Figure 3 and Figure 4, respectively. Groundwater elevations from this event are generally consistent with historical events.

On March 12, absorbent socks in monitoring wells MW-3B, MW-4B, MW-15, MW-18, MW-19, MW-22, MW-23, and MW-24 were removed and evaluated for SPH contamination. Sorbent socks with no visible SPH were returned to their respective wells; sorbent socks with visible SPH were removed and replaced with new socks. Sorbent sock field forms are included in Attachment A.

During sampling activities conducted on March 12, 0.02 feet of SPH was measured in monitoring well MW-3B.

Groundwater Analytical Results

A summary of this event's laboratory analytical results is presented in Tables 2 through 4. Historical groundwater analytical results through 2017 are presented in Appendix C. Based on the findings of the Beneficial Water Use Survey (SAIC 2006) and the Beneficial Water Use Survey Addendum (SAIC 2007), groundwater analytical results were compared to the following values:

- Risk-based concentrations (RBCs) for construction and excavation workers exposed to groundwater in an open excavation, which are provided in Appendix A to the DEQ document titled "Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites" (DEQ 2003; RBC tables, updated 2018)
- Screening level values (SLVs) for a Level II Screening Ecological Risk Assessment for aquatic receptors in fresh surface water, which are provided in Table 1 of the DEQ document titled "Guidance for Ecological Risk Assessment: Levels I, II, III, and IV" (DEQ 1998, updated 2001)

Comparisons of groundwater analytical results to the applicable RBCs and SLVs are presented in Tables 2 through 4. No analytes were detected at concentrations greater than the applicable RBCs during this event. Several samples contained concentrations of PAHs and metals greater than SLVs. A summary of PAH and metals results exceeding SLVs is presented in the table below. Overall, the results of this event are generally consistent with the results of previous monitoring events.

Constituent	Frequency of Detection Above the MDL	SLV[2] in µg/L	Frequency of Exceedances	Concentration of Exceedances in µg/L (Well ID)
Benzo (a) anthracene	2/8	0.027	2/8	0.1 (MW-18) 0.5 (MW-24)
Benzo (a) pyrene	2/8	0.014	2/8	0.04 J (MW-18) 0.2 (MW-24)
Fluorene	5/8	3.9	1/8	7 (MW-18)

Total Barium	8/8	4	8/8	42.8 (MW-4B) 27.3 (MW-12) 127 (MW-15) 136 (MW-18) 43.6 (MW-19) 87.1 (MW-20) 41.2 (MW-22) 42.3 ((MW-22) (DUP)) 38.3 (MW-24)
Dissolved Barium	8/8	4	8/8	42.6 (MW-4B) 22.3 (MW-12) 136 (MW-15) 116 (MW-18) 34.7 (MW-19) 92.3 (MW-20) 38.9 (MW-22) 38 ((MW-22) (DUP)) 35 (MW-24)
Total Cadmium	1/8	2.2	1/8	2.4 J (MW-22) 3.0 J ((MW-22) (DUP))
Total Iron	8/8	1,000	8/8	16,700 (MW-4B) 11,200 (MW-12) 32,100 (MW-15) 29,000 (MW-18) 25,900 (MW-19) 17,400 (MW-20) 1,390 (MW-22) 1,670 ((MW-22) (DUP)) 1,930 (MW-24)
Dissolved Iron	8/8	1,000	6/8	16,400 (MW-4B) 4,100 (MW-12) 31,700 (MW-15) 25,600 (MW-18) 17,700 (MW-19) 17,700 (MW-20)

Notes:
MDL = method detection limit
µg/L = micrograms per liter
SLV = Screening Level Values for a Level II Screening Ecological Risk Assessment for aquatic receptors in fresh water, which are provided in Table 1 of the Oregon Department of Environmental Quality document titled "Guidance for Ecological Risk Assessment: Levels I, II, III, and IV" (DEQ, April 1998, last updated December 2001).

RECOMMENDATIONS

Based on the results of the first semi-annual 2019 groundwater monitoring event, semi-annual monitoring will continue in accordance with the DEQ approved Groundwater Monitoring Optimization Plan (Arcadis 2010) and the reductions to the monitoring program recommended in the 2015 Second Semi-Annual Groundwater Monitoring Report (Arcadis 2016a) and the 2016 First Semi-Annual Groundwater Monitoring Report (Arcadis 2016b). The next sampling event is currently scheduled for September 2019.

If you have any comments or questions, please contact Stephen Ahlquist by telephone at 503.785.9308 or by e-mail at Stephen.Ahlquist@arcadis.com.

Sincerely,
Arcadis

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Project Manager

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Appendix B:	Analytical Laboratory Reports and Chains of Custody
Appendix C:	Historical Groundwater Analytical Results

References

Arcadis. 2010. Groundwater Monitoring Program Optimization Work Plan. Former Chevron Bulk Plant No. 1001838. 10 Fifth Street, Astoria, Oregon. ECSI No. 1402. March.

Arcadis. 2014. Remedial Investigation, Human Health, and Ecological Risk Assessment Report. Former Chevron Bulk Plant No. 100-1838. Astoria, Oregon. ECSI No. 1402. May.

Arcadis. 2016a. 2015 Second Semi-Annual Groundwater Monitoring Report. Former Chevron Bulk Plant No. 1001838. 10 Fifth Street, Astoria, Oregon. ECSI No. 1402. February.

Arcadis. 2016b. 2016 First Semi-Annual Groundwater Monitoring Report. Former Chevron Bulk Plant No. 1001838. 10 Fifth Street, Astoria, Oregon. ECSI No. 1402. August 4.

Oregon Department of Environmental Quality (DEQ). 2001. Guidance for Ecological Risk Assessment: Levels I, II, III, and IV. Prepared April 1998, last updated December 2001.

Oregon Department of Environmental Quality (DEQ). 2003. Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites. September 22, 2003. RBC Tables updated June 2012.

Science Applications International Corporation (SAIC). 2006. Beneficial Water Use Survey Report. Decommissioned Chevron Bulk Plant. Facility No. 100-1838. 10 5th Street, Astoria Oregon. DEQ ECSI Site #1402. March 24.

Science Applications International Corporation (SAIC). 2007. Addendum – Beneficial Water Use Survey Report. Former Chevron Astoria Bulk Plant No. 100-1838. 10 5th Street, Astoria Oregon. DEQ-LQVC-NWR-04-04. ECSI #1402. August 2.

TABLES

Table 1
Depth to Water and Groundwater Elevation Data
First Semi Annual 2019 Groundwater Monitoring Report
Former Chevron Bulk Facility #1001838
10 Fifth Street
Astoria, Oregon

Well	Date	TOC (ft amsl)	High Tide				Low Tide			
			DTP (ft)	DTW (ft)	SPH thickness (ft)	GWE (ft amsl)	DTP (ft)	DTW (ft)	SPH thickness (ft)	GWE (ft amsl)
MW-3B	3/12/2019	13.78	--	8.95	0.00	4.83	8.94	8.96	0.02	4.84
MW-4B	3/12/2019	14.49	--	9.41	0.00	5.08	--	9.80	0.00	4.69
MW-12	3/12/2019	13.19	--	7.83	0.00	5.36	--	7.80	0.00	5.39
MW-14	3/12/2019	13.51	--	9.58	0.00	3.93	--	10.07	0.00	3.44
MW-15	3/12/2019	13.98	--	9.47	0.00	4.51	--	10.03	0.00	3.95
MW-16	3/12/2019	13.35	--	9.91	0.00	3.44	--	10.05	0.00	3.30
MW-17	3/12/2019	13.33	--	9.38	0.00	3.95	--	9.42	0.00	3.91
MW-18	3/12/2019	13.40	--	10.06	0.00	3.34	--	10.23	0.00	3.17
MW-19	3/12/2019	12.90	--	9.81	0.00	3.09	--	9.96	0.00	2.94
MW-20	3/12/2019	12.90	--	9.62	0.00	3.28	--	9.93	0.00	2.97
MW-21	3/12/2019	12.89	--	9.20	0.00	3.69	--	8.84	0.00	4.05
MW-22	3/12/2019	12.79	--	9.73	0.00	3.06	--	8.93	0.00	3.86
MW-23	3/12/2019	12.77	--	7.61	0.00	5.16	--	7.75	0.00	5.02
MW-24	3/12/2019	13.05	--	9.37	0.00	3.68	--	10.90	0.00	2.15
MW-25	3/12/2019	13.14	--	9.73	0.00	3.41	--	10.11	0.00	3.03

Notes:
TOC = Top of Casing
ft = Feet
amsl = Above Mean Sea Level
DTP = Depth to Product
DTW = Depth to Water
SPH = Separate Phase Hydrocarbons
GWE = Groundwater Elevation
-- = Not Measured/Not Analyzed

Table 2
Groundwater Monitoring Data and Analytical Results - TPH and BTEX
First Semi-Annual 2019 Groundwater Monitoring Report
Former Chevron Bulk Facility #1001838
10 Fifth Street
Astoria, Oregon

Well ID	Sample Date	TOC* (ft)	DTW (ft)	SPH Thickness (ft)	GWE (ft)	TPH-G (µg/L)	TPH-D (µg/L)	TPH-O (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)
MW-3B	3/13/2019	13.78	8.96	0.02	4.82	Not sampled due to presence of SPH						
MW-4B	3/13/2019	14.49	9.47	0.00	5.02	**110 J**	<30	<68	<0.2	<0.2	<0.2	<0.5
MW-12	3/13/2019	13.19	7.87	0.00	5.32	**62 J**	**83 J**	<67	<0.2	<0.2	<0.2	<0.5
MW-15	3/13/2019	13.98	9.49	0.00	4.49	**22 J**	<29	<66	<0.2	<0.2	<0.2	<0.5
MW-18	3/13/2019	13.40	10.06	0.00	3.34	**1,600**	**5,500**	**940**	<0.2	<0.2	<0.2	<0.5
MW-19	3/13/2019	12.90	9.52	0.00	3.38	**72 J**	<29	<67	<0.2	<0.2	<0.2	<0.5
MW-20	3/13/2019	12.90	9.14	0.00	3.76	**27 J**	<29	<66	<0.2	<0.2	<0.2	<0.5
MW-22	3/13/2019	12.79	9.28	0.00	3.51	<19	**550**	<69	<0.2	<0.2	<0.2	<0.5
MW-22 (DUP)	3/13/2019	12.79	9.28	0.00	3.51	<19	**520**	<68	<0.2	<0.2	<0.2	<0.5
MW-24	3/13/2019	13.05	9.98	0.00	3.07	**200 J**	**470**	**490**	**0.3 J**	**0.2 J**	**0.3 J**	<0.5
Proposed Screening Levels		**RBC (µg/L)**				14,000	>S	>S	1,800	220,000	4,500	23,000
		SLV (µg/L)				NE	NE	NE	130	9.8	7.3	13

TOC = Top of Casing
(ft) = Feet
DTW = Depth to Water (at time of sampling)
SPH = Separate Phase Hydrocarbons
GWE = Groundwater Elevation (at time of sampling)
TPH-G = Total Petroleum Hydrocarbons in the Gasoline Range
TPH-D = Total Petroleum Hydrocarbons in the Diesel Range
TPH-O = Total Petroleum Hydrocarbons in the Heavy Oil Range

B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes
(µg/L) = Micrograms per liter

(DUP) = Duplicate sample
BOLD = Detected Concentration
< = not detected above the laboratory reporting limit indicated
>S = RBC exceeds solubility limit
NE = Not Established
-- = Not Measured/Not Analyzed

RBC = Risk Based Concentration for construction and excavation workers exposed to groundwater in an open excavation, which are provided in Appendix A of the Oregon Department of Environmental Quality document titled "Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites" (DEQ, 2003; updated November 2015).

SLV = Screening Level Values for a Level II Screening Ecological Risk Assessment for aquatic receptors in fresh water, which are provided in Table 1 of the Oregon Department of Environmental Quality document titled "Guidance for Ecological Risk Assessment: Levels I, II, III, and IV" (DEQ, April 1998, last updated December 2001).

* = TOC Elevations were surveyed in May 2005 (updated September 2005 and June 2007) by Chase, Jones and Associates Inc. TOC elevations are referenced to mean sea level.

ANALYTICAL METHODS:

BTEX analyzed by USEPA Method 8260B.
TPH-G analyzed by Northwest Method NWTPH-Gx
TPH-D and TPH-O by Northwest Method NWTPH-Dx with silica-gel acid cleanup 10-gram column method

Table 3
Groundwater Analytical Results - PAHs
First Semi-Annual 2019 Groundwater Monitoring Report
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

Well ID	Sample Date	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a) anthracene	Benzo(a) Pyrene	Benzo(b) Fluoranthene	Benzo(g,h,i) perylene	Benzo(k) Fluoranthene	Chrysene	Dibenz(a,h) anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MW -3B	3/13/2019	Not sampled due to presence of SPH															
MW-4B	3/13/2019	**0.01 J**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	**0.02 J**	<0.01	<0.03	<0.03	**0.01 J**
MW-12	3/13/2019	**0.01 J**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.03	<0.03	<0.01
MW-15	3/13/2019	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	**0.01 J**	<0.01	<0.03	<0.03	<0.01
MW-18	3/13/2019	**2**	**0.5**	**0.8**	**0.1**	**0.04 J**	**0.08**	**0.03 J**	**0.01 J**	**0.3**	**0.02 J**	**0.3**	**7**	<0.01	<0.03	**0.3**	**0.5**
MW-19	3/13/2019	**0.01 J**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	**0.08**	<0.01	<0.03	<0.03	<0.01
MW-20	3/13/2019	**0.06**	<0.01	<0.01	<0.01	<0.01	**0.01 J**	**0.01 J**	<0.01	<0.01	<0.02	<0.01	<0.01	**0.01 J**	<0.03	<0.03	**0.01 J**
MW-22	3/13/2019	<0.01	**0.06**	<0.01	<0.01	<0.01	<0.01	**0.04 J**	<0.01	**0.01 J**	<0.02	<0.01	<0.01	**0.01 J**	<0.03	<0.03	**0.02 J**
MW-22 (DUP)	3/13/2019	<0.01	**0.01 J**	<0.01	<0.01	<0.01	<0.01	**0.02 J**	<0.01	<0.01	<0.02	<0.01	<0.01	**0.01 J**	<0.03	<0.03	<0.01
MW-24	3/13/2019	**0.03 J**	**0.02 J**	**0.05 J**	**0.5**	**0.2**	**0.4**	**0.07**	**0.1**	**0.3**	**0.02 J**	**0.9**	**0.02 J**	**0.07**	**0.09**	**0.07 J**	**0.9**
Proposed Screening	**RBC (µg/L)**	>S	NE	>S	>S	0.53	>S	NE	>S	>S	>S	>S	>S	>S	500	NE	>S
	SLV (µg/L)	520	NE	13	0.027	0.014	NE	NE	NE	NE	NE	6.16	3.9	NE	620	6.3	NE

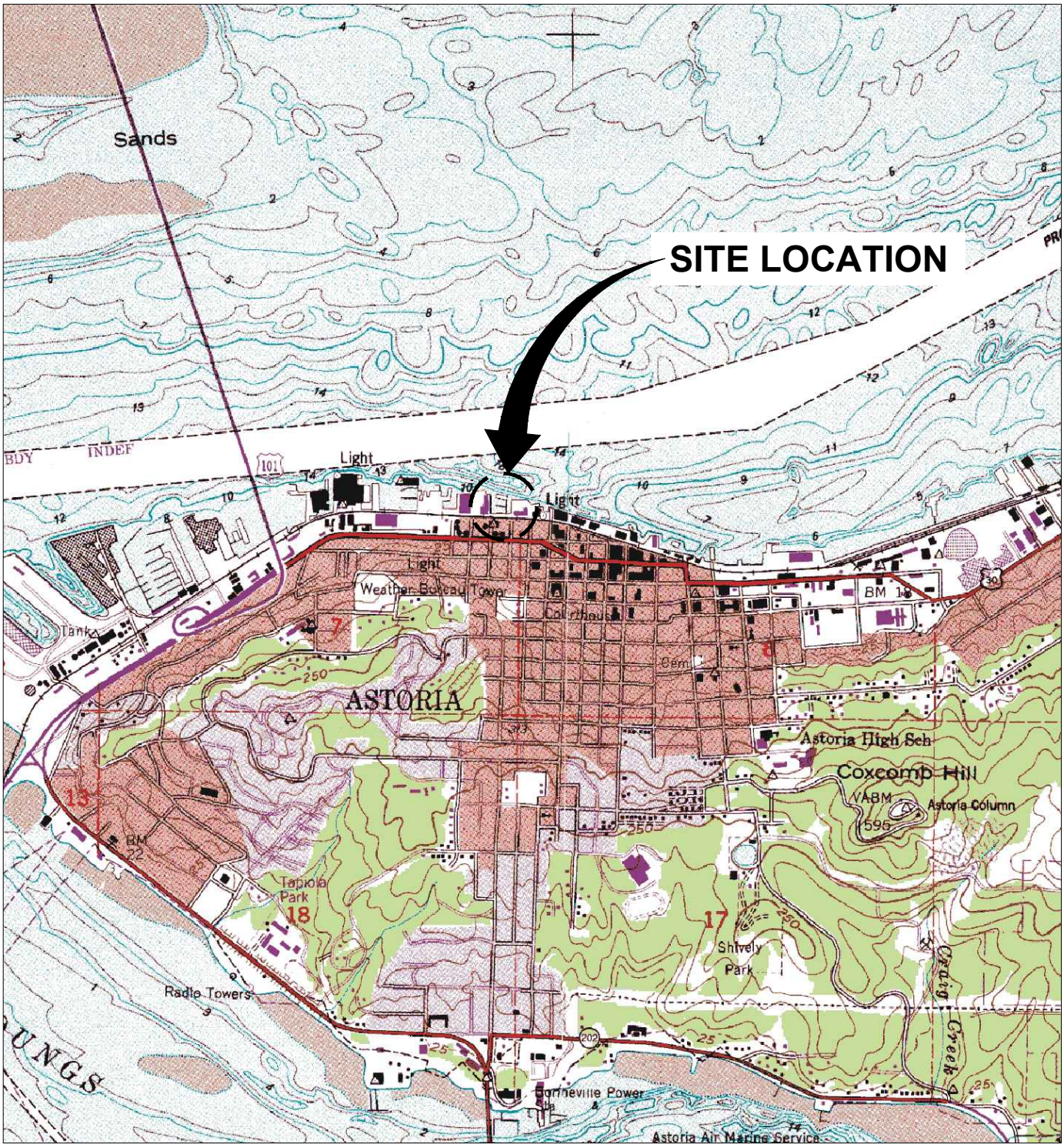
Notes:
(µg/L) = Micrograms per liter
< = Not detected above the laboratory reporting limit indicated
BOLD = Detected Concentration
Highlighted = Concentration exceeds the SLV
(DUP) = Duplicate sample
PAHs = Polynuclear Aromatic Hydrocarbons
NE = Not Established
>S = RBC exceeds solubility limit
RBC = Risk Based Concentration for construction and excavation workers exposed to groundwater in an open excavation, which are provided in Appendix A of the Oregon Department of Environmental Quality document titled "Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites" (DEQ, 2003; updated November 2015).
SLV = Screening Level Values for a Level II Screening Ecological Risk Assessment for aquatic receptors in fresh water, which are provided in Table 1 of the Oregon Department of Environmental Quality document titled "Guidance for Ecological Risk Assessment: Levels I, II, III, and IV" (DEQ, April 1998, last updated December 2001).
ANALYTICAL METHOD:
PAHs by USEPA Method 8270C SIM

Table 4
Groundwater Analytical Results - Total and Dissolved Metals
First Semi-Annual 2019 Groundwater Monitoring Report
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

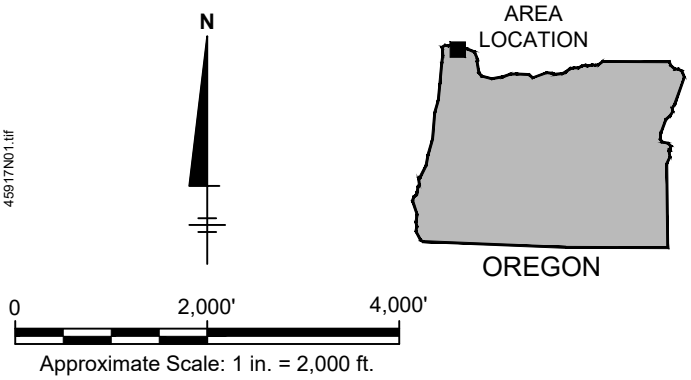
Well ID	Sample Date	Total Arsenic (µg/L)	Dissolved Arsenic (µg/L)	Total Barium (µg/L)	Dissolved Barium (µg/L)	Total Cadmium (µg/L)	Dissolved Cadmium (µg/L)	Total Chromium (µg/L)	Dissolved Chromium (µg/L)	Total Iron (µg/L)	Dissolved Iron (µg/L)	Total Manganese (µg/L)	Dissolved Manganese (µg/L)	Total Selenium (µg/L)	Dissolved Selenium (µg/L)	Total Silver (µg/L)	Dissolved Silver (µg/L)	Total Lead (µg/L)	Dissolved Lead (µg/L)	Total Mercury (µg/L)	Dissolved Mercury (µg/L)
MW-3B	3/13/2019	Not sampled due to presence of SPH																			
MW-4B	3/13/2019	<16.0	<16.0	**42.8**	**42.6**	<1.0	<1.0	<5.3	<5.3	**16,700**	**16,400**	**289**	**304**	<21.0	<21.0	<5.0	<5.0	<1.1	<1.1	<0.050	<0.050
MW-12	3/13/2019	<16.0	<16.0	**27.3**	**22.3**	<1.0	<1.0	<5.3	<5.3	**11,200**	**4,100**	**184**	**205**	<21.0	<21.0	<5.0	<5.0	**2.2 J**	<1.1	<0.050	<0.050
MW-15	3/13/2019	<16.0	<16.0	**127**	**136**	<1.0	<1.0	<5.3	<5.3	**32,100**	**31,700**	**494**	**566**	<21.0	<21.0	<5.0	<5.0	<1.1	<1.1	<0.050	<0.050
MW-18	3/13/2019	<16.0	<16.0	**136**	**116**	<1.0	<1.0	<5.3	<5.3	**29,000**	**25,600**	**631**	**645**	<21.0	<21.0	<5.0	<5.0	<1.1	<1.1	<0.050	<0.050
MW-19	3/13/2019	<16.0	<16.0	**43.6**	**34.7**	<1.0	<1.0	<5.3	<5.3	**25,900**	**17,700**	**482**	**455**	<21.0	<21.0	<5.0	<5.0	<1.1	<1.1	<0.050	<0.050
MW-20	3/13/2019	<16.0	<16.0	**87.1**	**92.3**	<1.0	<1.0	<5.3	<5.3	**17,400**	**17,700**	**348**	**382**	<21.0	<21.0	<5.0	<5.0	<1.1	<1.1	<0.050	<0.050
MW-22	3/13/2019	<16.0	<16.0	**41.2**	**38.9**	**2.4 J**	<1.0	<5.3	<5.3	**1,390**	**260**	**31.7**	**29.5**	<21.0	<21.0	<5.0	<5.0	<1.1	<1.1	<0.050	<0.050
MW-22 (DUP)	3/13/2019	<16.0	<16.0	**42.3**	**38**	**3.0 J**	<1.0	<5.3	<5.3	**1,670**	**239**	**35**	**27.5**	<21.0	<21.0	<5.0	<5.0	<1.1	<1.1	<0.050	<0.050
MW-24	3/13/2019	<16.0	<16.0	**38.3**	**35**	<1.0	<1.0	<5.3	<5.3	**1,930**	**681**	**11.1 J**	**6.7 J**	<21.0	<21.0	<5.0	<5.0	**1.8 J**	<1.1	<0.050	<0.050
Proposed	**RBC (µg/L)**	5,800		>S		130,000		9,400		NE		3,200,000		NE		1,100,000		>S		>S	
Screening	**SLV (µg/L)**	150		4		2.2		74		1,000		82,000		5		0.12		2.5		0.77	

Notes:
(µg/L) = Micrograms per liter
(DUP) = Duplicate sample
< = Not detected above the laboratory reporting limit indicated
BOLD = Detected Concentration
Highlighted = Concentration exceeds the SLV
NE = Not Established
>S = RBC exceeds solubility limit
RBC = Risk Based Concentration for construction and excavation workers exposed to groundwater in an open excavation, which are provided in Appendix A of the Oregon Department of Environmental Quality document titled "Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites" (DEQ, 2003; updated November 2015).
SLV = Screening Level Values for a Level II Screening Ecological Risk Assessment for aquatic receptors in fresh water, which are provided in Table 1 of the Oregon Department of Environmental Quality document titled "Guidance for Ecological Risk Assessment: Levels I, II, III, and IV" (DEQ, April 1998, last updated December 2001).
ANALYTICAL METHOD:
Total and Dissolved Metals by USEPA Method 6000/7000 series

FIGURES



REFERENCE: BASE MAP USGS 7.5. MIN. TOPO. QUAD., ASTORIA, OREGON-WASHINGTON, 1949, PHOTOREVISED 1984.



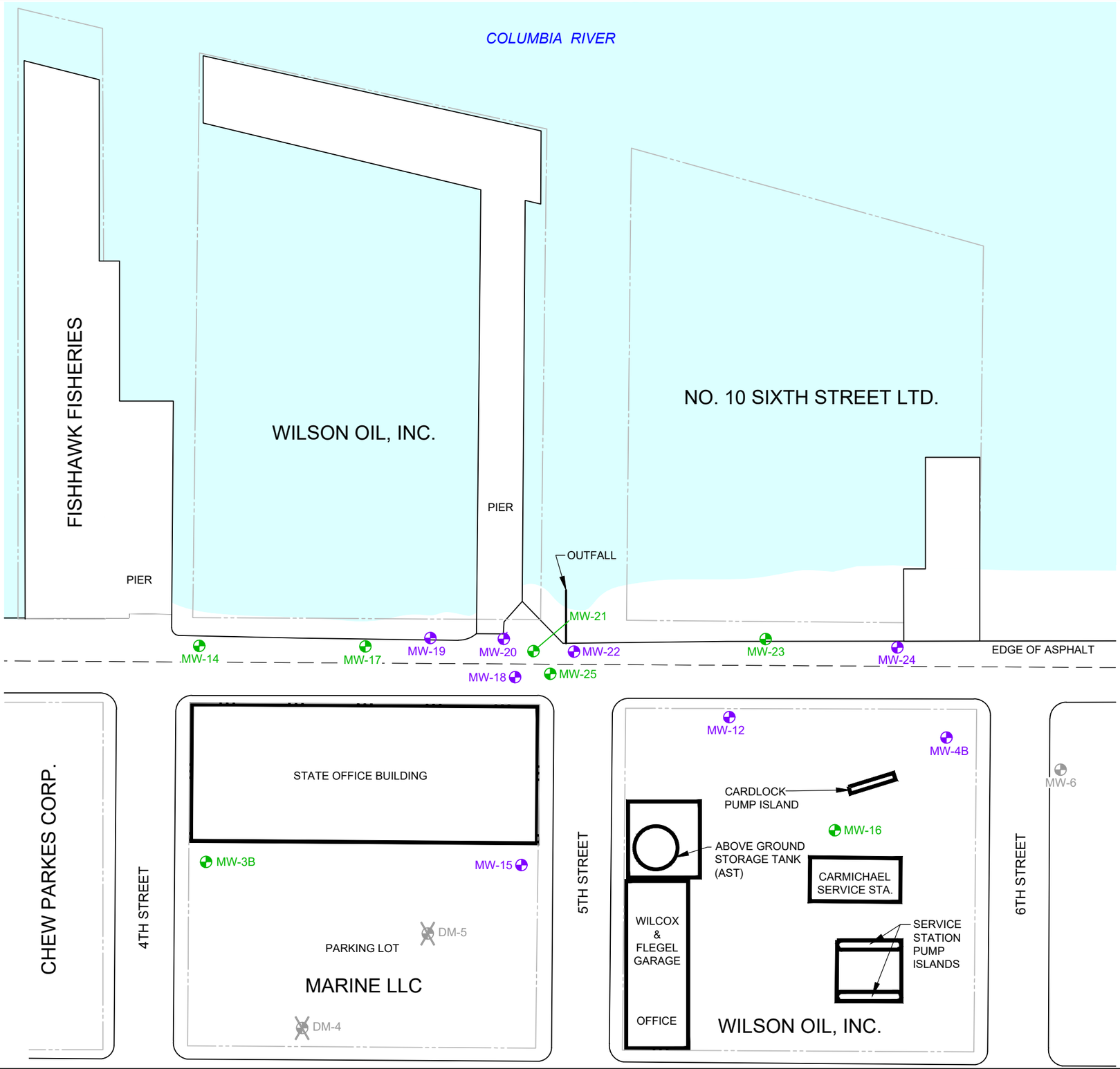
IMAGES:
45917N01.tif

CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
FORMER CHEVRON BULK PLANT SITE NO. 100-1838
10 5TH STREET, ASTORIA, OREGON
2019 FIRST SEMI-ANNUAL GROUNDWATER MONITORING REPORT

SITE LOCATION MAP

ARCADIS Design & Consultancy for natural and built assets

FIGURE
1



N

LEGEND:

- MW-12 — MONITORING WELL INCLUDED IN SEMI- ANNUAL SAMPLING
- MW-14 — MONITORING WELL (GAUGED ONLY, NOT SAMPLED)
- DM-4 — ABANDONED MONITORING WELL
- MW-6 — WELL PAVED OVER
- PROPERTY LINE
- TROLLEY TRACKS

NOTES:

1. BASEMAP AND WELL LOCATIONS BASED ON SURVEYS PERFORMED BETWEEN MAY 31, 2005 AND MARCH 26, 2008 BY CHASE, JONES & ASSOCIATES INC. OF PORTLAND, OREGON.
2. PROPERTY LINES ARE ADAPTED FROM CLATSOP COUNTY TAX MAP NO. "T8N R9W SEC 7DA WM", DATED AUGUST 2, 2007.
3. MONITORING WELL MW-3B AND MW-24 WAS NOT SAMPLED DURING THE SECOND SEMI-ANNUAL EVENT OF 2018 DUE TO THE PRESENCE OF TRACE AMOUNTS OF SEPARATE PHASE HYDROCARBONS.
4. MONITORING WELLS MW-3B, MW-14, MW-16, MW-17, MW-21, MW-23, MW-24 AND MW-25 WERE GAUGED ONLY.

0 60' 120'

Approximate Scale: 1 in. = 60 ft.

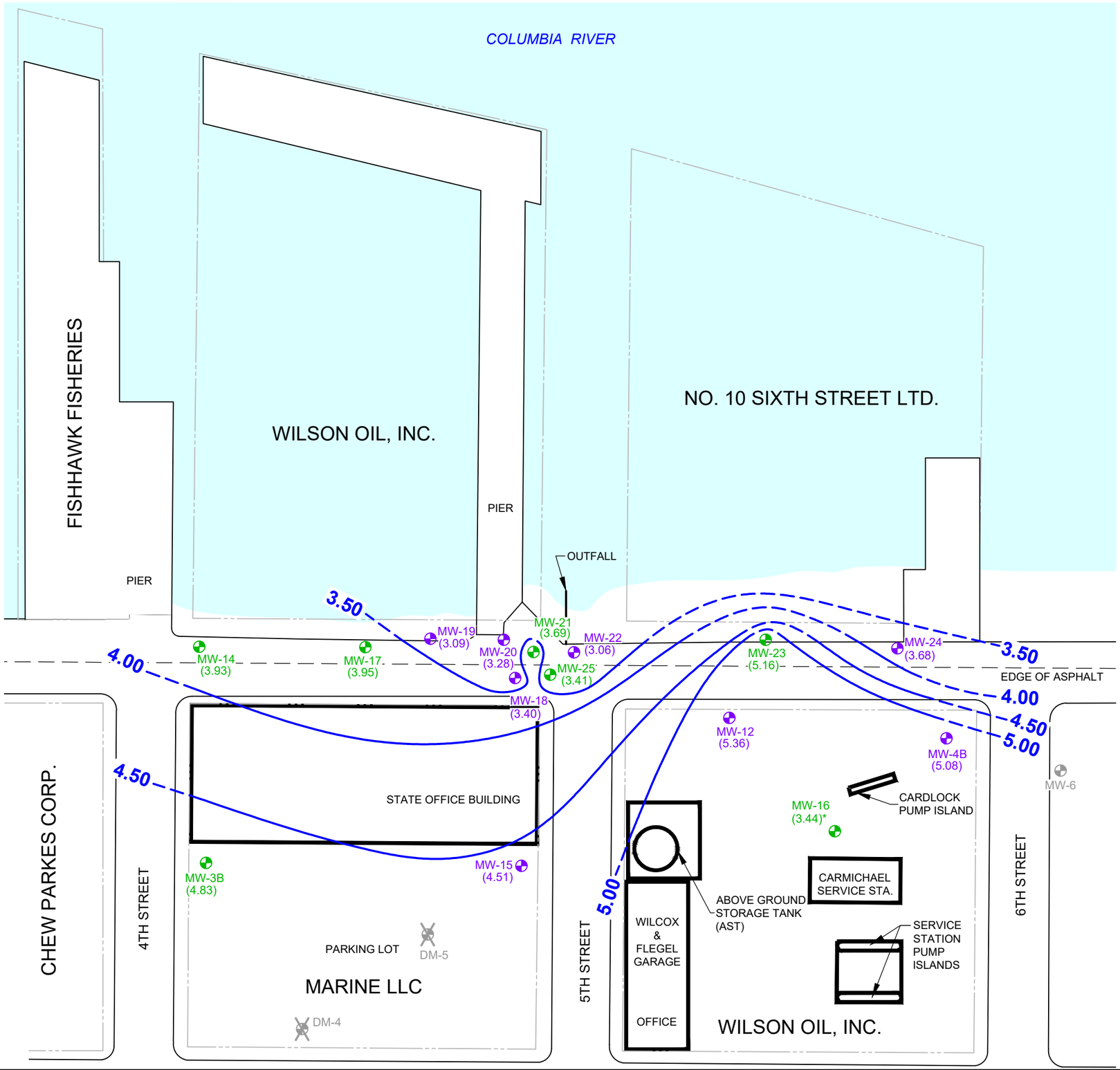
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
FORMER CHEVRON BULK PLANT SITE NO. 100-1838
10 5TH STREET, ASTORIA, OREGON
2019 FIRST SEMI-ANNUAL GROUNDWATER MONITORING REPORT

CURRENT MONITORING WELL NETWORK

ARCADIS Design & Consultancy for natural and built assets

FIGURE 2

CITY: BANGALORE, INDIA DIV/GROUP: ENVCAD DB: Y. NIMBARGIKAR PIC: M. FLEISCHNER PM/TM: G. SPRICK TR: C. MARTIN LYR:ON=*;OFF=*REF*
C:\Users\vol01040\BIM 360\Arcadis\ANA - CHEVRON CORPORATION\Project Files\OR-100183802019\GWRCFMNW_1838L940101-DWG\GWM-OR-FIG-2.dwg LAYOUT: 2 SAVED: 8/8/2019 4:47 PM ACADVER: 23.0S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 9/9/2019 4:31 PM BY: CHANDREGOWDA, VIKRAM



N

LEGEND:

- MW-12 — MONITORING WELL INCLUDED IN SEMI-ANNUAL SAMPLING
- MW-14 — MONITORING WELL (GAUGED ONLY; NOT SAMPLED)
- DM-4 — ABANDONED MONITORING WELL
- MW-6 — WELL PAVED OVER
- PROPERTY LINE
- TROLLEY TRACKS
- (5.08) — GROUNDWATER ELEVATION (FEET AMSL)
- 5.00 — GROUNDWATER ELEVATION CONTOUR (DASHED WHERE INFERRED)
- * — NOT INCLUDED IN GROUNDWATER CONTOURING DUE TO ANOMALOUS GROUNDWATER ELEVATION MEASUREMENT

NOTES:

1. BASEMAP AND WELL LOCATIONS BASED ON SURVEYS PERFORMED BETWEEN MAY 31, 2005 AND MARCH 26, 2008 BY CHASE, JONES & ASSOCIATES INC. OF PORTLAND, OREGON.
2. PROPERTY LINES ARE ADAPTED FROM CLATSOP COUNTY TAX MAP NO. "T8N R9W SEC 7DA WM", DATED AUGUST 2, 2007.
3. GROUNDWATER MEASUREMENTS WERE COLLECTED ON MARCH 12, 2018.
4. AMSL: ABOVE MEAN SEA LEVEL.
5. MONITORING WELLS MW-3B, MW-14, MW-16, MW-17, MW-21, MW-23 AND MW-25 WERE GAUGED ONLY.

0 60' 120'

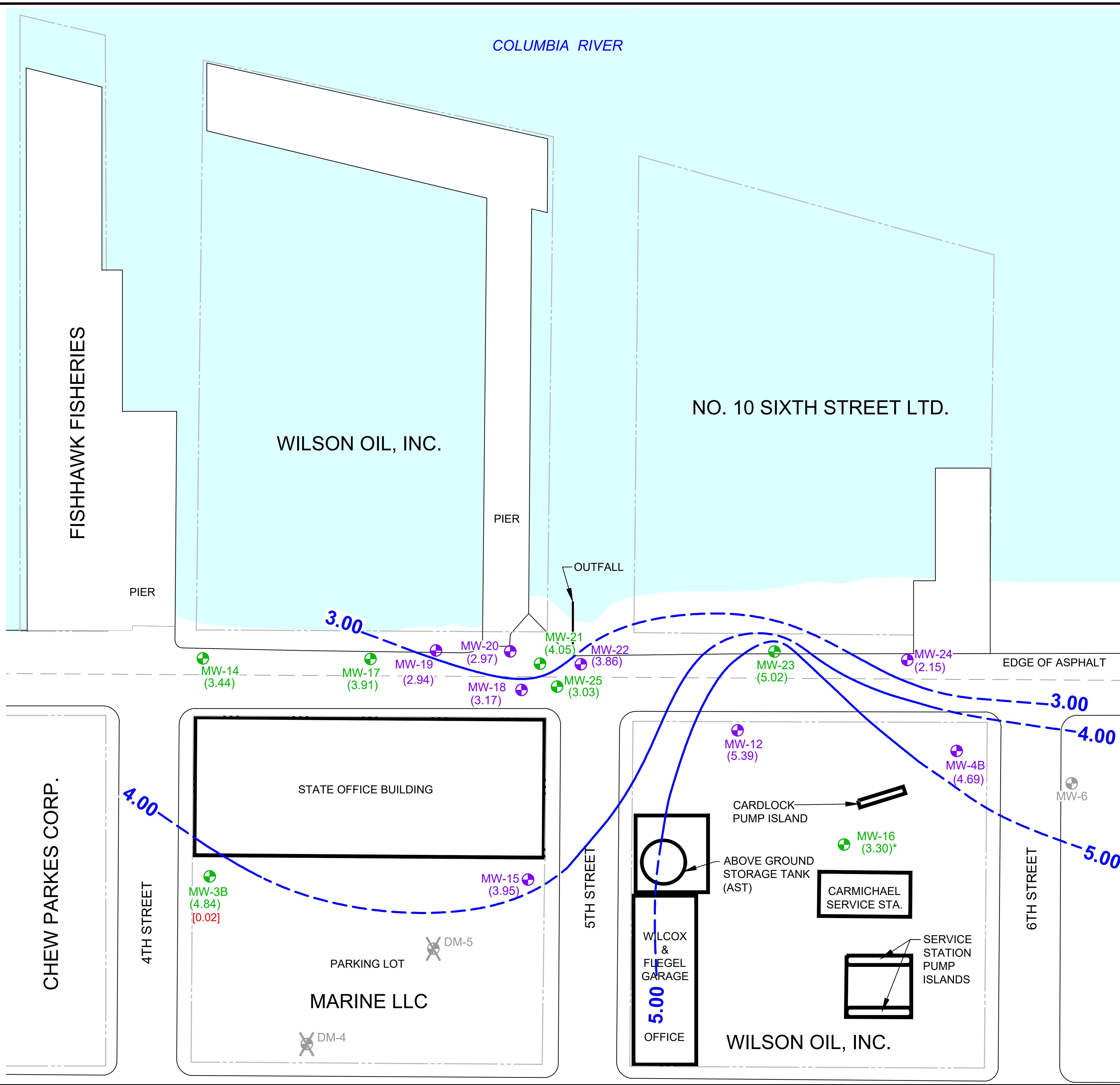
Approximate Scale: 1 in. = 60 ft.

CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
FORMER CHEVRON BULK PLANT SITE NO. 100-1838
10 5TH STREET, ASTORIA, OREGON
2019 FIRST SEMI-ANNUAL GROUNDWATER MONITORING REPORT

HIGH TIDE GROUNDWATER ELEVATION CONTOUR MAP

ARCADIS Design & Consultancy for natural and built assets

FIGURE 3



N

LEGEND:

MW-12	MONITORING WELL INCLUDED IN SEMI-ANNUAL SAMPLING
MW-14	MONITORING WELL (GAUGED ONLY; NOT SAMPLED)
DM-4	ABANDONED MONITORING WELL
MW-6	WELL PAVED OVER
	PROPERTY LINE
	TROLLEY TRACKS
(5.39)	GROUNDWATER ELEVATION (FEET AMSL)
5.00	GROUNDWATER ELEVATION CONTOUR (DASHED WHERE INFERRED)
*	NOT INCLUDED IN GROUNDWATER CONTOURING DUE TO ANOMALOUS GROUNDWATER ELEVATION MEASUREMENT
[0.02]	SPH PRESENT

NOTES:

1. BASEMAP AND WELL LOCATIONS BASED ON SURVEYS PERFORMED BETWEEN MAY 31, 2005 AND MARCH 26, 2008 BY CHASE, JONES & ASSOCIATES INC. OF PORTLAND, OREGON.
2. PROPERTY LINES ARE ADAPTED FROM CLATSOP COUNTY TAX MAP NO. "T8N R9W SEC 7DA WM", DATED AUGUST 2, 2007.
3. GROUNDWATER MEASUREMENTS WERE COLLECTED ON MARCH 12, 2019.
4. AMSL: ABOVE MEAN SEA LEVEL.
5. MONITORING WELLS MW-3B, MW-14, MW-16, MW-17, MW-21, MW-23 AND MW-25 WERE GAUGED ONLY.

0 60' 120'

Approximate Scale: 1 in. = 60 ft.

CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
FORMER CHEVRON BULK PLANT SITE NO. 100-1838
10 5TH STREET, ASTORIA, OREGON
2019 FIRST SEMI-ANNUAL GROUNDWATER MONITORING REPORT

LOW TIDE GROUNDWATER ELEVATION CONTOUR MAP

ARCADIS Design & Consultancy for natural and built assets

FIGURE
4

APPENDIX A

Groundwater Sampling Logs and Sorbent Sock Field Logs

GETTLER-RYAN INC.

TRANSMITTAL

March 22, 2019
G-R #: 17155864

TO: Mr. Steve Ahlquist
Arcadis
111 SW Columbia Street, Suite 670
Portland, OR 97201

FROM: Deanna L. Harding
Project Manager
Gettler-Ryan Inc.
6805 Sierra Court, Suite G
Dublin, California 94568

RE: Former Chevron Bulk Plant
SS#1001838
10 5th Street
Astoria, Oregon

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DESCRIPTION
VIA PDF	Groundwater Monitoring and Sampling Data Package **First Semi Annual Event of March 12 & 13, 2019**

COMMENTS:

Pursuant to your request, we are providing you with a copy of the above referenced data for your use.

Please provide us the updated historical data prior to the next monitoring and sampling event for our field use.

Please feel free to contact me if you have any comments/questions.

trans/1001838

GETTLER-RYAN INC.

CHEVRON - SITE CHECK LIST

Facility#:	**Chevron #1001838** Date: 3/12-13/19
Address:	**10 5Th Street**
City/St.:	**Astoria, OR**
Status of Site:	TROLLY PATH/ACTIVE CHEVRON/PARKING LOT

DRUMS:

Please list below ALL DRUMS on site:
(i.e., drum description, condition, labeling, contents and location of drums)

#	Description	Condition	Labeling	Contents/Capacity	Location
1	35 gal	OK	YES	SOIL/30	UNDER STAIRS

WELLS:

Please check the condition of ALL WELLS on site:
(i.e., gaskets, bolts, replaced well plug and/or well lock, well box condition and etc.)

Well ID	Gaskets (M) Missing (R) Replaced	Bolts (M) Missing (R) Replaced	Replaced Plug Y/N	Replaced Lock Y/N	Well Box Manufacturer/Size/# of Bolts	Other
MW-3B	OK	OK	N	N	MORRIS / 8 / 2	
MW-4B	↓	↓	↓	↓	↓ 3	
MW-12	↓	↓	↓	↓	↓	
MW-14	↓	↓	↓	↓	2	
MW-15	↓	↓	↓	↓	↓	
MW-16	↓	↓	↓	↓	3	
MW-17	↓	↓	↓	↓	2	
MW-18	↓	↓	↓	↓	↓	
MW-19	↓	↓	↓	↓	↓	
MW-20	↓	↓	↓	↓	3	
MW-21	↓	↓	↓	↓	↓	
MW-22	↓	↓	↓	↓	↓	
MW-23	↓	↓	↓	↓	↓	
MW-24	↓	↓	↓	↓	↓	
MW-25	↓	↓	↓	↓	↓	

Additional Comments/Observations:

STANDARD OPERATING PROCEDURE, LOW-FLOW PURGING AND SAMPLING

Gettler-Ryan Inc. field personnel adhere to the following Standard Operating Procedure (SOP) for the collection and handling of representative groundwater samples using the Low-Flow (Minimal-Drawdown) Purging technique. This SOP incorporates purging and sampling methods discussed in U.S. EPA, Ground Water Issue, Publication Number EPA/540/S-95/504, April 1996 by Puls, R.W. and M.J. Barcelona - *"Low-Flow (Minimal-Drawdown) Ground-Water Sampling Procedures."*

A QED Well Wizard™ (or equivalent) bladder pump or Peristaltic Pump will be used to purge and sample selected wells as outlined in the scope-of-work. An in-line flow cell or other multi-parameter meter is used to collect water quality indicating parameters during purging.

Initial Pump Discharge Test Procedures

The Static Water Level (SWL) is measured in all wells at the site prior to the installation of the pump or tubing and initiation of the test procedures in any well. In addition, the presence or absence of separate-phase hydrocarbons (SPH) is determined using an interface probe. Product thickness, if present, is measured to the nearest 0.01 foot. The SWL measurement and SPH thickness, if any, will be recorded on the field data sheet. Total well depths are measured annually.

The bladder pump or suction inlet tubing of the peristaltic pump is then positioned with its inlet located within the screened interval of the well. The in-line flow cell is then connected to the discharge tubing. After pump installation, the SWL is allowed to recover to its original level. The pump is then started at a discharge rate between 100 ml to 300 ml per minute with the in-line flow cell connected. The water level is monitored continuously for any change from the original measurement and the discharge rate is adjusted until an optimum discharge rate (ODR) is determined. The goal for the ODR is to produce a stable drawdown of less than 0.1 meter as allowed by site conditions; however the total drawdown from the initial SWL should not exceed 25% of the distance between pump inlet location and the top of the well screen. Once achieved, the ODR will be confirmed by volumetric discharge measurement and recorded on the field data sheet.

Purging and Water Quality Parameter Measurement

When the ODR has been determined and the SWL drawdown has been established within the acceptable range, and a minimum of one pump system volume (bladder volume and/or discharge tubing volume) has been purged, field measurements for temperature (T), pH, conductivity (Ec), and if required, oxygen reduction potential (ORP) and dissolved oxygen (DO) will be collected and documented on the field data sheet. Measurements should be taken every three to five minutes until parameters stabilize for three consecutive readings. The minimum parameter subset of T (± 10%), pH (± 0.1 unit), and Ec (± 10 uS) are required to stabilize. Additional parameters that may be required are DO (± 0.2 mg/l) and ORP (± 20 mV).

Sample Collection

When water quality parameters have stabilized, and the SWL drawdown remains established within the acceptable range, groundwater sample collection may begin. If used, the in-line flow cell and its tubing are disconnected from the discharge tubing prior to sample collection. Water samples are collected from the discharge tubing into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used when possible. When pre-preserved containers are not available, the laboratory is instructed to preserve the sample as appropriate. Duplicate samples are collected for the laboratory to use in maintaining quality assurance/quality control standards, as directed by the scope of work. The samples are labeled to include the job number, sample identification, collection date and time, analysis, preservation (if any), and the sample collector's initials. The water samples are placed in a cooler, maintained at 4°C for transport to the laboratory. A laboratory supplied trip blank accompanies each sampling set. The trip blank is analyzed for some or all of the same compounds as the groundwater samples. Once collected in the field, all samples are maintained under chain of custody until delivered to the laboratory.

The chain of custody document includes the job number, type of preservation, if any, analysis requested, sample identification, date and time collected, and the sample collector's name. The chain of custody is signed and dated (including time of transfer) by each person who receives or surrenders the samples, beginning with the field personnel and ending with the laboratory personnel.

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING
LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #1001838 | Job Number: 17155864
Site Address: 10 5Th Street | Event Date: 3/12-13/19 (inclusive)
City: Astoria, OR | Sampler: GM

Well ID: MW-3B | Date Monitored: 3/12/19
Well Diameter: (2) 4 in.
Total Depth: 19.96 ft.
Depth to Water: 8.96 ft.

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

☐ Check if water column is less then 0.50 ft.

11.00 xVF ___ = ___ x3 case volume = Estimated Purge Volume: ___ gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: ___

Purge Equipment:
Disposable Bailer ___
Stainless Steel Bailer ___
Stack Pump ___
Peristaltic Pump ___
QED Bladder Pump ___
Other: ___

Sampling Equipment:
Disposable Bailer ___
Pressure Bailer ___
Metal Filters ___
Peristaltic Pump ___
QED Bladder Pump ___
Other: ___

Time Started: ___ (2400 hrs)
Time Completed: ___ (2400 hrs)
Depth to Product: 8.94 ft
Depth to Water: 8.96 ft
Hydrocarbon Thickness: 0.02 ft
Visual Confirmation/Description: BLACK/OILY
Skimmer / Absorbant Sock (circle one)
Amt Removed from Skimmer: ___ ltr
Amt Removed from Well: ___ ltr
Water Removed: ___ ltr
Product Transferred to: ___

Start Time (purge): ___ Weather Conditions: ___
Sample Time/Date: / Water Color: ___ Odor: Y / N ___
Approx. Flow Rate: ___ mlpm Sediment Description: ___
Did well de-water? ___ If yes, Time: ___ Volume: ___ ltrs DTW @ Sampling: ___

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS / mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-3B	6 x voa vial	YES	HCL	EUROFINS	NWTPH-Gx/BTEX(8260)
	2 x 1 liter ambers	YES	HCL	EUROFINS	NWTPH-Dx w/sgc COLUMN
	2 x 250ml ambers	YES	NP	EUROFINS	PAH's(8270 SIM)
	1 x 250ml poly	YES	HNO3	EUROFINS	TOTAL METALS(6010B)/TOTAL MERCURY(7470A)/ TOTAL LEAD(6020)
	x 500ml poly	YES	HNO3	EUROFINS	TOTAL METALS(6010B)/TOTAL MERCURY(7470A)/ TOTAL LEAD(6020)
	1 x 250ml poly	YES	HNO3	EUROFINS	DISSOLVED METALS(6010B)/ DISSOLVED MERCURY(7470A)/TOTAL LEAD(6020)
	x 500ml poly	YES	HNO3	EUROFINS	DISSOLVED METALS(6010B)/ DISSOLVED MERCURY(7470A)/TOTAL LEAD(6020)

COMMENTS: IRON FIELD TEST RESULTS: NA SPH PRESENT @ TARID DEPTH
LOW TIDE DTW MEASUREMENT/TIME: 8.96 ft / 1220 TO WATER BEFORE SAMPLE ATTEMPT.
HIGH TIDE DTW MEASUREMENT/TIME: 8.95 ft / 1850 DID NOT SAMPLE.

Add/Replaced Gasket: ___ Add/Replaced Bolt: ___ Add/Replaced Plug: ___ Add/Replaced Lock: ___
SOCK REMOVED, EVALUATED & PUT IN DRUM & REPLACED.

GETTLER-RYAN INC.

SORBENT SOCK EVALUATION FORM

Name: G. MEDINA	Date: 3/12-13/19	Project Number: Chevron #1001838 GR #17155864
Site Address: 10 5th Street Astoria, OR	Well ID: MW-3B	Weather: CLOWDY

1. Time absorbent sock removed from well for inspection: 1035

2. Condition of sock:

   a. Length of sock showing product saturation: 16"

   b. Length of sock showing dryness: 19"

   c. Color of sock showing product saturation: BLACK

   d. Weight of the removed sock: 32.0 oz

   e. Weight of new/clean/dry sock: 3

   f. Difference in weight [(d-e) to 0.01 ounces]: 29 oz

3. Picture of sock removed from well taken: ☑

4. Sock removed from well deposited into a waste drum: ☑

   Confirm drum is labeled: YES How full is the drum (%): 10

5. At least 15 minutes after removing the sock from the well, measure (to 0.01ft) from the top of the well casing:

   a. Depth to product: LT: 8.96 HT: 8.95 ST: 8.94

   b. Depth to water: LT: 8.96 HT: 8.95 ST: 8.96

   c. Thickness of product (b-a): LT: 0 HT: 0 ST: 0.02

6. Size and type of sock installed: 2" SOAKEE

7. Comments: SOCK REMOVED, EVALUATED, PLACED IN DRUM, & INSTALLED NEW SOCK.

100838 Astoria 03-12-19, MW-3B Sock

Screenshot_20190312-213541_Gallery(2).jpg

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING
LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #1001838 | Job Number: 17155864
Site Address: 10 5Th Street | Event Date: 3/12-3/13/19 (inclusive)
City: Astoria, OR | Sampler: MC

Well ID: MW-4B | Date Monitored: 3-12-19
Well Diameter: 2 4 in.
Total Depth: 20.06 ft.
Depth to Water: 9.47 ft. ☐ Check if water column is less then 0.50 ft.

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

10.59 xVF ___ = ___ x3 case volume = Estimated Purge Volume: ___ gal.
Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: ___

Purge Equipment:

Disposable Bailer	
Stainless Steel Bailer	
Stack Pump	
Peristaltic Pump	X
QED Bladder Pump	
Other:	

Sampling Equipment:

Disposable Bailer	
Pressure Bailer	
Metal Filters	X
Peristaltic Pump	X
QED Bladder Pump	
Other:	

Time Started: ___ (2400 hrs)
Time Completed: ___ (2400 hrs)
Depth to Product: ___ ft
Depth to Water: ___ ft
Hydrocarbon Thickness: ___ ft
Visual Confirmation/Description: ___
Skimmer / Absorbant Sock (circle one)
Amt Removed from Skimmer: ___ ltr
Amt Removed from Well: ___ ltr
Water Removed: ___ ltr
Product Transferred to: ___

Start Time (purge): 1230 | Weather Conditions: Cloudy
Sample Time/Date: 1315 / 3-13-19 | Water Color: Clear | Odor: Y / N Medium
Approx. Flow Rate: 200 mlpm | Sediment Description: None
Did well de-water? NO If yes, Time: ___ Volume: ___ ltrs DTW @ Sampling: 9.50

Time (2400 hr)	Volume (Liters)	pH	Conductivity (µS / mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
1248	3.6	7.11	622	13.8			9.48
1251	4.2	7.21	627	13.8			9.48
1254	4.8	7.18	629	13.9			9.50

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-4B	6 x voa vial	YES	HCL	EUROFINS	NWTPH-Gx/BTEX(8260)
	2 x 1 liter ambers	YES	HCL	EUROFINS	NWTPH-Dx w/sgc COLUMN
	2 x 250ml ambers	YES	NP	EUROFINS	PAH's(8270 SIM)
	1 x 250ml poly	YES	HNO3	EUROFINS	TOTAL METALS(6010B)/TOTAL MERCURY(7470A)/ TOTAL LEAD(6020)
	x 500ml poly	YES	HNO3	EUROFINS	TOTAL METALS(6010B)/TOTAL MERCURY(7470A)/ TOTAL LEAD(6020)
	1 x 250ml poly	YES	HNO3	EUROFINS	DISSOLVED METALS(6010B)/ DISSOLVED MERCURY(7470A)/TOTAL LEAD(6020)
	x 500ml poly	YES	HNO3	EUROFINS	DISSOLVED METALS(6010B)/ DISSOLVED MERCURY(7470A)/TOTAL LEAD(6020)

COMMENTS: IRON FIELD TEST RESULTS: 5 SOCK REMOVED FROM WELL, EVALUAT
LOW TIDE DTW MEASUREMENT/TIME: 9.80 / 1205 NO PRODUCT VISIBLE ON SOCK, PER LC,
HIGH TIDE DTW MEASUREMENT/TIME: 9.41 / 1835 SOCK RE-INSTALLED IN WELL.

Add/Replaced Gasket: ___ Add/Replaced Bolt: ___ Add/Replaced Plug: ___ Add/Replaced Lock: ___

GETTLER-RYAN INC.

SORBENT SOCK EVALUATION FORM

Name: MIKE LOMBARD	Date: 3-12-19	Project Number: Chevron #1001838 GR #17155864
Site Address: 10 5th Street Astoria, OR	Well ID: MW-4B	Weather: RAIN

1. Time absorbent sock removed from well for inspection: 1005

2. Condition of sock:

   a. Length of sock showing product saturation: ~~N/A~~ 32"

   b. Length of sock showing dryness: 2"

   c. Color of sock showing product saturation: RED-BROWN

   d. Weight of the removed sock: 29 oz

   e. Weight of new/clean/dry sock: N/A

   f. Difference in weight [(d-e) to 0.01 ounces]: N/A

3. Picture of sock removed from well taken: ☒

4. Sock removed from well deposited into a waste drum: ☐

   Confirm drum is labeled: CONFIRMED How full is the drum (%): 20%

5. At least 15 minutes after removing the sock from the well, measure (to 0.01ft) from the top of the well casing:

   a. Depth to product: Ø

   b. Depth to water: HT-9.41 LT-9.80 ST-9.47

   c. Thickness of product (b-a): Ø

6. Size and type of sock installed: N/A

7. Comments: SOCK REMOVED FROM WELL, EVALUATED. NO PRODUCT VISIBLE ON SOCK, PER LC, SOCK RE-INSTALLED IN WELL.

100838 Astoria 03-12-19, MW-4B Sock

Screenshot_20190312-213606_Gallery(2).jpg

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING
LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #1001838 | Job Number: 17155864
Site Address: 10 5Th Street | Event Date: 3/12-3/13/19 (inclusive)
City: Astoria, OR | Sampler: ML

Well ID: MW-12 | Date Monitored: 3-12-19
Well Diameter: 2 (4) in.
Total Depth: 15.80 ft.
Depth to Water: 7.87 ft.

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

☐ Check if water column is less then 0.50 ft.

7.93 xVF ___ = ___ x3 case volume = Estimated Purge Volume: ___ gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: ___

Purge Equipment:		Sampling Equipment:	
Disposable Bailer		Disposable Bailer	
Stainless Steel Bailer		Pressure Bailer	
Stack Pump		Metal Filters	X
Peristaltic Pump	X	Peristaltic Pump	X
QED Bladder Pump		QED Bladder Pump	
Other:		Other:	

Time Started: ___ (2400 hrs)
Time Completed: ___ (2400 hrs)
Depth to Product: ___ ft
Depth to Water: ___ ft
Hydrocarbon Thickness: ___ ft
Visual Confirmation/Description: ___
Skimmer / Absorbant Sock (circle one)
Amt Removed from Skimmer: ___ ltr
Amt Removed from Well: ___ ltr
Water Removed: ___ ltr
Product Transferred to: ___

Start Time (purge): 1120 | Weather Conditions: Sunny
Sample Time/Date: 1205 / 3-13-19 | Water Color: Clear | Odor: (Y) / N light
Approx. Flow Rate: 200 mlpm | Sediment Description: light
Did well de-water? No If yes, Time: ___ Volume: ___ ltrs DTW @ Sampling: 7.93

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS) / mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
1138	3.6	6.82	722	14.0			7.92
1141	4.2	6.86	727	14.0			7.93
1144	4.8	6.87	729	14.0			7.93

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-12	6 x voa vial	YES	HCL	EUROFINS	NWTPH-Gx/BTEX(8260)
	2 x 1 liter ambers	YES	HCL	EUROFINS	NWTPH-Dx w/sgc COLUMN
	2 x 250ml ambers	YES	NP	EUROFINS	PAH's(8270 SIM)
	1 x 250ml poly	YES	HNO3	EUROFINS	TOTAL METALS(6010B)/TOTAL MERCURY(7470A)/ TOTAL LEAD(6020)
	x 500ml poly	YES	HNO3	EUROFINS	TOTAL METALS(6010B)/TOTAL MERCURY(7470A)/ TOTAL LEAD(6020)
	1 x 250ml poly	YES	HNO3	EUROFINS	DISSOLVED METALS(6010B)/ DISSOLVED MERCURY(7470A)/TOTAL LEAD(6020)
	x 500ml poly	YES	HNO3	EUROFINS	DISSOLVED METALS(6010B)/ DISSOLVED MERCURY(7470A)/TOTAL LEAD(6020)

COMMENTS: *IRON FIELD TEST RESULTS:* 5
LOW TIDE DTW MEASUREMENT/TIME: 7.80 / 1211
HIGH TIDE DTW MEASUREMENT/TIME: 7.83 / 1840

Add/Replaced Gasket: ___ Add/Replaced Bolt: ___ Add/Replaced Plug: ___ Add/Replaced Lock: ___

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING
LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #1001838 | Job Number: 17155864
Site Address: 10 5Th Street | Event Date: 3/12-13/19 (inclusive)
City: Astoria, OR | Sampler: GM

Well ID: MW-14 | Date Monitored: 3/12/19
Well Diameter: (2) 4 in.
Total Depth: 17.93 ft.
Depth to Water: / ft.

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

☐ Check if water column is less then 0.50 ft.

/ xVF ____ = ____ x3 case volume = Estimated Purge Volume: ____ gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: ____

Purge Equipment:
- Disposable Bailer ____
- Stainless Steel Bailer ____
- Stack Pump ____
- Peristaltic Pump ____
- QED Bladder Pump ____
- Other: ____

Sampling Equipment:
- Disposable Bailer ____
- Pressure Bailer ____
- Metal Filters ____
- Peristaltic Pump ____
- QED Bladder Pump ____
- Other: ____

Time Started: ____ (2400 hrs)
Time Completed: ____ (2400 hrs)
Depth to Product: ____ ft
Depth to Water: ____ ft
Hydrocarbon Thickness: Ø ft
Visual Confirmation/Description: ____
Skimmer / Absorbant Sock *(circle one)*
Amt Removed from Skimmer: ____ ltr
Amt Removed from Well: ____ ltr
Water Removed: ____ ltr
Product Transferred to: ____

Start Time (purge): ____ Weather Conditions: ____
Sample Time/Date: / Water Color: ____ Odor: Y / N ____
Approx. Flow Rate: ____ mlpm Sediment Description: ____
Did well de-water? ____ If yes, Time: ____ Volume: ____ ltrs DTW @ Sampling: ____

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS / mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-	x voa vial	YES	HCL	EUROFINS	NWTPH-Gx/BTEX(8260)
	x 1 liter ambers	YES	HCL	EUROFINS	NWTPH-Dx w/sgc COLUMN
	x 250ml ambers	YES	NP	EUROFINS	PAH's(8270 SIM)
	x 250ml poly	YES	HNO3	EUROFINS	TOTAL METALS(6010B)/TOTAL MERCURY(7470A)/ TOTAL LEAD(6020)
	x 500ml poly	YES	HNO3	EUROFINS	TOTAL METALS(6010B)/TOTAL MERCURY(7470A)/ TOTAL LEAD(6020)
	x 250ml poly	YES	HNO3	EUROFINS	DISSOLVED METALS(6010B)/ DISSOLVED MERCURY(7470A)/TOTAL LEAD(6020)
	x 500ml poly	YES	HNO3	EUROFINS	DISSOLVED METALS(6010B)/ DISSOLVED MERCURY(7470A)/TOTAL LEAD(6020)

COMMENTS: *IRON FIELD TEST RESULTS:* NA, M10
LOW TIDE DTW MEASUREMENT/TIME: 10.07 ft/1146
HIGH TIDE DTW MEASUREMENT/TIME: 9.58 ft/1814

Add/Replaced Gasket: ____ Add/Replaced Bolt: ____ Add/Replaced Plug: ____ Add/Replaced Lock: ____

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING
LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #1001838 | Job Number: 17155864
Site Address: 10 5Th Street | Event Date: 3/12-13/19 (inclusive)
City: Astoria, OR | Sampler: GM

Well ID: MW-15 | Date Monitored: 3/12&13/19
Well Diameter: (2)/ 4 in.
Total Depth: 21.46 ft.
Depth to Water: 9.49 ft.

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

☐ Check if water column is less then 0.50 ft.

11.97 xVF — = — x3 case volume = Estimated Purge Volume: — gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: —

Purge Equipment:		Sampling Equipment:	
Disposable Bailer		Disposable Bailer	
Stainless Steel Bailer		Pressure Bailer	
Stack Pump		Metal Filters	X
Peristaltic Pump	X	Peristaltic Pump	X
QED Bladder Pump		QED Bladder Pump	
Other:		Other:	

Time Started: _____ (2400 hrs)
Time Completed: _____ (2400 hrs)
Depth to Product: _____ ft
Depth to Water: _____ ft
Hydrocarbon Thickness: Ø ft
Visual Confirmation/Description: _____
Skimmer / Absorbant Sock (circle one)
Amt Removed from Skimmer: _____ ltr
Amt Removed from Well: _____ ltr
Water Removed: _____ ltr
Product Transferred to: _____

Start Time (purge): 0950 | Weather Conditions: CLOUDY
Sample Time/Date: 1035/3/13/19 | Water Color: CLEAR Odor: (Y) N STRONG
Approx. Flow Rate: 200 mlpm | Sediment Description: NONE
Did well de-water? NO If yes, Time: — Volume: — ltrs DTW @ Sampling: 9.54

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS) / mS µmhos/cm)	Temperature ((C) F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
1008	3.6	6.20	1374	12.5			9.53
1011	4.2	6.19	1375	12.4			9.53
1014	4.8	6.17	1377	12.4			9.54

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-15	6 x voa vial	YES	HCL	EUROFINS	NWTPH-Gx/BTEX(8260)
	2 x 1 liter ambers	YES	HCL	EUROFINS	NWTPH-Dx w/sgc COLUMN
	2 x 250ml ambers	YES	NP	EUROFINS	PAH's(8270 SIM)
	1 x 250ml poly	YES	HNO3	EUROFINS	TOTAL METALS(6010B)/TOTAL MERCURY(7470A)/ TOTAL LEAD(6020)
	x 500ml poly	YES	HNO3	EUROFINS	TOTAL METALS(6010B)/TOTAL MERCURY(7470A)/ TOTAL LEAD(6020)
	1 x 250ml poly	YES	HNO3	EUROFINS	DISSOLVED METALS(6010B)/ DISSOLVED MERCURY(7470A)/TOTAL LEAD(6020)
	x 500ml poly	YES	HNO3	EUROFINS	DISSOLVED METALS(6010B)/ DISSOLVED MERCURY(7470A)/TOTAL LEAD(6020)

COMMENTS: *IRON FIELD TEST RESULTS:* 3 SOCK REMOVED, EVALUATED, AND
LOW TIDE DTW MEASUREMENT/TIME: 10.03ft/1215 REINSTALLED BACK IN WELL PER
HIGH TIDE DTW MEASUREMENT/TIME: 9.47ft/1845 LC BECAUSE OF NO VISUAL PRODUCT STAINING

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____

GETTLER-RYAN INC.

SORBENT SOCK EVALUATION FORM

Name: G. MEDINA	Date: 3/12-13/19	Project Number: Chevron #1001838 GR #17155864
Site Address: 10 5th Street Astoria, OR	Well ID: MW-15	Weather: CLOUDY

1. Time absorbent sock removed from well for inspection: 1025

2. Condition of sock:

   a. Length of sock showing product saturation: 24"

   b. Length of sock showing dryness: 12"

   c. Color of sock showing product saturation: IVORY

   d. Weight of the removed sock: 25.20z

   e. Weight of new/clean/dry sock: 3

   f. Difference in weight [(d-e) to 0.01 ounces]: 22.20z

3. Picture of sock removed from well taken: ☑

4. Sock removed from well deposited into a waste drum: ☐

   Confirm drum is labeled: YES How full is the drum (%): 10

5. At least 15 minutes after removing the sock from the well, measure (to 0.01ft) from the top of the well casing:

   a. Depth to product: LT: NA/HT: NA/ST: NA

   b. Depth to water: LT: 10.03/HT: 9.47/ST: 9.49

   c. Thickness of product (b-a): Ø

6. Size and type of sock installed: 2" SOCICE

7. Comments: SOCK REMOVED, EVALUATED, AND PUT BACK IN WELL PER LC BECAUSE NO PRODUCT STAINING.

100838 Astoria 03-12-19, MW-15 Sock

Screenshot_20190312-213629_Gallery(2).jpg

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING
LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #1001838 | Job Number: 17155864
Site Address: 10 5Th Street | Event Date: 3/12-3/13/19 (inclusive)
City: Astoria, OR | Sampler: MC

Well ID: MW-11e | Date Monitored: 3-12-19
Well Diameter: (2) 4 in.
Total Depth: 20.86 ft.
Depth to Water: — ft.

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

☐ Check if water column is less then 0.50 ft.

— xVF — = — x3 case volume = Estimated Purge Volume: — gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: —

Purge Equipment:
- Disposable Bailer
- Stainless Steel Bailer
- Stack Pump
- Peristaltic Pump
- QED Bladder Pump
- Other:

Sampling Equipment:
- Disposable Bailer
- Pressure Bailer
- Metal Filters
- Peristaltic Pump
- QED Bladder Pump
- Other:

Time Started: (2400 hrs)
Time Completed: (2400 hrs)
Depth to Product: ft
Depth to Water: ft
Hydrocarbon Thickness: ft
Visual Confirmation/Description:
Skimmer / Absorbant Sock *(circle one)*
Amt Removed from Skimmer: ltr
Amt Removed from Well: ltr
Water Removed: ltr
Product Transferred to:

Start Time (purge): | Weather Conditions:
Sample Time/Date: / | Water Color: | Odor: Y / N
Approx. Flow Rate: mlpm | Sediment Description:
Did well de-water? | If yes, Time: | Volume: ltrs | DTW @ Sampling:

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS / mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-	x voa vial	YES	HCL	EUROFINS	NWTPH-Gx/BTEX(8260)
	x 1 liter ambers	YES	HCL	EUROFINS	NWTPH-Dx w/sgc COLUMN
	x 250ml ambers	YES	NP	EUROFINS	PAH's(8270 SIM)
	x 250ml poly	YES	HNO3	EUROFINS	TOTAL METALS(6010B)/TOTAL MERCURY(7470A)/ TOTAL LEAD(6020)
	x 500ml poly	YES	HNO3	EUROFINS	TOTAL METALS(6010B)/TOTAL MERCURY(7470A)/ TOTAL LEAD(6020)
	x 250ml poly	YES	HNO3	EUROFINS	DISSOLVED METALS(6010B)/ DISSOLVED MERCURY(7470A)/TOTAL LEAD(6020)
	x 500ml poly	YES	HNO3	EUROFINS	DISSOLVED METALS(6010B)/ DISSOLVED MERCURY(7470A)/TOTAL LEAD(6020)

COMMENTS: *IRON FIELD TEST RESULTS:* — M/O
LOW TIDE DTW MEASUREMENT/TIME: 10.05 / 1215
HIGH TIDE DTW MEASUREMENT/TIME: 9.91 / 1845

Add/Replaced Gasket: Add/Replaced Bolt: Add/Replaced Plug: Add/Replaced Lock:

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING
LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #1001838 | Job Number: 17155864
Site Address: 10 5Th Street | Event Date: 3/12-13/19 (inclusive)
City: Astoria, OR | Sampler: GM

Well ID MW-17 | Date Monitored: 3/12/19
Well Diameter (2)4 in.
Total Depth 20.54 ft.
Depth to Water ft.

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

☐ Check if water column is less then 0.50 ft.

____ xVF ____ = ____ x3 case volume = Estimated Purge Volume: ____ gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: ____

Purge Equipment:
Disposable Bailer
Stainless Steel Bailer
Stack Pump
Peristaltic Pump
QED Bladder Pump
Other:

Sampling Equipment:
Disposable Bailer
Pressure Bailer
Metal Filters
Peristaltic Pump
QED Bladder Pump
Other:

Time Started: ____ (2400 hrs)
Time Completed: ____ (2400 hrs)
Depth to Product: ____ ft
Depth to Water: ____ ft
Hydrocarbon Thickness: ____ ft
Visual Confirmation/Description: ____
Skimmer / Absorbant Sock *(circle one)*
Amt Removed from Skimmer: ____ ltr
Amt Removed from Well: ____ ltr
Water Removed: ____ ltr
Product Transferred to: ____

Start Time (purge): ____ Weather Conditions: ____
Sample Time/Date: ____ / ____ Water Color: ____ Odor: Y / N ____
Approx. Flow Rate: ____ mlpm Sediment Description: ____
Did well de-water? ____ If yes, Time: ____ Volume: ____ ltrs DTW @ Sampling: ____

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS / mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-	x voa vial	YES	HCL	EUROFINS	NWTPH-Gx/BTEX(8260)
	x 1 liter ambers	YES	HCL	EUROFINS	NWTPH-Dx w/sgc COLUMN
	x 250ml ambers	YES	NP	EUROFINS	PAH's(8270 SIM)
	x 250ml poly	YES	HNO3	EUROFINS	TOTAL METALS(6010B)/TOTAL MERCURY(7470A)/ TOTAL LEAD(6020)
	x 500ml poly	YES	HNO3	EUROFINS	TOTAL METALS(6010B)/TOTAL MERCURY(7470A)/ TOTAL LEAD(6020)
	x 250ml poly	YES	HNO3	EUROFINS	DISSOLVED METALS(6010B)/ DISSOLVED MERCURY(7470A)/TOTAL LEAD(6020)
	x 500ml poly	YES	HNO3	EUROFINS	DISSOLVED METALS(6010B)/ DISSOLVED MERCURY(7470A)/TOTAL LEAD(6020)

COMMENTS: *IRON FIELD TEST RESULTS: NA*
LOW TIDE DTW MEASUREMENT/TIME: 9.42 ft/1750
HIGH TIDE DTW MEASUREMENT/TIME: 9.38 ft/1919

Add/Replaced Gasket: ____ Add/Replaced Bolt: ____ Add/Replaced Plug: ____ Add/Replaced Lock: ____

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING
LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #1001838 | Job Number: 17155864
Site Address: 10 5Th Street | Event Date: 3/12-3/13/19 (inclusive)
City: Astoria, OR | Sampler: ML

Well ID: MW-18 | Date Monitored: 3-12-19
Well Diameter: (2)4 in.
Total Depth: 20.03 ft.
Depth to Water: 10.06 ft.

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

☐ Check if water column is less then 0.50 ft.

9.97 xVF ___ = ___ x3 case volume = Estimated Purge Volume: ___ gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: ___

Purge Equipment:

Disposable Bailer	
Stainless Steel Bailer	
Stack Pump	
Peristaltic Pump	X
QED Bladder Pump	
Other:	

Sampling Equipment:

Disposable Bailer	
Pressure Bailer	
Metal Filters	X
Peristaltic Pump	X
QED Bladder Pump	
Other:	

Time Started: ___ (2400 hrs)
Time Completed: ___ (2400 hrs)
Depth to Product: ___ ft
Depth to Water: ___ ft
Hydrocarbon Thickness: Ø ft
Visual Confirmation/Description: /
Skimmer / Absorbant Sock (circle one)
Amt Removed from Skimmer: ___ ltr
Amt Removed from Well: ___ ltr
Water Removed: ___ ltr
Product Transferred to: ___

Start Time (purge): 0910 | Weather Conditions: Sunny
Sample Time/Date: 0955 | 3-13-19 | Water Color: Clear | Odor: (Y) / N Light
Approx. Flow Rate: 200 mlpm | Sediment Description: None
Did well de-water? No If yes, Time: ___ Volume: ___ ltrs DTW @ Sampling: 10.11

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS) / mS µmhos/cm)	Temperature ((C) / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
0928	3.6	7.41	3769	13.3			10.11
0931	4.2	7.45	3776	13.3			10.11
0934	4.8	7.46	3771	13.3			10.11

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-18	6 x voa vial	YES	HCL	EUROFINS	NWTPH-Gx/BTEX(8260)
	2 x 1 liter ambers	YES	HCL	EUROFINS	NWTPH-Dx w/sgc COLUMN
	2 x 250ml ambers	YES	NP	EUROFINS	PAH's(8270 SIM)
	1 x 250ml poly	YES	HNO3	EUROFINS	TOTAL METALS(6010B)/TOTAL MERCURY(7470A)/ TOTAL LEAD(6020)
	x 500ml poly	YES	HNO3	EUROFINS	TOTAL METALS(6010B)/TOTAL MERCURY(7470A)/ TOTAL LEAD(6020)
	1 x 250ml poly	YES	HNO3	EUROFINS	DISSOLVED METALS(6010B)/ DISSOLVED MERCURY(7470A)/TOTAL LEAD(6020)
	x 500ml poly	YES	HNO3	EUROFINS	DISSOLVED METALS(6010B)/ DISSOLVED MERCURY(7470A)/TOTAL LEAD(6020)

COMMENTS: IRON FIELD TEST RESULTS: 5 SOCK REMOVED FROM WELL, EVAL/ATE
LOW TIDE DTW MEASUREMENT/TIME: 10.23 / 1146 AND PLACED IN DRUM. NEW
HIGH TIDE DTW MEASUREMENT/TIME: 10.00 / 1811 SOCK INSTALLED.

Add/Replaced Gasket: ___ Add/Replaced Bolt: ___ Add/Replaced Plug: ___ Add/Replaced Lock: ___

GETTLER-RYAN INC.

SORBENT SOCK EVALUATION FORM

Name: G. MEDINA	Date: 3/12-13/19	Project Number: Chevron #1001838 GR #17155864
Site Address: 10 5th Street Astoria, OR	Well ID: MW-18	Weather: CLOUDY

1. Time absorbent sock removed from well for inspection: 1012

2. Condition of sock:

   a. Length of sock showing product saturation: 37"

   b. Length of sock showing dryness: Ø

   c. Color of sock showing product saturation: BLACK

   d. Weight of the removed sock: 33.9oz

   e. Weight of new/clean/dry sock: 3oz

   f. Difference in weight [(d-e) to 0.01 ounces]: 30.9oz

3. Picture of sock removed from well taken: ☑

4. Sock removed from well deposited into a waste drum: ☑

   Confirm drum is labeled: YES How full is the drum (%): 10

5. At least 15 minutes after removing the sock from the well, measure (to 0.01ft) from the top of the well casing:

   a. Depth to product: LT: NA HT: NA ST: NA

   b. Depth to water: LT: 10.23 HT: 10.00 ST: 10.06

   c. Thickness of product (b-a): Ø

6. Size and type of sock installed: 2" SOAKEE

7. Comments: SOCK REMOVED, EVALUATED, PLACED IN DRUM AND REPLACED.

100838 Astoria 03-12-19, MW-18 Sock

Screenshot_20190312-213655_Gallery(2).jpg

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING
LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #1001838 | Job Number: 17155864
Site Address: 10 5Th Street | Event Date: 3/12-13/19 (inclusive)
City: Astoria, OR | Sampler: GM

Well ID: MW-19 | Date Monitored: 3/12&13/19
Well Diameter: (2) 4 in.
Total Depth: 19.02 ft.
Depth to Water: 9.52 ft. ☐ Check if water column is less then 0.50 ft.

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

9.50 xVF — = — x3 case volume = Estimated Purge Volume: — gal.
Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: —

Purge Equipment:
Disposable Bailer
Stainless Steel Bailer
Stack Pump
Peristaltic Pump X
QED Bladder Pump
Other:

Sampling Equipment:
Disposable Bailer
Pressure Bailer
Metal Filters X
Peristaltic Pump X
QED Bladder Pump
Other:

Time Started: (2400 hrs)
Time Completed: (2400 hrs)
Depth to Product: ft
Depth to Water: ft
Hydrocarbon Thickness: Ø ft
Visual Confirmation/Description:
Skimmer / Absorbant Sock (circle one)
Amt Removed from Skimmer: ltr
Amt Removed from Well: ltr
Water Removed: ltr
Product Transferred to:

Start Time (purge): 1055 | Weather Conditions: CLOUDY
Sample Time/Date: 1150/3/13/19 | Water Color: CLEAR | Odor: (Y) N SLIGHT
Approx. Flow Rate: 200 mlpm | Sediment Description: SL SILT
Did well de-water? NO If yes, Time: — Volume: ltrs DTW @ Sampling: 9.58

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS/mS µmhos/cm)	Temperature (C F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
1113	3.6	6.42	617	10.6			9.58
1116	4.2	6.44	620	10.6			9.58
1119	4.8	6.45	622	10.6			9.58

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-19	6 x voa vial	YES	HCL	EUROFINS	NWTPH-Gx/BTEX(8260)
	2 x 1 liter ambers	YES	HCL	EUROFINS	NWTPH-Dx w/sgc COLUMN
	2 x 250ml ambers	YES	NP	EUROFINS	PAH's(8270 SIM)
	1 x 250ml poly	YES	HNO3	EUROFINS	TOTAL METALS(6010B)/TOTAL MERCURY(7470A)/ TOTAL LEAD(6020)
	x 500ml poly	YES	HNO3	EUROFINS	TOTAL METALS(6010B)/TOTAL MERCURY(7470A)/ TOTAL LEAD(6020)
	1 x 250ml poly	YES	HNO3	EUROFINS	DISSOLVED METALS(6010B)/ DISSOLVED MERCURY(7470A)/TOTAL LEAD(6020)
	x 500ml poly	YES	HNO3	EUROFINS	DISSOLVED METALS(6010B)/ DISSOLVED MERCURY(7470A)/TOTAL LEAD(6020)

COMMENTS: *IRON FIELD TEST RESULTS:* 5 REMOVED SOCK, EVALUTED, REINSTALLED
LOW TIDE DTW MEASUREMENT/TIME: 9.96ft/1210 PER LC BECAUSE NO VISUAL
HIGH TIDE DTW MEASUREMENT/TIME: 9.81ft/1840 PRODUCT STAINING.

Add/Replaced Gasket: Add/Replaced Bolt: Add/Replaced Plug: Add/Replaced Lock:

GETTLER-RYAN INC.

SORBENT SOCK EVALUATION FORM

Name: G. MEDINA	Date: 3/12-13/19	Project Number: Chevron #1001838 GR #17155864
Site Address: 10 5th Street Astoria, OR	Well ID: MW-19	Weather: CLOUDY

1. Time absorbent sock removed from well for inspection: 1005

2. Condition of sock:

   a. Length of sock showing product saturation: 27.5"

   b. Length of sock showing dryness: 8"

   c. Color of sock showing product saturation: RED-BROWN

   d. Weight of the removed sock: 18.8oz

   e. Weight of new/clean/dry sock: 3oz

   f. Difference in weight [(d-e) to 0.01 ounces]: 15.8 oz

3. Picture of sock removed from well taken: ☑

4. Sock removed from well deposited into a waste drum: ☐

   Confirm drum is labeled: YES How full is the drum (%): 10

5. At least 15 minutes after removing the sock from the well, measure (to 0.01ft) from the top of the well casing:

   a. Depth to product: LT: NA HT: NA ST: NA

   b. Depth to water: LT: 9.96 HT: 9.81 ST: 9.52

   c. Thickness of product (b-a): LT: Ø HT: Ø ST: Ø

6. Size and type of sock installed: 2" SOAKEE

7. Comments: REMOVED SOCK, EVALUATED, REINSTALLED PER LC BECAUSE NO VISUAL PRODUCT STAINING.

100838 Astoria 03-12-19, MW-19 Sock

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GETTLER-RYAN INC.

WELL MONITORING/SAMPLING
LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #1001838 | Job Number: 17155864
Site Address: 10 5Th Street | Event Date: 3/12-13/19 (inclusive)
City: Astoria, OR | Sampler: GM

Well ID: MW-20 | Date Monitored: 3/12/19 & 3/13/19
Well Diameter: (2) 4 in.
Total Depth: 19.24 ft.
Depth to Water: 9.14 ft.

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

☐ Check if water column is less then 0.50 ft.

10.10 xVF ~ = ~ x3 case volume = Estimated Purge Volume: ~ gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: ~

Purge Equipment:

Disposable Bailer	
Stainless Steel Bailer	
Stack Pump	
Peristaltic Pump	X
QED Bladder Pump	
Other:	

Sampling Equipment:

Disposable Bailer	
Pressure Bailer	
Metal Filters	X
Peristaltic Pump	X
QED Bladder Pump	
Other:	

Time Started: _____ (2400 hrs)
Time Completed: _____ (2400 hrs)
Depth to Product: _____ ft
Depth to Water: _____ ft
Hydrocarbon Thickness: Ø ft
Visual Confirmation/Description: _____
Skimmer / Absorbant Sock (circle one)
Amt Removed from Skimmer: _____ ltr
Amt Removed from Well: _____ ltr
Water Removed: _____ ltr
Product Transferred to: _____

Start Time (purge): 0800 | Weather Conditions: CLOUDY
Sample Time/Date: 0930 / 3/13/19 | Water Color: CLEAR Odor (Y) N SLIGHT
Approx. Flow Rate: 200 mlpm | Sediment Description: SL SILT
Did well de-water? No If yes, Time: ~ Volume: ~ ltrs DTW @ Sampling: 9.21

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS/mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
0818	3.6	6.95	2371	10.4			9.20
0821	4.2	6.96	2373	10.5			9.20
0824	4.8	6.98	2375	10.4			9.21

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-20	6 x voa vial	YES	HCL	EUROFINS	NWTPH-Gx/BTEX(8260)
MS/MSD	2 x 1 liter ambers	YES	HCL	EUROFINS	NWTPH-Dx w/sgc COLUMN
	2 x 250ml ambers	YES	NP	EUROFINS	PAH's(8270 SIM)
	x 250ml poly	YES	HNO3	EUROFINS	TOTAL METALS(6010B)/TOTAL MERCURY(7470A)/ TOTAL LEAD(6020)
	1 x 500ml poly	YES	HNO3	EUROFINS	TOTAL METALS(6010B)/TOTAL MERCURY(7470A)/ TOTAL LEAD(6020)
	x 250ml poly	YES	HNO3	EUROFINS	DISSOLVED METALS(6010B)/ DISSOLVED MERCURY(7470A)/TOTAL LEAD(6020)
	1 x 500ml poly	YES	HNO3	EUROFINS	DISSOLVED METALS(6010B)/ DISSOLVED MERCURY(7470A)/TOTAL LEAD(6020)

COMMENTS: *IRON FIELD TEST RESULTS:* 5
LOW TIDE DTW MEASUREMENT/TIME: 9.93 ft / 1755
HIGH TIDE DTW MEASUREMENT/TIME: 9.62 ft / 1823

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING
LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #1001838 | Job Number: 17155864
Site Address: 10 5Th Street | Event Date: 3/12-13/19 (inclusive)
City: Astoria, OR | Sampler: GM

Well ID: MW-21 | Date Monitored: 3/12/19
Well Diameter: (2) 4 in.
Total Depth: 18.41 ft.
Depth to Water: / ft.

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

☐ Check if water column is less then 0.50 ft.

_____ xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: _____

Purge Equipment:
Disposable Bailer
Stainless Steel Bailer
Stack Pump
Peristaltic Pump
QED Bladder Pump
Other:

Sampling Equipment:
Disposable Bailer
Pressure Bailer
Metal Filters
Peristaltic Pump
QED Bladder Pump
Other:

Time Started: _____ (2400 hrs)
Time Completed: _____ (2400 hrs)
Depth to Product: _____ ft
Depth to Water: _____ ft
Hydrocarbon Thickness: 0 ft
Visual Confirmation/Description: _____
Skimmer / Absorbant Sock *(circle one)*
Amt Removed from Skimmer: _____ ltr
Amt Removed from Well: _____ ltr
Water Removed: _____ ltr
Product Transferred to: _____

Start Time (purge): _____ | Weather Conditions: _____
Sample Time/Date: / | Water Color: _____ | Odor: Y / N
Approx. Flow Rate: _____ mlpm | Sediment Description: _____
Did well de-water? _____ If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: _____

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS / mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-	x voa vial	YES	HCL	EUROFINS	NWTPH-Gx/BTEX(8260)
	x 1 liter ambers	YES	HCL	EUROFINS	NWTPH-Dx w/sgc COLUMN
	x 250ml ambers	YES	NP	EUROFINS	PAH's(8270 SIM)
	x 250ml poly	YES	HNO3	EUROFINS	TOTAL METALS(6010B)/TOTAL MERCURY(7470A)/ TOTAL LEAD(6020)
	x 500ml poly	YES	HNO3	EUROFINS	TOTAL METALS(6010B)/TOTAL MERCURY(7470A)/ TOTAL LEAD(6020)
	x 250ml poly	YES	HNO3	EUROFINS	DISSOLVED METALS(6010B)/ DISSOLVED MERCURY(7470A)/TOTAL LEAD(6020)
	x 500ml poly	YES	HNO3	EUROFINS	DISSOLVED METALS(6010B)/ DISSOLVED MERCURY(7470A)/TOTAL LEAD(6020)

COMMENTS: *IRON FIELD TEST RESULTS:* NA
LOW TIDE DTW MEASUREMENT/TIME: 8.84 ft/1159
HIGH TIDE DTW MEASUREMENT/TIME: 9.20 ft/1829

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING
LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #1001838 | Job Number: 17155864
Site Address: 10 5Th Street | Event Date: 3/12-3/13/19 (inclusive)
City: Astoria, OR | Sampler: ML

Well ID: MW-22 | Date Monitored: 3-12-19
Well Diameter: (2)4 in.
Total Depth: 18.36 ft.
Depth to Water: 9.28 ft.
9.08 xVF — = — x3 case volume = Estimated Purge Volume: — gal.
Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: —

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

☐ Check if water column is less then 0.50 ft.

Purge Equipment:		Sampling Equipment:	
Disposable Bailer		Disposable Bailer	
Stainless Steel Bailer		Pressure Bailer	
Stack Pump		Metal Filters	X
Peristaltic Pump	X	Peristaltic Pump	X
QED Bladder Pump		QED Bladder Pump	
Other:		Other:	

Time Started: _____ (2400 hrs)
Time Completed: _____ (2400 hrs)
Depth to Product: _____ ft
Depth to Water: _____ ft
Hydrocarbon Thickness: _____ ft
Visual Confirmation/Description: _____
Skimmer / Absorbant Sock (circle one)
Amt Removed from Skimmer: _____ ltr
Amt Removed from Well: _____ ltr
Water Removed: _____ ltr
Product Transferred to: _____

Start Time (purge): 0805 | Weather Conditions: Sunny
Sample Time/Date: 0850 13-13-19 | Water Color: Clear Odor: Y / N medium
Approx. Flow Rate: 200 mlpm | Sediment Description: none
Did well de-water? NO If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 9.36

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS/ mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
0823	3.6	6.91	702	13.2			9.35
0826	4.2	6.88	711	13.3			9.35
0829	4.8	6.88	712	13.3			9.36

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-22	6 x voa vial	YES	HCL	EUROFINS	NWTPH-Gx/BTEX(8260)
	2 x 1 liter ambers	YES	HCL	EUROFINS	NWTPH-Dx w/sgc COLUMN
	2 x 250ml ambers	YES	NP	EUROFINS	PAH's(8270 SIM)
	1 x 250ml poly	YES	HNO3	EUROFINS	TOTAL METALS(6010B)/TOTAL MERCURY(7470A)/ TOTAL LEAD(6020)
	x 500ml poly	YES	HNO3	EUROFINS	TOTAL METALS(6010B)/TOTAL MERCURY(7470A)/ TOTAL LEAD(6020)
	1 x 250ml poly	YES	HNO3	EUROFINS	DISSOLVED METALS(6010B)/ DISSOLVED MERCURY(7470A)/TOTAL LEAD(6020)
	x 500ml poly	YES	HNO3	EUROFINS	DISSOLVED METALS(6010B)/ DISSOLVED MERCURY(7470A)/TOTAL LEAD(6020)

COMMENTS: IRON FIELD TEST RESULTS: 5 DUPLICATE SAMPLE (DUP) COLLECTED FROM THIS WELL.
LOW TIDE DTW MEASUREMENT/TIME: 8.93 / 1150
HIGH TIDE DTW MEASUREMENT/TIME: 9.73 / 1816

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____
SOCK REMOVED FROM WELL, EVALUATED. NO PRODUCT VISIBLE ON SOCK. PERLC, SOCK RE-INSTALLED IN WELL.

GETTLER-RYAN INC.

SORBENT SOCK EVALUATION FORM

Name: MIKE LOMBARD	Date: 3-12-19	Project Number: Chevron #1001838 GR #17155864
Site Address: 10 5th Street Astoria, OR	Well ID: MW-22	Weather: RAIN

1. Time absorbent sock removed from well for inspection: 1010

2. Condition of sock:

   a. Length of sock showing product saturation: 14"

   b. Length of sock showing dryness: 20"

   c. Color of sock showing product saturation: RED-BROWN

   d. Weight of the removed sock: 7.8 oz.

   e. Weight of new/clean/dry sock: N/A

   f. Difference in weight [(d-e) to 0.01 ounces]: N/A

3. Picture of sock removed from well taken: ☒

4. Sock removed from well deposited into a waste drum: ☐

   Confirm drum is labeled: CONFIRMED How full is the drum (%): 20%

5. At least 15 minutes after removing the sock from the well, measure (to 0.01ft) from the top of the well casing:

   a. Depth to product: Ø

   b. Depth to water: HT- 9.73 LT- 8.93 ST- 9.28

   c. Thickness of product (b-a): Ø

6. Size and type of sock installed: N/A

7. Comments: SOCK REMOVED FROM WELL, EVALUATED. ~~PER LC~~, NO PRODUCT VISIBLE ON SOCK, PER LC, SOCK RE-INSTALLED IN WELL.

100838 Astoria 03-12-19, MW-22 Sock

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GETTLER-RYAN INC.

WELL MONITORING/SAMPLING
LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #1001838 Job Number: 17155864
Site Address: 10 5Th Street Event Date: 3/12-3/13/19 (inclusive)
City: Astoria, OR Sampler: ML

Well ID MW-23 Date Monitored: 3-12-19
Well Diameter (2) 4 in.
Total Depth 10.40 ft.
Depth to Water — ft.

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

☐ Check if water column is less then 0.50 ft.

— xVF — = — x3 case volume = Estimated Purge Volume: — gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: —

Purge Equipment:
Disposable Bailer
Stainless Steel Bailer
Stack Pump
Peristaltic Pump
QED Bladder Pump
Other:

Sampling Equipment:
Disposable Bailer
Pressure Bailer
Metal Filters
Peristaltic Pump
QED Bladder Pump
Other:

Time Started: (2400 hrs)
Time Completed: (2400 hrs)
Depth to Product: ft
Depth to Water: ft
Hydrocarbon Thickness: ft
Visual Confirmation/Description:
Skimmer / Absorbant Sock *(circle one)*
Amt Removed from Skimmer: ltr
Amt Removed from Well: ltr
Water Removed: ltr
Product Transferred to:

Start Time (purge): Weather Conditions:
Sample Time/Date: / Water Color: Odor: Y / N
Approx. Flow Rate: mlpm Sediment Description:
Did well de-water? If yes, Time: Volume: ltrs DTW @ Sampling:

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS / mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-	x voa vial	YES	HCL	EUROFINS	NWTPH-Gx/BTEX(8260)
	x 1 liter ambers	YES	HCL	EUROFINS	NWTPH-Dx w/sgc COLUMN
	x 250ml ambers	YES	NP	EUROFINS	PAH's(8270 SIM)
	x 250ml poly	YES	HNO3	EUROFINS	TOTAL METALS(6010B)/TOTAL MERCURY(7470A)/ TOTAL LEAD(6020)
	x 500ml poly	YES	HNO3	EUROFINS	TOTAL METALS(6010B)/TOTAL MERCURY(7470A)/ TOTAL LEAD(6020)
	x 250ml poly	YES	HNO3	EUROFINS	DISSOLVED METALS(6010B)/ DISSOLVED MERCURY(7470A)/TOTAL LEAD(6020)
	x 500ml poly	YES	HNO3	EUROFINS	DISSOLVED METALS(6010B)/ DISSOLVED MERCURY(7470A)/TOTAL LEAD(6020)

COMMENTS: *IRON FIELD TEST RESULTS:* — SOCK REMOVED FROM WELL,
LOW TIDE DTW MEASUREMENT/TIME: 7.75 / 1155 EVACUATED AND PLACED IN DRUM.
HIGH TIDE DTW MEASUREMENT/TIME: 7.61 / 1822 NEW SOCK INSTALLED.

Add/Replaced Gasket: Add/Replaced Bolt: Add/Replaced Plug: Add/Replaced Lock:

GETTLER-RYAN INC.

SORBENT SOCK EVALUATION FORM

Name: MIKE LOMBARD	Date: 3-12-19	Project Number: Chevron #1001838 GR #17155864
Site Address: 10 5th Street Astoria, OR	Well ID: MW-23	Weather: RAIN

1. Time absorbent sock removed from well for inspection: 1020

2. Condition of sock:

   a. Length of sock showing product saturation: 24"

   b. Length of sock showing dryness: 10"

   c. Color of sock showing product saturation: BLACK

   d. Weight of the removed sock: 23.2 oz

   e. Weight of new/clean/dry sock: 3.0 oz

   f. Difference in weight [(d-e) to 0.01 ounces]: 20.2 oz

3. Picture of sock removed from well taken: ☒

4. Sock removed from well deposited into a waste drum: ☒

   Confirm drum is labeled: CONFIRMED How full is the drum (%): 20%

5. At least 15 minutes after removing the sock from the well, measure (to 0.01ft) from the top of the well casing:

   a. Depth to product: Ø

   b. Depth to water: HT-7.61 LT-7.75

   c. Thickness of product (b-a): Ø

6. Size and type of sock installed: 2" SOAKEASE

7. Comments: SOCK REMOVED FROM WELL, EVALUATED AND PLACED IN DRUM. NEW SOCK INSTALLED.

100838 Astoria 03-12-19, MW-23 Sock

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GETTLER-RYAN INC.

WELL MONITORING/SAMPLING
LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #1001838 | Job Number: 17155864
Site Address: 10 5Th Street | Event Date: 3/12-3/13/19 (inclusive)
City: Astoria, OR | Sampler: ML

Well ID: MW-24 | Date Monitored: 3-12-19
Well Diameter: 2 4 in.
Total Depth: 20.03 ft.
Depth to Water: 9.98 ft.

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

☐ Check if water column is less then 0.50 ft.

10.05 xVF ___ = ___ x3 case volume = Estimated Purge Volume: ___ gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: ___

Purge Equipment:

Disposable Bailer	
Stainless Steel Bailer	
Stack Pump	
Peristaltic Pump	X
QED Bladder Pump	
Other:	

Sampling Equipment:

Disposable Bailer	
Pressure Bailer	
Metal Filters	X
Peristaltic Pump	X
QED Bladder Pump	
Other:	

Time Started: ___ (2400 hrs)
Time Completed: ___ (2400 hrs)
Depth to Product: ___ ft
Depth to Water: ___ ft
Hydrocarbon Thickness: ___ ft
Visual Confirmation/Description: ___
Skimmer / Absorbant Sock (circle one)
Amt Removed from Skimmer: ___ ltr
Amt Removed from Well: ___ ltr
Water Removed: ___ ltr
Product Transferred to: ___

Start Time (purge): 1015 | Weather Conditions: CLOUDY
Sample Time/Date: 1100 13-13-19 | Water Color: Clear Odor: Y / N Medium
Approx. Flow Rate: 200 mlpm | Sediment Description: light
Did well de-water? NO If yes, Time: ___ Volume: ___ ltrs DTW @ Sampling: 10.01

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS / mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
1033	3.6	7.26	555	13.4			10.01
1036	4.2	7.30	561	13.5			10.01
1039	4.8	7.31	562	13.5			10.01

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-24	6 x voa vial	YES	HCL	EUROFINS	NWTPH-Gx/BTEX(8260)
	2 x 1 liter ambers	YES	HCL	EUROFINS	NWTPH-Dx w/sgc COLUMN
	2 x 250ml ambers	YES	NP	EUROFINS	PAH's(8270 SIM)
	1 x 250ml poly	YES	HNO3	EUROFINS	TOTAL METALS(6010B)/TOTAL MERCURY(7470A)/ TOTAL LEAD(6020)
	x 500ml poly	YES	HNO3	EUROFINS	TOTAL METALS(6010B)/TOTAL MERCURY(7470A)/ TOTAL LEAD(6020)
	1 x 250ml poly	YES	HNO3	EUROFINS	DISSOLVED METALS(6010B)/ DISSOLVED MERCURY(7470A)/TOTAL LEAD(6020)
	x 500ml poly	YES	HNO3	EUROFINS	DISSOLVED METALS(6010B)/ DISSOLVED MERCURY(7470A)/TOTAL LEAD(6020)

COMMENTS: *IRON FIELD TEST RESULTS:* 5 SOCK REMOVED FROM WELL EVALUATED
LOW TIDE DTW MEASUREMENT/TIME: 10.90 / 1200 AND PLACED IN DRUM. NEW SOCK
HIGH TIDE DTW MEASUREMENT/TIME: 9.37 / 1827 INSTALLED.

Add/Replaced Gasket: ___ Add/Replaced Bolt: ___ Add/Replaced Plug: ___ Add/Replaced Lock: ___

GETTLER-RYAN INC.

SORBENT SOCK EVALUATION FORM

Name: MIKE LOMBARD	Date: 3-12-19	Project Number: Chevron #1001838 GR #17155864
Site Address: 10 5th Street Astoria, OR	Well ID: MW-24	Weather: RAIN

1. Time absorbent sock removed from well for inspection: 1030

2. Condition of sock:

   a. Length of sock showing product saturation: 34"

   b. Length of sock showing dryness: 0"

   c. Color of sock showing product saturation: BLACK

   d. Weight of the removed sock: 34.9 oz

   e. Weight of new/clean/dry sock: 3.0 oz

   f. Difference in weight [(d-e) to 0.01 ounces]: 31.9 oz

3. Picture of sock removed from well taken: ☒

4. Sock removed from well deposited into a waste drum: ☒

   Confirm drum is labeled: CONFIRMED How full is the drum (%): 20%

5. At least 15 minutes after removing the sock from the well, measure (to 0.01ft) from the top of the well casing:

   a. Depth to product: Ø

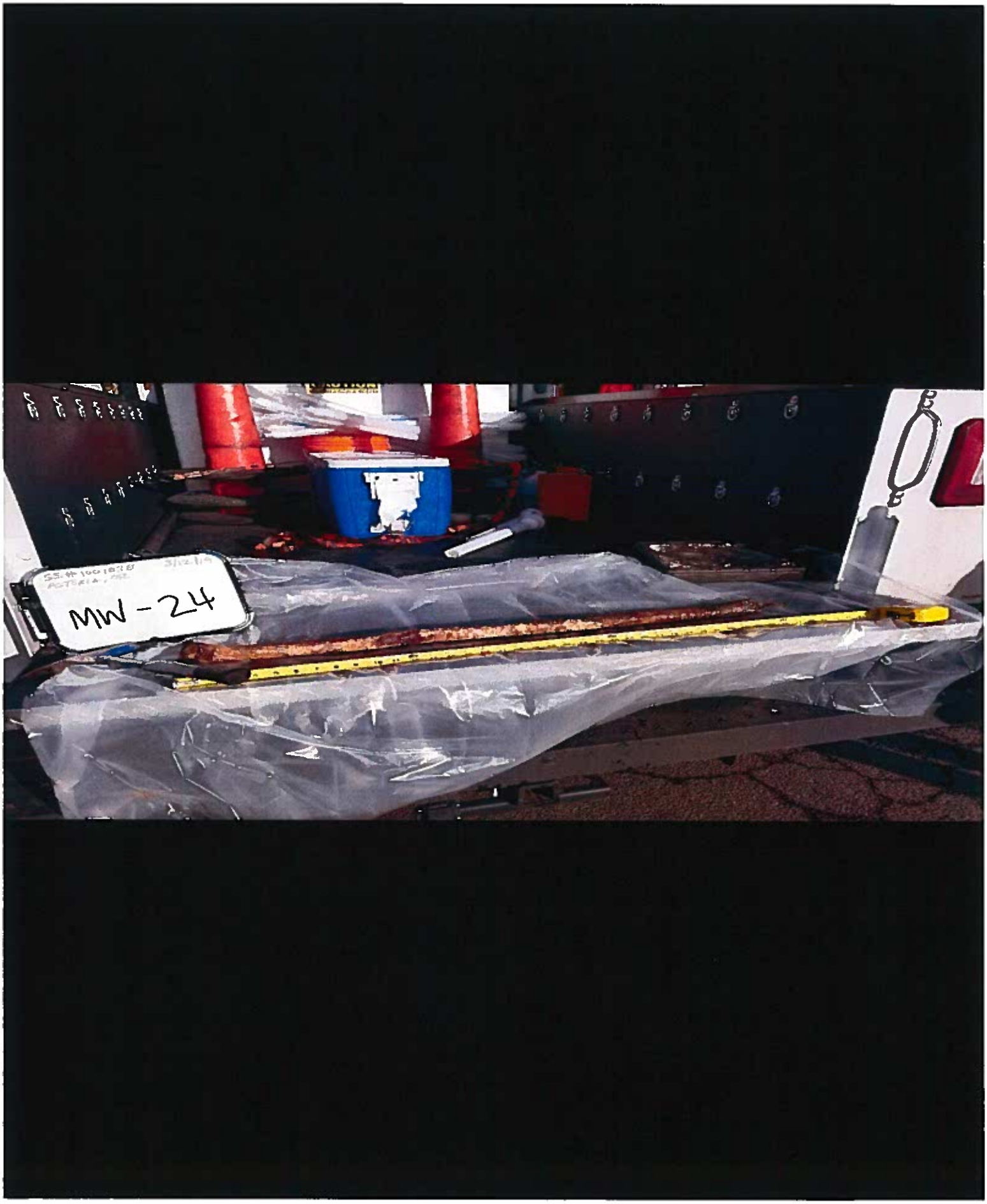
   b. Depth to water: HT- 9.37 LT- 10.90 SAMPLE - 9.9

   c. Thickness of product (b-a): Ø

6. Size and type of sock installed: 2" SOAKEASE

7. Comments: SOCK REMOVED FROM WELL, EVALUATED AND PLACED IN DRUM. NEW SOCK INSTALLED.

100838 Astoria 03-12-19, MW-24 Sock



Screenshot_20190312-213813_Gallery(2).jpg

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING
LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #1001838 | Job Number: 17155864
Site Address: 10 5Th Street | Event Date: 3/12-13/19 (inclusive)
City: Astoria, OR | Sampler: GM

Well ID: MW-25 | Date Monitored: 3/12/19
Well Diameter: (2)4 in.
Total Depth: 19.97 ft.
Depth to Water: / ft.

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

☐ Check if water column is less then 0.50 ft.

____ xVF ____ = ____ x3 case volume = Estimated Purge Volume: ____ gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: ____

Purge Equipment:
Disposable Bailer ____
Stainless Steel Bailer ____
Stack Pump ____
Peristaltic Pump ____
QED Bladder Pump ____
Other: ____

Sampling Equipment:
Disposable Bailer ____
Pressure Bailer ____
Metal Filters ____
Peristaltic Pump ____
QED Bladder Pump ____
Other: ____

Time Started: ____ (2400 hrs)
Time Completed: ____ (2400 hrs)
Depth to Product: ____ ft
Depth to Water: ____ ft
Hydrocarbon Thickness: Ø ft
Visual Confirmation/Description: ____
Skimmer / Absorbant Sock *(circle one)*
Amt Removed from Skimmer: ____ ltr
Amt Removed from Well: ____ ltr
Water Removed: ____ ltr
Product Transferred to: ____

Start Time (purge): ____ | Weather Conditions: ____
Sample Time/Date: / | Water Color: ____ Odor: Y / N ____
Approx. Flow Rate: ____ mlpm | Sediment Description: ____
Did well de-water? ____ If yes, Time: ____ Volume: ____ ltrs DTW @ Sampling: ____

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS / mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-	x voa vial	YES	HCL	EUROFINS	NWTPH-Gx/BTEX(8260)
	x 1 liter ambers	YES	HCL	EUROFINS	NWTPH-Dx w/sgc COLUMN
	x 250ml ambers	YES	NP	EUROFINS	PAH's(8270 SIM)
	x 250ml poly	YES	HNO3	EUROFINS	TOTAL METALS(6010B)/TOTAL MERCURY(7470A)/ TOTAL LEAD(6020)
	x 500ml poly	YES	HNO3	EUROFINS	TOTAL METALS(6010B)/TOTAL MERCURY(7470A)/ TOTAL LEAD(6020)
	x 250ml poly	YES	HNO3	EUROFINS	DISSOLVED METALS(6010B)/ DISSOLVED MERCURY(7470A)/TOTAL LEAD(6020)
	x 500ml poly	YES	HNO3	EUROFINS	DISSOLVED METALS(6010B)/ DISSOLVED MERCURY(7470A)/TOTAL LEAD(6020)

COMMENTS: *IRON FIELD TEST RESULTS:* NA M/O
LOW TIDE DTW MEASUREMENT/TIME: 10.11 ft/1205
HIGH TIDE DTW MEASUREMENT/TIME: 9.73 ft/1834

Add/Replaced Gasket: ____ Add/Replaced Bolt: ____ Add/Replaced Plug: ____ Add/Replaced Lock: ____

Chevron Northwest Region Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories

For Eurofins Lancaster Laboratories use only
Acct. # _____ Group # _____ Sample # _____
Instructions on reverse side correspond with circled numbers.

SCR #: _____

1 Client Information

Facility # SS#1001838-OML G-R#17155864 WBS
Site Address 18 5th Street, ASTORIA, OR
Chevron PM TBI ARCADISSA Lead Consultant: Stephen Ahlquist
Consultant Office Getter-Ryan Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568
Consultant Project Mgr Deanna L. Harding, (deanna@grinc.com)
Consultant Phone # (925) 551-7444 x180
Sampler GM / ML

4 Matrix

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

3 Grab / Composite

2 Sample Identification / Collected

Sample Identification	Date	Time	Grab	Composite	Soil	Water	Oil	Total Number of Containers	BTEX ±MTBE 8021 ☐ 8260 ☒ Naphth ☐	8260 full scan	Oxygenates ____	NWTPH-Gx	NWTPH-Dx with Silica Gel Cleanup ☒	NWTPH-Dx without Silica Gel Cleanup ☐	WA VPH ☐ WA EPH ☐	Lead Total ☒ Diss. ☐ Method 6020	Total & Dissolved Metals (Fe, As, Se, Ba, Cd, Cr, Mn, Ag, Hg)	Total & Dissolved Mercury (7470A)	PAHs (8270SIM)	MTBE (8260B)
QA	190313	—	X			X		2	X			X								X
DUP	190313	—	X			X		12	X			X	X			X	X	X	X	
MW-13	190313	1315	X			X		12	X			X	X			X	X	X	X	
MW-12	190313	1205	X			X		12	X			X	X			X	X	X	X	
MW-15	190313	1035	X			X		12	X			X	X			X	X	X	X	
MW-13	190313	0955	X			X		12	X			X	X			X	X	X	X	
MW-19	190313	1150	X			X		12	X			X	X			X	X	X	X	
MW-20	190313	0930	X			X		12	X			X	X			X	X	X	X	
MW-20 MS/MSD	190313	0930	X			X		24	X			X	X			X	X	X	X	
MW-24	190313	1100	X			X		12	X			X	X			X	X	X	X	
MW-22	190313	0950	X			X		12	X			X	X			X	X	X	X	

5 Analyses Requested

- 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

6 Remarks

Metals include: Fe, As, Se, Ba, Cd, Cr, Mn, Ag, Hg.
Requesting 10 gram silica gel cleanup on NWTPH-Dx w/sgc samples.
-add NWTPH-Dx w/sgc
JMM 3/20/19

Please forward the lab results directly to the Lead Consultant and cc: G-R.

7 Turnaround Time Requested (TAT) (please circle)

Standard | 5 day | 4 day | EDF/EDD | 72 hour | 48 hour | 24 hour

8 Data Package (circle if required)

Type I - Full
Type VI (Raw Data)

EDD (circle if required)

CVX-RTBU-FI_05 (default)
Other: _____

9

Relinquished by	Date	Time	Received by	Date	Time
[signature]	190314	1600			
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by Commercial Carrier: UPS ____ FedEx ✓ Other ____			Received by	Date	Time
Temperature Upon Receipt _____ °C			Custody Seals Intact?	Yes	No

APPENDIX B

Analytical Laboratory Report and Chain-of-Custody Documentation

eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

ANALYSIS REPORT

Prepared by:

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

Prepared for:

Chevron
L4310
6001 Bollinger Canyon Rd.
San Ramon CA 94583

Report Date: July 05, 2019 14:55

Project: 1001838

Account #: 11928
Group Number: 2034062
PO Number: 0015316106
Release Number: LATHROP
State of Sample Origin: OR

Electronic Copy To	ARCADIS	Attn: Steve Ahlquist
Electronic Copy To	ARCADIS	Attn: Steve Mahony
Electronic Copy To	Gettler-Ryan Inc.	Attn: Gettler Ryan

Respectfully Submitted,

Amek Carter
Specialist

(717) 556-7252

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

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
QA-T-190313 NA Water	03/13/2019	1010758
DUP-WD-190313 Grab Groundwater	03/13/2019	1010759
DUP-WD-190313 Filtered Grab Groundwater	03/13/2019	1010760
MW-4B-W-190313 Grab Groundwater	03/13/2019 13:15	1010761
MW-4B-W-190313 Filtered Grab Groundwater	03/13/2019 13:15	1010762
MW-12-W-190313 Grab Groundwater	03/13/2019 12:05	1010763
MW-12-W-190313 Filtered Grab Groundwater	03/13/2019 12:05	1010764
MW-15-W-190313 Grab Groundwater	03/13/2019 10:35	1010765
MW-15-W-190313 Filtered Grab Groundwater	03/13/2019 10:35	1010766
MW-18-W-190313 Grab Groundwater	03/13/2019 09:55	1010767
MW-18-W-190313 Filtered Grab Groundwater	03/13/2019 09:55	1010768
MW-19-W-190313 Grab Groundwater	03/13/2019 11:50	1010769
MW-19-W-190313 Filtered Grab Groundwater	03/13/2019 11:50	1010770
MW-20-W-190313 Grab Groundwater	03/13/2019 09:30	1010771
MW-20-W-190313MS Grab Groundwater	03/13/2019 09:30	1010772
MW-20-W-190313MSD Grab Groundwater	03/13/2019 09:30	1010773
MW-20-W-190313DUP Grab Groundwater	03/13/2019 09:30	1010774
MW-20-W-190313 Filtered Grab Groundwater	03/13/2019 09:30	1010775
MW-20-W-190313MS Filtered Grab Groundwater	03/13/2019 09:30	1010776
MW-20-W-190313MSD Filtered Grab Groundwater	03/13/2019 09:30	1010777
MW-20-W-190313DUP Filtered Grab Groundwater	03/13/2019 09:30	1010778
MW-24-W-190313 Grab Groundwater	03/13/2019 11:00	1010779
MW-24-W-190313 Filtered Grab Groundwater	03/13/2019 11:00	1010780
MW-22-W-190313 Grab Groundwater	03/13/2019 08:50	1010781
MW-22-W-190313 Filtered Grab Groundwater	03/13/2019 08:50	1010782

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

Sample Description: **QA-T-190313 NA Water**
Facility# 1001838 Job# 17155864
10 5th Street - Astoria, OR

Project Name: **1001838**

Submittal Date/Time: 03/15/2019 10:00
Collection Date/Time: 03/13/2019

Chevron
ELLE Sample #: WW 1010758
ELLE Group #: 2034062
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	**ug/l**	
10945	Benzene	71-43-2	N.D.	0.2	1	1
10945	Ethylbenzene	100-41-4	N.D.	0.2	1	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.2	1	1
10945	Toluene	108-88-3	N.D.	0.2	1	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	5	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	19	250	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	Z190782AA	03/19/2019 17:17	Alexander D Sechrist	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z190782AA	03/19/2019 17:16	Alexander D Sechrist	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	19078A20A	03/20/2019 21:40	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	19078A20A	03/20/2019 21:39	Jeremy C Giffin	1

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

Sample Description: **DUP-WD-190313 Grab Groundwater**
Facility# 1001838 Job# 17155864
10 5th Street - Astoria, OR

Project Name: **1001838**

Submittal Date/Time: 03/15/2019 10:00
Collection Date/Time: 03/13/2019

Chevron
ELLE Sample #: WW 1010759
ELLE Group #: 2034062
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	**ug/l**	
10945	Benzene	71-43-2	N.D.	0.2	1	1
10945	Ethylbenzene	100-41-4	N.D.	0.2	1	1
10945	Toluene	108-88-3	N.D.	0.2	1	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	5	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/l**	**ug/l**	**ug/l**	
14243	Acenaphthene	83-32-9	N.D.	0.01	0.05	1
14243	Acenaphthylene	208-96-8	0.01 J	0.01	0.05	1
14243	Anthracene	120-12-7	N.D.	0.01	0.05	1
14243	Benzo(a)anthracene	56-55-3	N.D.	0.01	0.05	1
14243	Benzo(a)pyrene	50-32-8	N.D.	0.01	0.05	1
14243	Benzo(b)fluoranthene	205-99-2	N.D.	0.01	0.05	1
14243	Benzo(g,h,i)perylene	191-24-2	0.02 J	0.01	0.05	1
14243	Benzo(k)fluoranthene	207-08-9	N.D.	0.01	0.05	1
14243	Chrysene	218-01-9	N.D.	0.01	0.05	1
14243	Dibenz(a,h)anthracene	53-70-3	N.D.	0.02	0.07	1
14243	Fluoranthene	206-44-0	N.D.	0.01	0.05	1
14243	Fluorene	86-73-7	N.D.	0.01	0.05	1
14243	Indeno(1,2,3-cd)pyrene	193-39-5	0.01 J	0.01	0.05	1
14243	Naphthalene	91-20-3	N.D.	0.03	0.07	1
14243	Phenanthrene	85-01-8	N.D.	0.03	0.07	1
14243	Pyrene	129-00-0	N.D.	0.01	0.05	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	19	250	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**ug/l**	**ug/l**	**ug/l**	
12005	DRO C12-C24 w/Si Gel	n.a.	520	30	97	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	240	1
The reverse surrogate, capric acid, is present at <1%.						
Metals	**SW-846 6010B**		**ug/l**	**ug/l**	**ug/l**	
07035	Arsenic	7440-38-2	N.D.	16.0	50.0	1
07046	Barium	7440-39-3	42.3	1.0	5.0	1
07049	Cadmium	7440-43-9	3.0 J	1.0	5.0	1
07051	Chromium	7440-47-3	N.D.	5.3	15.0	1
01754	Iron	7439-89-6	1,670	40.0	200	1
07058	Manganese	7439-96-5	35.0	1.1	20.0	1
07036	Selenium	7782-49-2	N.D.	21.0	50.0	1
07066	Silver	7440-22-4	N.D.	5.0	10.0	1

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

Sample Description: **DUP-WD-190313 Grab Groundwater**
Facility# 1001838 Job# 17155864
10 5th Street - Astoria, OR

Project Name: **1001838**

Submittal Date/Time: 03/15/2019 10:00
Collection Date/Time: 03/13/2019

Chevron
ELLE Sample #: WW 1010759
ELLE Group #: 2034062
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020**		**ug/l**	**ug/l**	**ug/l**	
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
	SW-846 7470A		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX 8260B Water	SW-846 8260B	1	Z190782AA	03/19/2019 12:03	Alexander D Sechrist	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z190782AA	03/19/2019 12:02	Alexander D Sechrist	1
14243	SIM SVOAs 8270C MINI	SW-846 8270C SIM	1	19079WAC026	03/21/2019 15:25	Kira N Beck	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	19079WAC026	03/20/2019 17:10	Christine E Gleim	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	19078A20A	03/20/2019 23:02	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	19078A20A	03/20/2019 23:01	Jeremy C Giffin	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	190860015A	03/29/2019 01:25	Heather E Williams	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	190860015A	03/27/2019 16:38	Ryan J Dowdy	1
07035	Arsenic	SW-846 6010B	1	190781404408	03/20/2019 18:35	Cindy M Gehman	1
07046	Barium	SW-846 6010B	1	190781404408	03/20/2019 18:35	Cindy M Gehman	1
07049	Cadmium	SW-846 6010B	1	190781404408	03/21/2019 21:42	Cindy M Gehman	1
07051	Chromium	SW-846 6010B	1	190781404408	03/20/2019 18:35	Cindy M Gehman	1
01754	Iron	SW-846 6010B	1	190781404408	03/20/2019 18:35	Cindy M Gehman	1
07058	Manganese	SW-846 6010B	1	190781404408	03/20/2019 18:35	Cindy M Gehman	1
07036	Selenium	SW-846 6010B	1	190781404408	03/20/2019 18:35	Cindy M Gehman	1
07066	Silver	SW-846 6010B	1	190781404408	03/20/2019 18:35	Cindy M Gehman	1
06035	Lead	SW-846 6020	1	190791404702A	04/18/2019 19:19	Patrick J Engle	1
00259	Mercury	SW-846 7470A	1	190780571311	03/22/2019 09:03	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	190781404408	03/19/2019 16:40	Barbara A Kane	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	190791404702	03/21/2019 15:00	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	190780571311	03/21/2019 07:30	Annamaria Kuhns	1

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

Sample Description: **DUP-WD-190313 Filtered Grab Groundwater**
Facility# 1001838 Job# 17155864
10 5th Street - Astoria, OR

Chevron
ELLE Sample #: WW 1010760
ELLE Group #: 2034062
Matrix: Groundwater

Project Name: **1001838**

Submittal Date/Time: 03/15/2019 10:00
Collection Date/Time: 03/13/2019

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals Dissolved	**SW-846 6010B**		**ug/l**	**ug/l**	**ug/l**	
07035	Arsenic	7440-38-2	N.D.	16.0	50.0	1
07046	Barium	7440-39-3	38.0	1.0	5.0	1
07049	Cadmium	7440-43-9	N.D.	1.0	5.0	1
07051	Chromium	7440-47-3	N.D.	5.3	15.0	1
01754	Iron	7439-89-6	239	40.0	200	1
07058	Manganese	7439-96-5	27.5	1.1	20.0	1
07036	Selenium	7782-49-2	N.D.	21.0	50.0	1
07066	Silver	7440-22-4	N.D.	5.0	10.0	1
	SW-846 6020		**ug/l**	**ug/l**	**ug/l**	
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
	SW-846 7470A		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

This sample was field filtered for dissolved metals.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	190781404408	03/20/2019 18:28	Cindy M Gehman	1
07046	Barium	SW-846 6010B	1	190781404408	03/20/2019 18:28	Cindy M Gehman	1
07049	Cadmium	SW-846 6010B	1	190781404408	03/20/2019 18:28	Cindy M Gehman	1
07051	Chromium	SW-846 6010B	1	190781404408	03/20/2019 18:28	Cindy M Gehman	1
01754	Iron	SW-846 6010B	1	190781404408	03/20/2019 18:28	Cindy M Gehman	1
07058	Manganese	SW-846 6010B	1	190781404408	03/20/2019 18:28	Cindy M Gehman	1
07036	Selenium	SW-846 6010B	1	190781404408	03/20/2019 18:28	Cindy M Gehman	1
07066	Silver	SW-846 6010B	1	190781404408	03/20/2019 18:28	Cindy M Gehman	1
06035	Lead	SW-846 6020	1	190791404702A	04/18/2019 19:15	Patrick J Engle	1
00259	Mercury	SW-846 7470A	1	190780571311	03/22/2019 08:59	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	190781404408	03/19/2019 16:40	Barbara A Kane	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	190791404702	03/21/2019 15:00	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	190780571311	03/21/2019 07:30	Annamaria Kuhns	1

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

Sample Description: **MW-4B-W-190313 Grab Groundwater**
Facility# 1001838 Job# 17155864
10 5th Street - Astoria, OR

Chevron
ELLE Sample #: WW 1010761
ELLE Group #: 2034062
Matrix: Groundwater

Project Name: **1001838**

Submittal Date/Time: 03/15/2019 10:00
Collection Date/Time: 03/13/2019 13:15

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	**ug/l**	
10945	Benzene	71-43-2	N.D.	0.2	1	1
10945	Ethylbenzene	100-41-4	N.D.	0.2	1	1
10945	Toluene	108-88-3	N.D.	0.2	1	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	5	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/l**	**ug/l**	**ug/l**	
14243	Acenaphthene	83-32-9	0.01 J	0.01	0.05	1
14243	Acenaphthylene	208-96-8	N.D.	0.01	0.05	1
14243	Anthracene	120-12-7	N.D.	0.01	0.05	1
14243	Benzo(a)anthracene	56-55-3	N.D.	0.01	0.05	1
14243	Benzo(a)pyrene	50-32-8	N.D.	0.01	0.05	1
14243	Benzo(b)fluoranthene	205-99-2	N.D.	0.01	0.05	1
14243	Benzo(g,h,i)perylene	191-24-2	N.D.	0.01	0.05	1
14243	Benzo(k)fluoranthene	207-08-9	N.D.	0.01	0.05	1
14243	Chrysene	218-01-9	N.D.	0.01	0.05	1
14243	Dibenz(a,h)anthracene	53-70-3	N.D.	0.02	0.07	1
14243	Fluoranthene	206-44-0	N.D.	0.01	0.05	1
14243	Fluorene	86-73-7	0.02 J	0.01	0.05	1
14243	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.01	0.05	1
14243	Naphthalene	91-20-3	N.D.	0.03	0.07	1
14243	Phenanthrene	85-01-8	N.D.	0.03	0.07	1
14243	Pyrene	129-00-0	0.01 J	0.01	0.05	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	110 J	19	250	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**ug/l**	**ug/l**	**ug/l**	
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	30	97	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	240	1
The reverse surrogate, capric acid, is present at <1%.						
Metals	**SW-846 6010B**		**ug/l**	**ug/l**	**ug/l**	
07035	Arsenic	7440-38-2	N.D.	16.0	50.0	1
07046	Barium	7440-39-3	42.8	1.0	5.0	1
07049	Cadmium	7440-43-9	N.D.	1.0	5.0	1
07051	Chromium	7440-47-3	N.D.	5.3	15.0	1
01754	Iron	7439-89-6	16,700	40.0	200	1
07058	Manganese	7439-96-5	289	1.1	20.0	1
07036	Selenium	7782-49-2	N.D.	21.0	50.0	1
07066	Silver	7440-22-4	N.D.	5.0	10.0	1

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

Sample Description: **MW-4B-W-190313 Grab Groundwater**
Facility# 1001838 Job# 17155864
10 5th Street - Astoria, OR

Project Name: **1001838**

Submittal Date/Time: 03/15/2019 10:00
Collection Date/Time: 03/13/2019 13:15

Chevron
ELLE Sample #: WW 1010761
ELLE Group #: 2034062
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020**		**ug/l**	**ug/l**	**ug/l**	
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
	SW-846 7470A		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX 8260B Water	SW-846 8260B	1	Z190782AA	03/19/2019 12:28	Alexander D Sechrist	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z190782AA	03/19/2019 12:27	Alexander D Sechrist	1
14243	SIM SVOAs 8270C MINI	SW-846 8270C SIM	1	19079WAC026	03/21/2019 15:53	Kira N Beck	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	19079WAC026	03/20/2019 17:10	Christine E Gleim	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	19078A20A	03/20/2019 23:30	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	19078A20A	03/20/2019 23:29	Jeremy C Giffin	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	190860015A	03/29/2019 01:47	Heather E Williams	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	190860015A	03/27/2019 16:38	Ryan J Dowdy	1
07035	Arsenic	SW-846 6010B	1	190781404407	03/28/2019 00:04	Elaine F Stoltzfus	1
07046	Barium	SW-846 6010B	1	190781404407	03/28/2019 00:04	Elaine F Stoltzfus	1
07049	Cadmium	SW-846 6010B	1	190781404407	03/28/2019 00:04	Elaine F Stoltzfus	1
07051	Chromium	SW-846 6010B	1	190781404407	03/28/2019 00:04	Elaine F Stoltzfus	1
01754	Iron	SW-846 6010B	1	190781404407	03/28/2019 00:04	Elaine F Stoltzfus	1
07058	Manganese	SW-846 6010B	1	190781404407	03/28/2019 00:04	Elaine F Stoltzfus	1
07036	Selenium	SW-846 6010B	1	190781404407	03/28/2019 00:04	Elaine F Stoltzfus	1
07066	Silver	SW-846 6010B	1	190781404407	03/28/2019 14:53	Cindy M Gehman	1
06035	Lead	SW-846 6020	1	190791404701A	03/21/2019 10:16	Choon Y Tian	1
00259	Mercury	SW-846 7470A	1	190780571310	03/21/2019 08:28	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	190781404407	03/22/2019 07:00	Annamaria Kuhns	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	190791404701	03/20/2019 15:15	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	190780571310	03/20/2019 17:00	Barbara A Kane	1

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

Sample Description: **MW-4B-W-190313 Filtered Grab Groundwater**
Facility# 1001838 Job# 17155864
10 5th Street - Astoria, OR

Chevron
ELLE Sample #: WW 1010762
ELLE Group #: 2034062
Matrix: Groundwater

Project Name: **1001838**

Submittal Date/Time: 03/15/2019 10:00
Collection Date/Time: 03/13/2019 13:15

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals Dissolved		**SW-846 6010B**	**ug/l**	**ug/l**	**ug/l**	
07035	Arsenic	7440-38-2	N.D.	16.0	50.0	1
07046	Barium	7440-39-3	42.6	1.0	5.0	1
07049	Cadmium	7440-43-9	N.D.	1.0	5.0	1
07051	Chromium	7440-47-3	N.D.	5.3	15.0	1
01754	Iron	7439-89-6	16,400	40.0	200	1
07058	Manganese	7439-96-5	304	1.1	20.0	1
07036	Selenium	7782-49-2	N.D.	21.0	50.0	1
07066	Silver	7440-22-4	N.D.	5.0	10.0	1
		SW-846 6020	**ug/l**	**ug/l**	**ug/l**	
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
		SW-846 7470A	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

This sample was field filtered for dissolved metals.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	190781404408	03/20/2019 18:13	Cindy M Gehman	1
07046	Barium	SW-846 6010B	1	190781404408	03/20/2019 18:13	Cindy M Gehman	1
07049	Cadmium	SW-846 6010B	1	190781404408	03/20/2019 18:13	Cindy M Gehman	1
07051	Chromium	SW-846 6010B	1	190781404408	03/20/2019 18:13	Cindy M Gehman	1
01754	Iron	SW-846 6010B	1	190781404408	03/20/2019 18:13	Cindy M Gehman	1
07058	Manganese	SW-846 6010B	1	190781404408	03/20/2019 18:13	Cindy M Gehman	1
07036	Selenium	SW-846 6010B	1	190781404408	03/20/2019 18:13	Cindy M Gehman	1
07066	Silver	SW-846 6010B	1	190781404408	03/20/2019 18:13	Cindy M Gehman	1
06035	Lead	SW-846 6020	1	190791404702A	04/18/2019 19:03	Patrick J Engle	1
00259	Mercury	SW-846 7470A	1	190780571310	03/21/2019 08:43	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	190781404408	03/19/2019 16:40	Barbara A Kane	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	190791404702	03/21/2019 15:00	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	190780571310	03/20/2019 17:00	Barbara A Kane	1

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

Sample Description: **MW-12-W-190313 Grab Groundwater**
Facility# 1001838 Job# 17155864
10 5th Street - Astoria, OR

Project Name: **1001838**

Submittal Date/Time: 03/15/2019 10:00
Collection Date/Time: 03/13/2019 12:05

Chevron
ELLE Sample #: WW 1010763
ELLE Group #: 2034062
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**		**ug/l**	**ug/l**	
10945	Benzene	71-43-2	N.D.		0.2	1	1
10945	Ethylbenzene	100-41-4	N.D.		0.2	1	1
10945	Toluene	108-88-3	N.D.		0.2	1	1
10945	Xylene (Total)	1330-20-7	N.D.		0.5	5	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/l**		**ug/l**	**ug/l**	
14243	Acenaphthene	83-32-9	0.01	J	0.01	0.05	1
14243	Acenaphthylene	208-96-8	N.D.		0.01	0.05	1
14243	Anthracene	120-12-7	N.D.		0.01	0.05	1
14243	Benzo(a)anthracene	56-55-3	N.D.		0.01	0.05	1
14243	Benzo(a)pyrene	50-32-8	N.D.		0.01	0.05	1
14243	Benzo(b)fluoranthene	205-99-2	N.D.		0.01	0.05	1
14243	Benzo(g,h,i)perylene	191-24-2	N.D.		0.01	0.05	1
14243	Benzo(k)fluoranthene	207-08-9	N.D.		0.01	0.05	1
14243	Chrysene	218-01-9	N.D.		0.01	0.05	1
14243	Dibenz(a,h)anthracene	53-70-3	N.D.		0.02	0.07	1
14243	Fluoranthene	206-44-0	N.D.		0.01	0.05	1
14243	Fluorene	86-73-7	N.D.		0.01	0.05	1
14243	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		0.01	0.05	1
14243	Naphthalene	91-20-3	N.D.		0.03	0.07	1
14243	Phenanthrene	85-01-8	N.D.		0.03	0.07	1
14243	Pyrene	129-00-0	N.D.		0.01	0.05	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**		**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	62	J	19	250	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**ug/l**		**ug/l**	**ug/l**	
12005	DRO C12-C24 w/Si Gel	n.a.	83	J	30	96	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.		67	240	1
The reverse surrogate, capric acid, is present at <1%.							
Metals	**SW-846 6010B**		**ug/l**		**ug/l**	**ug/l**	
07035	Arsenic	7440-38-2	N.D.		16.0	50.0	1
07046	Barium	7440-39-3	27.3		1.0	5.0	1
07049	Cadmium	7440-43-9	N.D.		1.0	5.0	1
07051	Chromium	7440-47-3	N.D.		5.3	15.0	1
01754	Iron	7439-89-6	11,200		40.0	200	1
07058	Manganese	7439-96-5	184		1.1	20.0	1
07036	Selenium	7782-49-2	N.D.		21.0	50.0	1
07066	Silver	7440-22-4	N.D.		5.0	10.0	1

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

Sample Description: **MW-12-W-190313 Grab Groundwater**
Facility# 1001838 Job# 17155864
10 5th Street - Astoria, OR

Chevron
ELLE Sample #: WW 1010763
ELLE Group #: 2034062
Matrix: Groundwater

Project Name: **1001838**

Submittal Date/Time: 03/15/2019 10:00
Collection Date/Time: 03/13/2019 12:05

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020**		**ug/l**		**ug/l**	**ug/l**	
06035	Lead	7439-92-1	2.2	J	1.1	3.0	1
	SW-846 7470A		**ug/l**		**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.		0.050	0.20	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX 8260B Water	SW-846 8260B	1	Z190782AA	03/19/2019 12:52	Alexander D Sechrist	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z190782AA	03/19/2019 12:51	Alexander D Sechrist	1
14243	SIM SVOAs 8270C MINI	SW-846 8270C SIM	1	19079WAC026	03/21/2019 16:21	Kira N Beck	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	19079WAC026	03/20/2019 17:10	Christine E Gleim	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	19078A20A	03/20/2019 23:57	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	19078A20A	03/20/2019 23:56	Jeremy C Giffin	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	190860015A	03/29/2019 02:09	Heather E Williams	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	190860015A	03/27/2019 16:38	Ryan J Dowdy	1
07035	Arsenic	SW-846 6010B	1	190781404408	03/20/2019 18:16	Cindy M Gehman	1
07046	Barium	SW-846 6010B	1	190781404408	03/20/2019 18:16	Cindy M Gehman	1
07049	Cadmium	SW-846 6010B	1	190781404408	03/20/2019 18:16	Cindy M Gehman	1
07051	Chromium	SW-846 6010B	1	190781404408	03/20/2019 18:16	Cindy M Gehman	1
01754	Iron	SW-846 6010B	1	190781404408	03/20/2019 18:16	Cindy M Gehman	1
07058	Manganese	SW-846 6010B	1	190781404408	03/20/2019 18:16	Cindy M Gehman	1
07036	Selenium	SW-846 6010B	1	190781404408	03/20/2019 18:16	Cindy M Gehman	1
07066	Silver	SW-846 6010B	1	190781404408	03/20/2019 18:16	Cindy M Gehman	1
06035	Lead	SW-846 6020	1	190791404702A	04/18/2019 19:05	Patrick J Engle	1
00259	Mercury	SW-846 7470A	1	190780571310	03/21/2019 08:45	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	190781404408	03/19/2019 16:40	Barbara A Kane	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	190791404702	03/21/2019 15:00	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	190780571310	03/20/2019 17:00	Barbara A Kane	1

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

Sample Description: **MW-12-W-190313 Filtered Grab Groundwater**
Facility# 1001838 Job# 17155864
10 5th Street - Astoria, OR

Chevron
ELLE Sample #: WW 1010764
ELLE Group #: 2034062
Matrix: Groundwater

Project Name: **1001838**

Submittal Date/Time: 03/15/2019 10:00
Collection Date/Time: 03/13/2019 12:05

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals Dissolved		**SW-846 6010B**	**ug/l**	**ug/l**	**ug/l**	
07035	Arsenic	7440-38-2	N.D.	16.0	50.0	1
07046	Barium	7440-39-3	22.3	1.0	5.0	1
07049	Cadmium	7440-43-9	N.D.	1.0	5.0	1
07051	Chromium	7440-47-3	N.D.	5.3	15.0	1
01754	Iron	7439-89-6	4,100	40.0	200	1
07058	Manganese	7439-96-5	205	1.1	20.0	1
07036	Selenium	7782-49-2	N.D.	21.0	50.0	1
07066	Silver	7440-22-4	N.D.	5.0	10.0	1
		SW-846 6020	**ug/l**	**ug/l**	**ug/l**	
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
		SW-846 7470A	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

This sample was field filtered for dissolved metals.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	190781404408	03/20/2019 18:22	Cindy M Gehman	1
07046	Barium	SW-846 6010B	1	190781404408	03/20/2019 18:22	Cindy M Gehman	1
07049	Cadmium	SW-846 6010B	1	190781404408	03/20/2019 18:22	Cindy M Gehman	1
07051	Chromium	SW-846 6010B	1	190781404408	03/20/2019 18:22	Cindy M Gehman	1
01754	Iron	SW-846 6010B	1	190781404408	03/20/2019 18:22	Cindy M Gehman	1
07058	Manganese	SW-846 6010B	1	190781404408	03/20/2019 18:22	Cindy M Gehman	1
07036	Selenium	SW-846 6010B	1	190781404408	03/20/2019 18:22	Cindy M Gehman	1
07066	Silver	SW-846 6010B	1	190781404408	03/20/2019 18:22	Cindy M Gehman	1
06035	Lead	SW-846 6020	1	190791404702A	04/18/2019 19:10	Patrick J Engle	1
00259	Mercury	SW-846 7470A	1	190780571311	03/22/2019 08:55	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	190781404408	03/19/2019 16:40	Barbara A Kane	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	190791404702	03/21/2019 15:00	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	190780571311	03/21/2019 07:30	Annamaria Kuhns	1

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

Sample Description: **MW-15-W-190313 Grab Groundwater**
Facility# 1001838 Job# 17155864
10 5th Street - Astoria, OR

Chevron
ELLE Sample #: WW 1010765
ELLE Group #: 2034062
Matrix: Groundwater

Project Name: **1001838**

Submittal Date/Time: 03/15/2019 10:00
Collection Date/Time: 03/13/2019 10:35

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	**ug/l**	
10945	Benzene	71-43-2	N.D.	0.2	1	1
10945	Ethylbenzene	100-41-4	N.D.	0.2	1	1
10945	Toluene	108-88-3	N.D.	0.2	1	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	5	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/l**	**ug/l**	**ug/l**	
14243	Acenaphthene	83-32-9	N.D.	0.01	0.05	1
14243	Acenaphthylene	208-96-8	N.D.	0.01	0.05	1
14243	Anthracene	120-12-7	N.D.	0.01	0.05	1
14243	Benzo(a)anthracene	56-55-3	N.D.	0.01	0.05	1
14243	Benzo(a)pyrene	50-32-8	N.D.	0.01	0.05	1
14243	Benzo(b)fluoranthene	205-99-2	N.D.	0.01	0.05	1
14243	Benzo(g,h,i)perylene	191-24-2	N.D.	0.01	0.05	1
14243	Benzo(k)fluoranthene	207-08-9	N.D.	0.01	0.05	1
14243	Chrysene	218-01-9	N.D.	0.01	0.05	1
14243	Dibenz(a,h)anthracene	53-70-3	N.D.	0.02	0.07	1
14243	Fluoranthene	206-44-0	N.D.	0.01	0.05	1
14243	Fluorene	86-73-7	0.01 J	0.01	0.05	1
14243	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.01	0.05	1
14243	Naphthalene	91-20-3	N.D.	0.03	0.07	1
14243	Phenanthrene	85-01-8	N.D.	0.03	0.07	1
14243	Pyrene	129-00-0	N.D.	0.01	0.05	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	22 J	19	250	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**ug/l**	**ug/l**	**ug/l**	
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	95	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	240	1
The reverse surrogate, capric acid, is present at <1%.						
Metals	**SW-846 6010B**		**ug/l**	**ug/l**	**ug/l**	
07035	Arsenic	7440-38-2	N.D.	16.0	50.0	1
07046	Barium	7440-39-3	127	1.0	5.0	1
07049	Cadmium	7440-43-9	N.D.	1.0	5.0	1
07051	Chromium	7440-47-3	N.D.	5.3	15.0	1
01754	Iron	7439-89-6	32,100	40.0	200	1
07058	Manganese	7439-96-5	494	1.1	20.0	1
07036	Selenium	7782-49-2	N.D.	21.0	50.0	1
07066	Silver	7440-22-4	N.D.	5.0	10.0	1

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

Sample Description: **MW-15-W-190313 Grab Groundwater**
Facility# 1001838 Job# 17155864
10 5th Street - Astoria, OR

Chevron
ELLE Sample #: WW 1010765
ELLE Group #: 2034062
Matrix: Groundwater

Project Name: **1001838**

Submittal Date/Time: 03/15/2019 10:00
Collection Date/Time: 03/13/2019 10:35

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020**		**ug/l**	**ug/l**	**ug/l**	
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
	SW-846 7470A		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX 8260B Water	SW-846 8260B	1	Z190782AA	03/19/2019 13:16	Alexander D Sechrist	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z190782AA	03/19/2019 13:15	Alexander D Sechrist	1
14243	SIM SVOAs 8270C MINI	SW-846 8270C SIM	1	19079WAC026	03/21/2019 16:49	Kira N Beck	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	19079WAC026	03/20/2019 17:10	Christine E Gleim	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	19078A20A	03/21/2019 00:25	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	19078A20A	03/21/2019 00:24	Jeremy C Giffin	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	190860015A	03/29/2019 02:31	Heather E Williams	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	190860015A	03/27/2019 16:38	Ryan J Dowdy	1
07035	Arsenic	SW-846 6010B	1	190781404408	03/20/2019 18:25	Cindy M Gehman	1
07046	Barium	SW-846 6010B	1	190781404408	03/20/2019 18:25	Cindy M Gehman	1
07049	Cadmium	SW-846 6010B	1	190781404408	03/20/2019 18:25	Cindy M Gehman	1
07051	Chromium	SW-846 6010B	1	190781404408	03/20/2019 18:25	Cindy M Gehman	1
01754	Iron	SW-846 6010B	1	190781404408	03/20/2019 18:25	Cindy M Gehman	1
07058	Manganese	SW-846 6010B	1	190781404408	03/20/2019 18:25	Cindy M Gehman	1
07036	Selenium	SW-846 6010B	1	190781404408	03/20/2019 18:25	Cindy M Gehman	1
07066	Silver	SW-846 6010B	1	190781404408	03/20/2019 18:25	Cindy M Gehman	1
06035	Lead	SW-846 6020	1	190791404702A	04/18/2019 19:12	Patrick J Engle	1
00259	Mercury	SW-846 7470A	1	190780571311	03/22/2019 08:57	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	190781404408	03/19/2019 16:40	Barbara A Kane	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	190791404702	03/21/2019 15:00	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	190780571311	03/21/2019 07:30	Annamaria Kuhns	1

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

Sample Description: **MW-15-W-190313 Filtered Grab Groundwater**
Facility# 1001838 Job# 17155864
10 5th Street - Astoria, OR

Chevron
ELLE Sample #: WW 1010766
ELLE Group #: 2034062
Matrix: Groundwater

Project Name: **1001838**

Submittal Date/Time: 03/15/2019 10:00
Collection Date/Time: 03/13/2019 10:35

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals Dissolved	**SW-846 6010B**		**ug/l**	**ug/l**	**ug/l**	
07035	Arsenic	7440-38-2	N.D.	16.0	50.0	1
07046	Barium	7440-39-3	136	1.0	5.0	1
07049	Cadmium	7440-43-9	N.D. K2	1.0	5.0	1
07051	Chromium	7440-47-3	N.D.	5.3	15.0	1
01754	Iron	7439-89-6	31,700	40.0	200	1
07058	Manganese	7439-96-5	566	1.1	20.0	1
07036	Selenium	7782-49-2	N.D.	21.0	50.0	1
07066	Silver	7440-22-4	N.D.	5.0	10.0	1
	SW-846 6020		**ug/l**	**ug/l**	**ug/l**	
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
	SW-846 7470A		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

This sample was field filtered for dissolved metals.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	190781404408	03/20/2019 17:57	Cindy M Gehman	1
07046	Barium	SW-846 6010B	1	190781404408	03/20/2019 17:57	Cindy M Gehman	1
07049	Cadmium	SW-846 6010B	1	190781404408	03/20/2019 17:57	Cindy M Gehman	1
07051	Chromium	SW-846 6010B	1	190781404408	03/20/2019 17:57	Cindy M Gehman	1
01754	Iron	SW-846 6010B	1	190781404408	03/20/2019 17:57	Cindy M Gehman	1
07058	Manganese	SW-846 6010B	1	190781404408	03/20/2019 17:57	Cindy M Gehman	1
07036	Selenium	SW-846 6010B	1	190781404408	03/20/2019 17:57	Cindy M Gehman	1
07066	Silver	SW-846 6010B	1	190781404408	03/20/2019 17:57	Cindy M Gehman	1
06035	Lead	SW-846 6020	1	190791404702A	04/18/2019 18:52	Patrick J Engle	1
00259	Mercury	SW-846 7470A	1	190780571310	03/21/2019 08:37	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	190781404408	03/19/2019 16:40	Barbara A Kane	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	190791404702	03/21/2019 15:00	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	190780571310	03/20/2019 17:00	Barbara A Kane	1

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

Sample Description: **MW-18-W-190313 Grab Groundwater**
Facility# 1001838 Job# 17155864
10 5th Street - Astoria, OR

Project Name: **1001838**

Submittal Date/Time: 03/15/2019 10:00
Collection Date/Time: 03/13/2019 09:55

Chevron
ELLE Sample #: WW 1010767
ELLE Group #: 2034062
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	**ug/l**	
10945	Benzene	71-43-2	N.D.	0.2	1	1
10945	Ethylbenzene	100-41-4	N.D.	0.2	1	1
10945	Toluene	108-88-3	N.D.	0.2	1	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	5	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/l**	**ug/l**	**ug/l**	
14243	Acenaphthene	83-32-9	2	0.01	0.05	1
14243	Acenaphthylene	208-96-8	0.5	0.01	0.05	1
14243	Anthracene	120-12-7	0.8	0.01	0.05	1
14243	Benzo(a)anthracene	56-55-3	0.1	0.01	0.05	1
14243	Benzo(a)pyrene	50-32-8	0.04 J	0.01	0.05	1
14243	Benzo(b)fluoranthene	205-99-2	0.08	0.01	0.05	1
14243	Benzo(g,h,i)perylene	191-24-2	0.03 J	0.01	0.05	1
14243	Benzo(k)fluoranthene	207-08-9	0.01 J	0.01	0.05	1
14243	Chrysene	218-01-9	0.3	0.01	0.05	1
14243	Dibenz(a,h)anthracene	53-70-3	0.02 J	0.02	0.07	1
14243	Fluoranthene	206-44-0	0.3	0.01	0.05	1
14243	Fluorene	86-73-7	7	0.01	0.05	1
14243	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.01	0.05	1
14243	Naphthalene	91-20-3	N.D.	0.03	0.07	1
14243	Phenanthrene	85-01-8	0.3	0.03	0.07	1
14243	Pyrene	129-00-0	0.5	0.01	0.05	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	1,600	19	250	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**ug/l**	**ug/l**	**ug/l**	
12005	DRO C12-C24 w/Si Gel	n.a.	5,500	31	100	1
12005	HRO C24-C40 w/Si Gel	n.a.	940	71	250	1
The reverse surrogate, capric acid, is present at <1%.						
Metals	**SW-846 6010B**		**ug/l**	**ug/l**	**ug/l**	
07035	Arsenic	7440-38-2	N.D.	16.0	50.0	1
07046	Barium	7440-39-3	136	1.0	5.0	1
07049	Cadmium	7440-43-9	N.D.	1.0	5.0	1
07051	Chromium	7440-47-3	N.D.	5.3	15.0	1
01754	Iron	7439-89-6	29,000	40.0	200	1
07058	Manganese	7439-96-5	631	1.1	20.0	1
07036	Selenium	7782-49-2	N.D.	21.0	50.0	1
07066	Silver	7440-22-4	N.D.	5.0	10.0	1

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

Sample Description: **MW-18-W-190313 Grab Groundwater**
Facility# 1001838 Job# 17155864
10 5th Street - Astoria, OR

Chevron
ELLE Sample #: WW 1010767
ELLE Group #: 2034062
Matrix: Groundwater

Project Name: **1001838**

Submittal Date/Time: 03/15/2019 10:00
Collection Date/Time: 03/13/2019 09:55

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals		**SW-846 6020**	**ug/l**	**ug/l**	**ug/l**	
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
		SW-846 7470A	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX 8260B Water	SW-846 8260B	1	Z190782AA	03/19/2019 13:40	Alexander D Sechrist	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z190782AA	03/19/2019 13:39	Alexander D Sechrist	1
14243	SIM SVOAs 8270C MINI	SW-846 8270C SIM	1	19079WAC026	03/21/2019 17:17	Kira N Beck	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	19079WAC026	03/20/2019 17:10	Christine E Gleim	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	19079B94A	03/21/2019 20:50	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	19079B94A	03/21/2019 20:49	Jeremy C Giffin	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	190860015A	03/29/2019 02:53	Heather E Williams	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	190860015A	03/27/2019 16:38	Ryan J Dowdy	1
07035	Arsenic	SW-846 6010B	1	190781404407	03/27/2019 23:59	Elaine F Stoltzfus	1
07046	Barium	SW-846 6010B	1	190781404407	03/27/2019 23:59	Elaine F Stoltzfus	1
07049	Cadmium	SW-846 6010B	1	190781404407	03/27/2019 23:59	Elaine F Stoltzfus	1
07051	Chromium	SW-846 6010B	1	190781404407	03/27/2019 23:59	Elaine F Stoltzfus	1
01754	Iron	SW-846 6010B	1	190781404407	03/27/2019 23:59	Elaine F Stoltzfus	1
07058	Manganese	SW-846 6010B	1	190781404407	03/27/2019 23:59	Elaine F Stoltzfus	1
07036	Selenium	SW-846 6010B	1	190781404407	03/27/2019 23:59	Elaine F Stoltzfus	1
07066	Silver	SW-846 6010B	1	190781404407	03/28/2019 14:40	Cindy M Gehman	1
06035	Lead	SW-846 6020	1	190791404701A	03/21/2019 10:12	Choon Y Tian	1
00259	Mercury	SW-846 7470A	1	190780571310	03/21/2019 08:24	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	190781404407	03/22/2019 07:00	Annamaria Kuhns	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	190791404701	03/20/2019 15:15	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	190780571310	03/20/2019 17:00	Barbara A Kane	1

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

Sample Description: **MW-18-W-190313 Filtered Grab Groundwater**
Facility# 1001838 Job# 17155864
10 5th Street - Astoria, OR

Chevron
ELLE Sample #: WW 1010768
ELLE Group #: 2034062
Matrix: Groundwater

Project Name: **1001838**

Submittal Date/Time: 03/15/2019 10:00
Collection Date/Time: 03/13/2019 09:55

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals Dissolved		**SW-846 6010B**	**ug/l**	**ug/l**	**ug/l**	
07035	Arsenic	7440-38-2	N.D.	16.0	50.0	1
07046	Barium	7440-39-3	116	1.0	5.0	1
07049	Cadmium	7440-43-9	N.D. K2	1.0	5.0	1
07051	Chromium	7440-47-3	N.D.	5.3	15.0	1
01754	Iron	7439-89-6	25,600	40.0	200	1
07058	Manganese	7439-96-5	645	1.1	20.0	1
07036	Selenium	7782-49-2	N.D.	21.0	50.0	1
07066	Silver	7440-22-4	N.D.	5.0	10.0	1
		SW-846 6020	**ug/l**	**ug/l**	**ug/l**	
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
		SW-846 7470A	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

This sample was field filtered for dissolved metals.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	190781404408	03/20/2019 17:54	Cindy M Gehman	1
07046	Barium	SW-846 6010B	1	190781404408	03/20/2019 17:54	Cindy M Gehman	1
07049	Cadmium	SW-846 6010B	1	190781404408	03/20/2019 17:54	Cindy M Gehman	1
07051	Chromium	SW-846 6010B	1	190781404408	03/20/2019 17:54	Cindy M Gehman	1
01754	Iron	SW-846 6010B	1	190781404408	03/20/2019 17:54	Cindy M Gehman	1
07058	Manganese	SW-846 6010B	1	190781404408	03/20/2019 17:54	Cindy M Gehman	1
07036	Selenium	SW-846 6010B	1	190781404408	03/20/2019 17:54	Cindy M Gehman	1
07066	Silver	SW-846 6010B	1	190781404408	03/20/2019 17:54	Cindy M Gehman	1
06035	Lead	SW-846 6020	1	190791404702A	04/18/2019 18:49	Patrick J Engle	1
00259	Mercury	SW-846 7470A	1	190780571310	03/21/2019 08:30	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	190781404408	03/19/2019 16:40	Barbara A Kane	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	190791404702	03/21/2019 15:00	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	190780571310	03/20/2019 17:00	Barbara A Kane	1

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

Sample Description: **MW-19-W-190313 Grab Groundwater**
Facility# 1001838 Job# 17155864
10 5th Street - Astoria, OR

Project Name: **1001838**

Submittal Date/Time: 03/15/2019 10:00
Collection Date/Time: 03/13/2019 11:50

Chevron
ELLE Sample #: WW 1010769
ELLE Group #: 2034062
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	**ug/l**	
10945	Benzene	71-43-2	N.D.	0.2	1	1
10945	Ethylbenzene	100-41-4	N.D.	0.2	1	1
10945	Toluene	108-88-3	N.D.	0.2	1	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	5	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/l**	**ug/l**	**ug/l**	
14243	Acenaphthene	83-32-9	0.01 J	0.01	0.05	1
14243	Acenaphthylene	208-96-8	N.D.	0.01	0.05	1
14243	Anthracene	120-12-7	N.D.	0.01	0.05	1
14243	Benzo(a)anthracene	56-55-3	N.D.	0.01	0.05	1
14243	Benzo(a)pyrene	50-32-8	N.D.	0.01	0.05	1
14243	Benzo(b)fluoranthene	205-99-2	N.D.	0.01	0.05	1
14243	Benzo(g,h,i)perylene	191-24-2	N.D.	0.01	0.05	1
14243	Benzo(k)fluoranthene	207-08-9	N.D.	0.01	0.05	1
14243	Chrysene	218-01-9	N.D.	0.01	0.05	1
14243	Dibenz(a,h)anthracene	53-70-3	N.D.	0.02	0.07	1
14243	Fluoranthene	206-44-0	N.D.	0.01	0.05	1
14243	Fluorene	86-73-7	0.08	0.01	0.05	1
14243	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.01	0.05	1
14243	Naphthalene	91-20-3	N.D.	0.03	0.07	1
14243	Phenanthrene	85-01-8	N.D.	0.03	0.07	1
14243	Pyrene	129-00-0	N.D.	0.01	0.05	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	72 J	19	250	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**ug/l**	**ug/l**	**ug/l**	
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	95	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	240	1
The reverse surrogate, capric acid, is present at <1%.						
Metals	**SW-846 6010B**		**ug/l**	**ug/l**	**ug/l**	
07035	Arsenic	7440-38-2	N.D.	16.0	50.0	1
07046	Barium	7440-39-3	43.6	1.0	5.0	1
07049	Cadmium	7440-43-9	N.D.	1.0	5.0	1
07051	Chromium	7440-47-3	N.D.	5.3	15.0	1
01754	Iron	7439-89-6	25,900	40.0	200	1
07058	Manganese	7439-96-5	482	1.1	20.0	1
07036	Selenium	7782-49-2	N.D.	21.0	50.0	1
07066	Silver	7440-22-4	N.D.	5.0	10.0	1

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

Sample Description: **MW-19-W-190313 Grab Groundwater**
Facility# 1001838 Job# 17155864
10 5th Street - Astoria, OR

Chevron
ELLE Sample #: WW 1010769
ELLE Group #: 2034062
Matrix: Groundwater

Project Name: **1001838**

Submittal Date/Time: 03/15/2019 10:00
Collection Date/Time: 03/13/2019 11:50

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020**		**ug/l**	**ug/l**	**ug/l**	
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
	SW-846 7470A		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX 8260B Water	SW-846 8260B	1	Z190782AA	03/19/2019 14:04	Alexander D Sechrist	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z190782AA	03/19/2019 14:03	Alexander D Sechrist	1
14243	SIM SVOAs 8270C MINI	SW-846 8270C SIM	1	19079WAC026	03/21/2019 17:46	Kira N Beck	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	19079WAC026	03/20/2019 17:10	Christine E Gleim	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	19078A20A	03/21/2019 00:52	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	19078A20A	03/21/2019 00:51	Jeremy C Giffin	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	190860015A	03/29/2019 03:15	Heather E Williams	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	190860015A	03/27/2019 16:38	Ryan J Dowdy	1
07035	Arsenic	SW-846 6010B	1	190781404407	03/28/2019 00:01	Elaine F Stoltzfus	1
07046	Barium	SW-846 6010B	1	190781404407	03/28/2019 00:01	Elaine F Stoltzfus	1
07049	Cadmium	SW-846 6010B	1	190781404407	03/28/2019 00:01	Elaine F Stoltzfus	1
07051	Chromium	SW-846 6010B	1	190781404407	03/28/2019 00:01	Elaine F Stoltzfus	1
01754	Iron	SW-846 6010B	1	190781404407	03/28/2019 00:01	Elaine F Stoltzfus	1
07058	Manganese	SW-846 6010B	1	190781404407	03/28/2019 00:01	Elaine F Stoltzfus	1
07036	Selenium	SW-846 6010B	1	190781404407	03/28/2019 00:01	Elaine F Stoltzfus	1
07066	Silver	SW-846 6010B	1	190781404407	03/28/2019 14:50	Cindy M Gehman	1
06035	Lead	SW-846 6020	1	190791404701A	03/21/2019 10:14	Choon Y Tian	1
00259	Mercury	SW-846 7470A	1	190780571310	03/21/2019 08:26	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	190781404407	03/22/2019 07:00	Annamaria Kuhns	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	190791404701	03/20/2019 15:15	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	190780571310	03/20/2019 17:00	Barbara A Kane	1

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

Sample Description: **MW-19-W-190313 Filtered Grab Groundwater**
Facility# 1001838 Job# 17155864
10 5th Street - Astoria, OR

Chevron
ELLE Sample #: WW 1010770
ELLE Group #: 2034062
Matrix: Groundwater

Project Name: **1001838**

Submittal Date/Time: 03/15/2019 10:00
Collection Date/Time: 03/13/2019 11:50

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals Dissolved		**SW-846 6010B**	**ug/l**	**ug/l**	**ug/l**	
07035	Arsenic	7440-38-2	N.D.	16.0	50.0	1
07046	Barium	7440-39-3	34.7	1.0	5.0	1
07049	Cadmium	7440-43-9	N.D.	1.0	5.0	1
07051	Chromium	7440-47-3	N.D.	5.3	15.0	1
01754	Iron	7439-89-6	17,700	40.0	200	1
07058	Manganese	7439-96-5	455	1.1	20.0	1
07036	Selenium	7782-49-2	N.D.	21.0	50.0	1
07066	Silver	7440-22-4	N.D.	5.0	10.0	1
		SW-846 6020	**ug/l**	**ug/l**	**ug/l**	
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
		SW-846 7470A	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

This sample was field filtered for dissolved metals.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	190781404408	03/20/2019 18:19	Cindy M Gehman	1
07046	Barium	SW-846 6010B	1	190781404408	03/20/2019 18:19	Cindy M Gehman	1
07049	Cadmium	SW-846 6010B	1	190781404408	03/20/2019 18:19	Cindy M Gehman	1
07051	Chromium	SW-846 6010B	1	190781404408	03/20/2019 18:19	Cindy M Gehman	1
01754	Iron	SW-846 6010B	1	190781404408	03/20/2019 18:19	Cindy M Gehman	1
07058	Manganese	SW-846 6010B	1	190781404408	03/20/2019 18:19	Cindy M Gehman	1
07036	Selenium	SW-846 6010B	1	190781404408	03/20/2019 18:19	Cindy M Gehman	1
07066	Silver	SW-846 6010B	1	190781404408	03/20/2019 18:19	Cindy M Gehman	1
06035	Lead	SW-846 6020	1	190791404702A	04/18/2019 19:08	Patrick J Engle	1
00259	Mercury	SW-846 7470A	1	190780571310	03/21/2019 08:47	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	190781404408	03/19/2019 16:40	Barbara A Kane	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	190791404702	03/21/2019 15:00	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	190780571310	03/20/2019 17:00	Barbara A Kane	1

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

Sample Description: **MW-20-W-190313 Grab Groundwater**
Facility# 1001838 Job# 17155864
10 5th Street - Astoria, OR

Chevron
ELLE Sample #: WW 1010771
ELLE Group #: 2034062
Matrix: Groundwater

Project Name: **1001838**

Submittal Date/Time: 03/15/2019 10:00
Collection Date/Time: 03/13/2019 09:30

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**		**ug/l**	**ug/l**	
10945	Benzene	71-43-2	N.D.		0.2	1	1
10945	Ethylbenzene	100-41-4	N.D.		0.2	1	1
10945	Toluene	108-88-3	N.D.		0.2	1	1
10945	Xylene (Total)	1330-20-7	N.D.		0.5	5	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/l**		**ug/l**	**ug/l**	
14243	Acenaphthene	83-32-9	0.06		0.01	0.05	1
14243	Acenaphthylene	208-96-8	N.D.		0.01	0.05	1
14243	Anthracene	120-12-7	N.D.		0.01	0.05	1
14243	Benzo(a)anthracene	56-55-3	N.D.		0.01	0.05	1
14243	Benzo(a)pyrene	50-32-8	N.D.		0.01	0.05	1
14243	Benzo(b)fluoranthene	205-99-2	0.01	J	0.01	0.05	1
14243	Benzo(g,h,i)perylene	191-24-2	0.01	J	0.01	0.05	1
14243	Benzo(k)fluoranthene	207-08-9	N.D.		0.01	0.05	1
14243	Chrysene	218-01-9	N.D.		0.01	0.05	1
14243	Dibenz(a,h)anthracene	53-70-3	N.D.		0.02	0.07	1
14243	Fluoranthene	206-44-0	N.D.		0.01	0.05	1
14243	Fluorene	86-73-7	N.D.		0.01	0.05	1
14243	Indeno(1,2,3-cd)pyrene	193-39-5	0.01	J	0.01	0.05	1
14243	Naphthalene	91-20-3	N.D.		0.03	0.07	1
14243	Phenanthrene	85-01-8	N.D.		0.03	0.07	1
14243	Pyrene	129-00-0	0.01	J	0.01	0.05	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**		**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	27	J	19	250	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**ug/l**		**ug/l**	**ug/l**	
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.		29	94	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.		66	240	1
The reverse surrogate, capric acid, is present at <1%.							
Metals	**SW-846 6010B**		**ug/l**		**ug/l**	**ug/l**	
07035	Arsenic	7440-38-2	N.D.		16.0	50.0	1
07046	Barium	7440-39-3	87.1		1.0	5.0	1
07049	Cadmium	7440-43-9	N.D.		1.0	5.0	1
07051	Chromium	7440-47-3	N.D.		5.3	15.0	1
01754	Iron	7439-89-6	17,400		40.0	200	1
07058	Manganese	7439-96-5	348		1.1	20.0	1
07036	Selenium	7782-49-2	N.D.		21.0	50.0	1
07066	Silver	7440-22-4	N.D.		5.0	10.0	1

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

Sample Description: **MW-20-W-190313 Grab Groundwater**
Facility# 1001838 Job# 17155864
10 5th Street - Astoria, OR

Chevron
ELLE Sample #: WW 1010771
ELLE Group #: 2034062
Matrix: Groundwater

Project Name: **1001838**

Submittal Date/Time: 03/15/2019 10:00
Collection Date/Time: 03/13/2019 09:30

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals		**SW-846 6020**	**ug/l**	**ug/l**	**ug/l**	
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
		SW-846 7470A	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX 8260B Water	SW-846 8260B	1	Z190782AA	03/19/2019 14:28	Alexander D Sechrist	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z190782AA	03/19/2019 14:27	Alexander D Sechrist	1
14243	SIM SVOAs 8270C MINI	SW-846 8270C SIM	1	19079WAC026	03/21/2019 14:00	Kira N Beck	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	19079WAC026	03/20/2019 17:10	Christine E Gleim	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	19078A20A	03/21/2019 01:20	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	19078A20A	03/21/2019 01:19	Jeremy C Giffin	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	190860015A	03/29/2019 03:37	Heather E Williams	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	190860015A	03/27/2019 16:38	Ryan J Dowdy	1
07035	Arsenic	SW-846 6010B	1	190781404409	03/28/2019 10:36	Kevin Litwa	1
07046	Barium	SW-846 6010B	1	190781404409	03/28/2019 10:36	Kevin Litwa	1
07049	Cadmium	SW-846 6010B	1	190781404409	03/28/2019 10:36	Kevin Litwa	1
07051	Chromium	SW-846 6010B	1	190781404409	03/28/2019 10:36	Kevin Litwa	1
01754	Iron	SW-846 6010B	1	190781404409	03/28/2019 10:36	Kevin Litwa	1
07058	Manganese	SW-846 6010B	1	190781404409	03/28/2019 10:36	Kevin Litwa	1
07036	Selenium	SW-846 6010B	1	190781404409	03/28/2019 10:36	Kevin Litwa	1
07066	Silver	SW-846 6010B	1	190781404409	04/01/2019 20:56	Cindy M Gehman	1
06035	Lead	SW-846 6020	1	190791404702A	04/18/2019 18:35	Patrick J Engle	1
00259	Mercury	SW-846 7470A	1	190800571303	03/21/2019 13:13	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	190781404409	03/20/2019 06:05	James L Mertz	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	190791404702	03/21/2019 15:00	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	190800571303	03/21/2019 09:15	Annamaria Kuhns	1

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

Sample Description: **MW-20-W-190313MS Grab Groundwater**
Facility# 1001838 Job# 17155864
10 5th Street - Astoria, OR

Chevron
ELLE Sample #: WW 1010772
ELLE Group #: 2034062
Matrix: Groundwater

Project Name: **1001838**

Submittal Date/Time: 03/15/2019 10:00
Collection Date/Time: 03/13/2019 09:30

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	**ug/l**	
10945	Benzene	71-43-2	22	0.2	1	1
10945	Ethylbenzene	100-41-4	19	0.2	1	1
10945	Toluene	108-88-3	21	0.2	1	1
10945	Xylene (Total)	1330-20-7	58	0.5	5	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/l**	**ug/l**	**ug/l**	
14243	Acenaphthene	83-32-9	0.7	0.01	0.05	1
14243	Acenaphthylene	208-96-8	0.6	0.01	0.05	1
14243	Anthracene	120-12-7	0.8	0.01	0.05	1
14243	Benzo(a)anthracene	56-55-3	1	0.01	0.05	1
14243	Benzo(a)pyrene	50-32-8	0.7	0.01	0.05	1
14243	Benzo(b)fluoranthene	205-99-2	0.9	0.01	0.05	1
14243	Benzo(g,h,i)perylene	191-24-2	0.8	0.01	0.05	1
14243	Benzo(k)fluoranthene	207-08-9	0.8	0.01	0.05	1
14243	Chrysene	218-01-9	0.9	0.01	0.05	1
14243	Dibenz(a,h)anthracene	53-70-3	0.8	0.02	0.07	1
14243	Fluoranthene	206-44-0	0.9	0.01	0.05	1
14243	Fluorene	86-73-7	0.7	0.01	0.05	1
14243	Indeno(1,2,3-cd)pyrene	193-39-5	0.9	0.01	0.05	1
14243	Naphthalene	91-20-3	0.6	0.03	0.07	1
14243	Phenanthrene	85-01-8	0.8	0.03	0.07	1
14243	Pyrene	129-00-0	0.9	0.01	0.05	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	1,300	19	250	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**ug/l**	**ug/l**	**ug/l**	
12005	DRO C12-C24 w/Si Gel	n.a.	820	29	93	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	65	230	1
The reverse surrogate, capric acid, is present at <1%.						
Metals	**SW-846 6010B**		**ug/l**	**ug/l**	**ug/l**	
07035	Arsenic	7440-38-2	150	16.0	50.0	1
07046	Barium	7440-39-3	2,060	1.0	5.0	1
07049	Cadmium	7440-43-9	50.2	1.0	5.0	1
07051	Chromium	7440-47-3	197	5.3	15.0	1
01754	Iron	7439-89-6	18,200	40.0	200	1
07058	Manganese	7439-96-5	856	1.1	20.0	1
07036	Selenium	7782-49-2	153	21.0	50.0	1
07066	Silver	7440-22-4	52.0	5.0	10.0	1

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

Sample Description: **MW-20-W-190313MS Grab Groundwater**
Facility# 1001838 Job# 17155864
10 5th Street - Astoria, OR

Chevron
ELLE Sample #: WW 1010772
ELLE Group #: 2034062
Matrix: Groundwater

Project Name: **1001838**

Submittal Date/Time: 03/15/2019 10:00
Collection Date/Time: 03/13/2019 09:30

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020**		**ug/l**	**ug/l**	**ug/l**	
06035	Lead	7439-92-1	15.3	1.1	3.0	1
	SW-846 7470A		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.92	0.050	0.20	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX 8260B Water	SW-846 8260B	1	Z190782AA	03/19/2019 14:52	Alexander D Sechrist	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z190782AA	03/19/2019 14:51	Alexander D Sechrist	1
14243	SIM SVOAs 8270C MINI	SW-846 8270C SIM	1	19079WAC026	03/21/2019 14:29	Kira N Beck	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	19079WAC026	03/20/2019 17:10	Christine E Gleim	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	19078A20A	03/21/2019 01:47	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	19078A20A	03/21/2019 01:46	Jeremy C Giffin	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	190860015A	03/29/2019 03:59	Heather E Williams	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	190860015A	03/27/2019 16:38	Ryan J Dowdy	1
07035	Arsenic	SW-846 6010B	1	190781404409	03/28/2019 10:44	Kevin Litwa	1
07046	Barium	SW-846 6010B	1	190781404409	03/28/2019 10:44	Kevin Litwa	1
07049	Cadmium	SW-846 6010B	1	190781404409	03/28/2019 10:44	Kevin Litwa	1
07051	Chromium	SW-846 6010B	1	190781404409	03/28/2019 10:44	Kevin Litwa	1
01754	Iron	SW-846 6010B	1	190781404409	03/28/2019 10:44	Kevin Litwa	1
07058	Manganese	SW-846 6010B	1	190781404409	03/28/2019 10:44	Kevin Litwa	1
07036	Selenium	SW-846 6010B	1	190781404409	03/28/2019 10:44	Kevin Litwa	1
07066	Silver	SW-846 6010B	1	190781404409	04/01/2019 21:06	Cindy M Gehman	1
06035	Lead	SW-846 6020	1	190791404702A	04/18/2019 18:42	Patrick J Engle	1
00259	Mercury	SW-846 7470A	1	190800571303	03/21/2019 13:17	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	190781404409	03/20/2019 06:05	James L Mertz	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	190791404702	03/21/2019 15:00	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	190800571303	03/21/2019 09:15	Annamaria Kuhns	1

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

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Sample Description: **MW-20-W-190313MSD Grab Groundwater**
Facility# 1001838 Job# 17155864
10 5th Street - Astoria, OR

Chevron
ELLE Sample #: WW 1010773
ELLE Group #: 2034062
Matrix: Groundwater

Project Name: **1001838**

Submittal Date/Time: 03/15/2019 10:00
Collection Date/Time: 03/13/2019 09:30

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	**ug/l**	
10945	Benzene	71-43-2	22	0.2	1	1
10945	Ethylbenzene	100-41-4	19	0.2	1	1
10945	Toluene	108-88-3	20	0.2	1	1
10945	Xylene (Total)	1330-20-7	58	0.5	5	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/l**	**ug/l**	**ug/l**	
14243	Acenaphthene	83-32-9	0.5	0.01	0.05	1
14243	Acenaphthylene	208-96-8	0.5	0.01	0.05	1
14243	Anthracene	120-12-7	0.8	0.01	0.05	1
14243	Benzo(a)anthracene	56-55-3	1	0.01	0.05	1
14243	Benzo(a)pyrene	50-32-8	0.7	0.01	0.05	1
14243	Benzo(b)fluoranthene	205-99-2	0.9	0.01	0.05	1
14243	Benzo(g,h,i)perylene	191-24-2	0.8	0.01	0.05	1
14243	Benzo(k)fluoranthene	207-08-9	0.8	0.01	0.05	1
14243	Chrysene	218-01-9	0.9	0.01	0.05	1
14243	Dibenz(a,h)anthracene	53-70-3	0.8	0.02	0.07	1
14243	Fluoranthene	206-44-0	0.9	0.01	0.05	1
14243	Fluorene	86-73-7	0.6	0.01	0.05	1
14243	Indeno(1,2,3-cd)pyrene	193-39-5	0.9	0.01	0.05	1
14243	Naphthalene	91-20-3	0.4	0.03	0.07	1
14243	Phenanthrene	85-01-8	0.8	0.03	0.07	1
14243	Pyrene	129-00-0	1	0.01	0.05	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	1,300	19	250	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**ug/l**	**ug/l**	**ug/l**	
12005	DRO C12-C24 w/Si Gel	n.a.	810	29	95	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	240	1
The reverse surrogate, capric acid, is present at <1%.						
Metals	**SW-846 6010B**		**ug/l**	**ug/l**	**ug/l**	
07035	Arsenic	7440-38-2	149	16.0	50.0	1
07046	Barium	7440-39-3	2,000	1.0	5.0	1
07049	Cadmium	7440-43-9	49.0	1.0	5.0	1
07051	Chromium	7440-47-3	193	5.3	15.0	1
01754	Iron	7439-89-6	18,000	40.0	200	1
07058	Manganese	7439-96-5	843	1.1	20.0	1
07036	Selenium	7782-49-2	152	21.0	50.0	1
07066	Silver	7440-22-4	51.2	5.0	10.0	1

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

Sample Description: **MW-20-W-190313MSD Grab Groundwater**
Facility# 1001838 Job# 17155864
10 5th Street - Astoria, OR

Chevron
ELLE Sample #: WW 1010773
ELLE Group #: 2034062
Matrix: Groundwater

Project Name: **1001838**

Submittal Date/Time: 03/15/2019 10:00
Collection Date/Time: 03/13/2019 09:30

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020**		**ug/l**	**ug/l**	**ug/l**	
06035	Lead	7439-92-1	15.4	1.1	3.0	1
	SW-846 7470A		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.90	0.050	0.20	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX 8260B Water	SW-846 8260B	1	Z190782AA	03/19/2019 15:17	Alexander D Sechrist	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z190782AA	03/19/2019 15:16	Alexander D Sechrist	1
14243	SIM SVOAs 8270C MINI	SW-846 8270C SIM	1	19079WAC026	03/21/2019 14:57	Kira N Beck	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	19079WAC026	03/20/2019 17:10	Christine E Gleim	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	19078A20A	03/21/2019 02:14	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	19078A20A	03/21/2019 02:13	Jeremy C Giffin	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	190860015A	03/29/2019 04:20	Heather E Williams	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	190860015A	03/27/2019 16:38	Ryan J Dowdy	1
07035	Arsenic	SW-846 6010B	1	190781404409	03/28/2019 10:47	Kevin Litwa	1
07046	Barium	SW-846 6010B	1	190781404409	03/28/2019 10:47	Kevin Litwa	1
07049	Cadmium	SW-846 6010B	1	190781404409	03/28/2019 10:47	Kevin Litwa	1
07051	Chromium	SW-846 6010B	1	190781404409	03/28/2019 10:47	Kevin Litwa	1
01754	Iron	SW-846 6010B	1	190781404409	03/28/2019 10:47	Kevin Litwa	1
07058	Manganese	SW-846 6010B	1	190781404409	03/28/2019 10:47	Kevin Litwa	1
07036	Selenium	SW-846 6010B	1	190781404409	03/28/2019 10:47	Kevin Litwa	1
07066	Silver	SW-846 6010B	1	190781404409	04/01/2019 21:09	Cindy M Gehman	1
06035	Lead	SW-846 6020	1	190791404702A	04/18/2019 18:45	Patrick J Engle	1
00259	Mercury	SW-846 7470A	1	190800571303	03/21/2019 13:19	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	190781404409	03/20/2019 06:05	James L Mertz	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	190791404702	03/21/2019 15:00	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	190800571303	03/21/2019 09:15	Annamaria Kuhns	1

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

Sample Description: **MW-20-W-190313DUP Grab Groundwater**
Facility# 1001838 Job# 17155864
10 5th Street - Astoria, OR

Chevron
ELLE Sample #: WW 1010774
ELLE Group #: 2034062
Matrix: Groundwater

Project Name: **1001838**

Submittal Date/Time: 03/15/2019 10:00
Collection Date/Time: 03/13/2019 09:30

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals		**SW-846 6010B**	**ug/l**	**ug/l**	**ug/l**	
07035	Arsenic	7440-38-2	N.D.	16.0	50.0	1
07046	Barium	7440-39-3	86.4	1.0	5.0	1
07049	Cadmium	7440-43-9	N.D.	1.0	5.0	1
07051	Chromium	7440-47-3	N.D.	5.3	15.0	1
01754	Iron	7439-89-6	17,200	40.0	200	1
07058	Manganese	7439-96-5	346	1.1	20.0	1
07036	Selenium	7782-49-2	N.D.	21.0	50.0	1
07066	Silver	7440-22-4	N.D.	5.0	10.0	1
		SW-846 6020	**ug/l**	**ug/l**	**ug/l**	
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
		SW-846 7470A	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	190781404409	03/28/2019 10:41	Kevin Litwa	1
07046	Barium	SW-846 6010B	1	190781404409	03/28/2019 10:41	Kevin Litwa	1
07049	Cadmium	SW-846 6010B	1	190781404409	03/28/2019 10:41	Kevin Litwa	1
07051	Chromium	SW-846 6010B	1	190781404409	03/28/2019 10:41	Kevin Litwa	1
01754	Iron	SW-846 6010B	1	190781404409	03/28/2019 10:41	Kevin Litwa	1
07058	Manganese	SW-846 6010B	1	190781404409	03/28/2019 10:41	Kevin Litwa	1
07036	Selenium	SW-846 6010B	1	190781404409	03/28/2019 10:41	Kevin Litwa	1
07066	Silver	SW-846 6010B	1	190781404409	04/01/2019 21:02	Cindy M Gehman	1
06035	Lead	SW-846 6020	1	190791404702A	04/18/2019 18:40	Patrick J Engle	1
00259	Mercury	SW-846 7470A	1	190800571303	03/21/2019 13:15	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	190781404409	03/20/2019 06:05	James L Mertz	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	190791404702	03/21/2019 15:00	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	190800571303	03/21/2019 09:15	Annamaria Kuhns	1

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

Sample Description: **MW-20-W-190313 Filtered Grab Groundwater**
Facility# 1001838 Job# 17155864
10 5th Street - Astoria, OR

Chevron
ELLE Sample #: WW 1010775
ELLE Group #: 2034062
Matrix: Groundwater

Project Name: **1001838**

Submittal Date/Time: 03/15/2019 10:00
Collection Date/Time: 03/13/2019 09:30

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals Dissolved	**SW-846 6010B**		**ug/l**	**ug/l**	**ug/l**	
07035	Arsenic	7440-38-2	N.D.	16.0	50.0	1
07046	Barium	7440-39-3	92.3	1.0	5.0	1
07049	Cadmium	7440-43-9	N.D.	1.0	5.0	1
07051	Chromium	7440-47-3	N.D. K2	5.3	15.0	1
01754	Iron	7439-89-6	17,700	40.0	200	1
07058	Manganese	7439-96-5	382	1.1	20.0	1
07036	Selenium	7782-49-2	N.D.	21.0	50.0	1
07066	Silver	7440-22-4	N.D.	5.0	10.0	1
	SW-846 6020		**ug/l**	**ug/l**	**ug/l**	
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
	SW-846 7470A		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

This sample was field filtered for dissolved metals.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	190781404410	03/20/2019 14:25	Cindy M Gehman	1
07046	Barium	SW-846 6010B	1	190781404410	03/20/2019 14:25	Cindy M Gehman	1
07049	Cadmium	SW-846 6010B	1	190781404410	03/20/2019 14:25	Cindy M Gehman	1
07051	Chromium	SW-846 6010B	1	190781404410	03/20/2019 14:25	Cindy M Gehman	1
01754	Iron	SW-846 6010B	1	190781404410	03/20/2019 14:25	Cindy M Gehman	1
07058	Manganese	SW-846 6010B	1	190781404410	03/20/2019 14:25	Cindy M Gehman	1
07036	Selenium	SW-846 6010B	1	190781404410	03/20/2019 14:25	Cindy M Gehman	1
07066	Silver	SW-846 6010B	1	190781404410	03/20/2019 14:25	Cindy M Gehman	1
06035	Lead	SW-846 6020	1	190791404701A	03/21/2019 09:16	Choon Y Tian	1
00259	Mercury	SW-846 7470A	2	190800571305	03/25/2019 06:27	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	190781404410	03/20/2019 06:05	James L Mertz	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	190791404701	03/20/2019 15:15	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	190800571305	03/22/2019 18:00	Barbara A Kane	1
05713	WW SW846 Hg Digest	SW-846 7470A	2	190840571303	03/26/2019 06:34	James L Mertz	1

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

Sample Description: **MW-20-W-190313MS Filtered Grab Groundwater**
Facility# 1001838 Job# 17155864
10 5th Street - Astoria, OR

Chevron
ELLE Sample #: WW 1010776
ELLE Group #: 2034062
Matrix: Groundwater

Project Name: **1001838**

Submittal Date/Time: 03/15/2019 10:00
Collection Date/Time: 03/13/2019 09:30

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals Dissolved	**SW-846 6010B**		**ug/l**	**ug/l**	**ug/l**	
07035	Arsenic	7440-38-2	158	16.0	50.0	1
07046	Barium	7440-39-3	2,090	1.0	5.0	1
07049	Cadmium	7440-43-9	49.8	1.0	5.0	1
07051	Chromium	7440-47-3	198	5.3	15.0	1
01754	Iron	7439-89-6	18,100	40.0	200	1
07058	Manganese	7439-96-5	886	1.1	20.0	1
07036	Selenium	7782-49-2	136	21.0	50.0	1
07066	Silver	7440-22-4	51.2	5.0	10.0	1
	SW-846 6020		**ug/l**	**ug/l**	**ug/l**	
06035	Lead	7439-92-1	15.4	1.1	3.0	1
	SW-846 7470A		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.95	0.050	0.20	1

Sample Comments

This sample was field filtered for dissolved metals.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	190781404410	03/20/2019 14:35	Cindy M Gehman	1
07046	Barium	SW-846 6010B	1	190781404410	03/20/2019 14:35	Cindy M Gehman	1
07049	Cadmium	SW-846 6010B	1	190781404410	03/20/2019 14:35	Cindy M Gehman	1
07051	Chromium	SW-846 6010B	1	190781404410	03/20/2019 14:35	Cindy M Gehman	1
01754	Iron	SW-846 6010B	1	190781404410	03/20/2019 14:35	Cindy M Gehman	1
07058	Manganese	SW-846 6010B	1	190781404410	03/20/2019 14:35	Cindy M Gehman	1
07036	Selenium	SW-846 6010B	1	190781404410	03/20/2019 14:35	Cindy M Gehman	1
07066	Silver	SW-846 6010B	1	190781404410	03/20/2019 14:35	Cindy M Gehman	1
06035	Lead	SW-846 6020	1	190791404701A	03/21/2019 09:22	Choon Y Tian	1
00259	Mercury	SW-846 7470A	2	190800571305	03/25/2019 06:31	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	190781404410	03/20/2019 06:05	James L Mertz	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	190791404701	03/20/2019 15:15	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	190800571305	03/22/2019 18:00	Barbara A Kane	1
05713	WW SW846 Hg Digest	SW-846 7470A	2	190840571303	03/26/2019 06:34	James L Mertz	1

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

Sample Description: **MW-20-W-190313MSD Filtered Grab Groundwater**
Facility# 1001838 Job# 17155864
10 5th Street - Astoria, OR

Chevron
ELLE Sample #: WW 1010777
ELLE Group #: 2034062
Matrix: Groundwater

Project Name: **1001838**

Submittal Date/Time: 03/15/2019 10:00
Collection Date/Time: 03/13/2019 09:30

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals Dissolved	**SW-846 6010B**		**ug/l**	**ug/l**	**ug/l**	
07035	Arsenic	7440-38-2	168	16.0	50.0	1
07046	Barium	7440-39-3	2,130	1.0	5.0	1
07049	Cadmium	7440-43-9	51.2	1.0	5.0	1
07051	Chromium	7440-47-3	202	5.3	15.0	1
01754	Iron	7439-89-6	18,400	40.0	200	1
07058	Manganese	7439-96-5	897	1.1	20.0	1
07036	Selenium	7782-49-2	159	21.0	50.0	1
07066	Silver	7440-22-4	52.5	5.0	10.0	1
	SW-846 6020		**ug/l**	**ug/l**	**ug/l**	
06035	Lead	7439-92-1	15.6	1.1	3.0	1
	SW-846 7470A		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.96	0.050	0.20	1

Sample Comments

This sample was field filtered for dissolved metals.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	190781404410	03/20/2019 14:38	Cindy M Gehman	1
07046	Barium	SW-846 6010B	1	190781404410	03/20/2019 14:38	Cindy M Gehman	1
07049	Cadmium	SW-846 6010B	1	190781404410	03/20/2019 14:38	Cindy M Gehman	1
07051	Chromium	SW-846 6010B	1	190781404410	03/20/2019 14:38	Cindy M Gehman	1
01754	Iron	SW-846 6010B	1	190781404410	03/20/2019 14:38	Cindy M Gehman	1
07058	Manganese	SW-846 6010B	1	190781404410	03/20/2019 14:38	Cindy M Gehman	1
07036	Selenium	SW-846 6010B	1	190781404410	03/20/2019 14:38	Cindy M Gehman	1
07066	Silver	SW-846 6010B	1	190781404410	03/20/2019 14:38	Cindy M Gehman	1
06035	Lead	SW-846 6020	1	190791404701A	03/21/2019 09:25	Choon Y Tian	1
00259	Mercury	SW-846 7470A	2	190800571305	03/25/2019 06:33	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	190781404410	03/20/2019 06:05	James L Mertz	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	190791404701	03/20/2019 15:15	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	190800571305	03/22/2019 18:00	Barbara A Kane	1
05713	WW SW846 Hg Digest	SW-846 7470A	2	190840571303	03/26/2019 06:34	James L Mertz	1

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

Sample Description: **MW-20-W-190313DUP Filtered Grab Groundwater**
Facility# 1001838 Job# 17155864
10 5th Street - Astoria, OR

Chevron
ELLE Sample #: WW 1010778
ELLE Group #: 2034062
Matrix: Groundwater

Project Name: **1001838**

Submittal Date/Time: 03/15/2019 10:00
Collection Date/Time: 03/13/2019 09:30

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals Dissolved		**SW-846 6010B**	**ug/l**	**ug/l**	**ug/l**	
07035	Arsenic	7440-38-2	N.D.	16.0	50.0	1
07046	Barium	7440-39-3	87.9	1.0	5.0	1
07049	Cadmium	7440-43-9	N.D.	1.0	5.0	1
07051	Chromium	7440-47-3	N.D. K2	5.3	15.0	1
01754	Iron	7439-89-6	18,700	40.0	200	1
07058	Manganese	7439-96-5	362	1.1	20.0	1
07036	Selenium	7782-49-2	N.D.	21.0	50.0	1
07066	Silver	7440-22-4	N.D.	5.0	10.0	1
		SW-846 6020	**ug/l**	**ug/l**	**ug/l**	
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
		SW-846 7470A	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

This sample was field filtered for dissolved metals.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	190781404410	03/20/2019 14:32	Cindy M Gehman	1
07046	Barium	SW-846 6010B	1	190781404410	03/20/2019 14:32	Cindy M Gehman	1
07049	Cadmium	SW-846 6010B	1	190781404410	03/20/2019 14:32	Cindy M Gehman	1
07051	Chromium	SW-846 6010B	1	190781404410	03/20/2019 14:32	Cindy M Gehman	1
01754	Iron	SW-846 6010B	1	190781404410	03/20/2019 14:32	Cindy M Gehman	1
07058	Manganese	SW-846 6010B	1	190781404410	03/20/2019 14:32	Cindy M Gehman	1
07036	Selenium	SW-846 6010B	1	190781404410	03/20/2019 14:32	Cindy M Gehman	1
07066	Silver	SW-846 6010B	1	190781404410	03/20/2019 14:32	Cindy M Gehman	1
06035	Lead	SW-846 6020	1	190791404701A	03/21/2019 09:20	Choon Y Tian	1
00259	Mercury	SW-846 7470A	2	190800571305	03/25/2019 06:29	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	190781404410	03/20/2019 06:05	James L Mertz	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	190791404701	03/20/2019 15:15	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	190800571305	03/22/2019 18:00	Barbara A Kane	1
05713	WW SW846 Hg Digest	SW-846 7470A	2	190840571303	03/26/2019 06:34	James L Mertz	1

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

Sample Description: **MW-24-W-190313 Grab Groundwater**
Facility# 1001838 Job# 17155864
10 5th Street - Astoria, OR

Chevron
ELLE Sample #: WW 1010779
ELLE Group #: 2034062
Matrix: Groundwater

Project Name: **1001838**

Submittal Date/Time: 03/15/2019 10:00
Collection Date/Time: 03/13/2019 11:00

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	**ug/l**	
10945	Benzene	71-43-2	0.3 J	0.2	1	1
10945	Ethylbenzene	100-41-4	0.3 J	0.2	1	1
10945	Toluene	108-88-3	0.2 J	0.2	1	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	5	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/l**	**ug/l**	**ug/l**	
14243	Acenaphthene	83-32-9	0.03 J	0.01	0.05	1
14243	Acenaphthylene	208-96-8	0.02 J	0.01	0.05	1
14243	Anthracene	120-12-7	0.05 J	0.01	0.05	1
14243	Benzo(a)anthracene	56-55-3	0.5	0.01	0.05	1
14243	Benzo(a)pyrene	50-32-8	0.2	0.01	0.05	1
14243	Benzo(b)fluoranthene	205-99-2	0.4	0.01	0.05	1
14243	Benzo(g,h,i)perylene	191-24-2	0.07	0.01	0.05	1
14243	Benzo(k)fluoranthene	207-08-9	0.1	0.01	0.05	1
14243	Chrysene	218-01-9	0.3	0.01	0.05	1
14243	Dibenz(a,h)anthracene	53-70-3	0.02 J	0.02	0.07	1
14243	Fluoranthene	206-44-0	0.9	0.01	0.05	1
14243	Fluorene	86-73-7	0.02 J	0.01	0.05	1
14243	Indeno(1,2,3-cd)pyrene	193-39-5	0.07	0.01	0.05	1
14243	Naphthalene	91-20-3	0.09	0.03	0.07	1
14243	Phenanthrene	85-01-8	0.07 J	0.03	0.07	1
14243	Pyrene	129-00-0	0.9	0.01	0.05	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	200 J	19	250	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**ug/l**	**ug/l**	**ug/l**	
12005	DRO C12-C24 w/Si Gel	n.a.	470	30	98	1
12005	HRO C24-C40 w/Si Gel	n.a.	490	68	240	1
The reverse surrogate, capric acid, is present at <1%.						
Metals	**SW-846 6010B**		**ug/l**	**ug/l**	**ug/l**	
07035	Arsenic	7440-38-2	N.D.	16.0	50.0	1
07046	Barium	7440-39-3	38.3	1.0	5.0	1
07049	Cadmium	7440-43-9	N.D.	1.0	5.0	1
07051	Chromium	7440-47-3	N.D.	5.3	15.0	1
01754	Iron	7439-89-6	1,930	40.0	200	1
07058	Manganese	7439-96-5	11.1 J	1.1	20.0	1
07036	Selenium	7782-49-2	N.D.	21.0	50.0	1
07066	Silver	7440-22-4	N.D.	5.0	10.0	1

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

Sample Description: **MW-24-W-190313 Grab Groundwater**
Facility# 1001838 Job# 17155864
10 5th Street - Astoria, OR

Chevron
ELLE Sample #: WW 1010779
ELLE Group #: 2034062
Matrix: Groundwater

Project Name: **1001838**

Submittal Date/Time: 03/15/2019 10:00
Collection Date/Time: 03/13/2019 11:00

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals		**SW-846 6020**	**ug/l**		**ug/l**	**ug/l**	
06035	Lead	7439-92-1	1.8	J	1.1	3.0	1
		SW-846 7470A	**ug/l**		**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.		0.050	0.20	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX 8260B Water	SW-846 8260B	1	Z190782AA	03/19/2019 15:41	Alexander D Sechrist	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z190782AA	03/19/2019 15:40	Alexander D Sechrist	1
14243	SIM SVOAs 8270C MINI	SW-846 8270C SIM	1	19079WAC026	03/21/2019 18:14	Kira N Beck	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	19079WAC026	03/20/2019 17:10	Christine E Gleim	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	19078A20A	03/21/2019 03:09	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	19078A20A	03/21/2019 03:08	Jeremy C Giffin	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	190860015A	03/29/2019 04:42	Heather E Williams	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	190860015A	03/27/2019 16:38	Ryan J Dowdy	1
07035	Arsenic	SW-846 6010B	1	190781404408	03/20/2019 18:44	Cindy M Gehman	1
07046	Barium	SW-846 6010B	1	190781404408	03/20/2019 18:44	Cindy M Gehman	1
07049	Cadmium	SW-846 6010B	1	190781404408	03/20/2019 18:44	Cindy M Gehman	1
07051	Chromium	SW-846 6010B	1	190781404408	03/20/2019 18:44	Cindy M Gehman	1
01754	Iron	SW-846 6010B	1	190781404408	03/20/2019 18:44	Cindy M Gehman	1
07058	Manganese	SW-846 6010B	1	190781404408	03/20/2019 18:44	Cindy M Gehman	1
07036	Selenium	SW-846 6010B	1	190781404408	03/20/2019 18:44	Cindy M Gehman	1
07066	Silver	SW-846 6010B	1	190781404408	03/20/2019 18:44	Cindy M Gehman	1
06035	Lead	SW-846 6020	1	190791404702A	04/18/2019 19:26	Patrick J Engle	1
00259	Mercury	SW-846 7470A	1	190780571311	03/22/2019 09:05	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	190781404408	03/19/2019 16:40	Barbara A Kane	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	190791404702	03/21/2019 15:00	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	190780571311	03/21/2019 07:30	Annamaria Kuhns	1

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

Sample Description: **MW-24-W-190313 Filtered Grab Groundwater**
Facility# 1001838 Job# 17155864
10 5th Street - Astoria, OR

Chevron
ELLE Sample #: WW 1010780
ELLE Group #: 2034062
Matrix: Groundwater

Project Name: **1001838**

Submittal Date/Time: 03/15/2019 10:00
Collection Date/Time: 03/13/2019 11:00

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals Dissolved	**SW-846 6010B**		**ug/l**	**ug/l**	**ug/l**	
07035	Arsenic	7440-38-2	N.D.	16.0	50.0	1
07046	Barium	7440-39-3	35.0	1.0	5.0	1
07049	Cadmium	7440-43-9	N.D.	1.0	5.0	1
07051	Chromium	7440-47-3	N.D.	5.3	15.0	1
01754	Iron	7439-89-6	681	40.0	200	1
07058	Manganese	7439-96-5	6.7 J	1.1	20.0	1
07036	Selenium	7782-49-2	N.D.	21.0	50.0	1
07066	Silver	7440-22-4	N.D.	5.0	10.0	1
	SW-846 6020		**ug/l**	**ug/l**	**ug/l**	
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
	SW-846 7470A		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

This sample was field filtered for dissolved metals.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	190781404408	03/20/2019 18:06	Cindy M Gehman	1
07046	Barium	SW-846 6010B	1	190781404408	03/20/2019 18:06	Cindy M Gehman	1
07049	Cadmium	SW-846 6010B	1	190781404408	03/20/2019 18:06	Cindy M Gehman	1
07051	Chromium	SW-846 6010B	1	190781404408	03/20/2019 18:06	Cindy M Gehman	1
01754	Iron	SW-846 6010B	1	190781404408	03/20/2019 18:06	Cindy M Gehman	1
07058	Manganese	SW-846 6010B	1	190781404408	03/20/2019 18:06	Cindy M Gehman	1
07036	Selenium	SW-846 6010B	1	190781404408	03/20/2019 18:06	Cindy M Gehman	1
07066	Silver	SW-846 6010B	1	190781404408	03/20/2019 18:06	Cindy M Gehman	1
06035	Lead	SW-846 6020	1	190791404702A	04/18/2019 18:59	Patrick J Engle	1
00259	Mercury	SW-846 7470A	1	190780571310	03/21/2019 08:39	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	190781404408	03/19/2019 16:40	Barbara A Kane	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	190791404702	03/21/2019 15:00	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	190780571310	03/20/2019 17:00	Barbara A Kane	1

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

Sample Description: **MW-22-W-190313 Grab Groundwater**
Facility# 1001838 Job# 17155864
10 5th Street - Astoria, OR

Chevron
ELLE Sample #: WW 1010781
ELLE Group #: 2034062
Matrix: Groundwater

Project Name: **1001838**

Submittal Date/Time: 03/15/2019 10:00
Collection Date/Time: 03/13/2019 08:50

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	**ug/l**	
10945	Benzene	71-43-2	N.D.	0.2	1	1
10945	Ethylbenzene	100-41-4	N.D.	0.2	1	1
10945	Toluene	108-88-3	N.D.	0.2	1	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	5	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/l**	**ug/l**	**ug/l**	
14243	Acenaphthene	83-32-9	N.D.	0.01	0.05	1
14243	Acenaphthylene	208-96-8	0.06	0.01	0.05	1
14243	Anthracene	120-12-7	N.D.	0.01	0.05	1
14243	Benzo(a)anthracene	56-55-3	N.D.	0.01	0.05	1
14243	Benzo(a)pyrene	50-32-8	N.D.	0.01	0.05	1
14243	Benzo(b)fluoranthene	205-99-2	N.D.	0.01	0.05	1
14243	Benzo(g,h,i)perylene	191-24-2	0.04 J	0.01	0.05	1
14243	Benzo(k)fluoranthene	207-08-9	N.D.	0.01	0.05	1
14243	Chrysene	218-01-9	0.01 J	0.01	0.05	1
14243	Dibenz(a,h)anthracene	53-70-3	N.D.	0.02	0.07	1
14243	Fluoranthene	206-44-0	N.D.	0.01	0.05	1
14243	Fluorene	86-73-7	N.D.	0.01	0.05	1
14243	Indeno(1,2,3-cd)pyrene	193-39-5	0.01 J	0.01	0.05	1
14243	Naphthalene	91-20-3	N.D.	0.03	0.07	1
14243	Phenanthrene	85-01-8	N.D.	0.03	0.07	1
14243	Pyrene	129-00-0	0.02 J	0.01	0.05	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	19	250	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**ug/l**	**ug/l**	**ug/l**	
12005	DRO C12-C24 w/Si Gel	n.a.	550	31	99	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	69	250	1
The reverse surrogate, capric acid, is present at <1%.						
Metals	**SW-846 6010B**		**ug/l**	**ug/l**	**ug/l**	
07035	Arsenic	7440-38-2	N.D.	16.0	50.0	1
07046	Barium	7440-39-3	41.2	1.0	5.0	1
07049	Cadmium	7440-43-9	2.4 J	1.0	5.0	1
07051	Chromium	7440-47-3	N.D.	5.3	15.0	1
01754	Iron	7439-89-6	1,390	40.0	200	1
07058	Manganese	7439-96-5	31.7	1.1	20.0	1
07036	Selenium	7782-49-2	N.D.	21.0	50.0	1
07066	Silver	7440-22-4	N.D.	5.0	10.0	1

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

Sample Description: **MW-22-W-190313 Grab Groundwater**
Facility# 1001838 Job# 17155864
10 5th Street - Astoria, OR

Project Name: **1001838**

Submittal Date/Time: 03/15/2019 10:00
Collection Date/Time: 03/13/2019 08:50

Chevron
ELLE Sample #: WW 1010781
ELLE Group #: 2034062
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020**		**ug/l**	**ug/l**	**ug/l**	
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
	SW-846 7470A		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX 8260B Water	SW-846 8260B	1	Z190782AA	03/19/2019 16:05	Alexander D Sechrist	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z190782AA	03/19/2019 16:04	Alexander D Sechrist	1
14243	SIM SVOAs 8270C MINI	SW-846 8270C SIM	1	19079WAC026	03/21/2019 18:42	Kira N Beck	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	19079WAC026	03/20/2019 17:10	Christine E Gleim	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	19078A20A	03/21/2019 03:36	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	19078A20A	03/21/2019 03:35	Jeremy C Giffin	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	190860015A	03/29/2019 05:04	Heather E Williams	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	190860015A	03/27/2019 16:38	Ryan J Dowdy	1
07035	Arsenic	SW-846 6010B	1	190781404408	03/20/2019 18:32	Cindy M Gehman	1
07046	Barium	SW-846 6010B	1	190781404408	03/20/2019 18:32	Cindy M Gehman	1
07049	Cadmium	SW-846 6010B	1	190781404408	03/21/2019 21:39	Cindy M Gehman	1
07051	Chromium	SW-846 6010B	1	190781404408	03/20/2019 18:32	Cindy M Gehman	1
01754	Iron	SW-846 6010B	1	190781404408	03/20/2019 18:32	Cindy M Gehman	1
07058	Manganese	SW-846 6010B	1	190781404408	03/20/2019 18:32	Cindy M Gehman	1
07036	Selenium	SW-846 6010B	1	190781404408	03/20/2019 18:32	Cindy M Gehman	1
07066	Silver	SW-846 6010B	1	190781404408	03/20/2019 18:32	Cindy M Gehman	1
06035	Lead	SW-846 6020	1	190791404702A	04/18/2019 19:17	Patrick J Engle	1
00259	Mercury	SW-846 7470A	1	190780571311	03/22/2019 09:01	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	190781404408	03/19/2019 16:40	Barbara A Kane	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	190791404702	03/21/2019 15:00	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	190780571311	03/21/2019 07:30	Annamaria Kuhns	1

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

Sample Description: **MW-22-W-190313 Filtered Grab Groundwater**
Facility# 1001838 Job# 17155864
10 5th Street - Astoria, OR

Chevron
ELLE Sample #: WW 1010782
ELLE Group #: 2034062
Matrix: Groundwater

Project Name: **1001838**

Submittal Date/Time: 03/15/2019 10:00
Collection Date/Time: 03/13/2019 08:50

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals Dissolved		**SW-846 6010B**	**ug/l**	**ug/l**	**ug/l**	
07035	Arsenic	7440-38-2	N.D.	16.0	50.0	1
07046	Barium	7440-39-3	38.9	1.0	5.0	1
07049	Cadmium	7440-43-9	N.D.	1.0	5.0	1
07051	Chromium	7440-47-3	N.D.	5.3	15.0	1
01754	Iron	7439-89-6	260	40.0	200	1
07058	Manganese	7439-96-5	29.5	1.1	20.0	1
07036	Selenium	7782-49-2	N.D.	21.0	50.0	1
07066	Silver	7440-22-4	N.D.	5.0	10.0	1
		SW-846 6020	**ug/l**	**ug/l**	**ug/l**	
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
		SW-846 7470A	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

This sample was field filtered for dissolved metals.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010B	1	190781404408	03/20/2019 18:10	Cindy M Gehman	1
07046	Barium	SW-846 6010B	1	190781404408	03/20/2019 18:10	Cindy M Gehman	1
07049	Cadmium	SW-846 6010B	1	190781404408	03/20/2019 18:10	Cindy M Gehman	1
07051	Chromium	SW-846 6010B	1	190781404408	03/20/2019 18:10	Cindy M Gehman	1
01754	Iron	SW-846 6010B	1	190781404408	03/20/2019 18:10	Cindy M Gehman	1
07058	Manganese	SW-846 6010B	1	190781404408	03/20/2019 18:10	Cindy M Gehman	1
07036	Selenium	SW-846 6010B	1	190781404408	03/20/2019 18:10	Cindy M Gehman	1
07066	Silver	SW-846 6010B	1	190781404408	03/20/2019 18:10	Cindy M Gehman	1
06035	Lead	SW-846 6020	1	190791404702A	04/18/2019 19:01	Patrick J Engle	1
00259	Mercury	SW-846 7470A	1	190780571310	03/21/2019 08:41	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	190781404408	03/19/2019 16:40	Barbara A Kane	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	190791404702	03/21/2019 15:00	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	190780571310	03/20/2019 17:00	Barbara A Kane	1

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

Quality Control Summary

Client Name: Chevron
Reported: 07/05/2019 14:55

Group Number: 2034062

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
	ug/l	ug/l	ug/l
Batch number: Z190782AA	Sample number(s): 1010758-1010759,1010761,1010763,1010765,1010767,1010769,1010771-1010773,1010779,1010781		
Benzene	N.D.	0.2	1
Ethylbenzene	N.D.	0.2	1
Methyl Tertiary Butyl Ether	N.D.	0.2	1
Toluene	N.D.	0.2	1
Xylene (Total)	N.D.	0.5	5
Batch number: 19079WAC026	Sample number(s): 1010759,1010761,1010763,1010765,1010767,1010769,1010771-1010773,1010779,1010781		
Acenaphthene	N.D.	0.01	0.05
Acenaphthylene	N.D.	0.01	0.05
Anthracene	N.D.	0.01	0.05
Benzo(a)anthracene	N.D.	0.01	0.05
Benzo(a)pyrene	N.D.	0.01	0.05
Benzo(b)fluoranthene	N.D.	0.01	0.05
Benzo(g,h,i)perylene	N.D.	0.01	0.05
Benzo(k)fluoranthene	N.D.	0.01	0.05
Chrysene	N.D.	0.01	0.05
Dibenz(a,h)anthracene	N.D.	0.02	0.07
Fluoranthene	N.D.	0.01	0.05
Fluorene	N.D.	0.01	0.05
Indeno(1,2,3-cd)pyrene	N.D.	0.01	0.05
Naphthalene	N.D.	0.03	0.07
Phenanthrene	N.D.	0.03	0.07
Pyrene	N.D.	0.01	0.05
Batch number: 19078A20A	Sample number(s): 1010758-1010759,1010761,1010763,1010765,1010769,1010771-1010773,1010779,1010781		
NWTPH-Gx water C7-C12	N.D.	19	250
Batch number: 19079B94A	Sample number(s): 1010767		
NWTPH-Gx water C7-C12	N.D.	19	250
Batch number: 190860015A	Sample number(s): 1010759,1010761,1010763,1010765,1010767,1010769,1010771-1010773,1010779,1010781		
DRO C12-C24 w/Si Gel	N.D.	31	100
HRO C24-C40 w/Si Gel	N.D.	70	250
Batch number: 190780571310	Sample number(s): 1010761-1010763,1010766-1010770,1010780,1010782		
Mercury	N.D.	0.050	0.20

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

Quality Control Summary

Client Name: Chevron
Reported: 07/05/2019 14:55

Group Number: 2034062

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: 190780571311	Sample number(s): 1010759-1010760,1010764-1010765,1010779,1010781		
Mercury	N.D.	0.050	0.20
Batch number: 190781404407	Sample number(s): 1010761,1010767,1010769		
Arsenic	N.D.	16.0	50.0
Barium	N.D.	1.0	5.0
Cadmium	N.D.	1.0	5.0
Chromium	N.D.	5.3	15.0
Iron	N.D.	40.0	200
Manganese	N.D.	1.1	20.0
Selenium	N.D.	21.0	50.0
Silver	N.D.	5.0	10.0
Batch number: 190781404408	Sample number(s): 1010759-1010760,1010762-1010766,1010768,1010770,1010779-1010782		
Arsenic	N.D.	16.0	50.0
Barium	N.D.	1.0	5.0
Cadmium	N.D.	1.0	5.0
Chromium	N.D.	5.3	15.0
Iron	N.D.	40.0	200
Manganese	1.4 J	1.1	20.0
Selenium	N.D.	21.0	50.0
Silver	N.D.	5.0	10.0
Batch number: 190781404409	Sample number(s): 1010771-1010774		
Arsenic	N.D.	16.0	50.0
Barium	N.D.	1.0	5.0
Cadmium	N.D.	1.0	5.0
Chromium	N.D.	5.3	15.0
Iron	N.D.	40.0	200
Manganese	N.D.	1.1	20.0
Selenium	N.D.	21.0	50.0
Silver	N.D.	5.0	10.0
Batch number: 190781404410	Sample number(s): 1010775-1010778		
Arsenic	N.D.	16.0	50.0
Barium	N.D.	1.0	5.0
Cadmium	N.D.	1.0	5.0
Chromium	N.D.	5.3	15.0
Iron	N.D.	40.0	200
Manganese	N.D.	1.1	20.0
Selenium	N.D.	21.0	50.0
Silver	N.D.	5.0	10.0
Batch number: 190791404701A	Sample number(s): 1010761,1010767,1010769,1010775-1010778		
Lead	N.D.	1.1	3.0
Batch number: 190791404702A	Sample number(s): 1010759-1010760,1010762-1010766,1010768,1010770-1010774,1010779-1010782		
Lead	N.D.	1.1	3.0

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Quality Control Summary

Client Name: Chevron
Reported: 07/05/2019 14:55

Group Number: 2034062

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: 190800571303	Sample number(s): 1010771-1010774		
Mercury	N.D.	0.050	0.20
Batch number: 190800571305	Sample number(s): 1010775-1010778		
Mercury	0.36	0.050	0.20

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: Z190782AA	Sample number(s): 1010758-1010759,1010761,1010763,1010765,1010767,1010769,1010771-1010773,1010779,1010781								
Benzene	20	18.85			94		80-120		
Ethylbenzene	20	17.1			86		80-120		
Methyl Tertiary Butyl Ether	20	19.71			99		69-122		
Toluene	20	17.97			90		80-120		
Xylene (Total)	60	52.01			87		80-120		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 19079WAC026	Sample number(s): 1010759,1010761,1010763,1010765,1010767,1010769,1010771-1010773,1010779,1010781								
Acenaphthene	1.00	0.813			81		54-123		
Acenaphthylene	1.00	0.822			82		52-123		
Anthracene	1.00	0.923			92		53-133		
Benzo(a)anthracene	1.00	0.984			98		59-143		
Benzo(a)pyrene	1.00	1.03			103		63-145		
Benzo(b)fluoranthene	1.00	1.12			112		63-152		
Benzo(g,h,i)perylene	1.00	0.980			98		59-139		
Benzo(k)fluoranthene	1.00	0.989			99		62-143		
Chrysene	1.00	0.952			95		59-135		
Dibenz(a,h)anthracene	1.00	0.999			100		56-145		
Fluoranthene	1.00	0.916			92		49-140		
Fluorene	1.00	0.872			87		54-131		
Indeno(1,2,3-cd)pyrene	1.00	1.09			109		56-151		
Naphthalene	1.00	0.688			69		46-121		
Phenanthrene	1.00	0.930			93		58-139		
Pyrene	1.00	1.03			103		52-135		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 19078A20A	Sample number(s): 1010758-1010759,1010761,1010763,1010765,1010769,1010771-1010773,1010779,1010781								

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Quality Control Summary

Client Name: Chevron
Reported: 07/05/2019 14:55

Group Number: 2034062

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
NWTPH-Gx water C7-C12	1100	1210.83			110		64-131		
Batch number: 19079B94A	Sample number(s): 1010767								
NWTPH-Gx water C7-C12	1100	1375.88	1100	1381.61	125	126	64-131	0	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 190860015A	Sample number(s): 1010759,1010761,1010763,1010765,1010767,1010769,1010771-1010773,1010779,1010781								
DRO C12-C24 w/Si Gel	1602.59	908.6			57		32-117		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 190780571310	Sample number(s): 1010761-1010763,1010766-1010770,1010780,1010782								
Mercury	1.00	0.850			85		80-114		
Batch number: 190780571311	Sample number(s): 1010759-1010760,1010764-1010765,1010779,1010781								
Mercury	1.00	0.875			88		80-114		
Batch number: 190781404407	Sample number(s): 1010761,1010767,1010769								
Arsenic	150	148.79			99		80-120		
Barium	2000	1981.82			99		87-111		
Cadmium	50	50.79			102		90-111		
Chromium	200	206.8			103		87-110		
Iron	1000	994.77			99		85-115		
Manganese	500	515.75			103		90-112		
Selenium	150	156.27			104		80-120		
Silver	50	52.42			105		80-120		
Batch number: 190781404408	Sample number(s): 1010759-1010760,1010762-1010766,1010768,1010770,1010779-1010782								
Arsenic	150	158.08			105		80-120		
Barium	2000	2077.53			104		87-111		
Cadmium	50	53.04			106		90-111		
Chromium	200	204.9			102		87-110		
Iron	1000	1103.19			110		85-115		
Manganese	500	533.64			107		90-112		
Selenium	150	156.26			104		80-120		
Silver	50	54.04			108		80-120		
Batch number: 190781404409	Sample number(s): 1010771-1010774								
Arsenic	150	147.4			98		80-120		
Barium	2000	1952.29			98		87-111		
Cadmium	50	49.9			100		90-111		
Chromium	200	192.2			96		87-110		
Iron	1000	988.57			99		85-115		
Manganese	500	500.89			100		90-112		
Selenium	150	153.77			103		80-120		
Silver	50	51.04			102		80-120		

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Quality Control Summary

Client Name: Chevron
Reported: 07/05/2019 14:55

Group Number: 2034062

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 190781404410	Sample number(s): 1010775-1010778								
Arsenic	150	160.26			107		80-120		
Barium	2000	2087.68			104		87-111		
Cadmium	50	53.14			106		90-111		
Chromium	200	204.5			102		87-110		
Iron	1000	1019.62			102		85-115		
Manganese	500	533.63			107		90-112		
Selenium	150	153.78			103		80-120		
Silver	50	53.37			107		80-120		
Batch number: 190791404701A	Sample number(s): 1010761,1010767,1010769,1010775-1010778								
Lead	15	15.47			103		90-110		
Batch number: 190791404702A	Sample number(s): 1010759-1010760,1010762-1010766,1010768,1010770-1010774,1010779-1010782								
Lead	15	14.82			99		90-110		
Batch number: 190800571303	Sample number(s): 1010771-1010774								
Mercury	1.00	0.885			88		80-114		
Batch number: 190800571305	Sample number(s): 1010775-1010778								
Mercury	1.00	0.902			90		80-114		

MS/MSD

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

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: Z190782AA	Sample number(s): 1010758-1010759,1010761,1010763,1010765,1010767,1010769,1010771-1010773,1010779,1010781 UNSPK: 1010771									
Benzene	N.D.	20	21.67	20	21.79	108	109	80-120	1	30
Ethylbenzene	N.D.	20	19.49	20	19.3	97	96	80-120	1	30
Methyl Tertiary Butyl Ether	N.D.	20	20.99	20	21.29	105	106	69-122	1	30
Toluene	N.D.	20	20.57	20	20.37	103	102	80-120	1	30
Xylene (Total)	N.D.	60	58.32	60	58.1	97	97	80-120	0	30
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 19079WAC026	Sample number(s): 1010759,1010761,1010763,1010765,1010767,1010769,1010771-1010773,1010779,1010781 UNSPK: 1010771									

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Quality Control Summary

Client Name: Chevron
Reported: 07/05/2019 14:55

Group Number: 2034062

MS/MSD (continued)

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

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Acenaphthene	0.0546	1.00	0.656	1.00	0.543	60	49*	54-123	19	30
Acenaphthylene	N.D.	1.00	0.596	1.00	0.501	59	50*	52-123	17	30
Anthracene	N.D.	1.00	0.824	1.00	0.767	82	76	53-133	7	30
Benzo(a)anthracene	N.D.	1.00	1.00	1.00	0.998	100	99	59-143	0	30
Benzo(a)pyrene	N.D.	1.00	0.726	1.00	0.702	72	70	63-145	3	30
Benzo(b)fluoranthene	0.0108	1.00	0.924	1.00	0.911	91	90	63-152	1	30
Benzo(g,h,i)perylene	0.0133	1.00	0.763	1.00	0.760	75	74	59-139	0	30
Benzo(k)fluoranthene	N.D.	1.00	0.839	1.00	0.849	84	85	62-143	1	30
Chrysene	N.D.	1.00	0.914	1.00	0.888	91	88	59-135	3	30
Dibenz(a,h)anthracene	N.D.	1.00	0.797	1.00	0.789	79	79	56-145	1	30
Fluoranthene	N.D.	1.00	0.878	1.00	0.865	87	86	49-140	2	30
Fluorene	N.D.	1.00	0.691	1.00	0.582	69	58	54-131	17	30
Indeno(1,2,3-cd)pyrene	0.0114	1.00	0.887	1.00	0.878	87	86	56-151	1	30
Naphthalene	N.D.	1.00	0.556	1.00	0.436	55	43*	46-121	24	30
Phenanthrene	N.D.	1.00	0.842	1.00	0.750	84	75	58-139	12	30
Pyrene	0.0107	1.00	0.925	1.00	1.00	91	99	52-135	8	30
	ug/l	**ug/l**	**ug/l**	**ug/l**	**ug/l**					
Batch number: 19078A20A	Sample number(s): 1010758-1010759,1010761,1010763,1010765,1010769,1010771-1010773,1010779,1010781 UNSPK: 1010771									
NWTPH-Gx water C7-C12	26.52	1100	1295.61	1100	1332.44	115	119	64-131	3	30
	ug/l	**ug/l**	**ug/l**	**ug/l**	**ug/l**					
Batch number: 190860015A	Sample number(s): 1010759,1010761,1010763,1010765,1010767,1010769,1010771-1010773,1010779,1010781 UNSPK: 1010771									
DRO C12-C24 w/Si Gel	N.D.	1494.95	820.47	1519.04	813.38	55	54	32-117	1	20
	ug/l	**ug/l**	**ug/l**	**ug/l**	**ug/l**					
Batch number: 190781404409	Sample number(s): 1010771-1010774 UNSPK: 1010771									
Arsenic	N.D.	150	149.94	150	149.29	100	100	75-125	0	20
Barium	87.1	2000	2056.94	2000	2004.2	98	96	75-125	3	20
Cadmium	N.D.	50	50.18	50	48.98	100	98	75-125	2	20
Chromium	N.D.	200	196.63	200	192.67	98	96	75-125	2	20
Iron	17371.84	1000	18181.63	1000	17975.34	81 (2)	60 (2)	75-125	1	20
Manganese	348.12	500	856.35	500	842.95	102	99	75-125	2	20
Selenium	N.D.	150	152.87	150	152.2	102	101	75-125	0	20
Silver	N.D.	50	52.02	50	51.16	104	102	75-125	2	20
Batch number: 190781404410	Sample number(s): 1010775-1010778 UNSPK: 1010775									
Arsenic	N.D.	150	157.79	150	167.61	105	112	75-125	6	20

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Quality Control Summary

Client Name: Chevron
Reported: 07/05/2019 14:55

Group Number: 2034062

MS/MSD (continued)

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

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Barium	92.3	2000	2087.68	2000	2129.91	100	102	75-125	2	20
Cadmium	N.D.	50	49.8	50	51.23	100	102	75-125	3	20
Chromium	N.D.	200	198.33	200	201.85	99	101	75-125	2	20
Iron	17669.07	1000	18071.76	1000	18379.05	40 (2)	71 (2)	75-125	2	20
Manganese	381.77	500	885.52	500	896.7	101	103	75-125	1	20
Selenium	N.D.	150	136.38	150	159.26	91	106	75-125	15	20
Silver	N.D.	50	51.21	50	52.46	102	105	75-125	2	20
Batch number: 190791404701A	Sample number(s): 1010761,1010767,1010769,1010775-1010778 UNSPK: 1010775									
Lead	N.D.	15	15.36	15	15.62	102	104	75-125	2	20
Batch number: 190791404702A	Sample number(s): 1010759-1010760,1010762-1010766,1010768,1010770-1010774,1010779-1010782 UNSPK: 1010771									
Lead	N.D.	15	15.32	15	15.45	102	103	75-125	1	20
Batch number: 190800571303	Sample number(s): 1010771-1010774 UNSPK: 1010771									
Mercury	N.D.	1.00	0.917	1.00	0.903	92	90	80-120	2	20
Batch number: 190800571305	Sample number(s): 1010775-1010778 UNSPK: 1010775									
Mercury	N.D.	1.00	0.952	1.00	0.960	95	96	80-120	1	20

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Batch number: 190781404409	Sample number(s): 1010771-1010774 BKG: 1010771			
Arsenic	N.D.	N.D.	0 (1)	20
Barium	87.1	86.35	1	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	N.D.	N.D.	0 (1)	20
Iron	17371.84	17182.55	1	20
Manganese	348.12	345.95	1	20
Selenium	N.D.	N.D.	0 (1)	20
Silver	N.D.	N.D.	0 (1)	20
Batch number: 190781404410	Sample number(s): 1010775-1010778 BKG: 1010775			
Arsenic	N.D.	N.D.	0 (1)	20
Barium	92.3	87.93	5	20
Cadmium	N.D.	N.D.	0 (1)	20

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Quality Control Summary

Client Name: Chevron
Reported: 07/05/2019 14:55

Group Number: 2034062

Laboratory Duplicate (continued)

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Chromium	N.D.	N.D.	0 (1)	20
Iron	17669.07	18722.92	6	20
Manganese	381.77	361.86	5	20
Selenium	N.D.	N.D.	0 (1)	20
Silver	N.D.	N.D.	0 (1)	20
Batch number: 190791404701A	Sample number(s): 1010761,1010767,1010769,1010775-1010778 BKG: 1010775			
Lead	N.D.	N.D.	0 (1)	20
Batch number: 190791404702A	Sample number(s): 1010759-1010760,1010762-1010766,1010768,1010770-1010774,1010779-1010782 BKG: 1010771			
Lead	N.D.	N.D.	0 (1)	20
Batch number: 190800571303	Sample number(s): 1010771-1010774 BKG: 1010771			
Mercury	N.D.	N.D.	0 (1)	20
Batch number: 190800571305	Sample number(s): 1010775-1010778 BKG: 1010775			
Mercury	N.D.	N.D.	0 (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.

Analysis Name: BTEX 8260B Water
Batch number: Z190782AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1010758	102	99	102	99
1010759	103	100	102	99
1010761	102	100	102	102
1010763	102	100	103	100
1010765	102	99	101	100
1010767	102	100	101	102
1010769	102	99	101	101
1010771	103	98	102	100
1010772	102	101	104	102
1010773	103	99	102	100
1010779	102	98	102	101
1010781	103	99	102	99
Blank	103	99	102	100
LCS	102	102	102	101
MS	102	101	104	102

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Quality Control Summary

Client Name: Chevron
Reported: 07/05/2019 14:55

Group Number: 2034062

Surrogate Quality Control

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

Analysis Name: BTEX 8260B Water
Batch number: Z190782AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
MSD	103	99	102	100
Limits:	80-120	80-120	80-120	80-120

Analysis Name: SIM SVOAs 8270C MINI
Batch number: 19079WAC026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
1010759	75	51	42
1010761	77	64	38
1010763	77	59	63
1010765	78	70	68
1010767	96	76	84
1010769	75	63	65
1010771	81	59	67
1010772	77	52	47
1010773	76	51	34
1010779	57	56	37
1010781	75	44	73
Blank	78	71	47
LCS	80	78	58
MS	77	52	47
MSD	76	51	34
Limits:	40-132	18-129	33-122

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 19078A20A

	Trifluorotoluene-F
1010758	87
1010759	85
1010761	88
1010763	84
1010765	83
1010769	85
1010771	85
1010772	92
1010773	98
1010779	90
1010781	86
Blank	84
LCS	101
MS	92

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Quality Control Summary

Client Name: Chevron
Reported: 07/05/2019 14:55

Group Number: 2034062

Surrogate Quality Control (continued)

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

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 19078A20A

	Trifluorotoluene-F
MSD	98
Limits:	50-150

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 19079B94A

	Trifluorotoluene-F
1010767	87
Blank	81
LCS	100
LCSD	101
Limits:	50-150

Analysis Name: NWTPH-Dx water w/ 10g Si Gel
Batch number: 190860015A

	Orthoterphenyl
1010759	71
1010761	62
1010763	70
1010765	68
1010767	57
1010769	68
1010771	73
1010772	72
1010773	75
1010779	66
1010781	61
Blank	68
LCS	80
MS	72
MSD	75
Limits:	50-150

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Chevron Northwest Region Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories

Acct. # 11928 For Eurofins Lancaster Laboratories use only Group # 2034062 Sample # 1010758-82

Instructions on reverse side correspond with circled numbers

(1) Client Information

Facility # SS#1001838-OML G-R#17155864 WBS

Site Address 5th Street, ASTORIA, OR

Chevron PM TBI ARCADISSA Lead Consultant Stephen Ahlqui

Consultant/Office Gettler-Ryan Inc., 6805 Sierra Court, Suite G, Dublin, CA 9

Consultant Project Mgr. Deanna L. Harding, (deanna@grinc.com)

Consultant Phone # (925) 551-7444 x180

Sampler GM / ML

(4) Matrix

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

(3) Grab / Composite

(2) Sample Identification | Collected Date | Time

(5) Analyses Requested

Total Number of Containers | BTEX +MTBE 8021 ☐ 8260 ☑ Naphth ☑ | 8260 full scan | Oxygenates | NWTPH-Gx | NWTPH-Dx with Silica Gel Cleanup ☑ | NWTPH-Dx without Silica Gel Cleanup ☐ | WA VPH ☐ WA EPH ☐ | Lead | Total ☑ Diss. ☐ Method 6020 | Dissolved Metals (As,Cd,Cr,Pb,Se,Ag) | Dissolved Mercury (7470A) | Dissolved Metals (As,Cd,Cr,Fe,Mn,Pb,Se,Zn) | Dissolved Metals (Ba)

(2) Sample Identification	Date	Time	Grab	Composite	(3)	(4)	Total Number of Containers	BTEX +MTBE 8021	8260 full scan	Oxygenates	NWTPH-Gx	NWTPH-Dx with Silica Gel Cleanup	NWTPH-Dx without Silica Gel Cleanup	WA VPH	WA EPH	Lead	Total / Diss. / Method 6020	Dissolved Metals (As,Cd,Cr,Pb,Se,Ag)	Dissolved Mercury (7470A)	Dissolved Metals (As,Cd,Cr,Fe,Mn,Pb,Se,Zn)	Dissolved Metals (Ba)
QA	190313	—	X			X	2	X			X										X
DUP	190313	—	X			X	12	X			X	X				X	X	X	X	X	
MW-13	190313	1245	X			X	12	X			X	X				X	X	X	X	X	
MW-12	190313	1305	X			X	12	X			X	X				X	X	X	X	X	
MW-15	190313	0935	X			X	12	X			X	X				X	X	X	X	X	
MW-18	190313	0955	X			X	12	X			X	X				X	X	X	X	X	
MW-19	190313	1100	X			X	12	X			X	X				X	X	X	X	X	
MW-20	190313	0930	X			X	12	X			X	X				X	X	X	X	X	
MW-20MS/MSD	190313	0930	X			X	24	X			X	X				X	X	X	X	X	
MW-21	190313	1120	X			X	12	X			X	X				X	X	X	X	X	
MW-22	190313	0950	X			X	12	X			X	X				X	X	X	X	X	

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

(6) Remarks

Metals include: Fe, As, Se, Ba, Cd, Cr, Mn, Ag, Hg. Requesting 10 gram silica gel cleanup on NWTPH-Dx w/sgc samples.

-add NWTPH-E w/sgc

JMM 3/20/14

Please forward the lab results directly to the Lead Consultant and cc G-R.

(7) Turnaround Time Requested (TAT) (please circle)

Standard | 5 day | 4 day | EDF/EDD | 72 hour | 48 hour | 24 hour

Relinquished by	Date	Time	Received by	Date	Time (9)
	3/13	1600			
Relinquished by	Date	Time	Received by	Date	Time

(8) Data Package (circle if required)

Type I - Full

Type VI (Raw Data)

EDD (circle if required)

CVX-RTBU-FI_05 (default)

Other: ____

Relinquished by Commercial Carrier: UPS ____ FedEx ☐ Other ____

Received by | Date | Time

Temperature Upon Receipt ____ °C

Custody Seals Intact? Yes No

Chevron Northwest Region Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories

Acct. # 11928 — For Eurofins Lancaster Laboratories use only — Group # 2034062 Sample # 1010758-82

Instructions on reverse side correspond with circled numbers.

SCR #: _____

(1) Client Information

Facility # SS#1001838-OML G-R#17155864 WBS

Site Address 10 5th Street, ASTORIA, OR

Chevron PM TBI ARCADISSA Lead Consultant Stephen Ahlquist

Consultant/Office Gettler-Ryan Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568

Consultant Project Mgr. Deanna L. Harding, (deanna@grinc.com)

Consultant Phone # (925) 551-7444 x180

Sampler GM/ML

(4) Matrix

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

(3) Grab / Composite

(2) Sample Identification / Collected

(5) Analyses Requested

Total Number of Containers; BTEX + MTBE 8021 ☐ 8260 ☒ Naphth; 8260 full scan; Oxygenates ___; NWTPH-Gx; NWTPH-Dx with Silica Gel Cleanup ☒; NWTPH-Dx without Silica Gel Cleanup ☐; WA VPH ☐ WA EPH ☐; Lead Total ☒ Diss. ☐ Method 6020; TOTAL & DISSOLVED METALS (Fe, As, Se, Ba, Cd, Cr, Mn, Ag, Hg); TOTAL & DISSOLVED MERCURY 7470A; PAHs 8270SIM; MTBE 8260B

Sample Identification	Collected Date	Collected Time	Grab	Composite	Soil	Water	Oil	Total Containers	BTEX + MTBE 8021	8260 Naphth	8260 full scan	Oxygenates	NWTPH-Gx	NWTPH-Dx with Silica Gel Cleanup	NWTPH-Dx without Silica Gel Cleanup	WA VPH	WA EPH	Lead	TOTAL & DISSOLVED METALS	TOTAL & DISSOLVED MERCURY	PAHs 8270SIM	MTBE 8260B
QA	190313	—	X			X		2	X				X									
DUP	190313	—	X			X		12	X				X					X	X	X	X	
MW-4B	190313	1315	X			X		12	X				X					X	X	X	X	
MW-12	190313	1205	X			X		12	X				X					X	X	X	X	
MW-15	190313	1035	X			X		12	X				X					X	X	X	X	
MW-18	190313	0955	X			X		12	X				X					X	X	X	X	
MW-19	190313	1150	X			X		12	X				X					X	X	X	X	
MW-20	190313	0930	X			X		12	X				X					X	X	X	X	
MW-20 MS/MSD	190313	0930	X			X		24	X				X					X	X	X	X	
MW-24	190313	1100	X			X		12	X				X					X	X	X	X	
MW-22	190313	0850	X			X		12	X				X					X	X	X	X	

- ☐ 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

(6) Remarks

Metals include: Fe, As, Se, Ba, Cd, Cr, Mn, Ag, Hg. Requesting 10 gram silica gel cleanup on NWTPH-Dx w/sgc samples.

Please forward the lab results directly to the Lead Consultant and cc: G-R.

(7) Turnaround Time Requested (TAT) (please circle)

~~Standard~~ | 5 day | 4 day | EDF/EDD | 72 hour | 48 hour | 24 hour

(8) Data Package (circle if required)

Type I - Full

Type VI (Raw Data)

EDD (circle if required)

CVX-RTBU-FL_05 (default)

Other: _____

Relinquished by	Date	Time	Received by	Date	Time
	190316	1600			

(9)

Relinquished by Commercial Carrier: UPS _____ FedEx X Other _____

Temperature Upon Receipt 0.0-3.9°C

Received by: [signature] Date 3/15/19 Time 1000

Custody Seals Intact? Yes No

eurofins | Lancaster Laboratories Environmental

Sample Administration Receipt Documentation Log

Doc Log ID: 243808

Group Number(s): 2034062

Client: Chevron

1001838

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	03/15/2019 10:00
Number of Packages:	5	Number of Projects:	2

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	No
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	2
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 Nicole Reiff (25684) at 09:03 on 03/16/2019

Samples Chilled Details: 1001838

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	3.0	DT	Wet	Y	Bagged	N
2	DT42-01	1.7	DT	Wet	Y	Bagged	N
3	DT42-01	0.8	DT	Wet	Y	Bagged	N
4	DT42-01	3.9	DT	Wet	Y	Bagged	N
5	DT42-01	0.6	DT	Wet	Y	Bagged	N

Sample Date/Time Discrepancy Details: 1001838

Sample ID on COC	Date/Time on Label	Comments
MW-19	3/12/2019 11:40	
MW-22	3/13/2019 08:55	

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

Explanation of Symbols and Abbreviations

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

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

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

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

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

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

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

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

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Data Qualifiers

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

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

APPENDIX C
Historical Groundwater Analytical Results

Appendix C
Table 1
Historical Groundwater Monitoring Data and Analytical Results - TPH, BTEX, and MTBE
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

WELL ID	TOC*	DATE	DTW (ft.)	SPHT (ft.)	SPH Removed (ml.)	GWE (ft.)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TPH-GRO (µg/L)	TPH-DRO[7] (µg/L)	TPH-DRO (µg/L)	TPH-HRO[7] (µg/L)	TPH-HRO (µg/L)
DM-4	98.38	12/1/1989	--	--	--	--	20	14	58	60	--	--	--	--	--	--
DM-4		09/00/90	--	--	--	--	19	4	2	30	--	--	--	--	--	--
DM-4		02/06/91	--	--	--	--	10	2	6	16	--	--	--	--	--	--
DM-4		05/08/91	--	--	--	--	4	1.9	9.7	14	--	--	--	--	--	--
DM-4		08/21/91	--	--	--	--	7.5	2.4	0.9	13	--	--	--	--	--	--
DM-4		03/26/92	--	--	--	--	61	2.5	24	17	--	--	--	--	--	--
DM-4		06/02/92	--	--	--	--	8.4	5	15	14	--	--	--	--	--	--
DM-4		09/15/92	7.55	0.00	--	-7.55	5.3	3.5	8.6	11	--	--	--	--	--	--
DM-4		02/23/93	2.51	0.00	--	-2.51	7.3	3.8	34	25	--	--	--	--	--	--
DM-4		05/08/93	3.87	0.00	--	-3.87	5.0	2.4	10	9	--	--	--	--	--	--
DM-4		07/23/93	4.58	0.00	--	-4.58	6.3	34	9.9	12	--	--	--	--	--	--
DM-4		10/12/93	5.50	0.00	--	-5.50	9.3	20	15	17	--	--	--	--	--	--
DM-4	99.35	02/04/94	3.32	0.00	--	96.03	3.4	2.5	10	8.6	--	--	--	--	--	--
DM-4		4/27/1994	3.53	0.00	--	95.82	4.2	2.2	20	11	--	--	--	--	--	--
DM-4		7/27/1994	4.13	0.00	--	95.22	7	4.6	19	17	--	--	--	--	--	--
DM-4		10/14/1994	4.50	0.00	--	94.85	12	6.2	71	33	--	--	--	--	--	--
DM-4		1/26/1995	0.95	0.00	--	98.40	1.5	1.4	5.3	6.2	--	--	--	--	--	--
DM-4		4/7/1995	1.93	0.00	--	97.42	2.1	1.6	11	8	--	--	--	--	--	--
DM-4		8/15/1995	1.40	0.00	--	97.95	3.6	2.2	9.2	8.4	--	--	--	--	--	--
DM-4		11/21/1995	1.50	0.00	--	97.85	1.3	0.52	3.1	3.8	--	--	--	--	--	--
DM-4		2/26/1996	0.80	0.00	--	98.55	9.1	7.4	44	16	--	--	--	--	--	--
DM-4		6/12/1996	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4		8/7/1996	4.31	0.00	--	95.04	--	--	--	--	--	--	--	--	--	--
DM-4		10/29/1996	0.74	0.00	--	98.61	--	--	--	--	--	--	--	--	--	--
DM-4		2/10/1997	2.52	0.00	--	96.83	11.9	13.9	19.9	14.4	--	--	--	--	--	--
DM-4		5/20/1997	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	101.5	2/3/1998	4.48	0.00	--	97.05	1.18	<0.50	6.36	1.1	--	--	--	--	--	--
DM-4		1/8/1999	5.09	0.00	--	96.44	1.35	<0.50	5.2	1.89	--	--	--	--	--	--
DM-4		1/10/2000	5.47	0.00	--	96.06	3.27	2.06	10.5	8.55	<2.0	--	--	--	--	--
DM-4		1/17/2001	6.70	0.00	--	94.83	3.54	2.56	9.14	9.29	<2.0	--	--	--	--	--
DM-4		1/9/2002	5.38	0.00	--	96.15	3.7	2.3	7.8	7.9	<2.5	--	--	--	--	--
DM-4		1/9/2003	6.34	0.00	--	95.19	3.8	2.2	10	9.7	<2.5	--	--	--	--	--
DM-4		8/26/2004	7.03	0.00	--	94.50	1.77	1.33	4.27	4.80	<1.00	259	--	6,280	--	1,700
DM-4		11/9/2004	6.58	0.00	--	94.95	2.86	1.56	11.40	7.82	<1.00	248	--	4,800	--	<500
DM-4		2/2/2005	5.78	0.00	--	95.75	2.38	1.18	5.00	4.77	<1.00	268	--	5,430	--	945
DM-4	(D)	2/2/2005	5.78	0.00	--	95.75	2.51	1.26	5.14	4.73	<1.00	293	--	5,710	--	1,700
DM-4		6/28/2005	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4		9/27/2005	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4		12/20/2005	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	14.61	12/21/2005	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4		3/21/2006	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4		6/23/2006	6.78	0.00	--	7.83	5	1	5	3	<0.5	290	--	3,800	--	1,200
DM-4		9/21/2006	8.00	0.00	--	6.61	3	2	4	5	<0.5	380	--	5,600	--	1,500
DM-4		12/20/2006	6.60	0.00	--	8.01	6	2	6	6	<0.5	630	--	4,900	--	<990
DM-4		2/27/2007	6.09	0.00	--	8.52	4	1	5	4	<0.5	560	--	4,500	--	1,000
DM-4	14.61	6/14/2007	6.94	0.00	--	7.67	3	1	4	4	<0.5	460	--	4,000	--	860
DM-4		9/25/2007	7.84	0.00	--	6.77	2	1	5	6	<0.5	560	--	7,000	--	3,600
DM-4		12/12/2007	6.88	Trace	--	7.73	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
DM-4		12/13/2007	--	--	--	--										
DM-4		3/6/2008	6.15	0.00	--	8.46	2	0.9	4	4	<0.5	440	--	3,700	--	<490
DM-4		6/3/2008	6.28	0.00	--	8.33	2	2	4	5	<0.5	460	--	3,800	--	<520
DM-4		9/13/2008	7.31	0.00	--	7.30	3	1	2	4	<0.5	500	--	3,900	--	640
DM-4		12/11/2008	6.23	0.00	--	8.38	2	1	2	3	<0.5	540	--	4,100	--	760
DM-4		3/10/2009														
DM-4		06/09-11/09														
DM-4		09/09-11/09														
DM-4		12/07-09/09														
DM-4		03/09-11/10														
DM-4		06/09-11/10					NOT MONITORED/SAMPLED DUE TO HIGH LEVELS OF METHANE GAS									
DM-4		9/9/2010														
DM-4		3/8/2011														
DM-4		9/14/2011														
DM-4		3/8/2012														
DM-4		9/11/2012														
DM-4		3/13/2013														
DM-4		9/13/2013	6.82	--	--	7.79	<0.5	0.7	0.5	2	--	290	830	4,700	<70	980
DM-4							WELL ABANDONED NOVEMBER 2013									
DM-5	98.00	12/01/89	--	--	--	--	88	5	--	8	--	--	--	--	--	--
DM-5		09/00/90	--	--	--	--	29	2	--	10	--	--	--	--	--	--
DM-5		02/06/91	--	--	--	--	140	6	--	0.6	--	--	--	--	--	--
DM-5		05/08/91	--	--	--	--	69	4.1	--	3	--	--	--	--	--	--
DM-5		08/21/91	--	--	--	--	1	--	8.3	--	--	--	--	--	--	--
DM-5		03/26/92	--	--	--	--	37	1.9	--	--	--	--	--	--	--	--
DM-5		06/02/92	--	--	--	--	18	2.3	--	--	--	--	--	--	--	--
DM-5		09/15/92	8.36	0.00	--	-8.36	0.7	3.2	--	5.2	--	--	--	--	--	--
DM-5		02/23/93	7.77	0.00	--	-7.77	7.3	3.8	34	25	--	--	--	--	--	--
DM-5		05/08/93	7.32	0.00	--	-7.32	33	1.7	<0.5	1.6	--	--	--	--	--	--
DM-5		07/23/93	8.47	0.00	--	-8.47	1.2	2.4	<0.5	4.1	--	--	--	--	--	--
DM-5		10/12/93	9.35	0.00	--	-9.35	<0.5	1.6	<0.5	2.9	--	--	--	--	--	--
DM-5	99.00	02/04/94	8.09	0.00	--	-8.09	1.2	1.8	<0.5	4.4	--	--	--	--	--	--
DM-5		04/27/94	8.30	0.00	--	-8.30	1.1	1.5	<0.5	2.6	--	--	--	--	--	--
DM-5		7/27/1994	8.52	0.00	--	-8.52	--	--	--	--	--	--	--	--	--	--
DM-5		10/14/1994	8.03	0.00	--	-8.03	--	--	--	--	--	--	--	--	--	--
DM-5		1/26/1995	7.71	0.00	--	-7.71	--	--	--	--	--	--	--	--	--	--
DM-5		4/7/1995	9.41	0.00	--	-9.41	--	--	--	--	--	--	--	--	--	--
DM-5		8/15/1995	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5		11/21/1995	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	99.00	2/26/1996	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5		6/12/1996	8.50	0.00	--	90.50	--	--	--	--	--	--	--	--	--	--
DM-5		8/7/1996	8.45	0.00	--	90.55	--	--	--	--	--	--	--	--	--	--
DM-5		10/29/1996	9.25	0.00	--	89.75	--	--	--	--	--	--	--	--	--	--
DM-5		2/10/1997	8.73	0.00	--	90.27	--	--	--	--	--	--	--	--	--	--

Appendix C
Table 1
Historical Groundwater Monitoring Data and Analytical Results - TPH, BTEX, and MTBE
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

WELL ID	TOC*	DATE	DTW (ft.)	SPHT (ft.)	SPH Removed (ml.)	GWE (ft.)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TPH-GRO (µg/L)	TPH-DRO[7] (µg/L)	TPH-DRO (µg/L)	TPH-HRO[7] (µg/L)	TPH-HRO (µg/L)
DM-5		5/20/1997	8.95	0.00	--	90.05	--	--	--	--	--	--	--	--	--	--
DM-5	100.9	2/3/1998	8.56	0.00	--	92.29	--	--	--	--	--	--	--	--	--	--
DM-5		1/8/1999	NOT SAMPLED DUE TO INACCESIBILITY													
DM-5		1/10/2000	9.16	0.00	--	91.69	--	--	--	--	--	--	--	--	--	--
DM-5		1/17/2001	10.08	0.00	--	90.77	--	--	--	--	--	--	--	--	--	--
DM-5		1/9/2002	8.72	0.00	--	92.13	--	--	--	--	--	--	--	--	--	--
DM-5		1/9/2003	9.51	0.00	--	91.34	--	--	--	--	--	--	--	--	--	--
DM-5		8/26/2004	9.99	0.00	--	90.86	<1.00	<1.00	<1.00	<3.00	<1.00	152	--	5,760	--	994
DM-5		11/9/2004	9.94	0.00	--	90.91	<1.00	<1.00	<1.00	<3.00	<1.00	165	--	4,640	--	<500
DM-5		2/2/2005	9.83	0.00	--	91.02	<1.00	<1.00	<1.00	<3.00	<1.00	181	--	5,350	--	674
DM-5		6/28/2005	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	13.86	9/27/2005	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5		12/20/2005	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5		3/21/2006	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5		6/23/2006	10.09	0.00	--	3.77	<3	<3	<3	<6	<3	330	--	3,900	--	1,300
DM-5		9/21/2006	10.64	0.00	--	3.22	<0.5	<0.5	<0.5	<1	<0.5	300	--	3,700	--	<1000
DM-5		12/19/2006	10.54	0.00	--	3.32	<0.5	<0.5	<0.5	0.5	<0.5	310	--	3,100	--	670
DM-5		2/27/2007	10.01	0.00	--	3.85	<0.5	<0.5	<0.5	0.6	<0.5	310	--	4,200	--	930
DM-5	13.86	6/14/2007	9.89	0.00	--	3.97	<0.5	<0.5	<0.5	0.6	<0.5	350	--	3,400	--	<1,000
DM-5		9/25/2007	11.15	0.00	--	2.71	<3.0	<3.0	<3.0	<6.0	<3.0	350	--	5,100	--	<1,000
DM-5		12/12/2007	10.44	Trace	--	3.42										
DM-5		12/13/2007	--	--	--	--										
DM-5		3/6/2008	10.81	Trace	--	3.05	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
DM-5		6/3/2008	10.01	Trace	--	3.85										
DM-5		9/11/2008														
DM-5		12/11/2008														
DM-5		3/10/2019														
DM-5		06/09-11/09														
DM-5		09/09-11/09														
DM-5		12/07-09/09														
DM-5		03/09-11/10					NOT MONITORED/SAMPLED DUE TO HIGH LEVELS OF METHANE GAS									
DM-5		06/09-11/10														
DM-5		9/9/2010														
DM-5		3/8/2011														
DM-5		9/14/2011														
DM-5		3/8/2012														
DM-5		9/11/2012														
DM-5		3/13/2013														
DM-5		9/13/2013	10.16	--	--	3.7	<0.5	<0.5	<0.5	<0.5	--	270	31	4,700	<70	810
DM-5			WELL ABANDONED NOVEMBER 2013													
MW-3B		6/28/2005	8.98	0.00	--	4.80	<1.00	<1.00	<1.00	<3.00	<1.00	177	--	2,660	--	<500
MW-3B	(D)	6/28/2005	8.98	0.00	--	4.80	<1.00	<1.00	<1.00	<3.00	<1.00	179	--	2,760	--	520
MW-3B		9/27/2005	10.44	0.00	--	3.34	<1.00	<1.00	<1.00	<3.00	<1.00	<80.0[2]	--	3,320	--	892
MW-3B	13.78	12/21/2005	7.82	0.02	--	5.94	--	--	--	--	--	--	--	--	--	--
MW-3B		3/21/2006														
MW-3B		6/22/2006					NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-3B		9/20/2006	10.03	0.00	--	3.75										
MW-3B		12/19/2006	8.69	sheen	87.5	5.09										
MW-3B		2/28/2007	8.04	sheen	15	5.74										
MW-3B	13.78	6/21/2007	--	sheen	61.3	--										
MW-3B		9/24/2007	--	0.00	48.8	--										
MW-3B		12/12/2007	9.97	0.01	--	3.81										
MW-3B		12/13/2007	--	--	--	--										
MW-3B		3/6/2008	8.55	Trace	--	5.32										
MW-3B		6/3/2008	8.81	Trace	--	4.97										
MW-3B		9/11/2008	9.65	Trace	--	4.13										
MW-3B		12/11/2008	--	--	--	--										
MW-3B		3/12/2009	8.51	0.04	--	5.30**	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-3B		06/09-11/09[3]	9.61	0.01	--	4.18**										
MW-3B		09/09-11/09[3]	9.34	0.04	--	4.47**										
MW-3B		12/07-09/09[3]	9.70	0.01	--	4.09**										
MW-3B		03/09-11/10[3]	8.34	Trace	--	5.44										
MW-3B		06/09-11/10[3]	10.43	Trace	--	3.35										
MW-3B		09/09/10[3]	9.68	0.14	--	4.10**										
MW-3B		03/08/11[3]	8.11	Trace	--	5.67										
MW-3B		09/14/11[3]	11.04	1.22	--	3.72**										
MW-3B		3/8/2012[3]	9.02	0.28	--	4.98**										
MW-3B		9/11/12[3]	10.63	0.85	--	3.83**										
MW-3B		3/13/2013	NOT MONITORED/SAMPLED DUE TO HIGH LEVELS OF METHANE GAS													
MW-3B		9/11/13[3]	9.74***	0.08	--[6]	4.10**										
MW-3B		2/14/2014****	9.60[9]	0.07	--[6]	4.24**										
MW-3B		9/18/2014	11.29	--	--	2.49**										
MW-3B		3/12/2015	9.27	--	--	4.51**										
MW-3B		9/9/2016	9.43	0.02	--	4.37	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-3B		3/15/2017	7.60	0.03	--	6.20**										
MW-3B		9/9/2017	9.31	0.02	--	4.49**										
MW-3B		3/14/2018	8.90***	0.03	--	4.90**										
MW-3B		9/6/2018	9.36***	0.02	--	4.44**										
MW-3B		3/13/2019	8.96	0.02	--	8.94										
MW-4B		6/28/2005	11.75	0.00	--	2.74	<1.00	<1.00	2.16	4.08	<1.00	995	--	1,670	--	1,030
MW-4B		9/27/2005	12.05	0.00	--	2.44	<1.00	1.32	1.04	5.81	<1.00	556	--	1,920	--	1,030
MW-4B	14.49	12/21/2005	10.08	0.00	--	4.41	<1.00	<1.00	<1.00	<3.00	<1.00	523	--	2,030	--	1,320
MW-4B		3/21/2006	9.85	0.00	--	4.64	<1.00	<1.00	<1.00	<3.00	<1.00	338	--	820	--	<526
MW-4B	(D)	3/21/2006	9.85	0.00	--	4.64	<1.00	<1.00	<1.00	<3.00	<1.00	360	--	1,330	--	696
MW-4B	14.49	6/22/2006	11.55	0.00	--	2.94	<0.5	<0.5	<0.5	0.6	<0.5	280	--	2,100	--	1,200
MW-4B		6/22/2006	11.55	0.00	--	2.94	<0.5	<0.5	<0.5	0.6	<0.5	300	--	3,100	--	2,000
MW-4B		9/20/2006	11.97	0.00	--	2.52	<0.5	<0.5	<0.5	1.0	<0.5	400	--	1,700	--	1,000
MW-4B	(D)	9/20/2006	11.97	0.00	--	2.52	<0.5	<0.5	<0.5	1.0	<0.5	560	--	1,900	--	1,100
MW-4B		12/19/2006	10.14	0.00	--	4.35	<0.5	<0.5	<0.5	<1.0	<0.5	240	--	1,700	--	1,200
MW-4B	(D)	12/19/2006	10.14	0.00	--	4.35	<0.5	<0.5	<0.5	<1.0	<0.5	230	--	2,100	--	1,500
MW-4B		2/27/2007	9.19	0.00	--	5.30	<0.5	<0.5	<0.5	<1.0	<0.5	330	--	1,000	--	570

Appendix C
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Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

WELL ID	TOC*	DATE	DTW (ft.)	SPHT (ft.)	SPH Removed (ml.)	GWE (ft.)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TPH-GRO (µg/L)	TPH-DRO[7] (µg/L)	TPH-DRO (µg/L)	TPH-HRO[7] (µg/L)	TPH-HRO (µg/L)
MW-4B	(D)	2/27/2007	9.19	0.00	--	5.30	<0.5	<0.5	<0.5	<1.0	<0.5	330	--	1,000	--	660
MW-4B		6/14/2007	10.74	0.00	--	3.75	<0.5	<0.5	<0.5	<1.0	<0.5	210	--	570	--	260
MW-4B	(D)	6/14/2007	10.74	0.00	--	3.75	<0.5	<0.5	<0.5	<1.0	<0.5	320	--	480	--	210
MW-4B		9/25/2007	11.65	0.00	--	2.84	<0.5	<0.5	<0.5	0.8	<0.5	320	--	1,200	--	600
MW-4B	(D)	9/25/2007	11.65	0.00	--	2.84	<0.5	0.5	<0.5	1.0	<0.5	360	--	1,200	--	630
MW-4B		12/13/2007	10.46	0.01	--	4.03	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-4B		3/5/2008	--	--	--	--	<0.5	0.5	<0.5	1.0	<0.5	180	--	2,200	--	1,800
MW-4B	(D)	3/5/2008	--	--	--	--	<0.5	0.5	<0.5	1.0	<0.5	180	--	2,200	--	1,800
MW-4B		3/6/2008	9.63	0.00	--	4.86	<0.5	0.5	<0.5	1.0	<0.5	--	--	--	--	--
MW-4B		6/3/2008	10.93	0.00	--	3.56	22	84	8	91.0	<0.5	690	--	1,300	--	870
MW-4B		9/10/2008	11.84	0.00	--	2.65	<0.5	<0.5	<0.5	1.0	<0.5	360	--	620	--	210
MW-4B		12/11/2008	9.72	--	--	4.77	<0.5	<0.5	<0.5	1.0	<0.5	230	--	2,000	--	1,800
MW-4B		3/11/2009	9.41	--	--	5.08	<0.5	<0.5	<0.5	0.7	<0.5	400	--	810	--	510
MW-4B		3/12/2009	--	--	--	--	<0.5	<0.5	<0.5	0.6	<0.5	320	--	670	--	460
MW-4B		06/09-11/09	11.11	0.00	--	3.38	<0.5	<0.5	<0.5	<1.0	<0.5	370	--	690	--	260
MW-4B		09/09-11/09	11.01	0.00	--	3.48	<0.5	<0.5	0.5	3	<0.5	1,200	--	3,600	--	3,700
MW-4B		12/07-09/09	10.58	0.00	--	3.91	<0.5	<0.5	<0.5	0.6	<0.5	990	--	1,100	--	580
MW-4B		03/09-11/10	9.58	0.00	--	4.91	<0.5	<0.5	<0.5	<0.5	<0.5	690	--	3,100	--	3,200
MW-4B		06/09-11/10	10.15	0.00	--	4.34	<0.5	<0.5	<0.5	<0.5	<0.5	450	--	580	--	750
MW-4B		9/9/2010	10.40	Trace	--	4.09	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-4B		3/10/2011	9.70	0.00	--	4.79	<0.5	<0.5	<0.5	<0.5	--	230	--	4700	--	4800
MW-4B		9/14/2011	11.32	Trace	--	3.17	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-4B		3/8/2012	9.43	0.00	--	5.06	<0.5	<0.5	<0.5	<0.5	--	94	<29	120	<68	87
MW-4B		9/12/2012	11.01	0.00	--	3.48	0.7	0.6	<0.5	4.0	--	680	14,000	9,900	8,700	6,700
MW-4B		3/13/2013	9.18	Trace	--	5.31	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-4B		9/11/2013	10.49	Trace	--	4.00										
MW-4B		2/14/2014****	9.65[9]	0.00[10]	--	4.84	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-4B		9/18/2014	10.44	--	--	4.05										
MW-4B		3/12/2015	10.26	--	--	4.23	<0.5	<0.5	<0.5	<0.5	--	140	<29	--	<67	--
MW-4B		9/15/2005	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B		3/11/2016	6.95	--	--	7.54	<0.5	<0.5	<0.5	<0.5	--	<50	450	--	630	--
MW-4B	(D)	3/11/2016	6.95	--	--	7.54	<0.5	<0.5	<0.5	<0.5	--	<50	280	--	500	--
MW-4B		9/9/2016	10.42	--	--	4.07	<0.5	<0.5	<0.5	<0.5	--	290	<28	--	<66	--
MW-4B		3/15/2017	8.26*****	0.02	--	6.25**	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-4B		9/9/2017	10.41	0.00	--	4.08	<0.5	5.0	<0.5	<0.5	--	150	340	--	340	--
MW-4B	(D)	9/9/2017	10.41	0.00	--	4.08	<0.5	4.0	<0.5	<0.5	--	120	260	--	290	--
MW-4B		3/14/2018	9.39	0.00	--	5.1	<0.5	<0.5	<0.5	<0.5	--	100	1,300	--	1,500	--
MW-4B		9/6/2018	10.83	0.00	--	3.66	<0.2	<0.2	<0.2	<0.5	--	290	930	--	1,000	--
MW-4B	(D)	9/6/2018	10.83	0.00	--	3.66	<0.2	<0.2	<0.2	<0.5	--	3,200	1,500	--	1,500	--
MW-4B		3/13/2019	14.49	0.00	--	14.49	<0.2	<0.2	<0.2	<0.5	--	110 J	<30	--	<68	--
MW-6[1]		09/22/88	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	99.26	12/01/89	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]		09/00/90	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]		02/06/91	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]		05/08/91	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]		08/21/91	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]		03/27/92	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]		06/02/92	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]		09/15/92	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]		02/23/93	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]		05/08/93	9.20	0.00	--	90.06	--	--	--	--	--	--	--	--	--	--
MW-6[1]		07/23/93	8.99	0.00	--	90.27	--	--	--	--	--	--	--	--	--	--
MW-6[1]		10/12/93	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	100.3	02/04/94	9.31	0.00	--	90.96	--	--	--	--	--	--	--	--	--	--
MW-6[1]		04/27/94	9.36	0.00	--	90.91	--	--	--	--	--	--	--	--	--	--
MW-6[1]		7/27/1994	9.76	0.00	--	90.51	--	--	--	--	--	--	--	--	--	--
MW-6[1]		10/14/1994	9.57	0.00	--	90.70	--	--	--	--	--	--	--	--	--	--
MW-6[1]		1/26/1995	8.57	0.00	--	91.70	--	--	--	--	--	--	--	--	--	--
MW-6[1]		4/7/1995	9.52	0.00	--	90.75	--	--	--	--	--	--	--	--	--	--
MW-6[1]		8/15/1995	9.64	0.00	--	90.63	--	--	--	--	--	--	--	--	--	--
MW-6[1]		11/21/1995	9.56	0.00	--	90.71	--	--	--	--	--	--	--	--	--	--
MW-6[1]		2/26/1996	9.32	0.00	--	90.95	--	--	--	--	--	--	--	--	--	--
MW-6[1]		6/12/1996	9.62	0.00	--	90.65	--	--	--	--	--	--	--	--	--	--
MW-6[1]		8/7/1996	9.75	0.00	--	90.52	--	--	--	--	--	--	--	--	--	--
MW-6[1]		10/29/1996	8.92	0.00	--	91.35	--	--	--	--	--	--	--	--	--	--
MW-6[1]		2/10/1997	9.45	0.00	--	90.82	--	--	--	--	--	--	--	--	--	--
MW-6[1]		5/20/1997	9.63	0.00	--	90.64	--	--	--	--	--	--	--	--	--	--
MW-6[1]		2/3/1998	9.15	0.00	--	91.12	--	--	--	--	--	--	--	--	--	--
MW-6[1]		1/8/1999	9.63	0.00	--	90.64	--	--	--	--	--	--	--	--	--	--
MW-6[1]		1/10/2000	8.40	0.00	--	91.87	--	--	--	--	--	--	--	--	--	--
MW-6[1]		1/17/2001	9.60	0.00	--	90.67	--	--	--	--	--	--	--	--	--	--
MW-6[1]		1/9/2002	9.34	0.00	--	90.93	--	--	--	--	--	--	--	--	--	--
MW-6[1]		1/9/2003	9.52	0.00	--	90.75	--	--	--	--	--	--	--	--	--	--
MW-6[1]		8/26/2004	9.56	0.00	--	90.71	<1.00	<1.00	<1.00	<3.00	<1.00	<80.0	--	<250	--	<500
MW-6[1]	(D)	8/26/2004	--	--	--	--	--	--	--	--	--	<80.0	--	<250	--	<500
MW-6[1]		11/9/2004	9.53	0.00	--	90.74	<1.00	<1.00	<1.00	<3.00	<1.00	<80.0	--	<250	--	<500
MW-6[1]		2/2/2005	8.80	0.00	--	91.47	<1.00	<1.00	<1.00	<3.00	<1.00	<80.0	--	<250	--	<500
MW-6[1]		6/28/2005	9.65	0.00	--	90.62	<1.00	<1.00	<1.00	<3.00	<1.00	<80.0	--	<250	--	<500
MW-6[1]		9/27/2005	10.53	0.00	--	89.74	<1.00	<1.00	<1.00	<3.00	<1.00	88	--	1,930	--	830
MW-6[1]	13.52	12/21/2005	9.59	0.00	--	3.93	<1.00	<1.00	<1.00	<3.00	<1.00	<80.0	--	<236	--	<472
MW-6[1]	(D)	12/21/2005	9.59	0.00	--	3.93	<1.00	<1.00	<1.00	<3.00	<1.00	<80.0	--	<236	--	<472
MW-6[1]		3/21/2006	9.51	0.00	--	4.01	<1.00	<1.00	<1.00	<3.00	<1.00	<80.0	--	<243	--	<485
MW-6[1]		6/22/2006	9.77	0.00	--	3.75	<0.5	<0.5	<0.5	<1.0	<0.5	<48	--	<78	--	<97
MW-6[1]		9/20/2006	10.17	0.00	--	3.35	<0.5	<0.5	<0.5	<1.0	<0.5	<48	--	<76	--	<95
MW-6[1]	13.52	12/19/2006	9.68	0.00	--	3.84	<0.5	<0.5	<0.5	<1.0	<0.5	<48	--	<79	--	<98
MW-6[1]		2/27/2007	8.90	0.00	--	4.62	<0.5	<0.5	<0.5	<1.0	<0.5	<48	--	170	--	130
MW-6[1]	13.72	6/14/2007	NOT SAMPLED DUE TO INACCESIBILITY													
MW-6[1]		9/24/2007	10.52	0.00	--	3.20	<0.5	<0.5	<0.5	<1.0	<0.5	--	--	--	--	--
MW-6[1]		9/25/2007	--	--	--	--	--	--	--	--	--	<50	--	<92	--	<110
MW-6[1]		12/13/2007	9.83	0.00	--	3.89	<0.5	<0.5	<0.5	<1.0	<0.5	<50	--	<78	--	<98
MW-6[1]		3/5/2008	--	--	--	--	--	--	--	--	--	<50	--	<80	--	<100
MW-6[1]		3/6/2008	10.02	0.00	--	3.70	<0.5	<0.5	<0.5	<1.0	<0.6	--	--	--	--	--

Appendix C
Table 1
Historical Groundwater Monitoring Data and Analytical Results - TPH, BTEX, and MTBE
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

WELL ID	TOC*	DATE	DTW (ft.)	SPHT (ft.)	SPH Removed (ml.)	GWE (ft.)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TPH-GRO (µg/L)	TPH-DRO[7] (µg/L)	TPH-DRO (µg/L)	TPH-HRO[7] (µg/L)	TPH-HRO (µg/L)
MW-6[1]		6/3/2008	12.01	0.00	--	1.71	2,900	13,000	1,100	7,600	<1.00	79,000	--	730	--	200
MW-6[1]		9/10/2008	10.56	0.00	--	2.96	1,400	1,700	250	1,080	<1	7,700	--	130	--	<100
MW-6[1]		12/11/2008	9.17	0.00	--	4.35	61	19	32	116	<0.5	440	--	91	--	<68
MW-6[1]		3/12/2009	9.50	0.00	--	4.02	6	0.9	14	26	<0.5	220	--	38	--	<71
MW-6[1]		06/09-11/09	9.63	0.00	--	4.09	4	<0.5	14	6	<0.5	220	--	39	--	<70
MW-6[1]		03/09-11/10	9.68	0.00	--	4.04	<0.5	<0.5	1	<0.5	<0.5	<50	--	<57[o]	--	140
MW-6[1]	(D)	03/09-11/10	--	--	--	--	<0.5	<0.5	1	<0.5	<0.5	<50	--	<28	--	140
MW-6[1]		06/09-11/10	9.25	0.00	--	4.47	<0.5	<0.5	<0.5	<0.5	<0.5	<50	--	<140	--	<340
MW-6[1]		9/9/2010	10.03	0.00	--	3.69	<0.5	<0.5	<0.5	<0.5	<0.5	<50	--	48	--	310
MW-6[1]		3/9/2011	9.14	0.00	--	4.58	<0.5	<0.5	<0.5	<0.5	--	<50	--	<29	--	<67
MW-6[1]		9/14/2011	10.01	0.00	--	3.71	<0.5	<0.5	<0.5	<0.5	--	<50	<29	39	160	180
MW-6[1]		3/8/2012	9.73	0.00	--	3.99	<0.5	<0.5	<0.5	<0.5	--	<51	<28	28	75	120
MW-6[1]		9/11/2012	10.35	0.00	--	3.37	<0.5	<0.5	<0.5	<0.5	--	<50	46	87	180	320
MW-6[1]		3/13/2013	9.25	0.00	--	4.47	<0.5	<0.5	<0.5	<0.5	--	<50	<30	<30	<71	100
MW-6[1]	(D)	3/13/2013	--	--	--	--	<0.5	<0.5	<0.5	<0.5	--	<50	<29	<29	<69	120
MW-6[1]		9/12/2013	9.86	--	--	3.86	<0.5	<0.5	<0.5	<0.5	--	ND<50	ND<29	ND<29	ND<68	88
MW-6[1]		2/14/2014****	9.5	0.00	--	--	<0.5	<0.5	<0.5	<0.5	--	<50	<29	<29	<67	<67
MW-6[1]		9/18/2014	10.15	--	--	3.57	<0.5	<0.5	<0.5	<0.5	--	<50	<29	--	<68	--
MW-6[1]		3/12/2015	WELL PAVED OVER													
MW-12[1]		02/04/94	7.43	0.00	--	92.57	0.9	0.6	<0.5	0.6	--	--	--	--	--	--
MW-12[1]	100.00	04/27/94	7.56	0.00	--	92.44	0.9	0.8	<0.5	0.5	--	--	--	--	--	--
MW-12[1]		7/27/1994	7.13	0.00	--	92.87	<0.5	<0.5	<0.5	2	--	--	--	--	--	--
MW-12[1]		10/14/1994	9.00	0.00	--	91.00	<0.5	<0.5	0.9	1.6	--	--	--	--	--	--
MW-12[1]		1/26/1995	7.85	0.00	--	92.15	<0.5	<0.5	2.6	4	--	--	--	--	--	--
MW-12[1]		4/7/1995	7.33	0.00	--	92.67	<0.5	0.5	<0.5	0.75	--	--	--	--	--	--
MW-12[1]		8/15/1995	8.96	0.00	--	91.04	1.0	0.82	<0.5	1.8	--	--	--	--	--	--
MW-12[1]		11/21/1995	7.86	0.00	--	92.14	<0.5	<0.5	<0.5	0.86	--	--	--	--	--	--
MW-12[1]		2/26/1996	7.44	0.00	--	92.56	<0.5	<0.5	<0.5	0.99	--	--	--	--	--	--
MW-12[1]		6/12/1996	9.68	0.00	--	90.32	--	--	--	--	--	--	--	--	--	--
MW-12[1]		8/7/1996	9.73	0.00	--	90.27	--	--	--	--	--	--	--	--	--	--
MW-12[1]		10/29/1996	7.28	0.00	--	92.72	--	--	--	--	--	--	--	--	--	--
MW-12[1]		2/10/1997	7.77	0.00	--	92.23	--	--	--	--	--	--	--	--	--	--
MW-12[1]		5/20/1997	8.32	0.00	--	91.68	--	--	--	--	--	--	--	--	--	--
MW-12[1]	100.08	2/3/1998	7.47	0.00	--	92.61	--	--	--	--	--	--	--	--	--	--
MW-12[1]		1/8/1999	7.79	0.00	--	92.29	--	--	--	--	--	--	--	--	--	--
MW-12[1]		1/10/2000	7.11	0.00	--	92.97	--	--	--	--	--	--	--	--	--	--
MW-12[1]		1/17/2001	7.40	0.00	--	92.68	--	--	--	--	--	--	--	--	--	--
MW-12[1]		1/9/2002	7.34	0.00	--	92.74	--	--	--	--	--	--	--	--	--	--
MW-12[1]		1/9/2003	7.91	0.00	--	92.17	--	--	--	--	--	--	--	--	--	--
MW-12[1]		8/26/2004	7.42	0.00	--	92.66	<1.00	<1.00	<1.00	<3.00	<1.00	110	--	1,150	--	<500
MW-12[1]		11/9/2004	8.35	0.00	--	91.73	<1.00	<1.00	<1.00	<3.00	<1.00	89	--	1,800	--	<500
MW-12[1]		2/2/2005	7.37	0.00	--	92.71	<1.00	<1.00	<1.00	<3.00	<1.00	173	--	2,510	--	<500
MW-12[1]		6/28/2005	8.68	0.00	--	91.40	<1.00	<1.00	<1.00	<3.00	<1.00	123	--	1,870	--	550
MW-12[1]		9/27/2005	10.85	0.00	--	89.23	<1.00	<1.00	<1.00	<3.00	<1.00	<80.0	--	<236	--	<472
MW-12[1]	13.19	12/20/2005	7.35	0.00	--	5.84	<1.00	<1.00	<1.00	<3.00	<1.00	--	--	--	--	--
MW-12[1]		12/21/2005	--	--	--	--	--	--	--	--	--	96.6	--	3,120	--	505
MW-12[1]		3/21/2006	7.88	0.00	--	5.31	<1.00	<1.00	<1.00	<3.00	<1.00	90.6	--	2,070	--	<526
MW-12[1]		6/22/2006	8.51	0.00	--	4.68	<0.5	<0.5	<0.5	<1.0	<0.5	100	--	280	--	120
MW-12[1]		9/20/2006	8.44	0.00	--	4.75	<0.5	<0.5	<0.5	<1.0	<0.5	150	--	3,700	--	<950
MW-12[1]		12/19/2006	7.99	0.00	--	5.20	<0.5	<0.5	<0.5	<1.0	<0.5	110	--	2,800	--	720
MW-12[1]		2/27/2007	7.65	0.00	--	5.54	<0.5	<0.5	<0.5	<1.0	<0.5	85	--	1,800	--	<520
MW-12[1]	13.19	6/14/2007	7.91	0.00	--	5.28	<0.5	<0.5	<0.5	<1.0	<0.5	190	--	2,100	--	250
MW-12[1]		9/24/2007	10.81	0.00	--	2.38	<0.5	<0.5	<0.5	<1.0	<0.5	--	--	--	--	--
MW-12[1]		9/25/2007	--	--	--	--	--	--	--	--	--	170	--	2,100	--	560
MW-12[1]		12/12/2007	8.49	0.00	--	4.70	<0.5	<0.5	<0.5	<1.0	<0.5	120	--	2,400	--	490
MW-12[1]		3/5/2008	--	--	--	--	--	--	--	--	--	130	--	3,000	--	730
MW-12[1]		3/6/2008	7.80	0.00	--	5.39	<0.5	<0.5	<0.5	<1.0	<0.6	--	--	--	--	--
MW-12[1]		6/3/2008	12.01	0.00	--	1.18	1	<0.7	<0.8	<1.0	<0.5	110	--	1,800	--	380
MW-12[1]		9/10/2008	10.33	0.00	--	3.57	<0.5	<0.5	<0.5	<1.0	<0.5	240	--	1,100	--	160
MW-12[1]		12/11/2008	7.76	0.00	--	5.43	<0.5	<0.5	<0.5	<1.0	<0.5	110	--	2,100	--	520
MW-12[1]		3/11/2009	7.80	0.00	--	5.39	<0.5	<0.5	<0.5	<1.0	<0.5	270	--	2,600	--	550
MW-12[1]		06/09-11/09	8.78	0.00	--	4.41	<0.5	<0.5	<0.5	<1.0	<0.5	140	--	4,300	--	770
MW-12[1]		09/09-11/09	9.06	0.00	--	4.13	<0.5	<0.5	<0.5	<1.0	<0.5	250	--	4,700	--	2,200
MW-12[1]		12/07-09/09	8.20	0.00	--	4.99	<0.5	<0.5	<0.5	<1.0	<0.5	150	--	5,700	--	2,200
MW-12[1]	(D)	12/07-09/09	--	--	--	--	<0.5	<0.5	<0.5	<1.0	<0.5	160	--	5,800	--	2,600
MW-12[1]		03/09-11/10	7.98	0.00	--	5.21	<0.5	<0.5	<0.5	<0.5	<0.5	190	--	1,900	--	820
MW-12[1]		06/09-11/10	7.58	0.00	--	5.61	<0.5	<0.5	<0.5	<0.5	<0.5	170	--	1,200	--	<680
MW-12[1]		9/9/2010	9.61	Trace	--	3.58	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-12[1]		3/9/2011	7.80	0.00	--	5.39	<0.5	<0.5	<0.5	<0.5	--	140	--	3,500	--	1,500
MW-12[1]		9/14/2011	10.22	0.00	--	2.97	<0.5	<0.5	<0.5	<0.5	--	170	1,200	2,700	530	1,000
MW-12[1]		3/8/2012	8.92	Trace	--	4.27	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-12[1]		9/12/2012	10.55	0.00	--	2.64	<0.5	<0.5	<0.5	<0.5	--	100	3,600	5,100	1,200	1,700
MW-12[1]		3/13/2013	7.83	Trace	--	5.36	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-12[1]		9/12/2013	9.61	--	--	3.58	<0.5	<0.5	<0.5	<0.5	--	120	2,600	4,500	840	1,300
MW-12[1]		2/14/2014****	7.5	0.00	--	5.69	<0.5	<0.5	<0.5	<0.5	--	88	1,600	3,200	890	1,600
MW-12[1]		9/18/2014	9.91	--	--	3.28	<0.5	<0.5	<0.5	<0.5	--	200	2,200	--	880	--
MW-12[1]		3/12/2015	8.56	--	--	4.63	<0.5	<0.5	<0.5	<0.5	--	<50	53	--	<66	--
MW-12[1]		9/15/2015	9.54	--	--	3.65	<0.5	<0.5	<0.5	<0.5	--	230	120		<66	
MW-12[1]		3/11/2016	7.11	--	--	6.08	<0.5	<0.5	<0.5	<0.5	--	<50	760	--	440	--
MW-12[1]	13.19	9/9/2016	8.58	--	--	4.61	<0.5	<0.5	<0.5	<0.5	--	170	250	--	<66	--
MW-12[1]		3/15/2017	7.27	--	--	5.92	<0.5	<0.5	<0.5	<0.5	--	82	2600	--	1600	--
MW-12[1]		9/9/2017	9.90	0.00	--	3.29	<0.5	<0.5	<0.5	<0.5	--	100	930	--	460	--
MW-12[1]		3/14/2018	8.01	0.00	--	5.18	<0.5	<0.5	<0.5	<0.5	--	130	110	--	<67	--
MW-12[1]	(D)	3/14/2018	8.01	0.00	--	5.18	<0.5	<0.5	<0.5	<0.5	--	180	80	--	<67	--
MW-12		9/6/2018	10.41	0.00	--	2.78	<0.2	<0.2	<0.2	<0.5	--	130 J	1,400	--	630	--
MW-12		3/13/2019	7.87	0.00	--	5.32	<0.2	<0.2	<0.2	<0.5	--	62 J	83 J	--	<67	--
MW-14		6/28/2005	10.08	0.00	--	3.43	<1.00	<1.00	<1.00	<3.00	<1.00	<80.0	--	280	--	<500
MW-14		9/27/2005	10.76	0.00	--	2.75	<1.00	<1.00	<1.00	<3.00	<1.00	<80.0	--	<485	--	<971
MW-14		12/20/2005	--	--	--	--	--	--	--	--	--	<80.0	--	<236	--	<472
MW-14	13.51	12/21/2005	8.19	0.00	--	5.32	<1.00	<1.00	<1.00	<3.00	<1.00	--	--	--	--	--
MW-14		3/21/2006	9.46	0.00	--	4.05	<1.00	<1.00	<1.00	<3.00	<1.00	<80.0	--	263	--	<500

Appendix C
Table 1
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Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

WELL ID	TOC*	DATE	DTW (ft.)	SPHT (ft.)	SPH Removed (ml.)	GWE (ft.)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TPH-GRO (µg/L)	TPH-DRO[7] (µg/L)	TPH-DRO (µg/L)	TPH-HRO[7] (µg/L)	TPH-HRO (µg/L)
MW-14		6/22/2006	9.88	0.00	--	3.63	<0.5	<0.5	<0.5	<1.0	<0.5	<48	--	<78	--	<98
MW-14		9/21/2006	10.46	0.00	--	3.05	<0.5	<0.5	<0.5	<1.0	<0.5	<48	--	130	--	99
MW-14		9/25/2006	--	--	--	--	--	--	--	--	--	<48	--	82	--	400
MW-14		12/19/2006	9.63	0.00	--	3.88	<0.5	<0.5	<0.5	<1.0	<0.5	<48	--	89	--	190
MW-14		2/27/2007	8.97	0.00	--	4.54	<0.5	<0.5	<0.5	<1.0	<0.5	<50	--	<91	--	<110
MW-14	13.51	6/14/2007	9.39	0.00	--	4.12	<0.5	<0.5	<0.5	<1.0	<0.5	--	--	--	--	--
MW-14		9/24/2007	10.89	0.00	--	2.62	<0.5	<0.5	<0.5	<1.0	<0.5	<50	--	<79	--	<99
MW-14		12/13/2007	9.84	0.00	--	3.67	<0.5	<0.5	<0.5	<1.0	<0.5	<50	--	100	--	<100
MW-14		3/5/2008	--	--	--	--	--	--	--	--	--	<50	--	<78	--	<98
MW-14		3/6/2008	9.61	0.00	--	3.90	<0.5	<0.5	<0.5	<1.0	<0.6	--	--	--	--	--
MW-14		6/4/2008	9.10	0.00	--	4.41	<0.5	<0.7	<0.8	<1.0	<0.5	<50	--	<79	--	<99
MW-14		9/10/2008	10.20	0.00	--	3.31	<0.5	<0.7	<0.8	<1.6	<0.5	51	--	170	--	<100
MW-14		12/10/2008	8.79	0.00	--	4.72	<0.5	<0.7	<0.8	<1.6	<0.5	<50	--	<30	--	<70
MW-14		3/12/2009	9.46	0.00	--	4.05	<0.5	<0.5	<0.5	<1.0	<0.5	54	--	52	--	<70
MW-14		06/09-11/09	9.57	0.00	--	3.94	<0.5	<0.5	<0.5	<1.0	<0.5	<50	--	36	--	<69
MW-14		09/09-11/09	9.97	0.00	--	3.54	<0.5	<0.5	<0.5	<1.0	<0.5	<50	--	<57	--	720
MW-14		12/07-09/09	9.83	0.00	--	3.68	<0.5	<0.5	<0.5	<1.0	<0.5	<50	--	79	--	<68
MW-14		03/09-11/10	9.17	0.00	--	4.34	<0.5	<0.5	0.6	<0.5	<0.5	<50	--	72	--	75
MW-14		06/09-11/10	9.33	0.00	--	4.18	<0.5	<0.5	<0.5	<0.5	<0.5	<50	--	<150[5]	--	<340[5]
MW-14		9/9/2010	9.75	0.00	--	3.76	<0.5	<0.5	<0.5	<0.5	<0.5	<50	--	<59	--	800
MW-14	(D)	9/9/2010	--	--	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<50	--	3,400	--	200
MW-14		3/8/2011	9.66	0.00	--	3.85	NO LONGER INCLUDED IN ROUTINE SAMPLING EVENTS									
MW-15		6/28/2005	9.78	0.00	--	4.20	<1.00	<1.00	<1.00	<3.00	<1.00	<80.0	--	<250	--	<500
MW-15		9/27/2005	10.61	0.00	--	3.37	<1.00	<1.00	<1.00	<3.00	<1.00	<80.0	--	309	--	<472
MW-15		12/20/2005	--	--	--	--	--	--	--	--	--	<80.0	--	<236	--	<472
MW-15	13.98	12/21/2005	9.23	0.00	--	4.75	<1.00	<1.00	<1.00	<3.00	<1.00	--	--	--	--	--
MW-15		3/21/2006	9.44	0.00	--	4.54	<1.00	<1.00	<1.00	<3.00	<1.00	<80.0	--	529	--	<526
MW-15		6/22/2006	9.41	0.00	--	4.57	<0.5	<0.5	<0.5	<1.0	<0.5	<48	--	1,800	--	540
MW-15		9/21/2006	10.51	0.00	--	3.47	<0.5	<0.5	<0.5	<1.0	<0.5	<48	--	200	--	110
MW-15		12/19/2006	9.42	0.00	--	4.56	<0.5	<0.5	<0.5	<1.0	<0.5	<48	--	290	--	120
MW-15		2/27/2007	9.08	0.00	--	4.90	<0.5	<0.5	<0.5	<1.0	<0.5	<48	--	300	--	160
MW-15	13.98	6/14/2007	9.46	0.00	--	4.52	<0.5	<0.5	<0.5	<1.0	<0.5	<50	--	120	--	<100
MW-15		9/25/2007	10.90	0.00	--	3.08	<0.5	<0.5	<0.5	<1.0	<0.5	<50	--	88	--	<100
MW-15		12/14/2007	9.69	0.00	--	4.29	<0.5	<0.5	<0.5	<1.0	<0.5	<50	--	170	--	<110
MW-15	(D)	12/14/2007	9.69	0.00	--	4.29	<0.5	<0.5	<0.5	<1.0	<0.5	<50	--	150	--	<100
MW-15		3/5/2008	--	--	--	--	--	--	--	--	--	<50	--	160	--	<98
MW-15		3/6/2008	9.68	0.00	--	4.30	<0.5	<0.5	<0.5	<1.0	<0.6	--	--	--	--	--
MW-15		6/4/2008	9.42	Trace	--	4.56	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-15		9/11/2008	10.39	0.00	--	3.59	<0.5	<0.7	<0.8	<1.6	<0.5	<50	--	120	--	<100
MW-15		12/11/2008	9.35	0.00	--	4.63	<0.5	<0.7	<0.8	<1.6	<0.5	<50	--	140	--	<71
MW-15		3/11/2009	9.55	Trace	--	4.43										
MW-15		06/09-11/09	--	--	--	--										
MW-15		09/09-11/09	--	--	--	--										
MW-15		12/07-09/09	--	--	--	--										
MW-15		03/09-11/10[5]	9.93	Trace	--	4.05										
MW-15		06/09-11/10[5]	10.01	Trace	--	3.97	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-15		09/09/10[5]	9.81	Trace	--	4.17										
MW-15		03/08/11[5]	9.23	Trace	--	4.75										
MW-15		09/14/11[5]	10.08	Trace	--	3.90										
MW-15		3/8/2012	9.72	Trace	--	4.26										
MW-15		9/11/2012	10.48	Trace	--	3.50										
MW-15		3/13/2013				NOT MONITORED/SAMPLED DUE TO HIGH LEVELS OF METHANE GAS										
MW-15		09/11/13[3]	9.88***	0.01	--[8]	13.99										
MW-15		2/14/2014****	9.63[9]	0.02	--[6]	4.36	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-15		9/18/2014	9.90	--	--	4.08										
MW-15		03/12/15	--	--	--	--										
MW-15		3/11/2016	7.45	0.00		6.06	<0.5	<0.5	<0.5	<0.5	--	<50	<28	--	<66	--
MW-15		9/9/2016	9.31	--	--	4.67	<0.5	<0.5	<0.5	<0.5	--	<50	<28	--	<66	--
MW-15		3/15/2017	8.76	0.02	--	5.24**	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-15		9/9/2017	9.64	0.00	--	4.34	<0.5	<0.5	<0.5	<0.5	--	<50	<29	--	<67	--
MW-15		3/14/2018	9.38	0.00	--	4.60	<0.5	<0.5	<0.5	<0.5	--	<50	<29	--	<67	--
MW-15		9/6/2018	10.31	0.00	--	3.67	<0.2	<0.2	<0.2	<0.5	--	<19	<29	--	<67	--
MW-15		3/13/2019	9.49	0.00	--	4.49	<0.2	<0.2	<0.2	<0.5	--	22 J	<29	--	<66	--
MW-16		6/28/2005	13.30	0.00	--	0.05	<1.00	<1.00	<1.00	<3.00	<1.00	<80.0	--	304	--	<500
MW-16		9/27/2005	13.14	0.00	--	0.21	<1.00	<1.00	<1.00	<3.00	<1.00	<80.0	--	494	--	<472
MW-16	13.35	12/20/2005	11.62	0.00	--	1.73	<1.00	<1.00	<1.00	<3.00	<1.00	<80.0	--	350	--	<485
MW-16		3/21/2006	10.54	0.00	--	2.81	<1.00	<1.00	<1.00	<3.00	<1.00	<80.0	--	418	--	<526
MW-16		6/22/2006	11.69	0.00	--	1.66	<0.5	<0.5	<0.5	<1.00	<0.5	<48	--	230	--	200
MW-16		9/20/2006	12.31	0.00	--	1.04	<0.5	<0.5	<0.5	<1.0	<0.5	<48	--	340	--	130
MW-16		12/19/2006	10.73	0.00	--	2.62	<0.5	<0.5	<0.5	<1.0	<0.5	<48	--	210	--	180
MW-16		2/27/2007	10.08	0.00	--	3.27	<0.5	<0.5	<0.5	<1.0	<0.5	<48	--	89	--	130
MW-16		6/14/2007	9.92	0.00	--	3.43	<0.5	<0.5	<0.5	<1.0	<0.5	<50	--	<78	--	<98
MW-16		9/23/2007	11.30	0.00	--	2.05	<0.5	<0.5	<0.5	<1.0	<0.5	--	--	--	--	--
MW-16		9/25/2007	--	--	--	--	--	--	--	--	--	<50	--	490	--	150
MW-16		12/12/2007	10.40	0.00	--	3.18	<0.5	<0.5	<0.5	<1.0	<0.5	<50	--	260	--	<100
MW-16		3/5/2008	--	--	--	--	--	--	--	--	--	<50	--	170	--	120
MW-16		3/6/2008	10.42	0.00	--	2.92	<0.5	<0.5	<0.5	<1.0	<0.6	--	--	--	--	--
MW-16		6/3/2008	8.66	0.00	--	4.69	14,000	39,000	2,700	18,600	<13	200,000	--	2,700	--	<1,000
MW-16		9/10/2008	12.10	0.00		1.25	230	34	15	57	<0.5	1,000	--	100	--	<98
MW-16		12/11/2008	10.83	0.00	--	2.52	120	1	10	4.6	<0.5	85	--	470	--	400
MW-16	13.35	3/11/2009	10.55	0.00	--	2.80	440	15	93	253	<1	1,200	--	130	--	<70
MW-16		06/09-11/09	12.05	0.00	--	1.30	200	0.7	42	7	<0.5	310	--	140	--	<69
MW-16		09/09-11/09	11.71	0.00	--	1.64	170	2	160	263	<0.5	1,800	--	130	--	140
MW-16		12/07-09/09	11.19	0.00	--	2.16	78	<0.5	21	10	<0.5	420	--	660	--	800
MW-16		03/09-11/10	10.19	0.00	--	3.16	130	34	78	410	<0.5	2,500	--	820	--	1,100
MW-16		06/09-11/10	10.32	0.00	--	3.03	1	<0.5	2	<0.5	<0.5	<50	--	<150[5]	--	600
MW-16	(D)	06/09-11/10	--	--	--	--	0.9	<0.5	1	<0.5	<0.5	<50	--	<150[5]	--	<340[5]
MW-16		9/9/2010	11.93	0.00	--	1.42	10.0	<0.5	<0.5	<0.5	<0.5	<50	--	270	--	380
MW-16		3/10/2011	9.62	0.00	--	3.73	<0.5	<0.5	<0.5	<0.5	--	<50	--	960	--	1,500
MW-16		9/14/2011	10.62	0.00	--	2.73	<0.5	<0.5	<0.5	<0.5	--	<50	<140	170	480	960
MW-16		3/8/2012	10.61	0.00	--	2.74	<0.5	<0.5	<0.5	<0.5	--	<50	110	330	670	1,200

Appendix C
Table 1
Historical Groundwater Monitoring Data and Analytical Results - TPH, BTEX, and MTBE
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

WELL ID	TOC*	DATE	DTW (ft.)	SPHT (ft.)	SPH Removed (ml.)	GWE (ft.)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TPH-GRO (µg/L)	TPH-DRO[7] (µg/L)	TPH-DRO (µg/L)	TPH-HRO[7] (µg/L)	TPH-HRO (µg/L)
MW-16	(D)	3/8/2012	--	--	--	--	<0.5	<0.5	<0.5	<0.5	--	<50	74	290	340	720
MW-16		9/12/2012	11.06	0.00	--	2.29	<0.5	<0.5	<0.5	<0.5	--	<50	290	600	290	790
MW-16		3/13/2013	10.03	0.00	--	3.32	0.9	<0.5	0.8	3.0	--	120	97	400	130	470
MW-16		9/12/2013	10.16	0.00	--	3.19	<0.5	<0.5	<0.5	<0.5	--	<50	<30	390	<70	140
MW-16		2/14/2014****	9.77	0.00	--	3.58	<0.5	<0.5	<0.5	<0.5	--	130	<29	170	<67	130
MW-16		9/18/2014	10.25	--	--	3.1	<0.5	<0.5	<0.5	<0.5	--	<50	<29	--	<66	
MW-16		09/15/2015	10.14	--	--	3.21	<0.5	<0.5	<0.5	<0.5	--	<50	<29	--	<67	
MW-16		3/11/2016	9.41	--	--	3.94	<0.5	<0.5	<0.5	<0.5	--	<50	<29	--	<67	--
MW-16		9/9/2016	10.15	--	--	3.20	<0.5	<0.5	<0.5	<0.5	--	71	<28	--	<66	--
MW-16		3/15/2017	9.32	--	--	4.03	NO LONGER INCLUDED IN ROUTINE SAMPLING EVENTS									
MW-17		6/28/2005	11.19	0.00	--	2.14	<1.00	<1.00	<1.00	<3.00	<1.00	390	--	2,610	--	502
MW-17	(D)	6/28/2005	11.19	0.00	--	2.14	<1.00	<1.00	<1.00	<3.00	<1.00	436	--	1,470	--	837
MW-17		9/27/2005	11.27	0.00	--	2.06	<1.00	<1.00	<1.00	<3.00	<1.00	165	--	2,610	--	700
MW-17	13.33	12/20/2005	8.65	0.00	--	4.68	<1.00	<1.00	<1.00	<3.00	<1.00	<80.0	--	280	--	<472
MW-17		3/21/2006	9.58	0.00	--	3.75	<1.00	<1.00	<1.00	<3.00	<1.00	<80.0	--	884	--	<526
MW-17		6/22/2006	10.11	0.00	--	3.22	<0.5	<0.5	<0.5	<1.0	<0.5	150	--	940	--	460
MW-17		9/21/2006	11.24	0.00	--	2.09	<0.5	<0.5	<0.5	<1.0	<0.5	68	--	1,400	--	390
MW-17		12/19/2006	9.72	0.00	--	3.61	<0.5	<0.5	<0.5	<1.0	<0.5	<48	--	720	--	710
MW-17		2/27/2007	8.76	0.00	--	4.57	<0.5	<0.5	<0.5	<1.0	<0.5	<48	--	600	--	710
MW-17	13.33	6/14/2007	9.06	sheen	--	4.27	<0.5	<0.5	<0.5	<1.0	<0.5	<50	--	1,200	--	530
MW-17		9/24/2007	11.48	0.00	--	1.85	<0.5	<0.5	<0.5	<1.0	<0.5	--	--	--	--	--
MW-17		9/25/2007	--	--	--	--	--	--	--	--	--	81	--	1,200	--	410
MW-17		12/13/2007	10.15	0.00	--	3.18	<0.5	<0.5	<0.5	<1.0	<0.5	<50	--	580	--	170
MW-17		3/5/2008	--	--	--	--	--	--	--	--	--	83	--	830	--	390
MW-17		3/6/2008	9.46	0.00	--	3.87	<0.5	<0.5	<0.5	<1.0	<0.5	--	--	--	--	--
MW-17		6/4/2008	9.38	0.00	--	3.95	<0.5	<0.7	<0.8	<1.0	<0.5	--	--	--	--	--
MW-17		6/6/2008	--	--	--	--	--	--	--	--	--	66	--	280	--	400
MW-17		9/11/2008	10.46	0.00	--	2.87	<0.5	<0.7	<0.8	<1.6	<0.5	<50	--	420	--	<100
MW-17	(D)	9/11/2008	--	--	--	--	<0.5	<0.7	<0.8	<1.6	<0.5	<50	--	610	--	480
MW-17		12/10/2008	9.36	0	--	3.97	<0.5	<0.7	<0.8	<1.6	<0.5	<50	--	640	--	620
MW-17	(D)	12/10/2008	--	--	--	--	<0.5	<0.7	<0.8	<1.6	<0.5	<50	--	530	--	480
MW-17		3/12/2009	9.3	--	--	4.03	<0.5	<0.5	<0.5	<1.0	<0.5	<50	--	860	--	770
MW-17		06/09-11/09	9.86	0.00	--	3.47	<0.5	<0.5	<0.5	<1.0	<0.5	96	--	220	--	<68
MW-17	(D)	06/09-11/09	--	--	--	--	<0.5	<0.5	<0.5	<1.0	<0.5	110	--	350	--	210
MW-17		09/09-11/09	10.01	0.00	--	3.32	<0.5	<0.5	<0.5	<1.0	<0.5	93	--	260	--	430
MW-17	(D)	09/09-11/09	--	--	--	--	<0.5	<0.5	<0.5	<1.0	<0.5	90	--	260	--	450
MW-17		12/07-09/09	9.92	0.00	--	3.41	<0.5	<0.5	<0.5	<1.0	<0.5	<50	--	1,500	--	1,600
MW-17		03/09-11/10	10.17	0.00	--	3.16	INACCESSIBLE									
MW-17		06/09-11/10	9.06	0.00	--	4.27	<0.5	<0.5	<0.5	<0.5	<0.5	<50	--	460	--	1,200
MW-17		9/9/2010	10.40	0.00	--	2.93	<0.5	<0.5	<0.5	<0.5	<0.5	76	--	1,000	--	990
MW-17		3/8/2011	8.06	0.00	--	5.27	NO LONGER INCLUDED IN ROUTINE SAMPLING EVENTS									
MW-18		6/28/2005	10.40	0.02	--	3.00	17.1	<1.00	3.83	<3.00	<1.00	526	--	7,510	--	1,510
MW-18		9/27/2005	11.01	0.00	--	2.39	59.7	<1.00	5.24	<3.00	<1.00	637	--	12,100	--	2,930
MW-18	13.40	12/21/2005	9.19	0.01	--	4.20	--	--	--	--	--	--	--	--	--	--
MW-18		3/21/2006					NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-18		6/22/2006	10.15	sheen	--	3.25	4	<0.5	<0.5	<1.0	<0.5	410	--	3,300	--	640
MW-18	13.40	9/20/2006	10.72	sheen	--	2.68										
MW-18		12/19/2006	9.68	sheen	17.5	3.72										
MW-18		2/27/2007	9.05	sheen	11.0	4.35										
MW-18		6/21/2007	--	sheen	55.0	--										
MW-18		9/25/2007	--	--	--	--										
MW-18		9/24/2007	--	sheen	21.25	--										
MW-18		12/13/2007	--	--	--	--										
MW-18		3/6/2008	10.09	sheen	--	3.31										
MW-18		6/4/2008	11.48	Trace	--	1.92										
MW-18		9/11/2008	11.31	Trace	--	2.09										
MW-18		12/10/2008	11.35	0.01	--	2.06**										
MW-18		3/11/2009	11.28	0.13	--	2.22**	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-18		06/09-11/09[3]	11.28	Trace	--	2.12										
MW-18		09/09-11/09[3]	11.28	Trace	--	2.12										
MW-18		12/07-09/09[3]	10.83	0.01	--	2.58**										
MW-18		03/09-11/10[3]	10.30	Trace	--	3.10										
MW-18		06/09-11/10[3]	10.89	Trace	--	2.51										
MW-18		09/09/10[3]	10.17	Trace	--	3.23										
MW-18		03/08/11[3]	10.17	Trace	--	3.23										
MW-18		09/14/11[3]	12.09	Trace	--	1.31										
MW-18		3/8/2012[3]	10.68	Trace	--	2.72										
MW-18		9/11/2012	11.42	Trace	--	1.98										
MW-18		3/13/2013[3]	11.00	0.16	--	2.40										
MW-18		9/11/2013[3]	10.96***	0.04	--[6]	2.47**										
MW-18		2/14/2014****	10.61[9]	0.02	--[6]	2.80**	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-18		9/18/2014	10.99	--	--	2.41**										
MW-18		3/12/2015	11.1	--	--	2.30**										
MW-18		09/14/2015	10.06	--	--	3.34**	<0.5	<0.5	<0.5	<0.5	--	380	2,200	--	460	--
MW-18		3/11/2016	7.79	--	--	5.61**	<0.5	<0.5	<0.5	<0.5	--	1100	410	--	<67	--
MW-18		9/9/2016	10.94*****	0.02	--	2.48	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-18		3/15/2017	8.92	0.02	--	4.50**										
MW-18		9/8/2017	9.93	0.00	--	3.47	WELL GAUGED BUT NOT SAMPLED									
MW-18		3/14/2018	9.79	0.00	--	3.61	<0.5	<0.5	<0.5	<0.5	--	530	2,300	--	430	--
MW-18		9/6/2018	10.95	0.00	--	2.45	<0.2	<0.2	<0.2	<0.5	--	620	3,000	--	540	--
MW-18		3/13/2019	10.06	0.00	--	3.34	<0.2	<0.2	<0.2	<0.5	--	1,600	5,500	--	940	--
MW-19		6/21/2007	13.11	0.00	0.00	-0.21	<0.5	<0.5	<0.5	<1.0	<0.5	420	--	2,200	--	<1,000
MW-19	12.90	9/24/2007	12.90	0.00	0.00	0.00	<0.5	<0.5	<0.5	<1.0	<0.5	370	--	2,400	--	280
MW-19		12/13/2007					NOT SAMPLED DUE TO INACCESIBILITY									
MW-19		3/5/2008	--	--	--	--	--	--	--	--	--	270	--	1,400	--	<100
MW-19		3/6/2008	9.89	0.00	0.00	3.01	<0.5	<0.5	<0.5	<1.0	<0.5	--	--	--	--	--
MW-19		6/2/2008	11.45	0.00	-	1.45	<0.5	0.8	<0.8	<1.0	<0.5	--	--	--	--	--
MW-19	(D)	6/4/2008	--	--	--	--	<0.5	<0.7	<0.8	<1.0	<0.5	--	--	--	--	--
MW-19		6/4/2008	--	--	--	--	--	--	--	--	--	240	--	450	--	<100
MW-19		6/6/2008	--	--	--	--	--	--	--	--	--	270	--	2,100	--	250

Appendix C
Table 1
Historical Groundwater Monitoring Data and Analytical Results - TPH, BTEX, and MTBE
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

WELL ID	TOC*	DATE	DTW (ft.)	SPHT (ft.)	SPH Removed (ml.)	GWE (ft.)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TPH-GRO (µg/L)	TPH-DRO[7] (µg/L)	TPH-DRO (µg/L)	TPH-HRO[7] (µg/L)	TPH-HRO (µg/L)
MW-19		9/11/2008	10.9	0.00	--	2.00	<0.5	<0.7	<0.8	<1.6	<0.5	560	--	1,400	--	<100
MW-19		12/10/2008	9.18	0.00	--	3.72	<0.5	<0.7	<0.8	<1.6	<0.5	<50	--	220	--	<69
MW-19		3/12/2009	9.4	0.00	--	3.5	<0.5	<0.5	<0.5	<1.0	<0.5	240	--	--	--	--
MW-19		06/09-11/09	11.76	0.00	--	1.14	<0.5	<0.5	<0.5	<1.0	<0.5	280	--	1,200	--	<69
MW-19		09/09-11/09	10.96	0.00	--	1.94	<0.5	<0.5	<0.5	<1.0	<0.5	360	--	4,400	--	3,100
MW-19		12/07-09/09							INACCESSIBLE							
MW-19		03/09-11/10	8.62	0.00	--	4.28	<0.5	<0.5	<0.5	<0.5	<0.5	160	--	1,000	--	73
MW-19		06/09-11/10	9.30	0.00	--	3.60	<0.5	<0.5	<0.5	<0.5	<0.5	100	--	270	--	550
MW-19		9/9/2010	10.70	Trace	--	2.20				NOT SAMPLED DUE TO THE PRESENCE OF SHEEN						
MW-19		3/9/2011	10.05	0.00	--	2.85	<0.5	<0.5	<0.5	<0.5	--	78	--	850	--	480
MW-19		9/14/2011	9.88	0.00	--	3.02	<0.5	<0.5	<0.5	<0.5	--	280	490	1,400	200	440
MW-19		3/8/2012	11.31	0.00	--	1.59	<0.5	<0.5	<0.5	<0.5	--	200	8,300	11,000	1,600	2,200
MW-19		9/12/2012	11.62	0.00	--	1.28	<0.5	<0.5	<0.5	<0.5	--	300	12,000	14,000	3,100	3,400
MW-19		3/13/2013							UNABLE TO LOCATE							
MW-19		9/11/2013	10.47	0.00	--	2.43				NOT SAMPLED DUE TO THE PRESENCE OF SHEEN						
MW-19		2/14/2014****	10.48[9]	0.00[10]	--	2.41				NOT SAMPLED DUE TO THE PRESENCE OF SPH						
MW-19		9/18/2014	11.29	--	--	1.61	<0.5	<0.5	<0.5	<0.5	<0.5	290	230	--	--	<66
MW-19		3/12/2015	10.39	--	--	2.51	<0.5	<0.5	<0.5	<0.5	--	210	74	--	<66	--
MW-19	(D)	3/12/2015	10.39	--	--	2.51	<0.5	<0.5	<0.5	<0.5	--	160	71	--	<66	--
MW-19		3/11/2016	6.36			6.54	<0.5	<0.5	<0.5	<0.5	--	<50	<28	--	<66	--
MW-19		9/9/2016	10.40	--	--	2.50	<0.5	<0.5	<0.5	<0.5	--	250	55	--	<66	--
MW-19		3/15/2017	7.86	--	--	5.04	<0.5	<0.5	<0.5	<0.5	--	<50	530	--	310	--
MW-19		9/9/2017	9.92	0.00	--	2.98	<0.5	<0.5	<0.5	<0.5	--	55	480	--	290	--
MW-19		3/14/2018	9.89	0.00	--	3.01	<0.5	<0.5	<0.5	<0.5	--	<50	<28	--	<66	--
MW-19		9/6/2018	10.85	0.00	--	2.05	<0.2	<0.2	<0.2	<0.5	--	87 J	3,500	--	1,400	--
MW-19		3/13/2019	9.52	0.00	--	3.38	<0.2	<0.2	<0.2	<0.5	--	72 J	<29	--	<67	--
MW-20		6/21/2007	12.49	0.00	0.00	0.41	6	0.8	<0.5	1	<0.5	300	--	5,700	--	<1,000
MW-20	12.90	9/24/2007	12.73	0.00	0.00	0.00	4	0.7	<0.5	1	<0.5	210	--	2,800	--	590
MW-20		12/13/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20		3/5/2008	--	--	--	--	--	--	--	--	--	<50	--	370	--	140
MW-20		3/6/2008	10.02	0.00	0.00	2.88	<0.5	<0.5	<0.5	0.6	<0.5	--	--	--	--	--
MW-20		6/4/2008	11.65	Trace	--	1.25	--	--	--	--	--	--	--	--	--	--
MW-20		9/11/2008	10.29	0.00	--	2.61	14	3	<0.08	5	<0.5	840	--	1,000	--	<96
MW-20		12/10/2008	9.64	0.00	--	3.26	1	<0.7	<0.8	<1.6	<0.5	81	--	1,000	--	210
MW-20		3/12/2009	10.13	0.00	--	2.77	13	3	2	4	<0.5	930	--	1,800	--	<110
MW-20		06/09-11/09[a]	11.16	0.00	0.00	1.74	3	0.9	<0.5	1	<0.5	250	--	880	--	<69
MW-20		09/09-11/09[a]	11.14	0.00	0.00	1.76	2	0.6	<0.5	1	<0.5	250	--	720	--	470
MW-20		12/07-09/09[a]	9.75	0.00	0.00	3.15	2	<0.5	<0.5	<1.0	<0.5	130	--	590	--	230
MW-20		03/09-11/10[a]	9.55	0.00	0.00	3.35	4	<0.5	<0.5	0.5	<0.5	260	--	1,200	--	430
MW-20		06/09-11/10[a]	9.48	0.00	0.00	3.42	2	<0.5	<0.5	0.6	<0.5	180	--	1,100	--	840
MW-20		09/09/10[a]	10.42	0.00	--	2.48	0.7	<0.5	<0.5	<0.5	<0.5	100	--	1,100	--	290
MW-20		03/09/11[a]	9.68	0.00	--	3.22	0.7	<0.5	<0.5	<0.5	--	<50	--	870	--	420
MW-20		09/14/11[a]	10.32	0.00	--	2.58	<0.5	<0.5	<0.5	<0.5	--	74	150	1,500	<66	210
MW-20		03/07/12[a]	10.65	0.00	--	2.25	0.6	<0.5	<0.5	<0.5	--	110	120	920	<68	320
MW-20		9/12/12[a]	10.61	0.00	--	2.29	<0.5	<0.5	<0.5	<0.5	--	110	520	1,700	180	480
MW-20	(D)	9/12/12[a]	--	--	--	--	<0.5	<0.5	<0.5	<0.5	--	120	570	1,900	170	490
MW-20		3/13/13[a]	9.71	0.00	--	3.19	0.7	<0.5	<0.5	<0.5	--	130	230	920	<71	300
MW-20		9/11/13[a]	10.23	--	--	2.67	<0.5	<0.5	<0.5	<0.5	--	94	430	1,400	<71	270
MW-20	(D)	9/11/13[a]	--	--	--	--	<0.5	<0.5	<0.5	<0.5	--	120	180	1,300	<72	270
MW-20	12.90	2/14/2014****	9.05	0.00	--	3.85	<0.5	<0.5	<0.5	<0.5	--	210	300	840	<71	150
MW-20		9/18/2014	10.69	--	--	2.21	<0.5	<0.5	<0.5	<0.5	--	160	97	--	<68	--
MW-20		3/12/2015	10.59	--	--	2.31	<0.5	<0.5	<0.5	<0.5	--	980	860	--	<66	--
MW-20		09/14/2015	9.62	--	--	3.28	<0.5	<0.5	<0.5	<0.5	--	<50	34	--	<66	--
MW-20		3/11/2016	6.61	--	--	--	<0.5	<0.5	<0.5	<0.5	--	<50	<29	--	<67	--
MW-20		9/9/2016	10.28	--	--	2.62	<0.5	<0.5	<0.5	<0.5	--	68	33	--	<66	--
MW-20		3/15/2017	8.59	--	--	-8.59	<0.5	<0.5	<0.5	<0.5	--	<50	<28	--	<66	--
MW-20		9/9/2017	9.99	0.00	--	-9.99	<0.5	<0.5	<0.5	<0.5	--	120	59	--	<67	--
MW-20		3/14/2018	9.72	0.00	--	3.18	<0.5	<0.5	<0.5	<0.5	--	<50	<29	--	<68	--
MW-20		9/6/2018	10.56	0.00	--	2.34	<0.2	<0.2	<0.2	<0.5	--	56 J	57 J	--	<67	--
MW-20		3/13/2019	9.14	0.00	--	3.76	<0.2	<0.2	<0.2	<0.5	--	27 J	<29	--	<66	--
MW-21		6/21/2007	12.41	0.00	0.00	0.17	<0.5	<0.5	<0.5	<1.0	<0.5	300	--	3,300	--	<1,000
MW-21	12.89	9/24/2007	12.38	0.00	0.00	0.48	<0.5	<0.5	<0.5	0.6	<0.5	100	--	1,500	--	<490
MW-21		12/13/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-21		3/5/2008	--	--	--	--	--	--	--	--	--	84	--	370	--	<99
MW-21		3/6/2008	9.92	0.00	0.00	2.97	<0.5	<0.5	<0.5	0.6	<0.5	--	--	--	--	--
MW-21		6/3/2008	--	--	--	--	--	--	--	--	--	<50	--	160	--	<100
MW-21		6/4/2008	9.48	0.00	--	3.41	<0.5	<0.7	<0.8	<1.0	<0.5	--	--	--	--	--
MW-21		9/11/2008	10.28	0.00	--	2.61	<0.5	<0.7	<0.8	<1.6	<0.5	160	--	580	--	<97
MW-21		12/10/2008	9.80	0.00	--	3.09	<0.5	<0.7	<0.8	<1.6	<0.5	<50	--	32	--	<69
MW-21		3/12/2009	9.90	0.00	--	2.99	<0.5	<0.5	<0.5	<1.0	<0.5	<50	--	110	--	<73
MW-21		06/09-11/09	10.08	0.00	--	2.81	<0.5	<0.5	<0.5	<1.0	<0.5	<50	--	170	--	<68
MW-21		09/09-11/09	10.62	0.00	--	2.27	<0.5	<0.5	<0.5	<1.0	<0.5	150	--	790	--	290
MW-21		12/07-09/09							INACCESSIBLE							
MW-21		03/09-11/10	9.43	0.00	--	3.46	<0.5	<0.5	<0.5	<0.5	<0.5	<50	--	230	--	<69
MW-21		06/09-11/10	9.08	0.00	--	3.81	<0.5	<0.5	<0.5	<0.5	<0.5	<50	--	1,200	--	1,000
MW-21		9/9/2010	9.90	0.00	--	2.99	<0.5	<0.5	<0.5	<0.5	<0.5	58	--	490	--	310
MW-21		3/8/2011	8.72	0.00	--	4.17				NO LONGER INCLUDED IN ROUTINE SAMPLING EVENTS						
MW-22		6/20/2007	11.94	0.00	0.00	0.51	3	3	45	34	<0.5	3,100	--	27,000	--	2,400
MW-22	12.79	9/24/2007	12.10	0.00	0.00	0.85				NOT SAMPLED DUE TO THE PRESENCE OF SHEEN						
MW-22		12/13/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22		3/6/2008	9.48	0.02	0.00	3.31				NOT SAMPLED DUE TO THE PRESENCE OF SPH						
MW-22		6/4/2008	10.62	0.03	--	2.19**										
MW-22		9/11/2008	10.49	Trace	--	2.91										
MW-22		12/10/2008	9.98	--	--	2.81										
MW-22		3/12/2009	9.55	--	--	3.24										
MW-22		06/09-11/09[3]	9.94	Trace	--	-9.94										
MW-22		09/09-11/09	9.88	Trace	--	-9.88										
MW-22		12/07-09/09	9.70	Trace		-9.70										
MW-22		03/09-11/10	9.18	Trace	--	3.61										
MW-22		06/09-11/10[3]	10.12	Trace	--	2.67				NOT SAMPLED DUE TO THE PRESENCE OF SHEEN						

Appendix C
Table 1
Historical Groundwater Monitoring Data and Analytical Results - TPH, BTEX, and MTBE
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

WELL ID	TOC*	DATE	DTW (ft.)	SPHT (ft.)	SPH Removed (ml.)	GWE (ft.)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TPH-GRO (µg/L)	TPH-DRO[7] (µg/L)	TPH-DRO (µg/L)	TPH-HRO[7] (µg/L)	TPH-HRO (µg/L)
MW-22		09/09/10[3]	9.55	Trace	--	3.24										
MW-22		03/08/11[3]	9.15	Trace	--	3.64										
MW-22		09/14/11[3]	10.70	Trace	--	2.09										
MW-22		3/8/2012	10.30	Trace	--	2.49										
MW-22		09/11/12[3]	11.08	Trace	--	1.71										
MW-22		03/13/13[3]	10.04	Trace	--	2.75										
MW-22		09/11/13[3]	10.24***	Trace	--[6]	2.55										
MW-22		2/14/2014****	9.77[9]	0.01	--[6]	3.01	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-22		9/18/2014	10.38	--	--	2.41										
MW-22		3/12/2015	10.42	--	--	2.37	<0.5	<0.5	<0.5	<0.5	--	<50	72	--	<67	--
MW-22		09/14/2015	9.58	--	--	3.21	<0.5	<0.5	<0.5	<0.5	--	<50	330	--	<66	--
MW-22		3/11/2016	6.36	--	--	6.43	<0.5	<0.5	<0.5	<0.5	--	<250	160	--	96	--
MW-22		9/9/2016	10.25	--	--	2.54	<0.5	<0.5	<0.5	<0.5	--	83	6,400	--	750	--
MW-22	(D)	9/9/2016	10.25	--	--	2.54	<0.5	<0.5	<0.5	<0.5	--	80	1,600	--	240	--
MW-22		3/15/2017	7.46	--	--	5.33	<0.5	<0.5	<0.5	<0.5	--	180	31,000	--	6,400	--
MW-22	(D)	3/15/2017	7.46	--	--	5.33	<0.5	<0.5	<0.5	<0.5	--	82	24,000	--	4,700	--
MW-22		9/9/2017	9.87	0.00	--	2.92	<0.5	<0.5	<0.5	<0.5	--	990	35,000	--	<3,300	--
MW-22		3/14/2018	9.50	0.00	--	2.92	<0.5	<0.5	<0.5	<0.5	--	190	31,000	--	3,900	--
MW-22		9/7/2018	10.59	0.00	--	2.20	<0.2	<0.2	<0.2	<0.5	--	250	34,000	--	5,700	--
MW-22		3/13/2019	9.28	0.00	--	3.51	<0.2	<0.2	<0.2	<0.5	--	<19	550	--	<69	--
MW-22	(D)	3/13/2019	9.28	0.00	--	3.51	<0.2	<0.2	<0.2	<0.5	--	<19	520	--	<68	--
MW-23		6/20/2007	7.80	0.00	0.00	0.69	2	3	0.9	5.7	<0.5	3,000	--	3,300	--	1,300
MW-23	12.77	9/24/2007	8.42	0.00	0.00	4.97	4	4	2	5.8	<0.5	-	--	3,800	--	1,400
MW-23		12/13/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-23		3/3/2008	7.45	0.00	0.00	5.60	1.00	0.07	1.00	2.00	<0.5	--	--	--	--	--
MW-23		3/5/2008	--	--	--	--	--	--	--	--	--	1,400	--	600	--	160
MW-23		6/3/2008	7.67	0.00	--	5.38	6.00	5.00	<4	<8	<3	1,300	--	1,900	--	770
MW-23		9/11/2008	7.64	0.00	--	5.13	2.00	2.00	1.00	3.00	<0.5	2,400	--	830	--	400
MW-23		12/10/2008	7.45	0.00	--	5.32	3.00	3.00	1.00	3.00	<0.5	2,000	--	590	--	86
MW-23		3/12/2009	7.54	0.00	--	5.23	2.00	1.00	0.80	2.00	<0.5	1,700	--	970	--	470
MW-23		06/09-11/09	7.66	0.00	--	5.11	1	1	0.6	1	<0.5	1,900	--	1,500	--	520
MW-23		09/09-11/09	7.94	Trace	--	4.83										
MW-23		12/07-09/09	8.91	Trace	--	3.86										
MW-23		03/09-11/10	7.40	Trace	--	5.37	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-23		06/09-11/10[3]	10.01	Trace	--	2.76										
MW-23		09/09/10[3]	8.37	Trace	--	4.40										
MW-23		03/08/11[3]	7.58	Trace	--[6]	5.19	NO LONGER INCLUDED IN ROUTINE SAMPLING EVENTS									
MW-24		6/20/2007	12.82	0.00	0.00	4.35	36	45	22	83	<1	3,200	--	7,200	--	4,900
MW-24	13.05	9/24/2007	12.41	0.00	0.00	0.23	--	--	--	--	--	--	--	--	--	--
MW-24		12/13/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	13.05	3/6/2008	10.01	0.12	0.00	3.14**										
MW-24		6/3/2008	12.83	0.43	--	0.56**	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-24		9/11/2008	11.4	0.23	--	1.83**	--	--	--	--	--	--	--	--	--	--
MW-24		12/11/2008	13.68	1.79	--	0.80**	--	--	--	--	--	--	--	--	--	--
MW-24		3/12/2009	12.21			0.84	--	--	--	--	--	--	--	--	--	--
MW-24		06/09-11/09[3]	13.02	0.52	--	0.45**										
MW-24		09/09-11/09[3]	11.70	0.25	--	1.55**										
MW-24		12/07-09/09[3]	11.70	0.18	--	1.49**										
MW-24		03/09-11/10[3]	10.08	0.08	--	3.03**										
MW-24		06/09-11/10[3]	10.65	0.40	--	2.72**										
MW-24		09/09/10[3]	10.20	Trace	--	2.85	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-24		03/08/11[3]	9.81	Trace	--	3.24										
MW-24		09/14/11[3]	12.27	0.15	--	0.90**										
MW-24		03/08/12[3]	11.12	0.30	--	2.17**										
MW-24		09/11/12[3]	11.43	0.02	--	1.64**										
MW-24		03/13/13[3]	11.20	0.14	--	1.96**										
MW-24		09/11/13[3]	11.60***	Trace	--	1.45	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-24		2/14/2014****	10.73[9]	0.01	--	2.31										
MW-24		9/18/2014	10.96	--	--	2.09	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-24		3/12/2015	10.14*****	--	--	13.05										
MW-24		09/14/2015	9.58	--	--	3.47	7	2	3	2	--	740	2,500,000	--	1,600,000	--
MW-24		9/9/2016	11.89*****	0.02	--	1.18	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-24		3/15/2017	7.66	0.02	--	5.41**										
MW-24		9/9/2017	12.40	0.00	--	0.65	13	8	6	11	--	1,500	430	--	280	--
MW-24		3/14/2018	7.72	0.00	--	5.33	<0.5	<0.5	<0.5	<0.5	--	400	230	--	410	--
MW-24		9/6/2018	11.90***	0.01	--	1.16	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-24		9/6/2018	11.37*****	0.02	--	1.70										
MW-24		3/13/2019	9.98	0.00	--	3.07	0.3 J	0.2 J	0.3 J	<0.5	--	200 J	470	--	490	--
MW-25		6/21/2007	12.24	0.00	0.00	0.64	<0.5	<0.5	<0.5	<1.0	<0.5	150	--	2,800	--	<1,000
MW-25	13.14	6/21/2007	12.24	0.00	0.00	0.90	<0.5	<0.5	<0.5	<1.0	<0.5	140	--	2,400	--	<1,000
MW-25		9/24/2007	10.68	0.00	0.00	0.90	<0.5	<0.5	<0.5	<1.0	<0.5	78	--	1,300	--	330
MW-25		12/13/2007	11.33	0.00	0.00	1.81	--	--	--	--	--	--	--	--	--	--
MW-25		3/5/2008	--	--	--	--	--	--	--	--	--	<50	--	430	--	<98
MW-25		3/6/2008	9.78	0.00	0.00	3.36	<0.5	<0.5	<0.5	<1.0	<0.5	--	--	--	--	--
MW-25		6/4/2008	11.96	0.06	--	1.18	--	--	--	--	--	--	--	--	--	--
MW-25		9/11/2008	10.93	0.00	--	2.21	<0.5	<0.7	<0.8	<1.6	<0.5	61	--	360	--	<97
MW-25		12/10/2008	10.78	0.00	--	2.36	2	<0.7	<0.8	<1.6	<0.5	<50	--	410	--	<70
MW-25		3/12/2009	10.51	0.00	--	2.63	<0.5	<0.5	<0.5	<1.0	<0.5	<50	--	360	--	<68
MW-25		06/09-11/09	9.89	0.00	--	3.25	0.7	<0.5	<0.5	<1.0	<0.5	<50	--	320	--	<69
MW-25		09/09-11/09	11.39	0.00	--	1.75	<0.5	<0.5	<0.5	<1.0	<0.5	<50	--	300	--	410
MW-25		12/07-09/09	10.14	0.00	--	3.00	<0.5	<0.5	<0.5	<1.0	<0.5	<50	--	780	--	250
MW-25		03/09-11/10	9.80	0.00	--	3.34	<0.5	<0.5	<0.5	<0.5	<0.5	<50	--	430	--	200
MW-25		06/09-11/10	10.32	0.00	--	2.82	<0.5	<0.5	<0.5	<0.5	<0.5	<50	--	530	--	510
MW-25		9/9/2010	11.14	0.00	--	2.00	<0.5	<0.5	<0.5	<0.5	<0.5	<51	--	420	--	160
MW-25		3/8/2011	10.05	0.00	--	3.09	<0.5	<0.5	<0.5	<0.5	--	77	--	800	--	280
MW-25	(D)	3/8/2011	--	--	--	--	<0.5	<0.5	<0.5	<0.5	--	68	--	870	--	370

Appendix C
Table 1
Historical Groundwater Monitoring Data and Analytical Results - TPH, BTEX, and MTBE
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

WELL ID	TOC*	DATE	DTW (ft.)	SPHT (ft.)	SPH Removed (ml.)	GWE (ft.)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TPH-GRO (µg/L)	TPH-DRO[7] (µg/L)	TPH-DRO (µg/L)	TPH-HRO[7] (µg/L)	TPH-HRO (µg/L)
MW-25		9/14/2011	11.43	0.00	--	1.71	<0.5	<0.5	<0.5	<0.5	--	<50	<28	630	<66	120
MW-25	(D)	9/14/2011	11.43	0.00	--	1.71	<0.5	<0.5	<0.5	<0.5	--	<50	<28	490	<66	99
MW-25		3/8/2012	10.68	0.00	--	2.46	<0.5	<0.5	<0.5	<0.5	--	<50	<29	580	220	470
MW-25		9/12/2012	11.44	0.00	--	1.70	<0.5	<0.5	<0.5	<0.5	--	<50	<29	740	<67	460
MW-25		3/13/2013	11.16	0.00	--	1.98	<0.5	<0.5	<0.5	<0.5	--	58	<30	490	<69	230
MW-25		9/12/2013	10.53	--	--	2.61	<0.5	<0.5	<0.5	<0.5	--	<50	<30	640	<69	130
MW-25		2/14/2014****	9.22	0.00	--	3.92	<0.5	<0.5	<0.5	<0.5	--	160	29	530	<67	<67
MW-25	(D)	2/14/2014****	9.22	0.00	--	3.92	<0.5	<0.5	<0.5	<0.5	--	160	29	490	<66	85
MW-25		9/18/2014	10.66	--	--	2.48	<0.5	<0.5	<0.5	<0.5	--	<50	<29	--	<66	--
MW-25	(D)	9/18/2014	10.66	--	--	2.48	<0.5	<0.5	<0.5	<0.5	--	<50	<29	--	<66	--
MW-25		3/12/2015	11.28	--	--	1.86	<0.5	<0.5	<0.5	<0.5	--	<50	<28	--	<66	--
MW-25		09/14/2015	9.58	--	--	3.56	<0.5	<0.5	<0.5	<0.5	--	<50	<28	--	<66	--
MW-25	(D)	09/14/2015	9.58	--	--	3.56	<0.5	<0.5	<0.5	<0.5	--	<50	<28	--	<66	--
MW-25		3/11/2016	6.36	--	--	6.78	<0.5	<0.5	<0.5	<0.5	--	<50	<29	--	<67	--
MW-25		9/9/2016	10.74	--	--	2.4	<0.5	<0.5	<0.5	<0.5	--	<50	<28	--	<66	--
MW-25		3/15/2017	8.75	--	--	-8.75	NO LONGER INCLUDED IN ROUTINE SAMPLING EVENTS									
DM-1		12/01/89	--	--	--	--	50	--	--	--	--	--	--	--	--	--
DM-1	99.01	09/00/90	--	--	--	--	3	--	--	--	--	--	--	--	--	--
DM-1		02/06/91	--	--	--	--	5	--	--	--	--	--	--	--	--	--
DM-1		05/08/91	--	--	--	--	1.3	--	--	1.6	--	--	--	--	--	--
DM-1		08/21/91	--	--	--	--	5	--	--	--	--	--	--	--	--	--
DM-1		03/26/92	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-1		06/02/92	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-1		09/15/92	8.74	0.00	--	90.27	--	--	--	--	--	--	--	--	--	--
DM-1		02/23/93	8.45	0.00	--	90.56	<0.5	<0.5	<0.5	0.9	--	--	--	--	--	--
DM-1		05/08/93	7.99	0.00	--	91.02	<0.5	<0.5	<0.5	0.9	--	--	--	--	--	--
DM-1		07/23/93	8.60	0.00	--	90.41	<0.5	<0.5	<0.5	0.5	--	--	--	--	--	--
DM-1		10/12/93	9.71	0.00	--	89.30	<0.5	<0.5	<0.5	<1	--	--	--	--	--	--
DM-1	100.03	02/04/94	8.51	0.00	--	91.52	<0.5	<0.5	<0.5	<1	--	--	--	--	--	--
DM-1		04/27/94	8.43	0.00	--	91.60	<0.5	<0.5	<0.5	<1	--	--	--	--	--	--
DM-1		7/27/1994	8.74	0.00	--	91.29	--	--	--	--	--	--	--	--	--	--
DM-1		10/14/1994	9.05	0.00	--	90.98	--	--	--	--	--	--	--	--	--	--
DM-1		1/26/1995	8.11	0.02	--	91.92	--	--	--	--	--	--	--	--	--	--
DM-1		4/7/1995	8.49	0.02	--	91.54	--	--	--	--	--	--	--	--	--	--
DM-1		8/15/1995	8.80	0.01	--	91.23	--	--	--	--	--	--	--	--	--	--
DM-1		11/21/1995	8.62	0.09	--	91.41	--	--	--	--	--	--	--	--	--	--
DM-1		2/26/1996	8.46	0.04	--	91.57	--	--	--	--	--	--	--	--	--	--
DM-1		6/12/1996	8.67	0.06	--	91.36	--	--	--	--	--	--	--	--	--	--
DM-1		8/7/1996	8.80	0.01	--	91.23	--	--	--	--	--	--	--	--	--	--
DM-1		10/29/1996	8.41	0.03	--	91.62	--	--	--	--	--	--	--	--	--	--
DM-1		2/10/1997	8.77	0.00	--	91.26	--	--	--	--	--	--	--	--	--	--
DM-1		5/20/1997	8.51	0.56	--	91.52	--	--	--	--	--	--	--	--	--	--
DM-1					---------- Well Abandoned on May 30, 1997 ----------											
DM-2		12/01/89	--	--	--	--	10	--	--	--	--	--	--	--	--	--
DM-2		09/00/90	--	--	--	--	7	2	--	2	--	--	--	--	--	--
DM-2		02/06/91	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-2		05/08/91	--	--	--	--	59	1.5	1.3	--	--	--	--	--	--	--
DM-2		08/15/91	--	--	--	--	8.6	--	1.1	0.6	--	--	--	--	--	--
DM-2		03/26/92	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-2		06/02/92	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-2		09/15/92	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-2		02/23/93	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-2		05/08/93	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-2		07/23/93	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-2		10/12/93	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-2	100.09	02/04/94	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-2					---------- Well Abandoned between October 12, 1993 and February 4, 1994 ----------											
DM-3		12/01/89	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-3	98.21	09/00/90	--	--	--	--	1	1	--	--	--	--	--	--	--	--
DM-3		02/06/91	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-3		05/08/91	--	--	--	--	--	--	--	5	--	--	--	--	--	--
DM-3		08/15/91	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-3		03/26/92	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-3		06/02/92	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-3		09/15/92	8.19	0.00	--	90.02	--	--	--	1.3	--	--	--	--	--	--
DM-3		02/23/93	6.79	0.00	--	91.42	<0.5	<0.5	<0.5	<1	--	--	--	--	--	--
DM-3		05/08/93	7.89	0.00	--	90.32	<0.5	<0.5	<0.5	<1	--	--	--	--	--	--
DM-3		07/23/93	7.76	0.00	--	90.45	--	--	--	--	--	--	--	--	--	--
DM-3		10/12/93	8.79	0.00	--	89.42	<0.5	<0.5	<0.5	<1	--	--	--	--	--	--
DM-3	99.23	02/04/94	7.08	0.00	--	92.15	<0.5	<0.5	<0.5	<1	--	--	--	--	--	--
DM-3		04/27/94	7.33	0.00	--	91.90	<0.5	<0.5	<0.5	<1	--	--	--	--	--	--
DM-3		7/27/1994	7.98	0.00	--	91.25	--	--	--	--	--	--	--	--	--	--
DM-3		10/14/1994	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-3		1/26/1995	6.71	0.00	--	92.52	--	--	--	--	--	--	--	--	--	--
DM-3		4/7/1995	7.27	0.00	--	91.96	--	--	--	--	--	--	--	--	--	--
DM-3		8/15/1995	8.10	0.00	--	91.13	--	--	--	--	--	--	--	--	--	--
DM-3		11/21/1995	7.71	0.00	--	91.52	--	--	--	--	--	--	--	--	--	--
DM-3		2/26/1996	6.75	0.00	--	92.48	--	--	--	--	--	--	--	--	--	--
DM-3		6/12/1996	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-3		8/7/1996	8.91	0.00	--	90.32	--	--	--	--	--	--	--	--	--	--
DM-3		10/29/1996	8.17	0.00	--	91.06	--	--	--	--	--	--	--	--	--	--
DM-3		2/10/1997	8.66	0.00	--	90.57	--	--	--	--	--	--	--	--	--	--
DM-3		5/20/1997	7.77	0.00	--	91.46	--	--	--	--	--	--	--	--	--	--
DM-3					---------- Well Abandoned on May 27, 1997 ----------											

Appendix C
Table 1
Historical Groundwater Monitoring Data and Analytical Results - TPH, BTEX, and MTBE
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

WELL ID	TOC*	DATE	DTW (ft.)	SPHT (ft.)	SPH Removed (ml.)	GWE (ft.)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TPH-GRO (µg/L)	TPH-DRO[7] (µg/L)	TPH-DRO (µg/L)	TPH-HRO[7] (µg/L)	TPH-HRO (µg/L)
DM-3A		02/06/91	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-3A	99.20	05/08/91	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-3A		08/15/91	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-3A		03/26/92	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-3A		06/02/92	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-3A		09/15/92	9.05	0.00	--	90.15	--	--	--	--	--	--	--	--	--	--
DM-3A		02/23/93	5.23	0.00	--	93.97	--	--	--	--	--	--	--	--	--	--
DM-3A		05/08/93	4.93	0.00	--	94.27	--	--	--	--	--	--	--	--	--	--
DM-3A		07/23/93	6.77	0.00	--	92.43	--	--	--	--	--	--	--	--	--	--
DM-3A		10/12/93	9.21	0.00	--	89.99	--	--	--	--	--	--	--	--	--	--
DM-3A	100.22	02/04/94	5.64	0.00	--	93.56	<0.5	<0.5	<0.5	<1	--	--	--	--	--	--
DM-3A		4/27/1994	5.50	0.00	--	93.70	--	--	--	--	--	--	--	--	--	--
DM-3A			---------- Not Part of Sampling Program ----------													
DM-3A		6/12/1996	5.73	0.00	--	93.47	--	--	--	--	--	--	--	--	--	--
DM-3A			---------- Not Part of Sampling Program ----------													
DM-3A	100.62	2/3/1998	4.10	0.00	--	96.12	--	--	--	--	--	--	--	--	--	--
DM-3A		1/8/1999	DRY	0.00	--	Dry	--	--	--	--	--	--	--	--	--	--
DM-3A		1/10/2000	3.89	0.00	--	96.73	--	--	--	--	--	--	--	--	--	--
DM-3A		1/17/2001	DRY	0.00	--	Dry	--	--	--	--	--	--	--	--	--	--
DM-3A		1/9/2002	3.67	0.00	--	96.95	--	--	--	--	--	--	--	--	--	--
DM-3A		1/9/2003	4.79	0.00	--	95.83	--	--	--	--	--	--	--	--	--	--
DM-10		02/06/91	--	--	--	--	--	--	1	1	--	--	--	--	--	--
DM-10	99.01	05/08/91	--	--	--	--	--	--	0.9	3.4	--	--	--	--	--	--
DM-10		08/15/91	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-10		03/26/92	--	--	--	--	2.9	1.6	4.4	1.3	--	--	--	--	--	--
DM-10		06/02/92	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-10		09/15/92	9.23	0.00	--	89.78	--	1.5	1.4	4.9	--	--	--	--	--	--
DM-10		02/23/93	8.35	0.00	--	90.66	<0.5	<0.5	<0.5	<1	--	--	--	--	--	--
DM-10		05/08/93	8.19	0.00	--	90.82	<0.5	<0.5	<0.5	<1	--	--	--	--	--	--
DM-10		07/23/93	9.06	0.00	--	89.95	<0.5	<0.5	<0.5	<1	--	--	--	--	--	--
DM-10		10/12/93	10.03	0.00	--	88.98	<0.5	<0.5	<0.5	<1	--	--	--	--	--	--
DM-10	100.01	02/04/94	8.50	0.00	--	91.51	3.5	5.7	1	3.9	--	--	--	--	--	--
DM-10		04/27/94	8.82	0.00	--	91.19	<0.5	<0.5	<0.5	<1	--	--	--	--	--	--
DM-10		7/27/1994	9.52	0.00	--	90.49	--	--	--	--	--	--	--	--	--	--
DM-10		10/14/1994	9.41	0.00	--	90.60	--	--	--	--	--	--	--	--	--	--
DM-10		1/26/1995	8.28	0.00	--	91.73	--	--	--	--	--	--	--	--	--	--
DM-10		4/7/1995	8.63	0.00	--	91.38	--	--	--	--	--	--	--	--	--	--
DM-10		8/15/1995	9.08	0.00	--	90.93	--	--	--	--	--	--	--	--	--	--
DM-10		11/21/1995	8.97	0.00	--	91.04	--	--	--	--	--	--	--	--	--	--
DM-10	100.01	2/26/1996	8.20	0.00	--	91.81	--	--	--	--	--	--	--	--	--	--
DM-10		6/12/1996	8.77	0.00	--	91.24	--	--	--	--	--	--	--	--	--	--
DM-10		8/7/1996	9.25	0.00	--	90.76	--	--	--	--	--	--	--	--	--	--
DM-10		10/29/1996	8.60	0.00	--	91.41	--	--	--	--	--	--	--	--	--	--
DM-10		2/10/1997	8.72	0.00	--	91.29	--	--	--	--	--	--	--	--	--	--
DM-10		5/20/1997	9.87	0.00	--	90.14	--	--	--	--	--	--	--	--	--	--
DM-10			---------- Well Abandoned on May 27, 1997 ----------													
W-1		09/22/88	--	--	--	--	--	--	26	92	--	--	--	--	--	--
W-1			---------- Well Abandoned ----------													
W-2		09/22/88	--	--	--	--	--	--	--	--	--	--	--	--	--	--
W-2			---------- Well Abandoned ----------													
W-3		09/22/88	--	--	--	--	--	--	--	--	--	--	--	--	--	--
W-3			---------- Well Abandoned ----------													
W-9		09/22/88	--	--	--	--	--	0.5	--	--	--	--	--	--	--	--
W-9			---------- Well Abandoned ----------													
W-10		09/22/88	--	--	--	--	12	--	13	41	--	--	--	--	--	--
W-10			---------- Well Abandoned ----------													
W-11		09/22/88	--	--	--	--	--	--	--	--	--	--	--	--	--	--
W-11			---------- Well Abandoned ----------													
W-13		12/01/93	8.85	0.00	--	-8.85	--	--	--	--	--	--	--	--	--	--
W-13	100.66	02/04/94	9.51	0.00	--	91.15	<0.5	<0.5	<0.5	<1	--	--	--	--	--	--
W-13		04/27/94	9.43	0.00	--	91.23	<0.5	<0.5	<0.5	<1	--	--	--	--	--	--
W-13		7/27/1994	9.70	0.00	--	90.96	<0.5	<0.5	<0.5	<1	--	--	--	--	--	--
W-13		10/14/1994	9.87	0.00	--	90.79	<0.5	<0.5	<0.5	<1	--	--	--	--	--	--
W-13		1/26/1995	8.99	0.00	--	91.67	<0.5	<0.5	<0.5	<1	--	--	--	--	--	--
W-13		4/7/1995	9.39	0.00	--	91.27	<0.5	<0.5	<0.5	<1	--	--	--	--	--	--
W-13		8/15/1995	9.64	0.00	--	91.02	<0.5	<0.5	<0.5	<1	--	--	--	--	--	--
W-13		11/21/1995	9.31	0.00	--	91.35	<0.5	<0.5	<0.5	<1	--	--	--	--	--	--
W-13		2/26/1996	9.12	0.00	--	91.54	<0.50	<0.50	<0.50	<1.0	--	--	--	--	--	--
W-13		6/12/1996	9.34	0.00	--	91.32	--	--	--	--	--	--	--	--	--	--
W-13		8/7/1996	9.57	0.00	--	91.09	--	--	--	--	--	--	--	--	--	--
W-13		10/29/1996	9.05	0.00	--	91.61	--	--	--	--	--	--	--	--	--	--
W-13		2/10/1997	9.17	0.00	--	91.49	--	--	--	--	--	--	--	--	--	--
W-13		5/20/1997	9.39	0.00	--	91.27	--	--	--	--	--	--	--	--	--	--
W-13			---------- Well Abandoned on May 27, 1997 ----------													
MW-4		08/15/91	--	--	--	--	2.6	3	8	5.4	--	--	--	--	--	--
MW-4	103.88	03/27/92	--	--	--	--	--	--	3.1	2.7	--	--	--	--	--	--
MW-4		06/02/92	--	--	--	--	0.9	1.3	1.3	1.4	--	--	--	--	--	--
MW-4		09/15/92	13.88	0.00	--	90.00	<0.5	<0.5	<0.5	1.8	--	--	--	--	--	--

Appendix C
Table 1
Historical Groundwater Monitoring Data and Analytical Results - TPH, BTEX, and MTBE
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

WELL ID	TOC*	DATE	DTW (ft.)	SPHT (ft.)	SPH Removed (ml.)	GWE (ft.)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TPH-GRO (µg/L)	TPH-DRO[7] (µg/L)	TPH-DRO (µg/L)	TPH-HRO[7] (µg/L)	TPH-HRO (µg/L)
MW-4		02/23/93	8.40	0.00	--	95.48	<0.5	<0.5	<0.5	1.3	--	--	--	--	--	--
MW-4		05/08/93	8.06	0.00	--	95.82	<0.5	<0.5	<0.5	0.6	--	--	--	--	--	--
MW-4		07/23/93	8.75	0.00	--	95.13	0.5	1.7	<0.5	1.4	--	--	--	--	--	--
MW-4		10/12/93	10.01	0.00	--	93.87	--	--	--	--	--	--	--	--	--	--
MW-4		12/01/93	7.14	0.00	--	96.74	--	--	--	--	--	--	--	--	--	--
MW-4	100.00	02/04/94	8.06	0.00	--	91.94	--	--	--	--	--	--	--	--	--	--
MW-4		04/27/94	7.82	0.00	--	92.18	--	--	--	--	--	--	--	--	--	--
MW-4		7/27/1994	8.27	0.00	--	91.73	--	--	--	--	--	--	--	--	--	--
MW-4		10/14/1994	8.25	0.00	--	91.75	--	--	--	--	--	--	--	--	--	--
MW-4		1/26/1995	7.58	0.00	--	92.42	--	--	--	--	--	--	--	--	--	--
MW-4		4/7/1995	7.72	0.00	--	92.28	--	--	--	--	--	--	--	--	--	--
MW-4		8/15/1995	8.10	0.00	--	91.90	--	--	--	--	--	--	--	--	--	--
MW-4		11/21/1995	7.83	0.00	--	92.17	--	--	--	--	--	--	--	--	--	--
MW-4		2/26/1996	7.84	0.00	--	92.16	--	--	--	--	--	--	--	--	--	--
MW-4		6/12/1996	8.34	0.00	--	91.66	--	--	--	--	--	--	--	--	--	--
MW-4		8/7/1996	8.35	0.00	--	91.65	--	--	--	--	--	--	--	--	--	--
MW-4		10/29/1996	7.77	0.00	--	92.23	--	--	--	--	--	--	--	--	--	--
MW-4		2/10/1997	7.98	0.00	--	92.02	--	--	--	--	--	--	--	--	--	--
MW-4		5/20/1997	8.13	0.00	--	91.87	--	--	--	--	--	--	--	--	--	--
MW-4	100.00	2/3/1998	7.57	0.00	--	92.43	--	--	--	--	--	--	--	--	--	--
MW-4		1/8/1999	8.04	0.00	--	91.96	--	--	--	--	--	--	--	--	--	--
MW-4		1/10/2000	7.53	0.00	--	92.47	--	--	--	--	--	--	--	--	--	--
MW-4		1/17/2001	8.06	0.00	--	91.94	--	--	--	--	--	--	--	--	--	--
MW-4		1/9/2002	7.70	0.00	--	92.30	--	--	--	--	--	--	--	--	--	--
MW-4		1/9/2003	7.92	0.00	--	92.08	--	--	--	--	--	--	--	--	--	--
W-4		09/22/88	--	--	--	--	--	--	--	--	--	--	--	--	--	--
W-4	99.46	12/01/89	--	--	--	--	--	--	--	--	--	--	--	--	--	--
W-4		05/08/91	--	--	--	--	--	--	--	--	--	--	--	--	--	--
W-4		08/15/91	--	--	--	--	--	--	--	--	--	--	--	--	--	--
W-4		03/27/92	--	--	--	--	--	--	--	--	--	--	--	--	--	--
W-4		06/02/92	--	--	--	--	--	--	--	--	--	--	--	--	--	--
W-4		09/15/92	9.22	0.00	--	90.24	--	--	--	--	--	--	--	--	--	--
W-4		02/23/93	8.87	0.00	--	90.59	--	--	--	--	--	--	--	--	--	--
W-4		05/08/93	8.63	0.00	--	90.83	--	--	--	--	--	--	--	--	--	--
W-4		07/23/93	8.95	0.00	--	90.51	--	--	--	--	--	--	--	--	--	--
W-4		10/12/93	DRY	DRY	--	DRY	--	--	--	--	--	--	--	--	--	--
W-4	100.56	02/04/94	-	-	--	--	--	--	--	--	--	--	--	--	--	--
W-4		04/27/94	8.83	0.00	--	91.73	--	--	--	--	--	--	--	--	--	--
W-4					---------- Well Inaccessible ----------											
W-5		09/22/88	--	--	--	--	--	--	--	--	--	--	--	--	--	--
W-5	99.58	12/01/89	--	--	--	--	--	--	--	--	--	--	--	--	--	--
W-5		09/00/90	--	--	--	--	1	2	3	3	--	--	--	--	--	--
W-5		02/06/91	--	--	--	--	--	--	1	1	--	--	--	--	--	--
W-5		05/08/91	--	--	--	--	--	0.5	1	2.5	--	--	--	--	--	--
W-5		08/21/91	--	--	--	--	--	--	0.9	0.5	--	--	--	--	--	--
W-5		03/27/92	--	--	--	--	--	--	--	--	--	--	--	--	--	--
W-5		06/02/92	--	--	--	--	--	--	--	--	--	--	--	--	--	--
W-5		09/15/92	8.91	0.00	--	90.67	--	--	--	--	--	--	--	--	--	--
W-5		02/23/93	9.33	0.00	--	90.25	--	--	--	--	--	--	--	--	--	--
W-5		05/08/93	9.22	0.00	--	90.36	--	--	--	--	--	--	--	--	--	--
W-5		07/23/93	9.35	0.00	--	90.23	--	--	--	--	--	--	--	--	--	--
W-5		10/12/93	10.26	0.00	--	89.32	<0.5	<0.5	<0.5	<1	--	--	--	--	--	--
W-5					---------- Well Abandoned between October 12, 1993 and February 4, 1994 ----------											
W-7		09/22/88	--	--	--	--	110	--	--	2.6	--	--	--	--	--	--
W-7	100.77	12/01/89	--	--	--	--	16	--	--	--	--	--	--	--	--	--
W-7		09/00/90	--	--	--	--	5	--	--	--	--	--	--	--	--	--
W-7		02/06/91	--	--	--	--	5	--	--	--	--	--	--	--	--	--
W-7		05/08/91	--	--	--	--	8.6	--	--	--	--	--	--	--	--	--
W-7		08/15/91	--	--	--	--	3.1	--	--	--	--	--	--	--	--	--
W-7		03/27/92	--	--	--	--	2.8	--	--	--	--	--	--	--	--	--
W-7		06/02/92	--	--	--	--	3.8	0.5	--	--	--	--	--	--	--	--
W-7		09/15/92	9.53	0.00	--	91.24	3	0.5	--	0.6	--	--	--	--	--	--
W-7		02/23/93	9.07	0.00	--	91.70	2.9	<0.5	<0.5	<1	--	--	--	--	--	--
W-7		05/08/93	8.88	0.00	--	91.89	3.3	<0.5	<0.5	<1	--	--	--	--	--	--
W-7		07/23/93	9.14	0.00	--	91.63	3.0	<0.5	<0.5	<1	--	--	--	--	--	--
W-7					---------- Well Abandoned between July 23, 1993 and October 12, 1993 ----------											
W-8		09/22/88	--	--	--	--	--	--	--	2.7	--	--	--	--	--	--
W-8	99.64	12/01/89	--	--	--	--	--	--	--	--	--	--	--	--	--	--
W-8		09/00/90	--	--	--	--	--	--	--	--	--	--	--	--	--	--
W-8		02/06/91	--	--	--	--	--	--	--	--	--	--	--	--	--	--
W-8		05/08/91	--	--	--	--	--	--	--	0.5	--	--	--	--	--	--
W-8		08/15/91	--	--	--	--	--	--	--	--	--	--	--	--	--	--
W-8		03/27/92	--	--	--	--	--	--	--	--	--	--	--	--	--	--
W-8		06/02/92	--	--	--	--	--	--	--	1.6	--	--	--	--	--	--
W-8		09/15/92	9.36	0.00	--	90.28	--	--	--	--	--	--	--	--	--	--
W-8		02/23/93	9.01	0.00	--	90.63	<0.5	<0.5	<0.5	<1	--	--	--	--	--	--
W-8		05/08/93	8.82	0.00	--	90.82	<0.5	<0.5	<0.5	<1	--	--	--	--	--	--
W-8		07/23/93	9.07	0.00	--	90.57	<0.5	<0.5	<0.5	<1	--	--	--	--	--	--
W-8		10/12/93	10.17	0.00	--	89.47	<0.5	<0.5	<0.5	<1	--	--	--	--	--	--
W-8					---------- Well Abandoned between October 12, 1993 and February 4, 1994 ----------											

Appendix C
Table 1
Groundwater Monitoring Data and Analytical Results
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

EXPLANATIONS:

TOC = Top of Casing
(ft.) = Feet
(ml) = Millimeters
DTW = Depth to Water
GWE = Groundwater Elevation
MTBE = Methyl Tertiary Butyl Ether
SPHT = Separate-phase hydrocarbons thickness
SPH = Separate-phase hydrocarbons
TPH = Total Petroleum Hydrocarbons
DRO = Diesel Range Organics
GRO = Gasoline Range Organics
HRO = Heavy Range Organics
B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes
(µg/L) = Micrograms per liter
-- = Not Measured/Not Analyzed
QA = Quality Assurance/Trip Blank
(D) = Duplicate

RBC = Risk Based Concentration for construction and excavation workers exposed to groundwater in an open excavation, which are provided in Appendix A to the Oregon Department of Environmental Quality document titled "Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites" (DEQ, September 22, 2003, last updated May 2018).

SLV = Screening Level Values for a Level II Screening Ecological Risk Assessment for aquatic receptors in fresh water, which are provided in Table 1 of the Oregon Department of Environmental Quality document titled "Guidance for Ecological Risk Assessment: Levels I, II, III, and IV" (DEQ, April 1998, last updated December 2001).

ANALYTICAL METHODS:

BTEX and MTBE analyzed by EPA Method 8260.
Prior to June 9, 2009, BTEX and MTBE by EPA Method 8020A, 8021B, or 8260B
For June 9, 2009 going forward, TPH-GRO analyzed by ECY Method 97-602 NWTPH-Gx
For June 9, 2009 going forward, TPH-DRO and TPH-HRO by ECY Method 97-602 NWTPH-Dx with silica-gel cleanup. All results since at least 2Q2007 incldue silica gel cleanup.

* TOC Elevations were surveyed in May 2005 (updated September 2005 and June 2007) by Chase, Jones and Associates Inc. TOC elevations are referenced to Mean Sea Level. Vertical datum is NGVD 29.
TOC elevations are expressed in feet relative to an arbitrary datum.

** Groundwater elevation is corrected for the presence of SPH using: Groundwater Elevation = TOC - DTW + SPH thickness x Specific gravity of gasoline. Specific gravity of gasoline is assumed at 0.80.

*** Measurement collected at low tide.

**** Water level measurement collected 2/13/14; groundwater sample collected 2/14/14.

***** Measurement collected at high tide.

[1] Monitoring wells MW-6 and MW-12 were previously designated W-6 and W-12, respectively.

[2] Reported value is the result of a laboratory re-extraction from a vial with headspace. Result should be considered an estimate.

[3] Absorbant sock in well.

[4] Matrix spike and duplicate matrix spike samples were collected from this well. Please refer to lab sheets for results.

[5] Laboratory report indicates due to the nature of the sample extract matrix, a dilution was used for the analysis. The reporting limits were raised accordingly.

[6] Insufficient water to determine GWE.

[7] NWTPH-Dx with silica gel acid cleanup 10 gram column method.

[8] Monitoring well sock removed and replaced.

[9] Starting in 2014 all water level measurements were conducted during low tide

[10] SPH not observed during gauging activities; however SPH was later observed during well purging.

NOTES:

Starting 1Q 2011, wells MW-14, MW-17, MW-21 and MW-23 were removed from monitoring.
Starting 3Q 2016, well MW-6 was removed from monitoring

Appendix C
Table 2
Historical Groundwater Monitoring Data and Analytical Results
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

			Benzene	Ethylbenzene	Toluene	m,p-Xylene	o-Xylene	total Xylenes	Methyl Tert-Butyl Ether	Acetone	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	2-Butanone	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon Disulfide	Carbon Tetrachloride
			(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
		RBC (µg/L)	1,800	4,500	220,000	--	--	23,000	63,000	--	--	--	--	14,000	1,200	--	--	--	--	--	1,800
Proposed Screening Levels		SLV (µg/L)	130	7.3	9.8	--	--	13	--	1,500	--	--	--	--	--	14,000	--	--	--	0.92	74
Well ID	**Date**																				
DM-4	08/26/04		--	--	--	--	--	--	--	<25.0	--	--	--	--	<5.00	--	--	<1.00	<1.00	--	--
DM-4	11/09/04		--	--	--	--	--	--	--	<25.0	--	--	--	--	<5.00	--	--	<1.00	<1.00	--	--
DM-4	02/02/05		--	--	--	--	--	--	--	<25.0	--	--	--	--	<5.00	--	--	<1.00	<1.00	--	--
DM-4	02/02/05	(D)	--	--	--	--	--	--	--	<25.0	--	--	--	--	<5.00	--	--	<1.00	<1.00	--	--
DM-4	06/28/05		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	09/27/05		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	12/20/05		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	03/21/06		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	06/23/06		--	--	--	--	--	--	--	17	--	--	--	--	<1	--	--	<1	<1	--	--
DM-4	09/21/06		--	--	--	--	--	--	--	<6	--	--	--	--	<1	--	--	<1	<1	--	--
DM-4	12/19/06		--	--	--	--	--	--	--	<6	--	--	--	--	<1	--	--	<1	<1	--	--
DM-4	02/27/07		--	--	--	--	--	--	--	<6	--	--	--	--	<1	--	--	<1	<1	--	--
DM-4	06/14/07		--	--	--	--	--	--	--	<6	--	--	--	--	<1	--	--	<1	<1	--	--
DM-4	09/25/07		--	--	--	--	--	--	--	<6	--	--	--	--	<1	--	--	3	<1	--	--
DM-4	12/13/07		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	03/06/08		2	4	<1.00	2	2	4	<.500	<6.00	--	--	--	--	<1.00	--	--	<1.00	<1.00	--	--
DM-4	06/03/08		2	4	2	3	2	--	<.5	<6.00	--	--	--	--	<1.00	--	--	<1.00	<1.00	--	--
DM-4	09/11/08		3	2	1	2	2	4	<.5	<6.00	--	--	--	--	<1.00	--	--	<1.00	<1.00	--	--
DM-4	12/11/08		2	2	1	2	1	3	<.5	<6.00		<1.00	<1.00	<1.00	<1.00	<3.00	<1.00	<1.00	<1.00	<1.00	<1.00
DM-4	03/11/09		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	06/09-11/09[3]		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	09/09-11/09[3]		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	12/07-09/09[3]		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	03/09-11/10[3]		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	06/09-11/10[3]		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	09/09/10[3]		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	03/08/11[3]		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	09/14/11[3]		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	03/08/12[3]		`	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	09/11/12[3]		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	03/13/13[3]		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	09/13/13		<0.5	<0.5	0.7	--	--	2	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	08/26/04		--	--	--	--	--	--	--	<25.0	--	--	--	--	<5.00	--	--	<1.00	<1.00	--	--
DM-5	11/09/04		--	--	--	--	--	--	--	<25.0	--	--	--	--	<5.00	--	--	<1.00	<1.00	--	--
DM-5	02/02/05		--	--	--	--	--	--	--	<25.0	--	--	--	--	<5.00	--	--	<1.00	<1.00	--	--
DM-5	06/28/05		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	09/27/05		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	12/20/05		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	03/21/06		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	06/23/06		--	--	--	--	--	--	--	<30	--	--	--	--	<5	--	--	<5	<5	--	--
DM-5	09/21/06		--	--	--	--	--	--	--	20	--	--	--	--	<1.0	--	--	<1.0	<1	--	--
DM-5	12/19/06		--	--	--	--	--	--	--	<6	--	--	--	--	<1.0	--	--	<1.0	<1	--	--
DM-5	02/27/07		--	--	--	--	--	--	--	<6	--	--	--	--	<1.0	--	--	<1.0	<1	--	--
DM-5	06/14/07		--	--	--	--	--	--	--	<6	--	--	--	--	<1.0	--	--	<1.0	<1	--	--
DM-5	09/25/07		--	--	--	--	--	--	--	<30.0	--	--	--	--	<5.0	--	--	<5.0	<5	--	--
DM-5	12/13/07		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	03/06/08		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	06/03/08		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	09/11/08		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	12/11/08		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	03/11/09		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	06/09-11/09[3]		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	09/09-11/09[3]		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	12/07-09/09[3]		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	03/09-11/10[3]		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	06/09-11/10[3]		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	09/09/10[3]		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	03/08/11[3]		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	09/14/11[3]		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix C
Table 2
Historical Groundwater Monitoring Data and Analytical Results
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

		Benzene	Ethylbenzene	Toluene	m,p-Xylene	o-Xylene	total Xylenes	Methyl Tert-Butyl Ether	Acetone	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	2-Butanone	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon Disulfide	Carbon Tetrachloride
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
	RBC (µg/L)	1,800	4,500	220,000	--	--	23,000	63,000	--	--	--	--	14,000	1,200	--	--	--	--	--	1,800
Proposed Screening Levels	SLV (µg/L)	130	7.3	9.8	--	--	13	--	1,500	--	--	--	--	--	14,000	--	--	--	0.92	74
Well ID	**Date**																			
DM-5	03/08/12[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	09/11/12[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	03/13/13[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	09/13/13	<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3B	06/28/05	--	--	--	--	--	--	--	<25.0	--	--	--	--	<5.00	--	--	1.02	<1.00	--	--
MW-3B	06/28/05 (D)	--	--	--	--	--	--	--	<25.0	--	--	--	--	<5.00	--	--	1.12	<1.00	--	--
MW-3B	09/27/05	--	--	--	--	--	--	--	<25.0	--	--	--	--	<5.00	--	--	1.02	<1.00	--	--
MW-3B	9/9/2016[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3B	3/15/2017[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3B	9/9/17[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3B	3/14/18[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3B	09/06/18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3B	3/13/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	06/28/05	--	--	--	--	--	--	--	<25.0	--	--	--	--	<5.00	--	--	2.35	<1.00	--	--
MW-4B	09/27/05	--	--	--	--	--	--	--	<25.0	--	--	--	--	<5.00	--	--	2.00	<1.00	--	--
MW-4B	12/20/05	--	--	--	--	--	--	--	<25.0	--	--	--	--	<5.00	--	--	1.17	<1.00	--	--
MW-4B	03/21/06	--	--	--	--	--	--	--	<25.0	--	--	--	--	<5.00	--	--	1.19	<1.00	--	--
MW-4B	03/21/06	--	--	--	--	--	--	--	<25.0	--	--	--	--	<5.00	--	--	1.26	<1.00	--	--
MW-4B	06/22/06	--	--	--	--	--	--	--	<6	--	--	--	--	<1	--	--	<1	<1	--	--
MW-4B	09/20/06 (D)	--	--	--	--	--	--	--	<6	--	--	--	--	<1	--	--	1	<1	--	--
MW-4B	12/19/06	--	--	--	--	--	--	--	<6	--	--	--	--	<1	--	--	<1	<1	--	--
MW-4B	12/19/06 (D)	--	--	--	--	--	--	--	<6	--	--	--	--	<1	--	--	<1	<1	--	--
MW-4B	02/27/07	--	--	--	--	--	--	--	<6	--	--	--	--	<1	--	--	<1	<1	--	--
MW-4B	02/27/07 (D)	--	--	--	--	--	--	--	<6	--	--	--	--	<1	--	--	<1	<1	--	--
MW-4B	06/14/07	--	--	--	--	--	--	--	8	--	--	--	--	<1	--	--	<1	<1	--	--
MW-4B	06/14/07 (D)	--	--	--	--	--	--	--	9	--	--	--	--	<1	--	--	<1	<1	--	--
MW-4B	09/25/07	--	--	--	--	--	--	--	<6	--	--	--	--	<1	--	--	3	<1	--	--
MW-4B	09/25/07 (D)	--	--	--	--	--	--	--	<6	--	--	--	--	<1	--	--	3	<1	--	--
MW-4B	12/13/07	--	--	--	--	--	--	--	-	--	--	--	--	-	--	--	--	--	--	--
MW-4B	03/05/08	<.500	<.500	<.500	<.500	<.500	<.500	<.500	<6	--	--	--	--	<1.00	--	--	<1.00	<1.00	--	--
MW-4B	06/03/08	22	8	84	47	44	--	<.500	7	--	--	--	--	<1.00	--	--	<1.00	<1.00	--	--
MW-4B	09/10/08	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	21	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-4B	12/11/08	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	7	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-4B	03/11/09	<0.5	<0.5	<0.5	0.7	<0.5	0.7	<0.5	<6	<1	<1	<1	<1	<1	<1	<1	<1	<1	<3	<1
MW-4B	03/12/09 (D)	<0.5	<0.5	<0.5	0.6	<0.5	0.6	<0.5	<6	<1	<1	<1	<1	<1	<1	<1	<1	<1	<3	<1
MW-4B	06/09-11/09	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-4B	09/09-11/09	<0.5	0.5	<0.5	3	<0.5	3	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	3	<1	<1	<1
MW-4B	12/07-09/09	<0.5	<0.5	<0.5	0.6	<0.5	0.6	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	1	<1	<1	<1
MW-4B	03/09-11/10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	1	<1	<1	<1
MW-4B	06/09-11/10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-4B	09/09/10[5]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	03/10/11	<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	09/14/11[5]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	03/08/12	<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	09/12/12	0.7	<0.5	0.6	--	--	4	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	03/13/13[5]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	09/11/13[5]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	02/14/14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	09/18/14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	03/12/15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	03/11/16	<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	03/11/16 (D)	<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	09/09/16	<0.5	<0.5	<0.5	--	--	<0.5													
MW-4B	03/15/17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	09/09/17	<0.5	<0.5	5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	09/09/17 (D)	<0.5	<0.5	4	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	03/14/18	<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	09/06/18	<0.2	<0.2	<0.2	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	09/06/18 (D)	<0.2	<0.2	<0.2	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix C
Table 2
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Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

			Benzene	Ethylbenzene	Toluene	m,p-Xylene	o-Xylene	total Xylenes	Methyl Tert-Butyl Ether	Acetone	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	2-Butanone	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon Disulfide	Carbon Tetrachloride
			(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
		RBC (µg/L)	1,800	4,500	220,000	--	--	23,000	63,000	--	--	--	--	14,000	1,200	--	--	--	--	--	1,800
Proposed Screening Levels		SLV (µg/L)	130	7.3	9.8	--	--	13	--	1,500	--	--	--	--	--	14,000	--	--	--	0.92	74
Well ID	**Date**																				
MW-4B	3/13/2019		<0.2	<0.2	<0.2	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	08/26/04		--	--	--	--	--	--	--	<25.0	--	--	--	--	<5.00	--	--	<1.00	<1.00	--	--
MW-6[1]	08/26/04	(D)	--	--	--	--	--	--	--	<25.0	--	--	--	--	<5.00	--	--	<1.00	<1.00	--	--
MW-6[1]	11/09/04		--	--	--	--	--	--	--	<25.0	--	--	--	--	<5.00	--	--	<1.00	<1.00	--	--
MW-6[1]	02/02/05		--	--	--	--	--	--	--	<25.0	--	--	--	--	<5.00	--	--	<1.00	<1.00	--	--
MW-6[1]	06/28/05		--	--	--	--	--	--	--	<25.0	--	--	--	--	<5.00	--	--	<1.00	<1.00	--	--
MW-6[1]	09/27/05		--	--	--	--	--	--	--	<25.0	--	--	--	--	<5.00	--	--	<1.00	<1.00	--	--
MW-6[1]	12/21/05	(D)	--	--	--	--	--	--	--	<25.0	--	--	--	--	<5.00	--	--	<1.00	<1.00	--	--
MW-6[1]	12/21/05		--	--	--	--	--	--	--	<25.0	--	--	--	--	<5.00	--	--	<1.00	<1.00	--	--
MW-6[1]	3/21/2006		--	--	--	--	--	--	--	<25.0	--	--	--	--	<5.00	--	--	<1.00	<1.00	--	--
MW-6[1]	6/22/2006		--	--	--	--	--	--	--	<6	--	--	--	--	<1	--	--	<1	<1	--	--
MW-6[1]	09/20/06		--	--	--	--	--	--	--	<6	--	--	--	--	<1	--	--	<1	<1	--	--
MW-6[1]	12/19/06		--	--	--	--	--	--	--	<6	--	--	--	--	<1	--	--	<1	<1	--	--
MW-6[1]	02/27/07		--	--	--	--	--	--	--	<6	--	--	--	--	<1	--	--	<1	<1	--	--
MW-6[1]	06/14/07		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	09/25/07		--	--	--	--	--	--	--	<6	--	--	--	--	<1	--	--	<1	<1	--	--
MW-6[1]	12/13/07		<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<1.0	<6	--	--	--	--	<1.0	--	--	<1.0	<1.0	--	--
MW-6[1]	03/05/08		<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<6	--	--	--	--	<1.0	--	--	<1.0	<1.0	--	--
MW-6[1]	06/03/08		2,900	1,100	13,000	5,200	2,400	--	<1.0	150	--	--	--	--	<3.0	--	--	3	<3.0	--	--
MW-6[1]	09/10/08		1,400	250	1,700	780	300	1080	<1	48	<2	<2	<2	<2	<2	9	<2	<2	<2	<2	<2
MW-6[1]	12/11/08		61	32	19	81	35	116	<0.5	12	<1	<1	<1	<1	<1	<3	<1	<2	<1	<1	<1
MW-6[1]	03/12/09		6	14	0.9	25	1	26	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-6[1]	06/09-11/09		4	14	<0.5	6	<0.5	6	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-6[1]	09/09-11/09		0.8	<0.5	<0.5	<0.5	0.6	0.6	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-6[1]	12/07-09/09		41	60	2	71	25	96	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-6[1]	03/09-11/10		<0.5	1	<0.5	<0.5	<0.5	<0.5	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-6[1]	03/09-11/10	(D)	<0.5	1	<0.5	<0.5	<0.5	<0.5	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-6[1]	06/09-11/10		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-6[1]	09/09/10		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-6[1]	03/09/11		<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	09/14/11		<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	03/08/12		<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	09/11/12		<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	03/14/13		<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	03/14/13	(D)	<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	09/12/13		<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	02/14/14		<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	08/26/04		--	--	--	--	--	--	--	<25.0	--	--	--	--	<5.00	--	--	<1.00	<1.00	--	--
MW-12[1]	11/09/04		--	--	--	--	--	--	--	<25.0	--	--	--	--	<5.00	--	--	<1.00	<1.00	--	--
MW-12[1]	02/02/05		--	--	--	--	--	--	--	<25.0	--	--	--	--	<5.00	--	--	<1.00	<1.00	--	--
MW-12[1]	06/28/05		--	--	--	--	--	--	--	<25.0	--	--	--	--	<5.00	--	--	<1.00	<1.00	--	--
MW-12[1]	09/27/05		--	--	--	--	--	--	--	<25.0	--	--	--	--	<5.00	--	--	<1.00	<1.00	--	--
MW-12[1]	12/21/05		--	--	--	--	--	--	--	<25.0	--	--	--	--	<5.00	--	--	<1.00	<1.00	--	--
MW-12[1]	03/21/06		--	--	--	--	--	--	--	<25.0	--	--	--	--	<5.00	--	--	<1.00	<1.00	--	--
MW-12[1]	06/22/06		--	--	--	--	--	--	--	<6	--	--	--	--	<1	--	--	<1	<1	--	--
MW-12[1]	09/20/06		--	--	--	--	--	--	--	<6	--	--	--	--	<1	--	--	<1	<1	--	--
MW-12[1]	12/19/06		--	--	--	--	--	--	--	<6	--	--	--	--	<1	--	--	<1	<1	--	--
MW-12[1]	02/27/07		--	--	--	--	--	--	--	<6	--	--	--	--	<1	--	--	<1	<1	--	--
MW-12[1]	06/14/07		--	--	--	--	--	--	--	<6	--	--	--	--	<1	--	--	<1	<1	--	--
MW-12[1]	09/25/07		--	--	--	--	--	--	--	<6	--	--	--	--	<1	--	--	<1	<1	--	--
MW-12[1]	12/12/07		<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<6	--	--	--	--	<1.0	--	--	<1.0	<1.0	--	--
MW-12[1]	03/05/08		<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<6	--	--	--	--	<1	--	--	<1.0	<1.0	--	--

Appendix C
Table 2
Historical Groundwater Monitoring Data and Analytical Results
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

			Benzene	Ethylbenzene	Toluene	m,p-Xylene	o-Xylene	total Xylenes	Methyl Tert-Butyl Ether	Acetone	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	2-Butanone	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon Disulfide	Carbon Tetrachloride
			(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
		RBC (µg/L)	1,800	4,500	220,000	--	--	23,000	63,000	--	--	--	--	14,000	1,200	--	--	--	--	--	1,800
Proposed Screening Levels		SLV (µg/L)	130	7.3	9.8	--	--	13	--	1,500	--	--	--	--	--	14,000	--	--	--	0.92	74
Well ID	Date																				
MW-12[1]	06/03/08		1	<0.8	<0.7	<0.8	<0.8	--	<0.5	<6	--	--	--	--	<1	--	--	<1.0	<1.0	--	--
MW-12[1]	09/10/08		<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	13	<1.0	<1.0	<1.0	<1.0	<1.0	<3	<1.0	<1.0	<1.0	<1.0	<1.0
MW-12[1]	12/11/08		<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<6	<1.0	<1.0	<1.0	<1.0	<1.0	<3	<1.0	<1.0	<1.0	<1.0	<1.0
MW-12[1]	03/11/09		<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<6	<1.0	<1.0	<1.0	<1.0	<1.0	<3	<1.0	<1.0	<1.0	<1.0	<1.0
MW-12[1]	06/09-11/09		<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-12[1]	09/09-11/09		<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	7	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-12[1]	12/07-09/09		<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-12[1]	12/07-09/09	(D)	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-12[1]	03/09-11/10		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-12[1]	06/09-11/10		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-12[1]	09/09/10[5]		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	03/09/11		<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	09/14/11		<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	03/08/12[5]		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	09/12/12		<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	03/13/13[5]		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	09/12/13		<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	02/14/14		<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	09/18/14		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	03/12/15		<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	09/15/2015		<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	03/11/16		<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	09/09/16		<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	03/15/17		<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	09/09/17		<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	03/14/18		<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	03/14/18	(D)	<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	09/06/18		<0.2	<0.2	<0.2	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	3/13/2019		<0.2	<0.2	<0.2	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-14	06/28/05		--	--	--	--	--	--	--	<25.0	--	--	--	--	<5.00	--	--	<1.00	<1.00	--	--
MW-14	09/27/05		--	--	--	--	--	--	--	<25.0	--	--	--	--	<5.00	--	--	<1.00	<1.00	--	--
MW-14	12/20/05		--	--	--	--	--	--	--	<25.0	--	--	--	--	<5.00	--	--	<1.00	<1.00	--	--
MW-14	03/21/06		--	--	--	--	--	--	--	<25.0	--	--	--	--	<5.00	--	--	<1.00	<1.00	--	--
MW-14	06/22/06		--	--	--	--	--	--	--	<6	--	--	--	--	<1	--	--	<1	<1	--	--
MW-14	09/21/06		--	--	--	--	--	--	--	<6	--	--	--	--	<1	--	--	<1	<1	--	--
MW-14	12/19/06		--	--	--	--	--	--	--	<6	--	--	--	--	<1	--	--	<1	<1	--	--
MW-14	02/27/07		--	--	--	--	--	--	--	<6	--	--	--	--	<1	--	--	<1	<1	--	--
MW-14	06/14/07		--	--	--	--	--	--	--	<6	--	--	--	--	<1	--	--	<1	<1	--	--
MW-14	09/25/07		--	--	--	--	--	--	--	<6	--	--	--	--	<1	--	--	<1	<1	--	--
MW-14	12/13/07		<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<6	--	--	--	--	<1.0	--	--	<1.0	<1.0	--	--
MW-14	03/06/08		<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<6	--	--	--	--	<1.0	--	--	<1.0	<1.0	--	--
MW-14	06/04/08		<0.5	<0.8	<0.7	<0.8	<0.8	-	<0.5	<6	--	--	--	--	<1.0	--	--	<1.0	<1.0	--	--
MW-14	09/11/08		<0.5	<0.8	<0.7	<0.8	<0.8	<1.6	<0.5	<6	--	--	--	--	<1	--	--	<1	<1	--	--
MW-14	12/10/08		<0.5	<0.8	<0.7	<0.8	<0.8	<1.6	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-14	03/12/09		<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-14	06/09-11/09		<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-14	09/09-11/09		<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-14	12/07-09/09		<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-14	03/09-11/10		<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-14	06/09-11/10		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-14	09/09/10		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-14	09/09/10	(D)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-15	06/28/05		--	--	--	--	--	--	--	<25.0	--	--	--	--	<5.00	--	--	<1.00	<1.00	--	--
MW-15	09/27/05		--	--	--	--	--	--	--	<25.0	--	--	--	--	<5.00	--	--	<1.00	<1.00	--	--
MW-15	12/20/05		--	--	--	--	--	--	--	<25.0	--	--	--	--	<5.00	--	--	<1.00	<1.00	--	--
MW-15	03/21/06		--	--	--	--	--	--	--	<25.0	--	--	--	--	<5.00	--	--	<1.00	<1.00	--	--

Appendix C
Table 2
Historical Groundwater Monitoring Data and Analytical Results
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

		Benzene	Ethylbenzene	Toluene	m,p-Xylene	o-Xylene	total Xylenes	Methyl Tert-Butyl Ether	Acetone	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	2-Butanone	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon Disulfide	Carbon Tetrachloride
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
	RBC (µg/L)	1,800	4,500	220,000	--	--	23,000	63,000	--	--	--	--	14,000	1,200	--	--	--	--	--	1,800
Proposed Screening Levels	SLV (µg/L)	130	7.3	9.8	--	--	13	--	1,500	--	--	--	--	--	14,000	--	--	--	0.92	74
Well ID	**Date**																			
MW-15	06/22/06	--	--	--	--	--	--	--	<6	--	--	--	--	<1	--	--	<1	<1	--	--
MW-15	09/21/06	--	--	--	--	--	--	--	<6	--	--	--	--	<1	--	--	<1	<1	--	--
MW-15	12/19/06	--	--	--	--	--	--	--	<6	--	--	--	--	<1	--	--	<1	<1	--	--
MW-15	02/27/07	--	--	--	--	--	--	--	<6	--	--	--	--	<1	--	--	<1	<1	--	--
MW-15	06/14/07	--	--	--	--	--	--	--	<6	--	--	--	--	<1	--	--	<1	<1	--	--
MW-15	09/25/07	--	--	--	--	--	--	--	<6	--	--	--	--	<1	--	--	<1	<1	--	--
MW-15	12/14/07	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<6	--	--	--	--	<1.0	--	--	<1.0	<1.0	--	--
MW-15	12/14/07 (D)	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<6	--	--	--	--	<1.0	--	--	<1.0	<1.0	--	--
MW-15	03/06/08	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<6	--	--	--	--	<1.0	--	--	<1.0	<1.0	--	--
MW-15	06/04/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	09/11/08	<0.5	<0.8	<0.7	<0.8	<0.8	<1.6	<0.5	<6	--	--	--	--	<1	--	--	<1.0	<1.0	--	--
MW-15	12/11/08	<0.5	<0.8	<0.7	<0.8	<0.8	<1.6	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-15	03/12/09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	06/09-11/09[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	09/09-11/09[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	12/07-09/09[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	03/09-11/10[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	06/09-11/10[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	09/09/10[5]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	03/08/11[5]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	03/11/16	<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	09/09/16	<0.5	<0.5	<0.5	--	--	<0.5													
MW-15	03/15/17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	09/09/17	<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	03/14/18	<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	09/06/18	<0.2	<0.2	<0.2	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	3/13/2019	<0.2	<0.2	<0.2	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	06/28/05	--	--	--	--	--	--	--	--	--	--	--	--	<5.00	--	--	<1.00	<1.00	--	--
MW-16	09/27/05	--	--	--	--	--	--	--	--	--	--	--	--	<5.00	--	--	<1.00	<1.00	--	--
MW-16	12/21/05	--	--	--	--	--	--	--	--	--	--	--	--	<5.00	--	--	<1.00	<1.00	--	--
MW-16	03/21/06	--	--	--	--	--	--	--	--	--	--	--	--	<5.00	--	--	<1.00	<1.00	--	--
MW-16	06/22/06	--	--	--	--	--	--	--	--	--	--	--	--	<1	--	--	<1	<1	--	--
MW-16	09/20/06	--	--	--	--	--	--	--	--	--	--	--	--	<1	--	--	<1	<1	--	--
MW-16	12/19/06	--	--	--	--	--	--	--	--	--	--	--	--	<1	--	--	<1	<1	--	--
MW-16	02/27/07	--	--	--	--	--	--	--	--	--	--	--	--	<1	--	--	<1	<1	--	--
MW-16	06/14/07	--	--	--	--	--	--	--	--	--	--	--	--	<1	--	--	<1	<1	--	--
MW-16	09/25/07	--	--	--	--	--	--	--	--	--	--	--	--	<1	--	--	<1	<1	--	--
MW-16	12/12/07	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	--	--	--	--	--	<1.0	--	--	<1.0	<1.0	--	--
MW-16	03/05/08	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<6	--	--	--	--	<1.0	--	--	<1.0	<1.0	--	--
MW-16	06/03/08	14,000	2,700	39,000	13,000	5,600	--	<13	820	--	--	--	--	<25	--	--	<25	<25	--	--
MW-16	09/10/08	230	15	34	48	9	57	<0.5	8	<1	<1	<1	<1	<1	<3	1	<1	<1	<1	<1
MW-16	12/09/08	120	10	1	4	0.6	4.6	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-16	03/11/09	440	93	15	160	93	253	<1	<12	<2	<2	<2	<2	<2	6	<2	<2	<2	<2	<2
MW-16	06/09-11/09	200	42	0.7	4	3	7	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	2	<1
MW-16	09/09-11/09	170	160	2	220	43	263	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	2	<1
MW-16	12/07-09/09	78	21	<0.5	8	2	10	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-16	03/09-11/10	130	78	34	140	270	410	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-16	06/09-11/10	1	2	<0.5	<0.5	<0.5	<0.5	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-16	06/09-11/10 (D)	0.9	1	<0.5	<0.5	<0.5	<0.5	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-16	09/09/10	10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-16	03/10/11	<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	09/14/11	<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	03/08/12 (D)	<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	03/08/12	<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	09/12/12	<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	03/14/13	0.9	0.8	<0.5	--	--	3	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	09/12/13	<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	02/14/14	<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	09/18/14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	03/12/15	<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	09/15/2015	<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix C
Table 2
Historical Groundwater Monitoring Data and Analytical Results
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

			Benzene	Ethylbenzene	Toluene	m,p-Xylene	o-Xylene	total Xylenes	Methyl Tert-Butyl Ether	Acetone	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	2-Butanone	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon Disulfide	Carbon Tetrachloride
			(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
		RBC (µg/L)	1,800	4,500	220,000	--	--	23,000	63,000	--	--	--	--	14,000	1,200	--	--	--	--	--	1,800
Proposed Screening Levels		SLV (µg/L)	130	7.3	9.8	--	--	13	--	1,500	--	--	--	--	--	14,000	--	--	--	0.92	74
Well ID	**Date**																				
MW-16	03/11/16		<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-17	06/28/05		--	--	--	--	--	--	--	<25.0	--	--	--	--	<5.00	--	--	1.31	<1.00	--	--
MW-17	06/28/05	(D)	--	--	--	--	--	--	--	<25.0	--	--	--	--	<5.00	--	--	1.39	<1.00	--	--
MW-17	09/27/05		--	--	--	--	--	--	--	<25.0	--	--	--	--	<5.00	--	--	<1.00	<1.00	--	--
MW-17	12/20/05		--	--	--	--	--	--	--	<25.0	--	--	--	--	<5.00	--	--	<1.00	<1.00	--	--
MW-17	03/21/06		--	--	--	--	--	--	--	<25.0	--	--	--	--	<5.00	--	--	<1.00	<1.00	--	--
MW-17	06/22/06		--	--	--	--	--	--	--	<6	--	--	--	--	<1	--	--	<1	<1	--	--
MW-17	09/21/06		--	--	--	--	--	--	--	<6	--	--	--	--	<1	--	--	<1	<1	--	--
MW-17	12/19/06		--	--	--	--	--	--	--	<6	--	--	--	--	<1	--	--	<1	<1	--	--
MW-17	02/27/07		--	--	--	--	--	--	--	<6	--	--	--	--	<1	--	--	<1	<1	--	--
MW-17	06/14/07		--	--	--	--	--	--	--	<6	--	--	--	--	<1	--	--	<1	<1	--	--
MW-17	09/25/07		--	--	--	--	--	--	--	<6	--	--	--	--	<1	--	--	3	<1	--	--
MW-17	12/13/07		<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<6	--	--	--	--	<1.0	--	--	<1.0	<1.0	--	--
MW-17	03/06/08		<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<6	--	--	--	--	<1.0	--	--	<1.0	<1.0	--	--
MW-17	06/04/08		<0.5	<0.8	<0.7	<0.8	<0.8	--	<0.5	<6	--	--	--	--	<1	--	--	<1.0	<1.0	--	--
MW-17	09/11/08		<0.5	<0.8	<0.7	<0.8	<0.8	<1.6	<0.5	<6	--	--	--	--	<1	--	--	<1.0	<1.0	--	--
MW-17	09/11/08	(D)	<0.5	<0.8	<0.7	<0.8	<0.8	<1.6	<0.5	<6	--	--	--	--	<1	--	--	<1.0	<1.0	--	--
MW-17	12/10/08		<0.5	<0.8	<0.7	<0.8	<0.8	<1.6	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-17	12/10/08	(D)	<0.5	<0.8	<0.7	<0.8	<0.8	<1.6	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-17	03/12/09		<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-17	06/09-11/09		<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-17	06/09-11/09	(D)	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-17	09/09-11/09		<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-17	09/09-11/09	(D)	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-17	12/07-09/09		<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-17	03/09-11/10[6]		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-17	06/09-11/10		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-17	09/09/10		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-18	06/28/05		--	--	--	--	--	--	--	<25.0	--	--	--	--	17.1	--	--	1.97	<1.00	--	--
MW-18	09/27/05		--	--	--	--	--	--	--	<25.0	--	--	--	--	<5.00	--	--	2.19	<1.00	--	--
MW-18	12/21/05		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	03/21/06		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	06/22/06		--	--	--	--	--	--	--	<6	--	--	--	--	<1	--	--	<1	<1	--	--
MW-18	09/20/06		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	12/19/06		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	02/27/07		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	06/14/07		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	09/25/07		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	12/13/07		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	03/06/08		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	06/04/08		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	09/11/08		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	12/10/08		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	03/11/09		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	06/09-11/09[4]		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	09/09-11/09[4]		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	12/07-09/09[4]		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	03/09-11/10[4]		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	06/09-11/10[4]		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	09/09/10[4]		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	03/08/11[5]		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	09/15/2015		<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	03/11/16		<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	09/09/16		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	03/15/17		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	09/09/17		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	03/14/18		<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	09/06/18		<0.2	<0.2	<0.2	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	3/13/2019		<0.2	<0.2	<0.2	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix C
Table 2
Historical Groundwater Monitoring Data and Analytical Results
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

			Benzene	Ethylbenzene	Toluene	m,p-Xylene	o-Xylene	total Xylenes	Methyl Tert-Butyl Ether	Acetone	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	2-Butanone	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon Disulfide	Carbon Tetrachloride
			(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
		RBC (µg/L)	1,800	4,500	220,000	--	--	23,000	63,000	--	--	--	--	14,000	1,200	--	--	--	--	--	1,800
Proposed Screening Levels		SLV (µg/L)	130	7.3	9.8	--	--	13	--	1,500	--	--	--	--	--	14,000	--	--	--	0.92	74
Well ID	Date																				
MW-19	06/21/07		<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	1	<1	<1	<1
MW-19	09/24/07		<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<6	<1	<1	<1	<1	<1	<3	2	3	<1	<1	<1
MW-19	12/13/07		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	03/06/08		<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<6	--	--	--	--	<1	--	--	<1	<1	--	--
MW-19	06/06/08		<0.5	<0.8	0.8	<0.8	<0.8	--	<0.5	<6	--	--	--	--	<1	--	--	<1.0	<1.0	--	--
MW-19	06/04/08	(D)	<0.5	<0.5	<0.7	<0.5	<0.5	<1.0	<0.5	<6	--	--	--	--	<1	--	--	<1	<1	--	--
MW-19	09/11/08		<0.5	<0.8	<0.7	<0.8	<0.8	<1.6	<0.5	<6	--	--	--	--	<1	--	--	1	<1	--	--
MW-19	12/10/08		<0.5	<0.8	<0.7	<0.8	<0.8	<1.6	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-19	03/12/09		<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-19	06/09-11/09		<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-19	09/09-11/09		<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-19	12/07-09/09[6]		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	03/09-11/10		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-19	06/09-11/10		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-19	09/09/10[5]		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	03/09/11		<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	09/14/11		<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	03/08/12		<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	09/12/12		<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	03/12/15		<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	03/12/15	(D)	<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	03/11/16		<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	09/09/16		<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	03/15/17		<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	09/09/17		<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	03/14/18		<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	09/06/18		<0.2	<0.2	<0.2	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	3/13/2019		<0.2	<0.2	<0.2	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	06/21/07		6	<0.5	0.8	1	<0.5	1	<0.5	13	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-20	09/24/07		4	<0.5	0.7	1	<0.5	1	<0.5	<6	<1	<1	<1	<1	<1	<3	1	<1	<1	<1	<1
MW-20	12/13/07		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	03/06/08		<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<6	--	--	--	--	<1	--	--	<1	<1	--	--
MW-20	06/04/08		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	09/11/08		14	<0.8	3	5	<0.8	5	<0.5	28	--	--	--	--	<1	--	--	3	<1	--	--
MW-20	12/10/08		1	<0.8	<0.7	<0.8	<0.8	<1.6	<0.5	8	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-20	03/12/09		13	2	3	4	<0.5	4	<0.5	16	<1	<1	<1	<1	<1	5	2	<1	<1	<1	<1
MW-20	06/09-11/09[2]		3	<0.5	0.9	1	<0.5	1	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-20	09/09-11/09[2]		2	<0.5	0.6	1	<0.5	1	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-20	12/07-09/09[2]		2	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-20	03/09-11/10[2]		4	<0.5	<0.5	0.5	<0.5	0.5	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	1	<1	<1	<1
MW-20	06/09-11/10[2]		2	<0.5	<0.5	0.6	<0.5	0.6	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-20	09/09/10[2]		0.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	2	<1	<1	<1
MW-20	03/09/11[2]		0.7	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	09/14/11[2]		<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	3/7/2012[2]		0.6	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	09/12/12[2]		<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	09/12/12[2]	(D)	<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	03/14/13[2]		0.7	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	09/12/13[2]		<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	09/12/13[2]	(D)	<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	02/14/14		<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	09/18/14		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	03/12/15		<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	09/15/2015		<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	03/11/16		<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	09/09/16		<0.5	<0.5	<0.5	--	--	<0.5													
MW-20	03/15/17		<0.5	<0.5	<0.5	--	--	<0.5													
MW-20	09/09/17		<0.5	<0.5	<0.5	--	--	<0.5													
MW-20	03/14/18		<0.5	<0.5	<0.5	--	--	<0.5													

Appendix C
Table 2
Historical Groundwater Monitoring Data and Analytical Results
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

		Benzene	Ethylbenzene	Toluene	m,p-Xylene	o-Xylene	total Xylenes	Methyl Tert-Butyl Ether	Acetone	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	2-Butanone	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon Disulfide	Carbon Tetrachloride
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
	RBC (µg/L)	1,800	4,500	220,000	--	--	23,000	63,000	--	--	--	--	14,000	1,200	--	--	--	--	--	1,800
Proposed Screening Levels	SLV (µg/L)	130	7.3	9.8	--	--	13	--	1,500	--	--	--	--	--	14,000	--	--	--	0.92	74
Well ID	**Date**																			
MW-20	09/06/18	<0.2	<0.2	<0.2	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	3/13/2019	<0.2	<0.2	<0.2	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-21	06/21/07	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	7	<1	<1	<1	<1	<1	<3	1	<1	<1	<1	<1
MW-21	09/24/07	<0.5	<0.5	<0.5	0.6	<0.5	0.6	<0.5	<6	<1	<1	<1	<1	<1	<3	1	<1	<1	<1	<1
MW-21	12/13/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-21	03/06/08	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<6	--	--	--	--	<1	--	--	<1	<1	--	--
MW-21	06/04/08	<0.5	<0.5	<0.7	<0.5	<0.5	<1.0	<0.5	<6	--	--	--	--	<1	--	--	<1	<1	--	--
MW-21	09/11/08	<0.5	<0.8	<0.7	<0.8	<0.8	<1.6	<0.5	<6	--	--	--	--	<1	--	--	<1	<1	--	--
MW-21	12/10/08	<0.5	<0.8	<0.7	<0.8	<0.8	<1.6	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-21	03/12/09	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-21	06/09-11/09	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-21	09/09-11/09	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-21	12/07-09/09[6]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-21	03/09-11/10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-21	06/09-11/10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-21	09/09/10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-22	06/20/07	3	45	3	33	1	34	<0.5	13	<1	<1	<1	<1	<1	21	17	10	12	<1	<1
MW-22	09/24/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	12/13/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	03/06/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	06/04/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	09/11/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	12/10/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	03/12/09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	06/09-11/09[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	09/09-11/09[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	12/07-09/09[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	03/09-11/10[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	06/09-11/10[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	09/09/10[5]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	03/08/10[5]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	03/12/15	<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	09/15/2015	<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	03/11/16	<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	09/09/16	<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	09/09/16 (D)	<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	03/15/17	<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	03/15/17 (D)	<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	09/09/17	<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	03/14/18	<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	09/07/18	<0.2	<0.2	<0.2	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	3/13/2019	<0.2	<0.2	<0.2	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	3/13/2019 (D)	<0.2	<0.2	<0.2	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-23	06/20/07	2	0.9	3	5	0.7	5.7	<0.5	42	<1	<1	<1	<1	<1	13	4	7	<1	<1	<1
MW-23	09/24/07	4	2	4	5	0.8	5.8	--	81	<1	<1	<1	<1	<1	12	5	7	--	1	<1
MW-23	12/13/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-23	03/05/08	1	0.7	1	2	<0.5	<2.5	<0.5	16	--	--	--	--	<1	--	--	4	<1	--	--
MW-23	06/03/08	6	<4	5	4	<4	-	<3	50	--	--	--	--	<5	--	--	<5	<5	--	--
MW-23	09/11/08	2	1	2	3	<0.5	3	<0.5	22	<1	<1	<1	<1	<1	6	3	5	<1	<1	<1
MW-23	12/10/08	3	1	3	3	<.08	3	<0.5	33	<1	<1	<1	<1	<1	6	2	4	<1	<1	<1
MW-23	03/12/09	2	0.8	1	2	<0.5	2	<0.5	10	<1	<1	<1	<1	<1	<3	2	2	<1	<1	<1
MW-23	06/09-11/09	1	0.6	1	1	<0.5	1	<0.5	13	<1	<1	<1	<1	<1	3	2	3	<1	<1	<1
MW-23	09/09-11/09[5]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-23	12/07-09/09[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-23	03/09-11/10[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-23	06/09-11/10[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-23	09/09/10[5]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-23	03/08/10[5]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix C
Table 2
Historical Groundwater Monitoring Data and Analytical Results
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

		Benzene	Ethylbenzene	Toluene	m,p-Xylene	o-Xylene	total Xylenes	Methyl Tert-Butyl Ether	Acetone	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	2-Butanone	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon Disulfide	Carbon Tetrachloride
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
	RBC (µg/L)	1,800	4,500	220,000	--	--	23,000	63,000	--	--	--	--	14,000	1,200	--	--	--	--	--	1,800
Proposed Screening Levels	SLV (µg/L)	130	7.3	9.8	--	--	13	--	1,500	--	--	--	--	--	14,000	--	--	--	0.92	74
Well ID	**Date**																			
MW-24	06/20/07	36	22	45	62	21	83	<1	38	<2	<2	<2	<2	<2	10	<2	4	<2	<2	<2
MW-24	09/24/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	12/13/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	03/05/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	06/03/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	09/11/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	12/10/08							--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	03/12/09							--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	06/09-11/09[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	09/09-11/09[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	12/07-09/09[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	03/09-11/10[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	06/09-11/10[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	09/09/10[5]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	03/08/10[5]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	09/15/2015	7	3	2	--	--	2	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	09/09/16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	03/15/17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	09/09/17	13	6	8	--	--	11	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	03/14/18	<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	09/06/18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	3/13/2019	0.3 J	0.2 J	0.3 J	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	06/21/07	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-25	06/21/07 (D)	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-25	09/24/07	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-25	12/13/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	03/05/08	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<6	--	--	--	--	<1	--	--	<1	<1	--	--
MW-25	06/03/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	09/11/08	<0.5	<0.8	<0.7	<0.8	<0.8	<1.6	<0.5	<6	--	--	--	--	<1	--	--	<1	<1	--	--
MW-25	12/10/08	2	<0.8	<0.7	<0.8	<0.8	<1.6	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-25	03/12/09	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-25	06/09-11/09	0.7	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-25	09/09-11/09	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-25	12/07-09/09	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-25	03/09-11/10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-25	06/09-11/10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-25	09/09/10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<6	<1	<1	<1	<1	<1	<3	<1	<1	<1	<1	<1
MW-25	03/09/11	<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	09/14/11	<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	09/14/11 (D)	<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	03/08/12	<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	09/12/12	<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	03/14/13	<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	09/12/13	<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	02/14/14	<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	02/14/14 (D)	<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	09/18/14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	09/18/14 (D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	3/12/2015	<0.5	<0.5	<0.5	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	09/15/2015	<0.5	<0.5	<0.5	--	--	<0.6	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	09/15/2015 (D)	<0.5	<0.5	<0.5	--	--	<0.7	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	03/11/16	<0.5	<0.5	<0.5	--	--	<0.8	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	09/09/16	<0.5	<0.5	<0.5	--	--	<0.5													

Appendix C
Table 2
Historical Groundwater Monitoring Data and Analytical Results
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

		Chlorobenzene	Chloroethane	Chloroform	Chloromethane	2-Chlorotoluene	4-Chlorotoluene	1,2-Dibromo-3-chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,1-Dichloroethane	1,2-Dichloroethane	Isopropylbenzene	Naphthalene
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
	RBC (µg/L)	10,000	2,400,000	720	22,000	--	--	--	27	37,000	--	1,500	10,000	630	--	500
Proposed Screening Levels	SLV (µg/L)	50	-	1,240	--	--	--	--	--	14	71	15	47	--	--	620
Well ID	Date															
DM-4	08/26/04	--	--	--	--	--	--	--	--	--	--	--	--	--	2.69	23.2
DM-4	11/09/04	--	--	--	--	--	--	--	--	--	--	--	--	--	3.75	25.0
DM-4	02/02/05	--	--	--	--	--	--	--	--	--	--	--	--	--	2.52	15.0
DM-4	02/02/05	(D) --	--	--	--	--	--	--	--	--	--	--	--	--	2.62	14.8
DM-4	06/28/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	09/27/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	12/20/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	03/21/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	06/23/06	--	--	--	--	--	--	--	--	--	--	--	--	--	2	8
DM-4	09/21/06	--	--	--	--	--	--	--	--	--	--	--	--	--	2	5
DM-4	12/19/06	--	--	--	--	--	--	--	--	--	--	--	--	--	3	12
DM-4	02/27/07	--	--	--	--	--	--	--	--	--	--	--	--	--	2	8.2
DM-4	06/14/07	--	--	--	--	--	--	--	--	--	--	--	--	--	3	8.0
DM-4	09/25/07	--	--	--	--	--	--	--	--	--	--	--	--	--	3	8
DM-4	12/13/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	03/06/08	--	--	--	--	--	--	--	--	--	--	--	--	--	2	13
DM-4	06/03/08	--	--	--	--	--	--	--	--	--	--	--	--	--	2	10
DM-4	09/11/08	--	--	--	--	--	--	--	--	--	--	--	--	--	2	4
DM-4	12/11/08	<0.8	<1.00	<0.8	<1.00	<1.00	<1.00	<2.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	2	9
DM-4	03/11/09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	06/09-11/09[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	09/09-11/09[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	12/07-09/09[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	03/09-11/10[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	06/09-11/10[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	09/09/10[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	03/08/11[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	09/14/11[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	03/08/12[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	09/11/12[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	03/13/13[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	09/13/13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	08/26/04	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.00	<2.00
DM-5	11/09/04	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.00	<2.00
DM-5	02/02/05	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.00	<2.00
DM-5	06/28/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	09/27/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	12/20/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	03/21/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	06/23/06	--	--	--	--	--	--	--	--	--	--	--	--	--	<5	<5
DM-5	09/21/06	--	--	--	--	--	--	--	--	--	--	--	--	--	<1.0	<1.0
DM-5	12/19/06	--	--	--	--	--	--	--	--	--	--	--	--	--	<1.0	<1.0
DM-5	02/27/07	--	--	--	--	--	--	--	--	--	--	--	--	--	<1.0	0.11
DM-5	06/14/07	--	--	--	--	--	--	--	--	--	--	--	--	--	<1.0	<1.0
DM-5	09/25/07	--	--	--	--	--	--	--	--	--	--	--	--	--	<5.0	<5.0
DM-5	12/13/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	03/06/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	06/03/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	09/11/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	12/11/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	03/11/09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	06/09-11/09[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	09/09-11/09[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	12/07-09/09[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	03/09-11/10[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	06/09-11/10[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	09/09/10[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	03/08/11[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	09/14/11[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix C
Table 2
Historical Groundwater Monitoring Data and Analytical Results
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

		Chlorobenzene	Chloroethane	Chloroform	Chloromethane	2-Chlorotoluene	4-Chlorotoluene	1,2-Dibromo-3-chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,1-Dichloroethane	1,2-Dichloroethane	Isopropylbenzene	Naphthalene
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
	RBC (µg/L)	10,000	2,400,000	720	22,000	--	--	--	27	37,000	--	1,500	10,000	630	--	500
Proposed Screening Levels	SLV (µg/L)	50	-	1,240	--	--	--	--	--	14	71	15	47	--	--	620
Well ID	Date															
DM-5	03/08/12[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	09/11/12[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	03/13/13[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	09/13/13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3B	06/28/05	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.00	<2.00
MW-3B	06/28/05 (D)	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.00	<2.00
MW-3B	09/27/05	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.00	<2.00
MW-3B	9/9/2016[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3B	3/15/2017[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3B	9/9/17[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3B	3/14/18[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3B	09/06/18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3B	3/13/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	06/28/05	--	--	--	--	--	--	--	--	--	--	--	--	--	7.00	<2.00
MW-4B	09/27/05	--	--	--	--	--	--	--	--	--	--	--	--	--	8.31	<2.00
MW-4B	12/20/05	--	--	--	--	--	--	--	--	--	--	--	--	--	2.72	<2.00
MW-4B	03/21/06	--	--	--	--	--	--	--	--	--	--	--	--	--	4.47	<2.00
MW-4B	03/21/06	--	--	--	--	--	--	--	--	--	--	--	--	--	4.81	<2.00
MW-4B	06/22/06	--	--	--	--	--	--	--	--	--	--	--	--	--	2	<1
MW-4B	09/20/06 (D)	--	--	--	--	--	--	--	--	--	--	--	--	--	4	<1
MW-4B	12/19/06	--	--	--	--	--	--	--	--	--	--	--	--	--	<1	<1
MW-4B	12/19/06 (D)	--	--	--	--	--	--	--	--	--	--	--	--	--	<1	<1
MW-4B	02/27/07	--	--	--	--	--	--	--	--	--	--	--	--	--	1	0.074
MW-4B	02/27/07 (D)	--	--	--	--	--	--	--	--	--	--	--	--	--	<1	<1
MW-4B	06/14/07	--	--	--	--	--	--	--	--	--	--	--	--	--	1	<1
MW-4B	06/14/07 (D)	--	--	--	--	--	--	--	--	--	--	--	--	--	1	<1
MW-4B	09/25/07	--	--	--	--	--	--	--	--	--	--	--	--	--	2	<1
MW-4B	09/25/07 (D)	--	--	--	--	--	--	--	--	--	--	--	--	--	4	<1
MW-4B	12/13/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	03/05/08	--	--	--	--	--	--	--	--	--	--	--	--	--	1	<1.00
MW-4B	06/03/08	--	--	--	--	--	--	--	--	--	--	--	--	--	<1.00	2
MW-4B	09/10/08	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1	<1
MW-4B	12/11/08	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1	<1
MW-4B	03/11/09	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	1	<1
MW-4B	03/12/09 (D)	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	1	<1
MW-4B	06/09-11/09	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1	<1
MW-4B	09/09-11/09	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	11	<1
MW-4B	12/07-09/09	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	3	<1
MW-4B	03/09-11/10	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	3	<1
MW-4B	06/09-11/10	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	1	<1
MW-4B	09/09/10[5]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	03/10/11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	09/14/11[5]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	03/08/12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	09/12/12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	03/13/13[5]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	09/11/13[5]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	02/14/14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	09/18/14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	03/12/15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.031
MW-4B	03/11/16	--	--	--						--	--	--	--	--	--	< 0.032
MW-4B	03/11/16 (D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	09/09/16															<0.031
MW-4B	03/15/17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	09/09/17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.14
MW-4B	09/09/17 (D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.18
MW-4B	03/14/18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.03
MW-4B	09/06/18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3
MW-4B	09/06/18 (D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.03

Appendix C
Table 2
Historical Groundwater Monitoring Data and Analytical Results
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

		Chlorobenzene	Chloroethane	Chloroform	Chloromethane	2-Chlorotoluene	4-Chlorotoluene	1,2-Dibromo-3-chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,1-Dichloroethane	1,2-Dichloroethane	Isopropylbenzene	Naphthalene
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
	RBC (µg/L)	10,000	2,400,000	720	22,000	--	--	--	27	37,000	--	1,500	10,000	630	--	500
Proposed Screening Levels	SLV (µg/L)	50	-	1,240	--	--	--	--	--	14	71	15	47	--	--	620
Well ID	Date															
MW-4B	3/13/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.03
MW-6[1]	08/26/04	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.00	<2.00
MW-6[1]	08/26/04 (D)	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.00	<2.00
MW-6[1]	11/09/04	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.00	<2.00
MW-6[1]	02/02/05	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.00	<2.00
MW-6[1]	06/28/05	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.00	<2.00
MW-6[1]	09/27/05	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.00	<2.00
MW-6[1]	12/21/05 (D)	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.00	<2.00
MW-6[1]	12/21/05	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.00	<2.00
MW-6[1]	3/21/2006	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.00	<2.00
MW-6[1]	6/22/2006	--	--	--	--	--	--	--	--	--	--	--	--	--	<1	<1
MW-6[1]	09/20/06	--	--	--	--	--	--	--	--	--	--	--	--	--	<1	<1
MW-6[1]	12/19/06	--	--	--	--	--	--	--	--	--	--	--	--	--	<1	<1
MW-6[1]	02/27/07	--	--	--	--	--	--	--	--	--	--	--	--	--	<1	0.011
MW-6[1]	06/14/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	09/25/07	--	--	--	--	--	--	--	--	--	--	--	--	--	<1	<1
MW-6[1]	12/13/07	--	--	--	--	--	--	--	--	--	--	--	--	--	<1.0	<1.0
MW-6[1]	03/05/08	--	--	--	--	--	--	--	--	--	--	--	--	--	<1.0	<1.0
MW-6[1]	06/03/08	--	--	--	--	--	--	--	--	--	--	--	--	--	30	150
MW-6[1]	09/10/08	<2	<2	<2	<2	<2	<2	<3	<1	<2	<2	<2	<2	<1	6	24
MW-6[1]	12/11/08	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	3	8
MW-6[1]	03/12/09	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1	2
MW-6[1]	06/09-11/09	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	1	5
MW-6[1]	09/09-11/09	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1	<1
MW-6[1]	12/07-09/09	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	3	8
MW-6[1]	03/09-11/10	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1	<1
MW-6[1]	03/09-11/10 (D)	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1	<1
MW-6[1]	06/09-11/10	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1	<1
MW-6[1]	09/09/10	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1	<1
MW-6[1]	03/09/11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	09/14/11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	03/08/12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	09/11/12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	03/14/13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	03/14/13 (D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	09/12/13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	02/14/14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	08/26/04	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.00	<2.00
MW-12[1]	11/09/04	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.00	<2.00
MW-12[1]	02/02/05	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.00	<2.00
MW-12[1]	06/28/05	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.00	<2.00
MW-12[1]	09/27/05	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.00	<2.00
MW-12[1]	12/21/05	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.00	<2.00
MW-12[1]	03/21/06	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.00	<2.00
MW-12[1]	06/22/06	--	--	--	--	--	--	--	--	--	--	--	--	--	<1	<1
MW-12[1]	09/20/06	--	--	--	--	--	--	--	--	--	--	--	--	--	<1	<1
MW-12[1]	12/19/06	--	--	--	--	--	--	--	--	--	--	--	--	--	<1	<1
MW-12[1]	02/27/07	--	--	--	--	--	--	--	--	--	--	--	--	--	<1	0.12
MW-12[1]	06/14/07	--	--	--	--	--	--	--	--	--	--	--	--	--	<1	<1
MW-12[1]	09/25/07	--	--	--	--	--	--	--	--	--	--	--	--	--	<1	<1
MW-12[1]	12/12/07	--	--	--	--	--	--	--	--	--	--	--	--	--	<1.0	<1.0
MW-12[1]	03/05/08	--	--	--	--	--	--	--	--	--	--	--	--	--	<1.0	<1.0

Appendix C
Table 2
Historical Groundwater Monitoring Data and Analytical Results
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

		Chlorobenzene	Chloroethane	Chloroform	Chloromethane	2-Chlorotoluene	4-Chlorotoluene	1,2-Dibromo-3-chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,1-Dichloroethane	1,2-Dichloroethane	Isopropylbenzene	Naphthalene
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
	RBC (µg/L)	10,000	2,400,000	720	22,000	--	--	--	27	37,000	--	1,500	10,000	630	--	500
Proposed Screening Levels	SLV (µg/L)	50	-	1,240	--	--	--	--	--	14	71	15	47	--	--	620
Well ID	Date															
MW-12[1]	06/03/08	--	--	--	--	--	--	--	--	--	--	--	--	--	<1.0	<1.0
MW-12[1]	09/10/08	<0.8	<1.0	<0.8	<1.0	<1.0	<1.0	<2	<0.5	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0
MW-12[1]	12/11/08	<0.8	<1.0	<0.8	<1.0	<1.0	<1.0	<2	<0.5	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0
MW-12[1]	03/11/09	<0.8	<1.0	<0.8	<1.0	<1.0	<1.0	<2	<0.5	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0
MW-12[1]	06/09-11/09	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1	<1
MW-12[1]	09/09-11/09	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1	<1
MW-12[1]	12/07-09/09	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1	<1
MW-12[1]	12/07-09/09 (D)	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1	<1
MW-12[1]	03/09-11/10	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1	<1
MW-12[1]	06/09-11/10	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1	<1
MW-12[1]	09/09/10[5]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	03/09/11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	09/14/11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	03/08/12[5]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	09/12/12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	03/13/13[5]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	09/12/13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	02/14/14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	09/18/14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	03/12/15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.032
MW-12[1]	09/15/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.030
MW-12[1]	03/11/16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.030
MW-12[1]	09/09/16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.030
MW-12[1]	03/15/17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.030
MW-12[1]	09/09/17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.030
MW-12[1]	03/14/18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.03
MW-12[1]	03/14/18 (D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.03
MW-12[1]	09/06/18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.04 J
MW-12[1]	3/13/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.03
MW-14	06/28/05	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.00	<2.00
MW-14	09/27/05	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.00	<2.00
MW-14	12/20/05	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.00	<2.00
MW-14	03/21/06	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.00	<2.00
MW-14	06/22/06	--	--	--	--	--	--	--	--	--	--	--	--	--	<1	<1
MW-14	09/21/06	--	--	--	--	--	--	--	--	--	--	--	--	--	<1	<1
MW-14	12/19/06	--	--	--	--	--	--	--	--	--	--		--	--	<1	<1
MW-14	02/27/07	--	--	--	--	--	--	--	--	--	--	--	--	--	<1	0.036
MW-14	06/14/07	--	--	--	--	--	--	--	--	--	--	--	--	--	<1	<1
MW-14	09/25/07	--	--	--	--	--	--	--	--	--	--	--	--	--	<1	<1
MW-14	12/13/07	--	--	--	--	--	--	--	--	--	--	--	--	--	<1.0	<1.0
MW-14	03/06/08	--	--	--	--	--	--	--	--	--	--	--	--	--	<1.0	<1.0
MW-14	06/04/08	--	--	--	--	--	--	--	--	--	--	--	--	--	<1.0	<1.0
MW-14	09/11/08	--	--	--	--	--	--	--		--	--	--	--	--	<1.0	<1
MW-14	12/10/08	<0.8	<1	<0.8	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1.0	<1
MW-14	03/12/09	<0.8	<1	<0.8	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1.0	<1
MW-14	06/09-11/09	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1	<1
MW-14	09/09-11/09	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1	<1
MW-14	12/07-09/09	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1	<1
MW-14	03/09-11/10	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1	<1
MW-14	06/09-11/10	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1	<1
MW-14	09/09/10	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1	<1
MW-14	09/09/10 (D)	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1	<1
MW-15	06/28/05	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.00	<2.00
MW-15	09/27/05	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.00	<2.00
MW-15	12/20/05	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.00	<2.00
MW-15	03/21/06	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.00	<2.00

Appendix C
Table 2
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Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

		Chlorobenzene	Chloroethane	Chloroform	Chloromethane	2-Chlorotoluene	4-Chlorotoluene	1,2-Dibromo-3-chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,1-Dichloroethane	1,2-Dichloroethane	Isopropylbenzene	Naphthalene
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
	RBC (µg/L)	10,000	2,400,000	720	22,000	--	--	--	27	37,000	--	1,500	10,000	630	--	500
Proposed Screening Levels	SLV (µg/L)	50	-	1,240	--	--	--	--	--	14	71	15	47	--	--	620
Well ID	Date															
MW-15	06/22/06	--	--	--	--	--	--	--	--	--	--	--	--	--	<1	<1
MW-15	09/21/06	--	--	--	--	--	--	--	--	--	--	--	--	--	<1	<1
MW-15	12/19/06	--	--	--	--	--	--	--	--	--	--	--	--	--	<1	<1
MW-15	02/27/07	--	--	--	--	--	--	--	--	--	--	--	--	--	<1	0.044
MW-15	06/14/07	--	--	--	--	--	--	--	--	--	--	--	--	--	<1	<1
MW-15	09/25/07	--	--	--	--	--	--	--	--	--	--	--	--	--	<1	<1
MW-15	12/14/07	--	--	--	--	--	--	--	--	--	--	--	--	--	<1.0	<1.0
MW-15	12/14/07	(D) --	--	--	--	--	--	--	--	--	--	--	--	--	<1.0	<1.0
MW-15	03/06/08	--	--	--	--	--	--	--	--	--	--	--	--	--	<1.0	<1.0
MW-15	06/04/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	09/11/08	--	--	--	--	--	--	--	--	--	--	--	--	--	<1.0	<1.0
MW-15	12/11/08	<0.8	<1	<0.8	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1.0	<1
MW-15	03/12/09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	06/09-11/09[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	09/09-11/09[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	12/07-09/09[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	03/09-11/10[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	06/09-11/10[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	09/09/10[5]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	03/08/11[5]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	03/11/16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.031
MW-15	09/09/16															<0.030
MW-15	03/15/17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	09/09/17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.030
MW-15	03/14/18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.03
MW-15	09/06/18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.05 J
MW-15	3/13/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.03
MW-16	06/28/05	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.00	<2.00
MW-16	09/27/05	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.00	<2.00
MW-16	12/21/05	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.00	<2.00
MW-16	03/21/06	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.00	<2.00
MW-16	06/22/06	--	--	--	--	--	--	--	--	--	--	--	--	--	<1	<1
MW-16	09/20/06	--	--	--	--	--	--	--	--	--	--	--	--	--	<1	<1
MW-16	12/19/06	--	--	--	--	--	--	--	--	--	--	--	--	--	<1	<1
MW-16	02/27/07	--	--	--	--	--	--	--	--	--	--	--	--	--	<1	<1
MW-16	06/14/07	--	--	--	--	--	--	--	--	--	--	--	--	--	<1	<1
MW-16	09/25/07	--	--	--	--	--	--	--	--	--	--	--	--	--	<1	<1
MW-16	12/12/07	--	--	--	--	--	--	--	--	--	--	--	--	--	<1.0	<1.0
MW-16	03/05/08	--	--	--	--	--	--	--	--	--	--	--	--	--	<1.0	<1.0
MW-16	06/03/08	--	--	--	--	--	--	--	--	--	--	--	--	--	73	410
MW-16	09/10/08	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1	7
MW-16	12/09/08	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1	<1
MW-16	03/11/09	<2	<2	<2	<2	<2	<2	<4	<1	<2	<2	<2	<2	<1	<2	4
MW-16	06/09-11/09	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	1	6
MW-16	09/09-11/09	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	3	19
MW-16	12/07-09/09	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	2	8
MW-16	03/09-11/10	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	5	23
MW-16	06/09-11/10	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1	<1
MW-16	06/09-11/10	(D) <0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1	<1
MW-16	09/09/10	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1	<1
MW-16	03/10/11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	09/14/11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	03/08/12	(D) --	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	03/08/12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	09/12/12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	03/14/13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	09/12/13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	02/14/14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	09/18/14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	03/12/15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.031
MW-16	09/15/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.031

Appendix C
Table 2
Historical Groundwater Monitoring Data and Analytical Results
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

		Chlorobenzene	Chloroethane	Chloroform	Chloromethane	2-Chlorotoluene	4-Chlorotoluene	1,2-Dibromo-3-chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,1-Dichloroethane	1,2-Dichloroethane	Isopropylbenzene	Naphthalene
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
	RBC (µg/L)	10,000	2,400,000	720	22,000	--	--	--	27	37,000	--	1,500	10,000	630	--	500
Proposed Screening Levels	SLV (µg/L)	50	-	1,240	--	--	--	--	--	14	71	15	47	--	--	620
Well ID	Date															
MW-16	03/11/16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.032
MW-17	06/28/05	--	--	--	--	--	--	--	--	--	--	--	--	--	3.27	<2.00
MW-17	06/28/05 (D)	--	--	--	--	--	--	--	--	--	--	--	--	--	3.33	<2.00
MW-17	09/27/05	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.00	<2.00
MW-17	12/20/05	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.00	<2.00
MW-17	03/21/06	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.00	<2.00
MW-17	06/22/06	--	--	--	--	--	--	--	--	--	--	--	--	--	<1	<1
MW-17	09/21/06	--	--	--	--	--	--	--	--	--	--	--	--	--	<1	<1
MW-17	12/19/06	--	--	--	--	--	--	--	--	--	--	--	--	--	<1	<1
MW-17	02/27/07	--	--	--	--	--	--	--	--	--	--	--	--	--	<1	0.022
MW-17	06/14/07	--	--	--	--	--	--	--	--	--	--	--	--	--	<1	<1
MW-17	09/25/07	--	--	--	--	--	--	--	--	--	--	--	--	--	<1	<1
MW-17	12/13/07	--	--	--	--	--	--	--	--	--	--	--	--	--	<1.0	<1.0
MW-17	03/06/08	--	--	--	--	--	--	--	--	--	--	--	--	--	<1.0	<1.0
MW-17	06/04/08	--	--	--	--	--	--	--	--	--	--	--	--	--	<1.0	<1.0
MW-17	09/11/08	--	--	--	--	--	--	--	--	--	--	--	--	--	<1.0	<1.0
MW-17	09/11/08 (D)	--	--	--	--	--	--	--	--	--	--	--	--	--	<1.0	<1.0
MW-17	12/10/08	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1.0	<1
MW-17	12/10/08 (D)	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1.0	<1
MW-17	03/12/09	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1.0	<1
MW-17	06/09-11/09	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1	<1
MW-17	06/09-11/09 (D)	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1	<1
MW-17	09/09-11/09 (D)	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1	<1
MW-17	12/07-09/09	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1	<1
MW-17	03/09-11/10[6]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-17	06/09-11/10	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1	<1
MW-17	09/09/10	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1	<1
MW-18	06/28/05	--	--	--	--	--	--	--	--	--	--	--	--	--	4.40	<2.00
MW-18	09/27/05	--	--	--	--	--	--	--	--	--	--	--	--	--	5.90	<2.00
MW-18	12/21/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	03/21/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	06/22/06	--	--	--	--	--	--	--	--	--	--	--	--	--	3	<1
MW-18	09/20/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	12/19/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	02/27/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	06/14/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	09/25/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	12/13/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	03/06/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	06/04/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	09/11/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	12/10/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	03/11/09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	06/09-11/09[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	09/09-11/09[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	12/07-09/09[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	03/09-11/10[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	06/09-11/10[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	09/09/10[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	03/08/11[5]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	09/15/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.030
MW-18	03/11/16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.030
MW-18	09/09/16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	03/15/17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	09/09/17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	03/14/18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.03
MW-18	09/06/18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.6
MW-18	3/13/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.03

Appendix C
Table 2
Historical Groundwater Monitoring Data and Analytical Results
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

			Chlorobenzene	Chloroethane	Chloroform	Chloromethane	2-Chlorotoluene	4-Chlorotoluene	1,2-Dibromo-3-chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,1-Dichloroethane	1,2-Dichloroethane	Isopropylbenzene	Naphthalene
			(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
		RBC (µg/L)	10,000	2,400,000	720	22,000	--	--	--	27	37,000	--	1,500	10,000	630	--	500
Proposed Screening Levels		SLV (µg/L)	50	-	1,240	--	--	--	--	--	14	71	15	47	--	--	620
Well ID	**Date**																
MW-19	06/21/07		<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<0.5	<0.5	1	<1
MW-19	09/24/07		<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<0.5	<0.5	1	<1
MW-19	12/13/07		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	03/06/08		--	--	--	--	--	--	--	--	--	--	--	--	--	2	<1
MW-19	06/06/08		--	--	--	--	--	--	--	--	--	--	--	--	--	2	<1.0
MW-19	06/04/08	(D)	--	--	--	--	--	--	--	--	--	--	--	--	--	2	<1
MW-19	09/11/08		--	--	--	--	--	--	--	--	--	--	--	--	--	2	<1
MW-19	12/10/08		<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1.0	<1
MW-19	03/12/09		<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	2	<1
MW-19	06/09-11/09		<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1	<1
MW-19	09/09-11/09		<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	1	<1
MW-19	12/07-09/09[6]		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	03/09-11/10		<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	1	<1
MW-19	06/09-11/10		<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1	<1
MW-19	09/09/10[5]		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	03/09/11		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	09/14/11		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	03/08/12		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	09/12/12		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	03/12/15		--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.031
MW-19	03/12/15	(D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.31
MW-19	03/11/16		--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.032
MW-19	09/09/16		--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.031
MW-19	03/15/17		--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.030
MW-19	09/09/17		--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.030
MW-19	03/14/18		--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.03
MW-19	09/06/18		--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1
MW-19	3/13/2019		--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.03
MW-20	06/21/07		<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<0.5	<0.5	3	<1
MW-20	09/24/07		<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<0.5	<0.5	2	<1
MW-20	12/13/07		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	03/06/08		--	--	--	--	--	--	--	--	--	--	--	--	--	<1	<1
MW-20	06/04/08		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	09/11/08		--	--	--	--	--	--	--	--	--	--	--	--	--	19	<1
MW-20	12/10/08		<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1.0	<1
MW-20	03/12/09		<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	18	<1
MW-20	06/09-11/09[2]		<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	5	<1
MW-20	09/09-11/09[2]		<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	4	<1
MW-20	12/07-09/09[2]		<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	3	<1
MW-20	03/09-11/10[2]		<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	8	<1
MW-20	06/09-11/10[2]		<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	3	<1
MW-20	09/09/10[2]		<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	2	<1
MW-20	03/09/11[2]		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	09/14/11[2]		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	3/7/2012[2]		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	09/12/12[2]		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	09/12/12[2]	(D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	03/14/13[2]		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	09/12/13[2]		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	09/12/13[2]	(D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	02/14/14		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	09/18/14		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	03/12/15		--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.030
MW-20	09/15/2015		--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.031
MW-20	03/11/16		--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.031
MW-20	09/09/16																<0.030
MW-20	03/15/17																0.038
MW-20	09/09/17																0.086
MW-20	03/14/18																<0.03

Appendix C
Table 2
Historical Groundwater Monitoring Data and Analytical Results
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

		Chlorobenzene	Chloroethane	Chloroform	Chloromethane	2-Chlorotoluene	4-Chlorotoluene	1,2-Dibromo-3-chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,1-Dichloroethane	1,2-Dichloroethane	Isopropylbenzene	Naphthalene
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
	RBC (µg/L)	10,000	2,400,000	720	22,000	--	--	--	27	37,000	--	1,500	10,000	630	--	500
Proposed Screening Levels	SLV (µg/L)	50	-	1,240	--	--	--	--	--	14	71	15	47	--	--	620
Well ID	Date															
MW-20	09/06/18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.5
MW-20	3/13/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.03
MW-21	06/21/07	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<0.5	<0.5	2	<1
MW-21	09/24/07	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<0.5	<0.5	<1	<1
MW-21	12/13/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-21	03/06/08	--	--	--	--	--	--	--	--	--	--	--	--	--	<1	<1
MW-21	06/04/08	--	--	--	--	--	--	--	--	--	--	--	--	--	<1	<1
MW-21	09/11/08	--	--	--	--	--	--	--	--	--	--	--	--	--	3	<1
MW-21	12/10/08	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1	<1
MW-21	03/12/09	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1	<1
MW-21	06/09-11/09	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1	<1
MW-21	09/09-11/09	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	2	<1
MW-21	12/07-09/09[6]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-21	03/09-11/10	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1	<1
MW-21	06/09-11/10	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1	<1
MW-21	09/09/10	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	1	<1
MW-22	06/20/07	<0.8	<1	12	<1	<1	<1	<2	<0.5	<1	<1	<1	<0.5	<0.5	61	1
MW-22	09/24/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	12/13/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	03/06/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	06/04/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	09/11/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	12/10/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	03/12/09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	06/09-11/09[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	09/09-11/09[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	12/07-09/09[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	03/09-11/10[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	06/09-11/10[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	09/09/10[5]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	03/08/10[5]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	03/12/15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.031
MW-22	09/15/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.031
MW-22	03/11/16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.032
MW-22	09/09/16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.031
MW-22	09/09/16 (D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.030
MW-22	03/15/17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.5
MW-22	03/15/17 (D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.5
MW-22	09/09/17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.30
MW-22	03/14/18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.3
MW-22	09/07/18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.2
MW-22	3/13/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.03
MW-22	3/13/2019 (D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.03
MW-23	06/20/07	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<0.5	<0.5	11	<1
MW-23	09/24/07	<0.8	<1	<0.8	<1	<1	<1	<2	--	<1	<1	<1	<0.5	--	8	2
MW-23	12/13/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-23	03/05/08	--	--	--	--	--	--	--	--	--	--	--	--	--	6	<1
MW-23	06/03/08	--	--	--	--	--	--	--	--	--	--	--	--	--	6	<5
MW-23	09/11/08	<1	<1	<1	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	7	<1
MW-23	12/10/08	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	5	<1
MW-23	03/12/09	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	3	<1
MW-23	06/09-11/09	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	4	<1
MW-23	09/09-11/09[5]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-23	12/07-09/09[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-23	03/09-11/10[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-23	06/09-11/10[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-23	09/09/10[5]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-23	03/08/10[5]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix C
Table 2
Historical Groundwater Monitoring Data and Analytical Results
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

		Chlorobenzene	Chloroethane	Chloroform	Chloromethane	2-Chlorotoluene	4-Chlorotoluene	1,2-Dibromo-3-chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,1-Dichloroethane	1,2-Dichloroethane	Isopropylbenzene	Naphthalene
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
	RBC (µg/L)	10,000	2,400,000	720	22,000	--	--	--	27	37,000	--	1,500	10,000	630	--	500
Proposed Screening Levels	SLV (µg/L)	50	-	1,240	--	--	--	--	--	14	71	15	47	--	--	620
Well ID	**Date**															
MW-24	06/20/07	<2	<2	<2	<2	<2	<2	<4	<1	<2	<2	<2	<2	<1	21	690
MW-24	09/24/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	12/13/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	03/05/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	06/03/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	09/11/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	12/10/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	03/12/09	--	--	--	--	--	--	--	--	--	--	--	--	--		--
MW-24	06/09-11/09[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	09/09-11/09[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	12/07-09/09[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	03/09-11/10[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	06/09-11/10[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	09/09/10[5]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	03/08/10[5]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	09/15/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	18
MW-24	09/09/16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	03/15/17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	09/09/17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	110
MW-24	03/14/18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2
MW-24	09/06/18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	3/13/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.09
MW-25	06/21/07	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<0.5	<0.5	<1	<1
MW-25	06/21/07 (D)	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<0.5	<0.5	<1	<1
MW-25	09/24/07	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<0.5	<0.5	<1	<1
MW-25	12/13/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	03/05/08	--	--	--	--	--	--	--	--	--	--	--	--	--	<1	<1
MW-25	06/03/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	09/11/08	--	--	--	--	--	--	--	--	--	--	--	--	--	<1	<1
MW-25	12/10/08	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1	<1
MW-25	03/12/09	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1	<1
MW-25	06/09-11/09	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1	<1
MW-25	09/09-11/09	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1	<1
MW-25	12/07-09/09	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1	<1
MW-25	03/09-11/10	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1	<1
MW-25	06/09-11/10	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1	<1
MW-25	09/09/10	<0.8	<1	<0.8	<1	<1	<1	<2	<0.5	<1	<1	<1	<1	<0.5	<1	<1
MW-25	03/09/11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	09/14/11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	09/14/11 (D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	03/08/12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	09/12/12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	03/14/13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	09/12/13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	02/14/14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	02/14/14 (D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	09/18/14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	09/18/14 (D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	3/12/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.032
MW-25	09/15/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.030
MW-25	09/15/2015 (D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.030
MW-25	03/11/16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.031
MW-25	09/09/16															<0.030

Appendix C
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			n-Propylbenzene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Dibromochloromethane	Dibromomethane	Dichlorodifluoromethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,2-Dichloropropane	1,3-Dichloropropane	2,2-Dichloropropane
			(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
		RBC (µg/L)	--	--	--	6,300	7,500	--	--	--	44,000	18,000	180,000	--	--	--
Proposed Screening Levels		SLV (µg/L)	--	--	110	--	--	--	--	--	--	590	--	5,700	244	--
Well ID	Date															
DM-4	08/26/04		2.69	--	--	2.95	<1.00	--	--	--	--	<1.00	--	--	--	--
DM-4	11/09/04		3.16	--	--	3.84	1.32	--	--	--	--	<1.00	--	--	--	--
DM-4	02/02/05		2.34	--	--	2.98	<1.00	--	--	--	--	<1.00	--	--	--	--
DM-4	02/02/05	(D)	2.45	--	--	3.08	<1.00	--	--	--	--	<1.00	--	--	--	--
DM-4	06/28/05		--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	09/27/05		--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	12/20/05		--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	03/21/06		--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	06/23/06		<1	--	--	2	<1	--	--	--	--	<0.8	--	--	--	--
DM-4	09/21/06		2	--	--	2	<1	--	--	--	--	<0.8	--	--	--	--
DM-4	12/19/06		2	--	--	4	1	--	--	--	--	<0.8	--	--	--	--
DM-4	02/27/07		2	--	--	3	<1	--	--	--	--	<0.8	--	--	--	--
DM-4	06/14/07		2	--	--	3	<1	--	--	--	--	<0.8	--	--	--	--
DM-4	09/25/07		2	--	--	3	1	--	--	--	--	<0.8	--	--	--	--
DM-4	12/13/07		--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	03/06/08		2	--	--	3	>1.00	--	--	--	--	<0.8	--	--	--	--
DM-4	06/03/08		2	--	--	3	1	--	--	--	--	<0.8	--	--	--	--
DM-4	09/11/08		1	--	--	2	<1.00	--	--	--	--	<0.8	--	--	--	--
DM-4	12/11/08		2	<1.00	<1.00	2	<1.00	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
DM-4	03/11/09		--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	06/09-11/09[3]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	09/09-11/09[3]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	12/07-09/09[3]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	03/09-11/10[3]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	06/09-11/10[3]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	09/09/10[3]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	03/08/11[3]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	09/14/11[3]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	03/08/12[3]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	09/11/12[3]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	03/13/13[3]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	09/13/13		--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	08/26/04		<1.00	--	--	<1.00	<1.00	--	--	--	--	<1.00	--	--	--	--
DM-5	11/09/04		<1.00	--	--	<1.00	<1.00	--	--	--	--	<1.00	--	--	--	--
DM-5	02/02/05		<1.00	--	--	<1.00	<1.00	--	--	--	--	<1.00	--	--	--	--
DM-5	06/28/05		--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	09/27/05		--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	12/20/05		--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	03/21/06		--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	06/23/06		<5	--	--	<5	<5	--	--	--	--	<4	--	--	--	--
DM-5	09/21/06		<1.0	--	--	<1.0	<1.0	--	--	--	--	<0.8	--	--	--	--
DM-5	12/19/06		<1.0	--	--	<1.0	<1.0	--	--	--	--	<0.8	--	--	--	--
DM-5	02/27/07		<1.0	--	--	<1.0	<1.0	--	--	--	--	<0.8	--	--	--	--
DM-5	06/14/07		<1.0	--	--	<1.0	<1.0	--	--	--	--	<0.8	--	--	--	--
DM-5	09/25/07		<5.0	--	--	<5.0	<5.0	--	--	--	--	<4.0	--	--	--	--
DM-5	12/13/07		--	--	--	--	--	--	--	--	--	-	--	--	--	--
DM-5	03/06/08		--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	06/03/08		--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	09/11/08		--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	12/11/08		--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	03/11/09		--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	06/09-11/09[3]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	09/09-11/09[3]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	12/07-09/09[3]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	03/09-11/10[3]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	06/09-11/10[3]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	09/09/10[3]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	03/08/11[3]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	09/14/11[3]		--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix C
Table 2
Historical Groundwater Monitoring Data and Analytical Results
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

			n-Propylbenzene (µg/L)	1,2,3-Trichlorobenzene (µg/L)	1,2,4-Trichlorobenzene (µg/L)	1,2,4-Trimethylbenzene (µg/L)	1,3,5-Trimethylbenzene (µg/L)	Dibromochloromethane (µg/L)	Dibromomethane (µg/L)	Dichlorodifluoromethane (µg/L)	1,1-Dichloroethene (µg/L)	cis-1,2-Dichloroethene (µg/L)	trans-1,2-Dichloroethene (µg/L)	1,2-Dichloropropane (µg/L)	1,3-Dichloropropane (µg/L)	2,2-Dichloropropane (µg/L)
		RBC (µg/L)	--	--	--	6,300	7,500	--	--	--	44,000	18,000	180,000	--	--	--
Proposed Screening Levels		SLV (µg/L)	--	--	110	--	--	--	--	--	--	590	--	5,700	244	--
Well ID	**Date**															
DM-5	03/08/12[3]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	09/11/12[3]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	03/13/13[3]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	09/13/13		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3B	06/28/05		1.48	--	--	<1.00	<1.00	--	--	--	--	<1.00	--	--	--	--
MW-3B	06/28/05	(D)	1.71	--	--	<1.00	<1.00	--	--	--	--	<1.00	--	--	--	--
MW-3B	09/27/05		1.66	--	--	<1.00	<1.00	--	--	--	--	<1.00	--	--	--	--
MW-3B	9/9/2016[4]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3B	3/15/2017[4]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3B	9/9/17[4]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3B	3/14/18[4]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3B	09/06/18		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3B	3/13/2019		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	06/28/05		6.18	--	--	<1.00	<1.00	--	--	--	--	<1.00	--	--	--	--
MW-4B	09/27/05		6.69	--	--	<1.00	<1.00	--	--	--	--	<1.00	--	--	--	--
MW-4B	12/20/05		2.08	--	--	<1.00	<1.00	--	--	--	--	<1.00	--	--	--	--
MW-4B	03/21/06		2.78	--	--	<1.00	<1.00	--	--	--	--	<1.00	--	--	--	--
MW-4B	03/21/06		3.14	--	--	<1.00	<1.00	--	--	--	--	<1.00	--	--	--	--
MW-4B	06/22/06		1	--	--	<1	<1	--	--	--	--	<0.8	--	--	--	--
MW-4B	09/20/06	(D)	2	--	--	<1	<1	--	--	--	--	<0.8	--	--	--	--
MW-4B	12/19/06		<1	--	--	<1	<1	--	--	--	--	<0.8	--	--	--	--
MW-4B	12/19/06	(D)	<1	--	--	<1	<1	--	--	--	--	<0.8	--	--	--	--
MW-4B	02/27/07		<1	--	--	<1	<1	--	--	--	--	<0.8	--	--	--	--
MW-4B	02/27/07	(D)	<1	--	--	<1	<1	--	--	--	--	<0.8	--	--	--	--
MW-4B	06/14/07		<1	--	--	<1	<1	--	--	--	--	<0.8	--	--	--	--
MW-4B	06/14/07	(D)	<1	--	--	<1	<1	--	--	--	--	<0.8	--	--	--	--
MW-4B	09/25/07		<1	--	--	<1	<1	--	--	--	--	<0.8	--	--	--	--
MW-4B	09/25/07	(D)	2	--	--	<1	<1	--	--	--	--	<0.8	--	--	--	--
MW-4B	12/13/07		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	03/05/08		<1.00	--	--	<1.00	<1.00	--	--	--	--	<0.8	--	--	--	--
MW-4B	06/03/08		<1.00	--	--	9	4	--	--	--	--	<0.8	--	--	--	--
MW-4B	09/10/08		<1	<1	<1	<1	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-4B	12/11/08		<1	<1	<1	<1	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-4B	03/11/09		<1	<1	<1	<1	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-4B	03/12/09	(D)	<1	<1	<1	<1	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-4B	06/09-11/09		<1	<1	<1	<1	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-4B	09/09-11/09		6	<1	<1	<1	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-4B	12/07-09/09		1	<1	<1	<1	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-4B	03/09-11/10		1	<1	<1	<1	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-4B	06/09-11/10		<1	<1	<1	<1	<1	--	--	--	--	--	--	--	--	--
MW-4B	09/09/10[5]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	03/10/11		--	--	--	--	--	--	--	--	--	<1.00	--	--	--	--
MW-4B	09/14/11[5]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	03/08/12		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	09/12/12		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	03/13/13[5]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	09/11/13[5]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	02/14/14		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	09/18/14		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	03/12/15		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	03/11/16		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	03/11/16	(D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	09/09/16		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	03/15/17		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	09/09/17		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	09/09/17	(D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	03/14/18		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	09/06/18		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	09/06/18	(D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix C
Table 2
Historical Groundwater Monitoring Data and Analytical Results
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

			n-Propylbenzene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Dibromochloromethane	Dibromomethane	Dichlorodifluoromethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,2-Dichloropropane	1,3-Dichloropropane	2,2-Dichloropropane
			(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
		RBC (µg/L)	--	--	--	6,300	7,500	--	--	--	44,000	18,000	180,000	--	--	--
Proposed Screening Levels		SLV (µg/L)	--	--	110	--	--	--	--	--	--	590	--	5,700	244	--
Well ID	**Date**															
MW-4B	3/13/2019		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	08/26/04		<1.00	--	--	<1.00	<1.00	--	--	--	--	<1.00	--	--	--	--
MW-6[1]	08/26/04	(D)	<1.00	--	--	<1.00	<1.00	--	--	--	--	<1.00	--	--	--	--
MW-6[1]	11/09/04		<1.00	--	--	<1.00	<1.00	--	--	--	--	<1.00	--	--	--	--
MW-6[1]	02/02/05		<1.00	--	--	<1.00	<1.00	--	--	--	--	<1.00	--	--	--	--
MW-6[1]	06/28/05		<1.00	--	--	<1.00	<1.00	--	--	--	--	<1.00	--	--	--	--
MW-6[1]	09/27/05		<1.00	--	--	<1.00	<1.00	--	--	--	--	<1.00	--	--	--	--
MW-6[1]	12/21/05	(D)	<1.00	--	--	<1.00	<1.00	--	--	--	--	<1.00	--	--	--	--
MW-6[1]	12/21/05		<1.00	--	--	<1.00	<1.00	--	--	--	--	<1.00	--	--	--	--
MW-6[1]	3/21/2006		<1.00	--	--	<1.00	<1.00	--	--	--	--	<0.8	--	--	--	--
MW-6[1]	6/22/2006		<1	--	--	<1	<1	--	--	--	--	<0.8	--	--	--	--
MW-6[1]	09/20/06		<1	--	--	<1	<1	--	--	--	--	<0.8	--	--	--	--
MW-6[1]	12/19/06		<1	--	--	<1	<1	--	--	--	--	<0.8	--	--	--	--
MW-6[1]	02/27/07		<1	--	--	<1	<1	--	--	--	--	--	--	--	--	--
MW-6[1]	06/14/07		--	--	--	--	--	--	--	--	--	<0.8	--	--	--	--
MW-6[1]	09/25/07		<1	--	--	<1	<1	--	--	--	--	<0.8	--	--	--	--
MW-6[1]	12/13/07		<1.0	--	--	<1.0	<1.0	--	--	--	--	<0.8	--	--	--	--
MW-6[1]	03/05/08		<1.0	--	--	<1.0	<1.0	--	--	--	--	<2.0	--	--	--	--
MW-6[1]	06/03/08		89	--	--	930	280	<2	<2	<4	<2	<2	<2	<2	<2	<2
MW-6[1]	09/10/08		14	<2	<2	110	34	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-6[1]	12/11/08		4	<1	<1	57	12	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-6[1]	03/12/09		1	<1	<1	17	5	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-6[1]	06/09-11/09		3	<1	<1	17	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-6[1]	09/09-11/09		<1	<1	<1	<1	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-6[1]	12/07-09/09		6	<1	<1	57	7	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-6[1]	03/09-11/10		<1	<1	<1	<1	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-6[1]	03/09-11/10	(D)	<1	<1	<1	<1	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-6[1]	06/09-11/10		<1	<1	<1	<1	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-6[1]	09/09/10		<1	<1	<1	<1	<1	--	--	--	--	--	--	--	--	--
MW-6[1]	03/09/11		--	--	--	--	--	--	--	--	--	<1.00	--	--	--	--
MW-6[1]	09/14/11		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	03/08/12		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	09/11/12		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	03/14/13		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	03/14/13	(D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	09/12/13		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	02/14/14		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	08/26/04		1.27	--	--	<1.00	<1.00	--	--	--	--	<1.00	--	--	--	--
MW-12[1]	11/09/04		<1.00	--	--	<1.00	<1.00	--	--	--	--	<1.00	--	--	--	--
MW-12[1]	02/02/05		<1.00	--	--	<1.00	<1.00	--	--	--	--	<1.00	--	--	--	--
MW-12[1]	06/28/05		<1.00	--	--	<1.00	<1.00	--	--	--	--	<1.00	--	--	--	--
MW-12[1]	09/27/05		<1.00	--	--	<1.00	<1.00	--	--	--	--	<1.00	--	--	--	--
MW-12[1]	12/21/05		<1.00	--	--	<1.00	<1.00	--	--	--	--	<1.00	--	--	--	--
MW-12[1]	03/21/06		<1.00	--	--	<1.00	<1.00	--	--	--	--	<0.8	--	--	--	--
MW-12[1]	06/22/06		<1	--	--	<1	<1	--	--	--	--	<0.8	--	--	--	--
MW-12[1]	09/20/06		<1	--	--	<1	<1	--	--	--	--	<0.8	--	--	--	--
MW-12[1]	12/19/06		<1	--	--	<1	<1	--	--	--	--	<0.8	--	--	--	--
MW-12[1]	02/27/07		<1	--	--	<1	<1	--	--	--	--	<0.8	--	--	--	--
MW-12[1]	06/14/07		<1	--	--	<1	<1	--	--	--	--	<0.8	--	--	--	--
MW-12[1]	09/25/07		<1	--	--	<1	<1	--	--	--	--	<0.8	--	--	--	--
MW-12[1]	12/12/07		<1.0	--	--	<1.0	<1.0	--	--	--	--	<0.8	--	--	--	--
MW-12[1]	03/05/08		<1.0	--	--	<1.0	<1.0	--	--	--	--	<0.8	--	--	--	--

Appendix C
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Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

			n-Propylbenzene (µg/L)	1,2,3-Trichlorobenzene (µg/L)	1,2,4-Trichlorobenzene (µg/L)	1,2,4-Trimethylbenzene (µg/L)	1,3,5-Trimethylbenzene (µg/L)	Dibromochloromethane (µg/L)	Dibromomethane (µg/L)	Dichlorodifluoromethane (µg/L)	1,1-Dichloroethene (µg/L)	cis-1,2-Dichloroethene (µg/L)	trans-1,2-Dichloroethene (µg/L)	1,2-Dichloropropane (µg/L)	1,3-Dichloropropane (µg/L)	2,2-Dichloropropane (µg/L)
		RBC (µg/L)	--	--	--	6,300	7,500	--	--	--	44,000	18,000	180,000	--	--	--
Proposed Screening Levels		SLV (µg/L)	--	--	110	--	--	--	--	--	--	590	--	5,700	244	--
Well ID	**Date**															
MW-12[1]	06/03/08		<1.0	--	--	<1.0	<1.0	<1	<1	<2	<0.8	<1	<0.8	<1	<1	<1
MW-12[1]	09/10/08		<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<2	<0.8	<1	<0.8	<1	<1	<1
MW-12[1]	12/11/08		<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<2	<0.8	<1	<0.8	<1	<1	<1
MW-12[1]	03/11/09		<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-12[1]	06/09-11/09		<1	<1	<1	<1	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-12[1]	09/09-11/09		<1	<1	<1	<1	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-12[1]	12/07-09/09		<1	<1	<1	<1	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-12[1]	12/07-09/09	(D)	<1	<1	<1	<1	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-12[1]	03/09-11/10		<1	<1	<1	<1	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-12[1]	06/09-11/10		<1	<1	<1	<1	<1	--	--	--	--	--	--	--	--	--
MW-12[1]	09/09/10[5]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	03/09/11		--	--	--	--	--	--	--	--	--	<1.00	--	--	--	--
MW-12[1]	09/14/11		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	03/08/12[5]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	09/12/12		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	03/13/13[5]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	09/12/13		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	02/14/14		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	09/18/14		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	03/12/15		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	09/15/2015		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	03/11/16		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	09/09/16		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	03/15/17		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	09/09/17		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	03/14/18		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	03/14/18	(D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	09/06/18		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	3/13/2019		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-14	06/28/05		<1.00	--	--	<1.00	<1.00	--	--	--	--	<1.00	--	--	--	--
MW-14	09/27/05		<1.00	--	--	<1.00	<1.00	--	--	--	--	<1.00	--	--	--	--
MW-14	12/20/05		<1.00	--	--	<1.00	<1.00	--	--	--	--	<1.00	--	--	--	--
MW-14	03/21/06		<1.00	--	--	<1.00	<1.00	--	--	--	--	<0.8	--	--	--	--
MW-14	06/22/06		<1	--	--	<1	<1	--	--	--	--	<0.8	--	--	--	--
MW-14	09/21/06		<1	--	--	<1	<1	--	--	--	--	<0.8	--	--	--	--
MW-14	12/19/06		<1	--	--	<1	<1	--	--	--	--	<0.8	--	--	--	--
MW-14	02/27/07		<1	--	--	<1	<1	--	--	--	--	<0.8	--	--	--	--
MW-14	06/14/07		<1	--	--	<1	<1	--	--	--	--	<0.8	--	--	--	--
MW-14	09/25/07		<1	--	--	<1	<1	--	--	--	--	<0.8	--	--	--	--
MW-14	12/13/07		<1.0	--	--	<1.0	<1.0	--	--	--	--	<0.8	--	--	--	--
MW-14	03/06/08		<1.0	--	--	<1.0	<1.0	--	--	--	--	<0.8	--	--	--	--
MW-14	06/04/08		<1.0	--	--	<1.0	<1.0	--	--	--	--	<0.8	--	--	--	--
MW-14	09/11/08		<1.0	--	--	<1.0	<1.0	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-14	12/10/08		<1.0	<1	<1	<1.0	<1.0	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-14	03/12/09		<1.0	<1	<1	<1.0	<1.0	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-14	06/09-11/09		<1	<1	<1	<1	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-14	09/09-11/09		<1	<1	<1	<1	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-14	12/07-09/09		<1	<1	<1	<1	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-14	03/09-11/10		<1	<1	<1	<1	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-14	06/09-11/10		<1	<1	<1	<1	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-14	09/09/10		<1	<1	<1	<1	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-14	09/09/10	(D)	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	--	--
MW-15	06/28/05		<1.00	--	--	<1.00	<1.00	--	--	--	--	<1.00	--	--	--	--
MW-15	09/27/05		<1.00	--	--	<1.00	<1.00	--	--	--	--	<1.00	--	--	--	--
MW-15	12/20/05		<1.00	--	--	<1.00	<1.00	--	--	--	--	<1.00	--	--	--	--
MW-15	03/21/06		<1.00	--	--	<1.00	<1.00	--	--	--	--	<0.8	--	--	--	--

Appendix C
Table 2
Historical Groundwater Monitoring Data and Analytical Results
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

			n-Propylbenzene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Dibromochloromethane	Dibromomethane	Dichlorodifluoromethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,2-Dichloropropane	1,3-Dichloropropane	2,2-Dichloropropane
			(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
		RBC (µg/L)	--	--	--	6,300	7,500	--	--	--	44,000	18,000	180,000	--	--	--
Proposed Screening Levels		SLV (µg/L)	--	--	110	--	--	--	--	--	--	590	--	5,700	244	--
Well ID	Date															
MW-15	06/22/06		<1	--	--	<1	<1	--	--	--	--	<0.8	--	--	--	--
MW-15	09/21/06		<1	--	--	<1	<1	--	--	--	--	<0.8	--	--	--	--
MW-15	12/19/06		<1	--	--	<1	<1	--	--	--	--	<0.8	--	--	--	--
MW-15	02/27/07		<1	--	--	<1	<1	--	--	--	--	<0.8	--	--	--	--
MW-15	06/14/07		<1	--	--	<1	<1	--	--	--	--	<0.8	--	--	--	--
MW-15	09/25/07		<1	--	--	<1	<1	--	--	--	--	<0.8	--	--	--	--
MW-15	12/14/07		<1.0	--	--	<1.0	<1.0	--	--	--	--	<0.8	--	--	--	--
MW-15	12/14/07	(D)	<1.0	--	--	<1.0	<1.0	--	--	--	--	<0.8	--	--	--	--
MW-15	03/06/08		<1.0	--	--	<1.0	<1.0	--	--	--	--	--	--	--	--	--
MW-15	06/04/08		--	--	--	--	--	<1	<1	<2	<0.8	2	<0.8	<1	<1	<1
MW-15	09/11/08		<1.0	--	--	<1.0	<1.0	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-15	12/11/08		<1.0	<1	<1	<1.0	<1.0	--	--	--	--	--	--	--	--	--
MW-15	03/12/09		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	06/09-11/09[4]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	09/09-11/09[4]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	12/07-09/09[4]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	03/09-11/10[4]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	06/09-11/10[4]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	09/09/10[5]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	03/08/11[5]		--	--	--	--		--	--	--	--	2.54	--	--	--	--
MW-15	03/11/16		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	09/09/16		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	03/15/17		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	09/09/17		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	03/14/18		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	09/06/18		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	3/13/2019		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	06/28/05		<1.00	--	--	<1.00	<1.00	--	--	--	--	3.67	--	--	--	--
MW-16	09/27/05		<1.00	--	--	<1.00	<1.00	--	--	--	--	1.79	--	--	--	--
MW-16	12/21/05		<1.00	--	--	<1.00	<1.00	--	--	--	--	1.26	--	--	--	--
MW-16	03/21/06		<1.00	--	--	<1.00	<1.00	--	--	--	--	0.8	--	--	--	--
MW-16	06/22/06		<1	--	--	<1	<1	--	--	--	--	<0.8	--	--	--	--
MW-16	09/20/06		<1	--	--	<1	<1	--	--	--	--	1	--	--	--	--
MW-16	12/19/06		<1	--	--	<1	<1	--	--	--	--	<0.8	--	--	--	--
MW-16	02/27/07		<1	--	--	<1	<1	--	--	--	--	<0.8	--	--	--	--
MW-16	06/14/07		<1	--	--	<1	<1	--	--	--	--	1	--	--	--	--
MW-16	09/25/07		<1	--	--	<1	<1	--	--	--	--	2	--	--	--	--
MW-16	12/12/07		<1.0	--	--	<1.0	<1.0	--	--	--	--	<0.8	--	--	--	--
MW-16	03/05/08		<1.0	--	--	<1.0	<1.0	--	--	--	--	<20	--	--	--	--
MW-16	06/03/08		250	--	--	2,400	660	<1	<1	<2	<0.8	2	<0.8	<1	<1	<1
MW-16	09/10/08		4	<1	<1	57	19	<1	<1	<2	<0.8	2	<0.8	<1	<1	<1
MW-16	12/09/08		<1	<1	<1	3	<1	<2	<2	<4	<2	<2	<2	<2	<2	<2
MW-16	03/11/09		<2	<2	<2	23	4	<1	<1	<2	<0.8	2	<0.8	<1	<1	<1
MW-16	06/09-11/09		3	<1	<1	25	<1	<1	<1	<2	<0.8	1	<0.8	<1	<1	<1
MW-16	09/09-11/09		8	<1	<1	90	15	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-16	12/07-09/09		2	<1	<1	45	2	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-16	03/09-11/10		10	<1	<1	150	20	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-16	06/09-11/10		<1	<1	<1	<1	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-16	06/09-11/10	(D)	<1	<1	<1	<1	<1	<1	<1	<2	<0.8	1	<0.8	<1	<1	<1
MW-16	09/09/10		<1	<1	<1	<1	<1	--	--	--	--	--	--	--	--	--
MW-16	03/10/11		--	--	--	--	--	--	--	--	--	<1.00	--	--	--	--
MW-16	09/14/11		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	03/08/12	(D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	03/08/12		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	09/12/12		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	03/14/13		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	09/12/13		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	02/14/14		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	09/18/14		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	03/12/15		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	09/15/2015		--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix C
Table 2
Historical Groundwater Monitoring Data and Analytical Results
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

			n-Propylbenzene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Dibromochloromethane	Dibromomethane	Dichlorodifluoromethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,2-Dichloropropane	1,3-Dichloropropane	2,2-Dichloropropane
			(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
		RBC (µg/L)	--	--	--	6,300	7,500	--	--	--	44,000	18,000	180,000	--	--	--
Proposed Screening Levels		SLV (µg/L)	--	--	110	--	--	--	--	--	--	590	--	5,700	244	--
Well ID	**Date**															
MW-16	03/11/16		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-17	06/28/05		3.55	--	--	<1.00	<1.00	--	--	--	--	<1.00	--	--	--	--
MW-17	06/28/05	(D)	3.55	--	--	<1.00	<1.00	--	--	--	--	<1.00	--	--	--	--
MW-17	09/27/05		<1.00	--	--	<1.00	<1.00	--	--	--	--	<1.00	--	--	--	--
MW-17	12/20/05		<1.00	--	--	<1.00	<1.00	--	--	--	--	<1.00	--	--	--	--
MW-17	03/21/06		<1.00	--	--	<1.00	<1.00	--	--	--	--	<0.8	--	--	--	--
MW-17	06/22/06		<1	--	--	<1	<1	--	--	--	--	<0.8	--	--	--	--
MW-17	09/21/06		<1	--	--	<1	<1	--	--	--	--	<0.8	--	--	--	--
MW-17	12/19/06		<1	--	--	<1	<1	--	--	--	--	<0.8	--	--	--	--
MW-17	02/27/07		<1	--	--	<1	<1	--	--	--	--	<0.8	--	--	--	--
MW-17	06/14/07		<1	--	--	<1	<1	--	--	--	--	<0.8	--	--	--	--
MW-17	09/25/07		<1	--	--	<1	<1	--	--	--	--	<0.8	--	--	--	--
MW-17	12/13/07		<1.0	--	--	<1.0	<1.0	--	--	--	--	<2	--	--	--	--
MW-17	03/06/08		<1.0	--	--	<1.0	<1.0	--	--	--	--	<0.8	--	--	--	--
MW-17	06/04/08		<1.0	--	--	<1.0	<1.0	--	--	--	--	<0.8	--	--	--	--
MW-17	09/11/08		<1.0	--	--	<1.0	<1.0	--	--	--	--	<0.8	--	--	--	--
MW-17	09/11/08	(D)	<1.0	--	--	<1.0	<1.0	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-17	12/10/08		<1.0	<1	<1	<1.0	<1.0	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-17	12/10/08	(D)	<1.0	<1	<1	<1.0	<1.0	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-17	03/12/09		<1.0	<1	<1	<1.0	<1.0	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-17	06/09-11/09		<1	<1	<1	<1	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-17	06/09-11/09	(D)	<1	<1	<1	<1	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-17	09/09-11/09	(D)	<1	<1	<1	<1	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-17	12/07-09/09		<1	<1	<1	<1	<1	--	--	--	--	--	--	--	--	--
MW-17	03/09-11/10[6]		--	--	--	--	--	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-17	06/09-11/10		<1	<1	<1	<1	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-17	09/09/10		<1	<1	<1	<1	<1	--	--	--	--	--	--	--	--	--
MW-18	06/28/05		7.49	--	--	<1.00	<1.00	--	--	--	--	<1.00	--	--	--	--
MW-18	09/27/05		8.98	--	--	<1.00	<1.00	--	--	--	--	--	--	--	--	--
MW-18	12/21/05		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	03/21/06		--	--	--	--	--	--	--	--	--	<0.8	--	--	--	--
MW-18	06/22/06		6	--	--	<1	<1	--	--	--	--	--	--	--	--	--
MW-18	09/20/06		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	12/19/06		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	02/27/07		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	06/14/07		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	09/25/07		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	12/13/07		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	03/06/08		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	06/04/08		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	09/11/08		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	12/10/08		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	03/11/09		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	06/09-11/09[4]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	09/09-11/09[4]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	12/07-09/09[4]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	03/09-11/10[4]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	06/09-11/10[4]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	09/09/10[4]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	03/08/11[5]		--	--	--	--	--	<1	<1	<2	<1	<0.8	<0.8	<1	<1	<1
MW-18	09/15/2015		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	03/11/16		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	09/09/16		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	03/15/17		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	09/09/17		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	03/14/18		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	09/06/18		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	3/13/2019		--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix C
Table 2
Historical Groundwater Monitoring Data and Analytical Results
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

			n-Propylbenzene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Dibromochloromethane	Dibromomethane	Dichlorodifluoromethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,2-Dichloropropane	1,3-Dichloropropane	2,2-Dichloropropane
			(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
		RBC (µg/L)	--	--	--	6,300	7,500	--	--	--	44,000	18,000	180,000	--	--	--
Proposed Screening Levels		SLV (µg/L)	--	--	110	--	--	--	--	--	--	590	--	5,700	244	--
Well ID	**Date**															
MW-19	06/21/07		2	<1	<1	<1	<1	<1	<1	<2	<1	<0.8	<0.8	<1	<1	<1
MW-19	09/24/07		1	<1	<1	<1	<1	--	--	--	--	--	--	--	--	--
MW-19	12/13/07		--	--	--	--	--	--	--	--	<0.8	--	--	--	--	--
MW-19	03/06/08		2	--	--	<1	<1	--	--	--	--	<0.8	--	--	--	--
MW-19	06/06/08		2	--	--	<1.0	<1.0	--	--	--	<0.8	--	--	--	--	--
MW-19	06/04/08	(D)	2	--	--	<1	<1	--	--	--	--	<0.8	--	--	--	--
MW-19	09/11/08		2	--	--	<1	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-19	12/10/08		<1.0	<1	<1	<1.0	<1.0	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-19	03/12/09		1	<1	<1	<1.0	<1.0	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-19	06/09-11/09		<1	<1	<1	<1	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-19	09/09-11/09		<1	<1	<1	<1	<1	--	--	--	--	--	--	--	--	--
MW-19	12/07-09/09[6]		--	--	--	--	--	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-19	03/09-11/10		<1	<1	<1	<1	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-19	06/09-11/10		<1	<1	<1	<1	<1	--	--	--	--	--	--	--	--	--
MW-19	09/09/10[5]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	03/09/11		--	--	--	--	--	<1	<1	<2	<1	<0.8	<0.8	<1	<1	<1
MW-19	09/14/11		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	03/08/12		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	09/12/12		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	03/12/15		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	03/12/15	(D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	03/11/16		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	09/09/16		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	03/15/17		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	09/09/17		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	03/14/18		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	09/06/18		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	3/13/2019		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	06/21/07		7	<1	<1	<1	<1	<1	<1	<2	<1	<0.8	<0.8	<1	<1	<1
MW-20	09/24/07		5	<1	<1	<1	<1	--	--	--	--	--	--	--	--	--
MW-20	12/13/07		--	--	--	--	--	--	--	--	<0.8	--	--	--	--	--
MW-20	03/06/08		<1	--	--	<1	<1	--	--	--	--	--	--	--	--	--
MW-20	06/04/08		--	--	--	--	--	--	--	--	--	<0.8	--	--	--	--
MW-20	09/11/08		40	--	--	<1	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-20	12/10/08		1	<1	<1	<1.0	<1.0	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-20	03/12/09		36	<1	<1	<1	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-20	06/09-11/09[2]		9	<1	<1	<1	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-20	09/09-11/09[2]		9	<1	<1	<1	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-20	12/07-09/09[2]		6	<1	<1	<1	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-20	03/09-11/10[2]		7	<1	<1	<1	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-20	06/09-11/10[2]		6	<1	<1	<1	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-20	09/09/10[2]		4	<1	<1	<1	<1	--	--	--	--	--	--	--	--	--
MW-20	03/09/11[2]		--	--	--	--	--	<1	<1	<2	<1	<0.8	<0.8	<1	<1	<1
MW-20	09/14/11[2]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	3/7/2012[2]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	09/12/12[2]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	09/12/12[2]	(D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	03/14/13[2]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	09/12/13[2]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	09/12/13[2]	(D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	02/14/14		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	09/18/14		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	03/12/15		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	09/15/2015		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	03/11/16		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	09/09/16		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	03/15/17		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	09/09/17		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	03/14/18		--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix C
Table 2
Historical Groundwater Monitoring Data and Analytical Results
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

			n-Propylbenzene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Dibromochloromethane	Dibromomethane	Dichlorodifluoromethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,2-Dichloropropane	1,3-Dichloropropane	2,2-Dichloropropane
			(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
		RBC (µg/L)	--	--	--	6,300	7,500	--	--	--	44,000	18,000	180,000	--	--	--
Proposed Screening Levels		SLV (µg/L)	--	--	110	--	--	--	--	--	--	590	--	5,700	244	--
Well ID	**Date**															
MW-20	09/06/18		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	3/13/2019		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-21	06/21/07		6	<1	<1	<1	<1	<1	<1	<2	<1	<0.8	<0.8	<1	<1	<1
MW-21	09/24/07		<1	<1	<1	<1	<1	--	--	--	--	--	--	--	--	--
MW-21	12/13/07		--	--	--	--	--	--	--	--	<0.8	--	--	--	--	--
MW-21	03/06/08		<1	--	--	<1	<1	--	--	--	<0.8	--	--	--	--	--
MW-21	06/04/08		<1	--	--	<1	<1	--	--	--	--	<0.8	--	--	--	--
MW-21	09/11/08		<1	--	--	<1	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-21	12/10/08		<1	<1	<1	<1	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-21	03/12/09		<1	<1	<1	<1	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-21	06/09-11/09		<1	<1	<1	<1	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-21	09/09-11/09		<1	<1	<1	<1	<1	--	--	--	--	--	--	--	--	--
MW-21	12/07-09/09[6]		--	--	--	--	--	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-21	03/09-11/10		<1	<1	<1	<1	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-21	06/09-11/10		<1	<1	<1	<1	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-21	09/09/10		<1	<1	<1	<1	<1	--	--	--	--	--	--	--	--	--
MW-22	06/20/07		170	<1	<1	2	15	--	--	--	--	--	--	--	--	--
MW-22	09/24/07		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	12/13/07		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	03/06/08		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	06/04/08		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	09/11/08		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	12/10/08		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	03/12/09		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	06/09-11/09[4]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	09/09-11/09[4]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	12/07-09/09[4]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	03/09-11/10[4]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	06/09-11/10[4]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	09/09/10[5]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	03/08/10[5]		--	--	--	--	--	<1	<1	<2	<1	<0.8	<0.8	<1	<1	<1
MW-22	03/12/15		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	09/15/2015		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	03/11/16		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	09/09/16		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	09/09/16	(D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	03/15/17		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	03/15/17	(D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	09/09/17		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	03/14/18		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	09/07/18		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	3/13/2019		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	3/13/2019	(D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-23	06/20/07		14	<1	<1	<1	<1	<1	<1	<2	<1	<0.8	<0.8	<1	<1	<1
MW-23	09/24/07		10	<1	<1	2	--	--	--	--	--	--	--	--	--	--
MW-23	12/13/07		--	--	--	--	--	--	--	--	--	<0.8	--	--	--	--
MW-23	03/05/08		9	--	--	<1	<1	--	--	--	--	<4	--	--	--	--
MW-23	06/03/08		9	--	--	<5	<5	<2	<1	<1	<0.8	<0.8	<0.8	<1	<1	<1
MW-23	09/11/08		10	<1	<1	<1	<1	<2	<1	<1	<0.8	<0.8	<0.8	<1	<1	<1
MW-23	12/10/08		6	<1	<1	<1	<1	<2	<1	<1	<0.8	<0.8	<0.8	<1	<1	<1
MW-23	03/12/09		4	<1	<1	<1	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-23	06/09-11/09		5	<1	<1	<1	<1	--	--	--	--	--	--	--	--	--
MW-23	09/09-11/09[5]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-23	12/07-09/09[4]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-23	03/09-11/10[4]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-23	06/09-11/10[4]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-23	09/09/10[5]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-23	03/08/10[5]		--	--	--	--	--	<2	<2	<4	<2	<2	<2	<2	<2	<2

Appendix C
Table 2
Historical Groundwater Monitoring Data and Analytical Results
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

			n-Propylbenzene (µg/L)	1,2,3-Trichlorobenzene (µg/L)	1,2,4-Trichlorobenzene (µg/L)	1,2,4-Trimethylbenzene (µg/L)	1,3,5-Trimethylbenzene (µg/L)	Dibromochloromethane (µg/L)	Dibromomethane (µg/L)	Dichlorodifluoromethane (µg/L)	1,1-Dichloroethene (µg/L)	cis-1,2-Dichloroethene (µg/L)	trans-1,2-Dichloroethene (µg/L)	1,2-Dichloropropane (µg/L)	1,3-Dichloropropane (µg/L)	2,2-Dichloropropane (µg/L)
		RBC (µg/L)	--	--	--	6,300	7,500	--	--	--	44,000	18,000	180,000	--	--	--
Proposed Screening Levels		SLV (µg/L)	--	--	110	--	--	--	--	--	--	590	--	5,700	244	--
Well ID	Date															
MW-24	06/20/07		13	<2	<2	44	15	--	--	--	--	--	--	--	--	--
MW-24	09/24/07		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	12/13/07		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	03/05/08		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	06/03/08		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	09/11/08		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	12/10/08		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	03/12/09			--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	06/09-11/09[4]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	09/09-11/09[4]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	12/07-09/09[4]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	03/09-11/10[4]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	06/09-11/10[4]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	09/09/10[5]		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	03/08/10[5]		--	--	--	--	--	<1	<1	<2	<1	<0.8	<0.8	<1	<1	<1
MW-24	09/15/2015		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	09/09/16		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	03/15/17		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	09/09/17		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	03/14/18		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	09/06/18		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	3/13/2019		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	06/21/07		1	<1	<1	<1	<1	<1	<1	<2	<1	<0.8	<0.8	<1	<1	<1
MW-25	06/21/07	(D)	<1	<1	<1	<1	<1	<1	<1	<2	<1	<0.8	<0.8	<1	<1	<1
MW-25	09/24/07		<1	<1	<1	<1	<1	--	--	--	--	--	--	--	--	--
MW-25	12/13/07		--	--	--	--	--	--	--	--	<0.8	--	--	--	--	--
MW-25	03/05/08		<1	--	--	<1	<1	--	--	--	--	--	--	--	--	--
MW-25	06/03/08		--	--	--	--	--	--	--	--	--	<0.8	--	--	--	--
MW-25	09/11/08		<1	--	--	<1	<1	<2	<1	<1	<0.8	<0.8	<0.8	<1	<1	<1
MW-25	12/10/08		<1	<1	<1	<1	<1	<2	<1	<1	<0.8	<0.8	<0.8	<1	<1	<1
MW-25	03/12/09		<1	<1	<1	<1	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-25	06/09-11/09		<1	<1	<1	<1	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-25	09/09-11/09		<1	<1	<1	<1	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-25	12/07-09/09		<1	<1	<1	<1	<1									
MW-25	03/09-11/10		<1	<1	<1	<1	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-25	06/09-11/10		<1	<1	<1	<1	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-25	09/09/10		<1	<1	<1	<1	<1	<1	<1	<2	<0.8	<0.8	<0.8	<1	<1	<1
MW-25	03/09/11		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	09/14/11		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	09/14/11	(D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	03/08/12		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	09/12/12		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	03/14/13		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	09/12/13		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	02/14/14		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	02/14/14	(D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	09/18/14		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	09/18/14	(D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	3/12/2015		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	09/15/2015		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	09/15/2015	(D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	03/11/16		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	09/09/16		--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix C
Table 2
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10 5th Street
Astoria, Oregon

		1,1-Dichloropropene (µg/L)	cis-1,3-Dichloropropene (µg/L)	trans-1,3-Dichloropropene (µg/L)	Hexachlorobutadiene (µg/L)	2-Hexanone (µg/L)	4-Methyl- 2-pentanone (µg/L)	Methylene Chloride (µg/L)	Styrene (µg/L)	1,1,2,2-Tetrachloroethane (µg/L)	Tetrachloroethene (µg/L)	1,1,2-Trichloroethane (µg/L)	Trichloroethene (µg/L)	Trichlorofluoromethane (µg/L)	1,2,3-Trichloropropane (µg/L)	Vinyl Chloride (µg/L)
	RBC (µg/L)	--	--	--	--	--	--	--	170,000	--	5,600	49	430	160,000	--	960
Proposed Screening Levels	SLV (µg/L)	--	--	--	9.3	99	170	2,200	--	2,400	--	9,400	--	--	--	--
Well ID	**Date**															
DM-4	08/26/04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	11/09/04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	02/02/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	02/02/05 (D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	06/28/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	09/27/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	12/20/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	03/21/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	06/23/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	09/21/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	12/19/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	02/27/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	06/14/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	09/25/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	12/13/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	03/06/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	06/03/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	09/11/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	12/11/08	<1	<1	<1	<0.8	<1	<3	<2	<1	<0.8	<1	<1	<0.8	<2	<1	<1
DM-4	03/11/09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	06/09-11/09[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	09/09-11/09[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	12/07-09/09[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	03/09-11/10[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	06/09-11/10[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	09/09/10[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	03/08/11[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	09/14/11[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	03/08/12[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	09/11/12[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	03/13/13[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	09/13/13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	08/26/04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	11/09/04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	02/02/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	06/28/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	09/27/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	12/20/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	03/21/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	06/23/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	09/21/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	12/19/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	02/27/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	06/14/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	09/25/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	12/13/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	03/06/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	06/03/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	09/11/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	12/11/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	03/11/09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	06/09-11/09[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	09/09-11/09[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	12/07-09/09[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	03/09-11/10[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	06/09-11/10[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	09/09/10[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	03/08/11[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	09/14/11[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

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Table 2
Historical Groundwater Monitoring Data and Analytical Results
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

		1,1-Dichloropropene (µg/L)	cis-1,3-Dichloropropene (µg/L)	trans-1,3-Dichloropropene (µg/L)	Hexachlorobutadiene (µg/L)	2-Hexanone (µg/L)	4-Methyl- 2-pentanone (µg/L)	Methylene Chloride (µg/L)	Styrene (µg/L)	1,1,2,2-Tetrachloroethane (µg/L)	Tetrachloroethene (µg/L)	1,1,2-Trichloroethane (µg/L)	Trichloroethene (µg/L)	Trichlorofluoromethane (µg/L)	1,2,3-Trichloropropane (µg/L)	Vinyl Chloride (µg/L)
	RBC (µg/L)	--	--	--	--	--	--	--	170,000	--	5,600	49	430	160,000	--	960
Proposed Screening Levels	SLV (µg/L)	--	--	--	9.3	99	170	2,200	--	2,400	--	9,400	--	--	--	--
Well ID	**Date**															
DM-5	03/08/12[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	09/11/12[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	03/13/13[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	09/13/13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3B	06/28/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3B	06/28/05 (D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3B	09/27/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3B	9/9/2016[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3B	3/15/2017[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3B	9/9/17[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3B	3/14/18[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3B	09/06/18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3B	3/13/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	06/28/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	09/27/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	12/20/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	03/21/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	03/21/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	06/22/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	09/20/06 (D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	12/19/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	12/19/06 (D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	02/27/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	02/27/07 (D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	06/14/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	06/14/07 (D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	09/25/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	09/25/07 (D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	12/13/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	03/05/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	06/03/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	09/10/08	<1	<1	<1	<2	<3	<3	<1	<1	<0.8	<1	<1	<0.8	<2	<1	<1
MW-4B	12/11/08	<1	<1	<1	<2	<3	<3	<1	<1	<0.8	<1	<1	<0.8	<2	<1	<1
MW-4B	03/11/09	<1	<1	<1	<2	<3	<3	<2	<1	<0.8	<1	<1	<0.8	<2	<1	<1
MW-4B	03/12/09 (D)	<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-4B	06/09-11/09	<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-4B	09/09-11/09	<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-4B	12/07-09/09	<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-4B	03/09-11/10	<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-4B	06/09-11/10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	09/09/10[5]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	03/10/11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	09/14/11[5]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	03/08/12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	09/12/12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	03/13/13[5]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	09/11/13[5]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	02/14/14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	09/18/14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	03/12/15	--	--	--	--	--										
MW-4B	03/11/16	--	--	--	--	--										
MW-4B	03/11/16 (D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	09/09/16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	03/15/17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	09/09/17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	09/09/17 (D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	03/14/18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	09/06/18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	09/06/18 (D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

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10 5th Street
Astoria, Oregon

			1,1-Dichloropropene (µg/L)	cis-1,3-Dichloropropene (µg/L)	trans-1,3-Dichloropropene (µg/L)	Hexachlorobutadiene (µg/L)	2-Hexanone (µg/L)	4-Methyl- 2-pentanone (µg/L)	Methylene Chloride (µg/L)	Styrene (µg/L)	1,1,2,2-Tetrachloroethane (µg/L)	Tetrachloroethene (µg/L)	1,1,2-Trichloroethane (µg/L)	Trichloroethene (µg/L)	Trichlorofluoromethane (µg/L)	1,2,3-Trichloropropane (µg/L)	Vinyl Chloride (µg/L)
		RBC (µg/L)	--	--	--	--	--	--	--	170,000	--	5,600	49	430	160,000	--	960
Proposed Screening Levels		SLV (µg/L)	--	--	--	9.3	99	170	2,200	--	2,400	--	9,400	--	--	--	--
Well ID	**Date**																
MW-4B	3/13/2019		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	08/26/04		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	08/26/04	(D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	11/09/04		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	02/02/05		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	06/28/05		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	09/27/05		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	12/21/05	(D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	12/21/05		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	3/21/2006		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	6/22/2006		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	09/20/06		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	12/19/06		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	02/27/07		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	06/14/07		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	09/25/07		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	12/13/07		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	03/05/08		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	06/03/08		<2	<2	<2	<4	7	<6	<4	<2	<2	<2	<2	<2	<4	<2	<2
MW-6[1]	09/10/08		<1	<1	<1	<2	<3	<3	<2	<1	<0.8	<1	<1	<0.8	<2	<1	<1
MW-6[1]	12/11/08		<1	<1	<1	<2	<3	<3	<2	<1	<0.8	<1	<1	<0.8	<2	<1	<1
MW-6[1]	03/12/09		<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-6[1]	06/09-11/09		<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-6[1]	09/09-11/09		<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-6[1]	12/07-09/09		<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-6[1]	03/09-11/10		<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-6[1]	03/09-11/10	(D)	<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-6[1]	06/09-11/10		<1	<1	<1	<2	<1	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-6[1]	09/09/10		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	03/09/11		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	09/14/11		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	03/08/12		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	09/11/12		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	03/14/13		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	03/14/13	(D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	09/12/13		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6[1]	02/14/14		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	08/26/04		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	11/09/04		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	02/02/05		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	06/28/05		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	09/27/05		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	12/21/05		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	03/21/06		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	06/22/06		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	09/20/06		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	12/19/06		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	02/27/07		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	06/14/07		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	09/25/07		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	12/12/07		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	03/05/08		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix C
Table 2
Historical Groundwater Monitoring Data and Analytical Results
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

			1,1-Dichloropropene (µg/L)	cis-1,3-Dichloropropene (µg/L)	trans-1,3-Dichloropropene (µg/L)	Hexachlorobutadiene (µg/L)	2-Hexanone (µg/L)	4-Methyl- 2-pentanone (µg/L)	Methylene Chloride (µg/L)	Styrene (µg/L)	1,1,2,2-Tetrachloroethane (µg/L)	Tetrachloroethene (µg/L)	1,1,2-Trichloroethane (µg/L)	Trichloroethene (µg/L)	Trichlorofluoromethane (µg/L)	1,2,3-Trichloropropane (µg/L)	Vinyl Chloride (µg/L)
		RBC (µg/L)	--	--	--	--	--	--	--	170,000	--	5,600	49	430	160,000	--	960
Proposed Screening Levels		SLV (µg/L)	--	--	--	9.3	99	170	2,200	--	2,400	--	9,400	--	--	--	--
Well ID	Date																
MW-12[1]	06/03/08		<1	<0.8	<1	<2	<3	<3	<2	<1	<0.8	<1	<1	<0.8	<2	<1	<1
MW-12[1]	09/10/08		<1	<0.8	<1	<2	<3	<3	<2	<1	<0.8	<1	<1	<0.8	<2	<1	<1
MW-12[1]	12/11/08		<1	<0.8	<1	<2	<3	<3	<2	<1	<0.8	<1	<1	<0.8	<2	<1	<1
MW-12[1]	03/11/09		<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-12[1]	06/09-11/09		<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-12[1]	09/09-11/09		<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-12[1]	12/07-09/09		<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-12[1]	12/07-09/09	(D)	<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-12[1]	03/09-11/10		<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-12[1]	06/09-11/10		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	09/09/10[5]		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	03/09/11		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	09/14/11		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	03/08/12[5]		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	09/12/12		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	03/13/13[5]		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	09/12/13		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	02/14/14		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	09/18/14		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	03/12/15		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	09/15/2015		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	03/11/16		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	09/09/16		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	03/15/17		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	09/09/17		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	03/14/18		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	03/14/18	(D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	09/06/18		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-12[1]	3/13/2019		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-14	06/28/05		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-14	09/27/05		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-14	12/20/05		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-14	03/21/06		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-14	06/22/06		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-14	09/21/06		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-14	12/19/06		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-14	02/27/07		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-14	06/14/07		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-14	09/25/07		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-14	12/13/07		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-14	03/06/08		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-14	06/04/08		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-14	09/11/08		<1	<1	<1	<2	<3	<3	<2	<1	<0.8	<1	<1	<0.8	<2	<1	<1
MW-14	12/10/08		<1	<1	<1	<2	<3	<3	<2	<1	<0.8	<1	<1	<0.8	<2	<1	<1
MW-14	03/12/09		<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-14	06/09-11/09		<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-14	09/09-11/09		<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-14	12/07-09/09		<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-14	03/09-11/10		<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-14	06/09-11/10		<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-14	09/09/10		<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-14	09/09/10	(D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	06/28/05		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	09/27/05		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	12/20/05		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	03/21/06		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix C
Table 2
Historical Groundwater Monitoring Data and Analytical Results
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

		1,1-Dichloropropene (µg/L)	cis-1,3-Dichloropropene (µg/L)	trans-1,3-Dichloropropene (µg/L)	Hexachlorobutadiene (µg/L)	2-Hexanone (µg/L)	4-Methyl- 2-pentanone (µg/L)	Methylene Chloride (µg/L)	Styrene (µg/L)	1,1,2,2-Tetrachloroethane (µg/L)	Tetrachloroethene (µg/L)	1,1,2-Trichloroethane (µg/L)	Trichloroethene (µg/L)	Trichlorofluoromethane (µg/L)	1,2,3-Trichloropropane (µg/L)	Vinyl Chloride (µg/L)
	RBC (µg/L)	--	--	--	--	--	--	--	170,000	--	5,600	49	430	160,000	--	960
Proposed Screening Levels	SLV (µg/L)	--	--	--	9.3	99	170	2,200	--	2,400	--	9,400	--	--	--	--
Well ID	**Date**															
MW-15	06/22/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	09/21/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	12/19/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	02/27/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	06/14/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	09/25/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	12/14/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	12/14/07 (D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	03/06/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	06/04/08	<1	<1	<1	<2	<3	<3	<2	<1	<0.8	<1	<1	<0.8	<2	<1	<1
MW-15	09/11/08	<1	<1	<1	<2	<3	<3	<2	<1	<0.8	<1	<1	<0.8	<2	<1	<1
MW-15	12/11/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	03/12/09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	06/09-11/09[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	09/09-11/09[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	12/07-09/09[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	03/09-11/10[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	06/09-11/10[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	09/09/10[5]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	03/08/11[5]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	03/11/16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	09/09/16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	03/15/17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	09/09/17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	03/14/18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	09/06/18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	3/13/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	06/28/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	09/27/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	12/21/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	03/21/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	06/22/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	09/20/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	12/19/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	02/27/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	06/14/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	09/25/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	12/12/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	03/05/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	06/03/08	<1	<1	<1	<2	<3	<3	<2	<1	<0.8	<1	<1	<0.8	<2	<1	<1
MW-16	09/10/08	<1	<1	<1	<2	<3	<3	<2	<1	<0.8	<1	<1	<0.8	<2	<1	<1
MW-16	12/09/08	<2	<2	<2	<4	<6	<6	<4	<2	<2	<2	<2	<2	4	<2	<2
MW-16	03/11/09	<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-16	06/09-11/09	<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-16	09/09-11/09	<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-16	12/07-09/09	<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-16	03/09-11/10	<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-16	06/09-11/10	<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-16	06/09-11/10 (D)	<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-16	09/09/10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	03/10/11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	09/14/11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	03/08/12 (D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	03/08/12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	09/12/12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	03/14/13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	09/12/13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	02/14/14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	09/18/14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	03/12/15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	09/15/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix C
Table 2
Historical Groundwater Monitoring Data and Analytical Results
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

		1,1-Dichloropropene (µg/L)	cis-1,3-Dichloropropene (µg/L)	trans-1,3-Dichloropropene (µg/L)	Hexachlorobutadiene (µg/L)	2-Hexanone (µg/L)	4-Methyl- 2-pentanone (µg/L)	Methylene Chloride (µg/L)	Styrene (µg/L)	1,1,2,2-Tetrachloroethane (µg/L)	Tetrachloroethene (µg/L)	1,1,2-Trichloroethane (µg/L)	Trichloroethene (µg/L)	Trichlorofluoromethane (µg/L)	1,2,3-Trichloropropane (µg/L)	Vinyl Chloride (µg/L)
	RBC (µg/L)	--	--	--	--	--	--	--	170,000	--	5,600	49	430	160,000	--	960
Proposed Screening Levels	SLV (µg/L)	--	--	--	9.3	99	170	2,200	--	2,400	--	9,400	--	--	--	--
Well ID	**Date**															
MW-16	03/11/16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-17	06/28/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-17	06/28/05 (D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-17	09/27/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-17	12/20/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-17	03/21/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-17	06/22/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-17	09/21/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-17	12/19/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-17	02/27/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-17	06/14/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-17	09/25/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-17	12/13/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-17	03/06/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-17	06/04/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-17	09/11/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-17	09/11/08 (D)	<1	<1	<1	<2	<3	<3	<2	<1	<0.8	<1	<1	<0.8	<2	<1	<1
MW-17	12/10/08	<1	<1	<1	<2	<3	<3	<2	<1	<0.8	<1	<1	<0.8	<2	<1	<1
MW-17	12/10/08 (D)	<1	<1	<1	<2	<3	<3	<2	<1	<0.8	<1	<1	<0.8	<2	<1	<1
MW-17	03/12/09	<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-17	06/09-11/09	<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-17	06/09-11/09 (D)	<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-17	09/09-11/09	<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-17	09/09-11/09 (D)	<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-17	12/07-09/09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-17	03/09-11/10[6]	<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-17	06/09-11/10	<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-17	09/09/10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	06/28/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	09/27/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	12/21/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	03/21/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	06/22/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	09/20/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	12/19/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	02/27/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	06/14/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	09/25/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	12/13/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	03/06/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	06/04/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	09/11/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	12/10/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	03/11/09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	06/09-11/09[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	09/09-11/09[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	12/07-09/09[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	03/09-11/10[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	06/09-11/10[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	09/09/10[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	03/08/11[5]	<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-18	09/15/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	03/11/16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	09/09/16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	03/15/17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	09/09/17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	03/14/18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	09/06/18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	3/13/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix C
Table 2
Historical Groundwater Monitoring Data and Analytical Results
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

			1,1-Dichloropropene (µg/L)	cis-1,3-Dichloropropene (µg/L)	trans-1,3-Dichloropropene (µg/L)	Hexachlorobutadiene (µg/L)	2-Hexanone (µg/L)	4-Methyl- 2-pentanone (µg/L)	Methylene Chloride (µg/L)	Styrene (µg/L)	1,1,2,2-Tetrachloroethane (µg/L)	Tetrachloroethene (µg/L)	1,1,2-Trichloroethane (µg/L)	Trichloroethene (µg/L)	Trichlorofluoromethane (µg/L)	1,2,3-Trichloropropane (µg/L)	Vinyl Chloride (µg/L)
		RBC (µg/L)	--	--	--	--	--	--	--	170,000	--	5,600	49	430	160,000	--	960
Proposed Screening Levels		SLV (µg/L)	--	--	--	9.3	99	170	2,200	--	2,400	--	9,400	--	--	--	--
Well ID	**Date**																
MW-19	06/21/07		<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-19	09/24/07		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	12/13/07		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	03/06/08		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	06/06/08		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	06/04/08	(D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	09/11/08		<1	<1	<1	<2	<3	<3	<2	<1	<0.8	<1	<1	<0.8	<2	<1	<1
MW-19	12/10/08		<1	<1	<1	<2	<3	<3	<2	<1	<0.8	<1	<1	<0.8	<2	<1	<1
MW-19	03/12/09		<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-19	06/09-11/09		<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-19	09/09-11/09		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	12/07-09/09[6]		<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-19	03/09-11/10		<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-19	06/09-11/10		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	09/09/10[5]		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	03/09/11		<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-19	09/14/11		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	03/08/12		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	09/12/12		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	03/12/15		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	03/12/15	(D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	03/11/16		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	09/09/16		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	03/15/17		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	09/09/17		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	03/14/18		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	09/06/18		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-19	3/13/2019		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	06/21/07		<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-20	09/24/07		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	12/13/07		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	03/06/08		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	06/04/08		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	09/11/08		<1	<1	<1	<2	<3	<3	<2	<1	<0.8	<1	<1	<0.8	<2	<1	<1
MW-20	12/10/08		<1	<1	<1	<2	<3	<3	<2	<1	<0.8	<1	<1	<0.8	<2	<1	<1
MW-20	03/12/09		<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-20	06/09-11/09[2]		<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-20	09/09-11/09[2]		<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-20	12/07-09/09[2]		<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-20	03/09-11/10[2]		<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-20	06/09-11/10[2]		<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-20	09/09/10[2]		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	03/09/11[2]		<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-20	09/14/11[2]		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	3/7/2012[2]		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	09/12/12[2]		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	09/12/12[2]	(D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	03/14/13[2]		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	09/12/13[2]		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	09/12/13[2]	(D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	02/14/14		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	09/18/14		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	03/12/15		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	09/15/2015		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	03/11/16		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	09/09/16		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	03/15/17		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	09/09/17		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	03/14/18		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix C
Table 2
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Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

		1,1-Dichloropropene (µg/L)	cis-1,3-Dichloropropene (µg/L)	trans-1,3-Dichloropropene (µg/L)	Hexachlorobutadiene (µg/L)	2-Hexanone (µg/L)	4-Methyl- 2-pentanone (µg/L)	Methylene Chloride (µg/L)	Styrene (µg/L)	1,1,2,2-Tetrachloroethane (µg/L)	Tetrachloroethene (µg/L)	1,1,2-Trichloroethane (µg/L)	Trichloroethene (µg/L)	Trichlorofluoromethane (µg/L)	1,2,3-Trichloropropane (µg/L)	Vinyl Chloride (µg/L)
	RBC (µg/L)	--	--	--	--	--	--	--	170,000	--	5,600	49	430	160,000	--	960
Proposed Screening Levels	SLV (µg/L)	--	--	--	9.3	99	170	2,200	--	2,400	--	9,400	--	--	--	--
Well ID	**Date**															
MW-20	09/06/18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	3/13/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-21	06/21/07	<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-21	09/24/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-21	12/13/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-21	03/06/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-21	06/04/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-21	09/11/08	<1	<1	<1	<2	<3	<3	<2	<1	<0.8	<1	<1	<0.8	<2	<1	<1
MW-21	12/10/08	<1	<1	<1	<2	<3	<3	<2	<1	<0.8	<1	<1	<0.8	<2	<1	<1
MW-21	03/12/09	<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-21	06/09-11/09	<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-21	09/09-11/09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-21	12/07-09/09[6]	<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-21	03/09-11/10	<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-21	06/09-11/10	<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-21	09/09/10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	06/20/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	09/24/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	12/13/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	03/06/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	06/04/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	09/11/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	12/10/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	03/12/09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	06/09-11/09[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	09/09-11/09[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	12/07-09/09[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	03/09-11/10[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	06/09-11/10[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	09/09/10[5]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	03/08/10[5]	<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-22	03/12/15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	09/15/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	03/11/16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	09/09/16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	09/09/16 (D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	03/15/17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	03/15/17 (D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	09/09/17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	03/14/18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	09/07/18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	3/13/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	3/13/2019 (D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-23	06/20/07	<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-23	09/24/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-23	12/13/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-23	03/05/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-23	06/03/08	<1	<1	<1	<2	<3	<3	<2	<1	<0.8	<1	<1	<0.8	<2	<1	<1
MW-23	09/11/08	<1	<1	<1	<2	<3	<3	<2	<1	<0.8	<1	<1	<0.8	<2	<1	<1
MW-23	12/10/08	<1	<1	<1	<2	<3	<3	<2	<1	<0.8	<1	<1	<0.8	<2	<1	<1
MW-23	03/12/09	<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-23	06/09-11/09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-23	09/09-11/09[5]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-23	12/07-09/09[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-23	03/09-11/10[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-23	06/09-11/10[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-23	09/09/10[5]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-23	03/08/10[5]	<2	<2	<2	<4	<6	<6	4	<2	<2	<2	<2	<2	<4	<2	<2

Appendix C
Table 2
Historical Groundwater Monitoring Data and Analytical Results
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

		1,1-Dichloropropene (µg/L)	cis-1,3-Dichloropropene (µg/L)	trans-1,3-Dichloropropene (µg/L)	Hexachlorobutadiene (µg/L)	2-Hexanone (µg/L)	4-Methyl- 2-pentanone (µg/L)	Methylene Chloride (µg/L)	Styrene (µg/L)	1,1,2,2-Tetrachloroethane (µg/L)	Tetrachloroethene (µg/L)	1,1,2-Trichloroethane (µg/L)	Trichloroethene (µg/L)	Trichlorofluoromethane (µg/L)	1,2,3-Trichloropropane (µg/L)	Vinyl Chloride (µg/L)
	RBC (µg/L)	--	--	--	--	--	--	--	170,000	--	5,600	49	430	160,000	--	960
Proposed Screening Levels	SLV (µg/L)	--	--	--	9.3	99	170	2,200	--	2,400	--	9,400	--	--	--	--
Well ID	Date															
MW-24	06/20/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	09/24/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	12/13/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	03/05/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	06/03/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	09/11/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	12/10/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	03/12/09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	06/09-11/09[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	09/09-11/09[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	12/07-09/09[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	03/09-11/10[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	06/09-11/10[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	09/09/10[5]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	03/08/10[5]	<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-24	09/15/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	09/09/16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	03/15/17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	09/09/17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	03/14/18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	09/06/18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	3/13/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	06/21/07	<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-25	06/21/07 (D)	<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-25	09/24/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	12/13/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	03/05/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	06/03/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	09/11/08	<1	<1	<1	<2	<3	<3	<2	<1	<0.8	<1	<1	<0.8	<2	<1	<1
MW-25	12/10/08	<1	<1	<1	<2	<3	<3	<2	<1	<0.8	<1	<1	<0.8	<2	<1	<1
MW-25	03/12/09	<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-25	06/09-11/09	<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-25	09/09-11/09	<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-25	12/07-09/09															
MW-25	03/09-11/10	<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-25	06/09-11/10	<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-25	09/09/10	<1	<1	<1	<2	<3	<3	<2	<1	<1	<0.8	<0.8	<1	<2	<1	<1
MW-25	03/09/11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	09/14/11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	09/14/11 (D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	03/08/12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	09/12/12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	03/14/13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	09/12/13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	02/14/14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	02/14/14 (D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	09/18/14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	09/18/14 (D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	3/12/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	09/15/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	09/15/2015 (D)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	03/11/16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	09/09/16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix C
Table 2
Groundwater Monitoring Data and Analytical Results
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

EXPLANATIONS:

(µg/L) = Micrograms per liter
-- = Not Measured/Not Analyzed
VOC = Volatile Organic Compounds
(D) = Duplicate
>S = RBC exceeds solubility limit
RBC = Risk Based Concentration for construction and excavation workers exposed to groundwater in an open excavation, which are provided in Appendix A to the Oregon Department of Environmental Quality document titled "Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites" (DEQ, September 22, 2003, last updated May 2018).
SLV = Screening Level Values for a Level II Screening Ecological Risk Assessment for aquatic receptors in fresh water, which are provided in Table 1 of the Oregon Department of Environmental Quality document titled "Guidance for Ecological Risk Assessment: Levels I, II, III, and IV" (DEQ, April 1998, last updated December 2001).

ANALYTICAL METHOD:

VOCs by EPA Method 8260B
Results are presented in µg/L

Additional VOCs are not detected unless noted otherwise.

[1] Monitoring wells MW-6 and MW-12 were previously designated W-6 and W-12, respectively.
[2] Matrix spike and duplicate matrix spike samples were collected from this well. Please refer to lab sheets for results.
[3] Not sampled per Arcadis due to high levels of Methane Gas.
[4] Not sampled due to the presence of SPH.
[5] Not sampled due to the presence of sheen.
[6] Well inaccessible.

Starting 1Q 2011, wells MW-14, MW-17, MW-21 and MW-23 were removed from monitoring.
Sampling did not take place on 03/08/11 (1st Quarter)
Starting 3Q 2016, well MW-6 was removed from monitoring

Appendix C
Table 3
Historical Groundwater Monitoring Data and Analytical Results
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

			Acenaphthene	Acenaphthylene	Anthracene	Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo (g,h,i) perylene	Benzo(k) fluoranthene	Chrysene	Dibenz(a,h)a nthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene
			(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
Proposed Screening Levels	**RBC (µg/L)**		>S	--	>S	>S	>S	>S	--	>S	>S	>S	>S	>S	>S	500	--	>S
	SLV (µg/L)		520	--	13	0.027	0.014	--	--	--	--	--	6.16	3.9	--	620	6.3	--
Well ID	**Date**																	
DM-4	08/26/04		18.7	<0.750	3.53	0.717	<0.500	<0.500	<0.500	<0.500	0.652	<1.00	2.84	13.9	<0.500	10.4	15.5	3.56
DM-4	11/09/04		22.4	<0.971	4.29	<0.971	<0.971	<0.971	<0.971	<0.971	<0.971	<1.94	3.33	16.4	<0.971	20.6	18.8	3.64
DM-4	02/02/05*		16.2	<0.750	2.81	0.792	<0.500	<0.500	<0.500	<0.500	0.776	<1.00	2.52	12.3	<0.500	10.3	12.2	3.52
DM-4	02/02/05**		16.7	<0.100	3.20	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	1.6	12.4	<0.100	17.0	12.0	2.1
DM-4	02/02/05*	(D)	18.0	<0.750	3.42	0.657	<0.500	<0.500	<0.500	<0.500	0.646	<1.00	2.7	13.2	<0.500	12.4	14.0	3.37
DM-4	02/02/05**	(D)	19.5	<1.00	3.44	0.565	<0.100	<0.100	<0.100	<0.100	0.59	<1.00	2.16	14.6	<0.500	17.2	14.3	2.9
DM-4	06/28/05		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	09/27/05		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	12/20/05		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	03/21/06		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-4	06/23/06		29	1.0	4.4	4.3	3.0	2.6	2.1	1.0	4.6	0.59	7.3	7.3	1.7	4.7	9.6	10
DM-4	09/21/06		9.5	0.81	2.3	1.4	0.87	0.73	0.38	0.31	1.3	0.11	3.7	7.3	0.31	2.5	5.1	5.3
DM-4	12/20/06		22	0.89	3.8	1.2	0.86	0.74	0.36	0.32	1.1	0.12	4.3	16	0.31	12	15	5.4
DM-4	02/27/07		0.92	20	4.6	2.6	1.5	1.2	0.62	0.59	2.5	0.2	7.5	14	0.52	10	14	8.3
DM-4	06/14/07		13	0.76	2.3	0.91	0.63	0.54	0.25	0.28	0.93	0.088	3.2	9.5	0.23	5.7	7.3	3.8
DM-4	09/25/07		24	2	5.7	3.9	4.6	4	2.9	1.5	4.6	0.84	8.6	16	2.4	5.8	14	13
DM-4	12/13/07		NOT SAMPLED DUE TO THE PRESENCE OF SHEEN															
DM-4	03/06/08		29	<0.0096	4.8	1.1	0.94	0.92	0.47	0.38	1.1	0.14	4.5	19	0.4	13	14	5
DM-4	06/03/08		16	<0.0099	4.2	2.4	1.9	2.1	0.55	0.84	2.6	0.22	7.1	12	0.61	8	6.8	6.5
DM-4	09/11/08		0.22	1.3	0.13	0.36	0.16	0.12	0.066	0.056	0.49	0.018	1	0.41	0.043	0.42	0.11	3.6
DM-4	12/11/08		11	0.57	1.1	0.88	0.48	0.44	0.19	0.18	0.92	<0.10	3.2	7.2	0.16	3.3	0.91	4.4
DM-4	03/11/09																	
DM-4	06/09-11/09[3]																	
DM-4	09/09-11/09[3]																	
DM-4	12/07-09/09[3]																	
DM-4	03/09-11/10[3]																	
DM-4	06/09-11/10[3]																	
DM-4	09/09/10[3]		NOT MONITORED/SAMPLED DUE TO HIGH LEVELS OF METHANE GAS															
DM-4	03/08/11[3]																	
DM-4	09/14/11[3]																	
DM-4	03/08/12[3]																	
DM-4	09/11/12[3]																	
DM-4	03/13/13[3]																	
DM-4	09/13/13		10	0.69	17.1	0.63	0.31	0.26	0.095	0.11	0.64	0.033	1.4	5.1	0.11	1.8	0.38	3.7
DM-4			WELL ABANDONED NOVEMBER 2013															
DM-5	08/26/04		<0.500	<0.500	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<0.500	<0.100	<0.150	<0.100	<0.100
DM-5	11/09/04		<0.485	<0.485	<0.485	<0.485	<0.485	<0.485	<0.485	<0.485	<0.485	<0.971	<0.485	<0.485	<0.485	<0.485	<0.485	<0.485
DM-5	02/02/05*		<0.150	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<0.500	<0.100	<0.150	<0.100	<0.100
DM-5	02/02/05**		<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<0.500	<0.100	<0.150	<0.100	<0.100
DM-5	06/28/05		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	09/27/05		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	12/20/05		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	03/21/06		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DM-5	06/23/06		0.52	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.1	<0.2	<0.2	0.26	0.43	<0.2	4.6	0.55	0.48
DM-5	09/21/06		0.048	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.02	<0.04	<0.04	<0.02	0.079	<0.02	0.033	0.083	<0.04
DM-5	12/19/06		0.072	<0.02	0.056	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	0.021	0.13	<0.02	0.083	0.074	<0.02
DM-5	02/27/07		<0.02	0.072	<0.04	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	0.021	0.13	<0.02	<1	0.049	<0.02
DM-5	06/14/07		0.073	<0.013	0.029	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	0.021	0.12	<0.013	0.16	0.061	<0.013
DM-5	09/25/07		0.082	<0.010	0.031	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.026	0.16	<0.010	0.15	0.082	0.016
DM-5	12/13/07																	
DM-5	03/05/08		NOT SAMPLED DUE TO THE PRESENCE OF SHEEN															
DM-5	06/03/08																	
DM-5	09/11/08																	

Appendix C
Table 3
Historical Groundwater Monitoring Data and Analytical Results
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

			Acenaphthene	Acenaphthylene	Anthracene	Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo (g,h,i) perylene	Benzo(k) fluoranthene	Chrysene	Dibenz(a,h)a nthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene
			(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
Proposed Screening Levels		**RBC (µg/L)**	>S	--	>S	>S	>S	>S	--	>S	>S	>S	>S	>S	>S	500	--	>S
		SLV (µg/L)	520	--	13	0.027	0.014	--	--	--	--	--	6.16	3.9	--	620	6.3	--
Well ID	**Date**																	
DM-5	12/11/08																	
DM-5	03/11/09																	
DM-5	06/09-11/09[3]																	
DM-5	09/09-11/09[3]																	
DM-5	12/07-09/09[3]																	
DM-5	03/09-11/10[3]																	
DM-5	06/09-11/10[3]		NOT MONITORED/SAMPLED DUE TO HIGH LEVELS OF METHANE GAS															
DM-5	09/09/10[3]																	
DM-5	03/08/11[3]																	
DM-5	09/14/11[3]																	
DM-5	03/08/12[3]																	
DM-5	09/11/12[3]																	
DM-5	03/13/13[3]																	
DM-5	09/13/13		0.16	<0.10	25.4	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.24	<0.10	2.3	<0.31	<0.10
DM-5			WELL ABANDONED NOVEMBER 2013															
MW-3B	06/28/05**		0.658	<0.150	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	1.32	<0.100	<0.0500	0.866	<0.100
MW-3B	06/28/05**	(D)	0.778	<0.150	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	1.77	<0.100	<0.400	0.760	<0.100
MW-3B	09/27/05		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3B	12/21/05		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3B	03/21/06																	
MW-3B	06/22/06		NOT SAMPLED DUE TO THE PRESENCE OF SPH															
MW-3B	09/20/06																	
MW-3B	12/19/06																	
MW-3B	02/27/07																	
MW-3B	06/21/07																	
MW-3B	09/24/07																	
MW-3B	12/13/07																	
MW-3B	03/05/08																	
MW-3B	06/03/08																	
MW-3B	09/11/08																	
MW-3B	12/11/08																	
MW-3B	03/11/09																	
MW-3B	06/09-11/09		NOT SAMPLED DUE TO THE PRESENCE OF SHEEN															
MW-3B	09/09-11/09																	
MW-3B	12/07-09/09																	
MW-3B	03/09-11/10																	
MW-3B	06/09-11/10																	
MW-3B	09/09/10																	
MW-3B	03/08/11																	
MW-3B	09/14/11																	
MW-3B	03/08/12																	
MW-3B	09/11/12																	
MW-3B	03/13/13		NOT SAMPLED DUE TO HIGH LEVELS OF METHANE GAS															
MW-3B	09/11/13																	
MW-3B	02/14/14																	
MW-3B	09/18/14																	
MW-3B	03/12/15																	
MW-3B	09/09/16																	
MW-3B	03/15/17		NOT SAMPLED DUE TO PRESENCE OF SPH															
MW-3B	09/09/17[4]																	
MW-3B	3/14/18[4]																	
MW-3B	09/06/18																	
MW-3B	3/13/2019																	

Appendix C
Table 3
Historical Groundwater Monitoring Data and Analytical Results
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

		Acenaphthene	Acenaphthylene	Anthracene	Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo (g,h,i) perylene	Benzo(k) fluoranthene	Chrysene	Dibenz(a,h)a nthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
Proposed Screening Levels	**RBC (µg/L)**	>S	--	>S	>S	>S	>S	--	>S	>S	>S	>S	>S	>S	500	--	>S
	SLV (µg/L)	520	--	13	0.027	0.014	--	--	--	--	--	6.16	3.9	--	620	6.3	--
Well ID	**Date**																
MW-4B	06/28/05**	0.229	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	0.141	<0.200	<0.100	0.749	<0.100	<0.450	0.643	<0.100
MW-4B	09/27/05	0.208	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943	<0.189	<0.0943	0.604	<0.0943	<0.613	0.322	<0.0943
MW-4B	12/21/05	0.138	<0.0952	<0.0952	<0.0952	<0.0952	<0.0952	<0.0952	<0.0952	<0.0952	<0.0952	<0.0952	0.503	<0.0952	<0.0952	0.269	<0.0952
MW-4B	03/21/06	0.114	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.198	<0.0990	0.372	<0.0990	<0.149	<0.0990	<0.0990
MW-4B	03/21/06 (D)	<0.556	<0.556	<0.556	<0.556	<0.556	<0.556	<0.556	<0.556	<0.556	<1.11	<0.556	<0.556	<0.556	<0.556	<0.556	<0.556
MW-4B	06/22/06	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.01	0.011	<0.02	<0.01	<0.01	<0.02
MW-4B	06/22/06 (D)	0.17	<0.02	0.26	0.059	<0.02	0.026	<0.02	<0.01	0.17	<0.02	0.085	0.50	<0.02	0.071	0.11	0.057
MW-4B	09/20/06	0.13	<0.02	<0.02	0.041	0.031	0.023	<0.02	<0.01	0.026	<0.02	<0.01	0.18	<0.02	0.041	<0.01	0.086
MW-4B	09/20/06 (D)	0.13	<0.02	0.021	<0.02	<0.02	0.021	<0.02	<0.01	0.072	<0.02	0.02	0.19	<0.02	0.028	0.021	0.077
MW-4B	12/19/06	0.079	<0.02	0.1	<0.02	<0.02	<0.02	<0.02	<0.01	0.059	<0.02	0.028	0.14	<0.02	<0.01	0.045	0.11
MW-4B	12/19/06 (D)	0.072	<0.02	0.095	<0.02	<0.02	<0.02	<0.02	0.018	0.12	<0.02	0.028	0.13	<0.02	<0.01	0.044	0.12
MW-4B	02/27/07	<0.02	0.13	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	0.029	<0.02	0.017	0.21	<0.02	<1	0.017	0.043
MW-4B	02/27/07 (D)	<0.02	0.14	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	0.027	<0.02	0.024	0.25	<0.02	<1	0.023	0.059
MW-4B	06/14/07	0.14	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	0.016	<0.011	0.013	0.21	<0.011	<0.011	0.015	0.028
MW-4B	06/14/07 (D)	0.13	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	0.02	<0.012	0.019	0.22	<0.012	<0.012	0.018	0.033
MW-4B	09/25/07	0.18	<0.011	<0.011	<0.011	<0.011	0.02	<0.011	<0.011	0.025	<0.011	0.023	0.099	<0.011	0.035	0.018	0.04
MW-4B	09/25/07 (D)	0.19	0.01	0.011	<0.010	<0.010	0.018	<0.010	<0.010	0.023	<0.010	0.02	0.11	<0.010	0.073	0.017	0.038
MW-4B	12/13/07	NOT SAMPLED DUE TO PRESENCE OF SPH															
MW-4B	03/05/08	0.32	0.14	0.081	0.018	0.026	0.031	0.056	0.01	0.018	0.011	0.086	0.09	0.033	0.14	0.023	0.12
MW-4B	03/05/08 (D)	0.17	0.01	0.16	0.022	0.043	0.024	0.017	0.01	0.059	0.01	0.052	0.26	0.01	0.01	0.074	0.12
MW-4B	06/03/08	0.1	<.0099	0.016	0.059	0.061	0.1	0.038	0.046	0.084	0.017	0.066	0.14	0.032	0.6	0.012	0.088
MW-4B	09/10/08	0.23	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.015	<0.010	<0.010	0.045	<0.010	<0.010	<0.010	0.017
MW-4B	12/11/08	0.11	0.023	<0.0098	0.024	0.023	0.029	0.013	0.014	0.071	<0.0098	0.05	0.057	<0.0098	0.017	<0.0098	0.054
MW-4B	03/11/09	0.095	<0.010	0.015	<0.010	0.016	0.026	<0.010	0.011	0.038	<0.010	0.023	0.11	<0.010	0.039	<0.010	0.038
MW-4B	06/09-11/09	0.14	<0.0099	0.20	0.038	0.033	0.11	0.021	<0.0099	0.19	0.015	0.095	0.16	<0.0099	0.14	<0.0099	0.18
MW-4B	09/09-11/09	0.27	0.046	0.18	0.035	0.034	0.035	0.021	0.015	0.084	0.017	0.042	0.66	0.017	0.20	0.12	0.15
MW-4B	12/07-09/09	0.42	0.060	0.56	0.10	0.062	0.11	0.053	<0.010	0.56	0.027	0.14	0.66	0.017	0.074	0.25	0.47
MW-4B	03/09-11/10	0.29	0.058	0.44	0.24	0.070	0.17	0.023	0.095	0.084	0.012	0.10	0.38	<0.0096	0.19	0.26	0.43
MW-4B	06/09-11/10	0.11	0.034	0.067	0.051	0.068	0.071	0.025	0.078	0.16	0.014	0.062	0.20	0.018	0.091	0.037	0.11
MW-4B	09/09/10[7]	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN															
MW-4B	03/10/11	0.045	0.020	0.17	0.025	0.024	0.090	0.034	<0.0095	0.082	0.014	0.087	0.083	0.012	0.15	<0.0095	0.12
MW-4B	09/14/11[4]	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN															
MW-4B	03/08/12	0.019	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.029	<0.029	<0.0097
MW-4B	09/12/12	0.74	0.19	1.4	0.21	0.22	0.17	0.11	0.19	0.81	<0.097	0.26	1.9	<0.097	1.2	0.79	0.89
MW-4B	03/13/13[7]	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN															
MW-4B	09/11/13[7]																
MW-4B	02/14/14	NOT SAMPLED DUE TO THE PRESENCE OF SPH															
MW-4B	09/18/14																
MW-4B	03/12/15	0.020	<0.010	0.015	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.028	<0.010	<0.030	<0.030	<0.010
MW-4B	09/15/15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4B	03/11/16	<0.010	<0.010	<0.010	0.016	<0.010	0.013	0.011	<0.010	0.033	<0.010	0.013	<0.010	<0.010	<0.031	<0.031	0.021
MW-4B	03/11/16 (D)	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	0.026	<0.011	0.012	<0.011	<0.011	<0.032	<0.032	0.016
MW-4B	9/9/2016	0.076	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.031	<0.031	0.014
MW-4B	03/15/17	NOT SAMPLED DUE TO THE PRESENCE OF SPH															
MW-4B	09/09/17	0.035	0.012	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.024	<0.010	0.018	<0.010	<0.010	0.14	<0.030	0.035
MW-4B	09/09/17 (D)	0.046	0.015	<0.010	<0.010	0.011	0.011	0.013	<0.010	0.039	<0.010	0.024	<0.010	<0.010	0.18	<0.030	0.042
MW-4B	03/14/18	0.02	0.02	<0.01	0.01	<0.01	0.03	0.04	<0.01	0.08	0.03	0.04	<0.01	0.03	<0.03	<0.03	0.04
MW-4B	09/06/18	0.09	0.04 J	0.09	0.04 J	0.03 J	0.03 J	0.03 J	<0.01	0.1	<0.02	0.04 J	0.03 J	0.02 J	0.3	<0.03	0.1
MW-4B	09/06/18 (D)	0.07	<0.01	<0.01	0.02 J	0.01 J	0.02 J	0.02 J	<0.01	0.09	<0.02	0.03 J	0.02 J	0.02 J	<0.03	<0.03	0.1
MW-4B	3/13/2019	0.01 J	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	0.02 J	<0.01	<0.03	<0.03	0.01 J
MW-6	08/26/04	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
MW-6	08/26/04 (D)	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
MW-6	11/09/04	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<1.00	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500

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		Acenaphthene	Acenaphthylene	Anthracene	Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo (g,h,i) perylene	Benzo(k) fluoranthene	Chrysene	Dibenz(a,h)a nthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
Proposed Screening Levels	**RBC (µg/L)**	>S	--	>S	>S	>S	>S	--	>S	>S	>S	>S	>S	>S	500	--	>S
	SLV (µg/L)	520	--	13	0.027	0.014	--	--	--	--	--	6.16	3.9	--	620	6.3	--
Well ID	**Date**																
MW-6	02/02/05	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
MW-6	06/28/05**	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
MW-6	09/27/05	0.316	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943	<0.189	<0.0943	0.450	<0.0943	<0.142	<0.0943	<0.0943
MW-6	12/21/05	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943	<0.189	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943
MW-6	12/21/05 (D)	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943	<0.189	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943
MW-6	03/21/06	<0.0962	<0.0962	<0.0962	<0.0962	<0.0962	<0.0962	<0.0962	<0.0962	<0.0962	<0.192	<0.0962	<0.0962	<0.0962	<0.0962	<0.0962	<0.0962
MW-6	06/22/06	<0.009	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.009	<0.02	<0.02	<0.009	<0.009	<0.02	<0.009	<0.009	<0.02
MW-6	09/20/06	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.01	<0.01	<0.02	<0.01	<0.01	<0.02
MW-6	12/19/06	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.01	<0.01	<0.02	<0.01	<0.01	<0.02
MW-6	02/27/07	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.01	<0.01	<0.02	<0.01	<0.01	<0.02
MW-6	06/14/07	NOT SAMPLED DUE TO INACCESIBILITY															
MW-6	09/25/07	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.02	<0.010	<0.010
MW-6	12/13/07	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	0.042	<0.011	<0.011
MW-6	03/05/08	<.0097	<.0097	<.0097	<.0097	<.0097	<.0097	<.0097	<.0097	<.0097	<.0097	<.0097	<.0097	<.0097	0.027	<.0097	<.0097
MW-6	06/03/08	0.04	<0.010	0.014	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.024	0.04	<0.010	150	0.034	0.014
MW-6	09/10/08	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	17	<0.0097	<0.0097
MW-6	12/11/08	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096
MW-6	03/12/09	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	0.76	<0.0099	<0.0099
MW-6	06/09-11/09	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	0.018	<0.0099	<0.0099
MW-6	09/09-11/09	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	0.014	<0.0096	0.011
MW-6	12/07-09/09	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.040	<0.010	<0.010
MW-6	03/09-11/10	<0.0095	<0.0095	<0.0095	<0.0095	0.010	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	0.013	<0.0095	<0.0095
MW-6	03/09-11/10 (D)	<0.0095	<0.0095	<0.0095	0.010	<0.0095	<0.0095	<0.0095	<0.0095	0.14	<0.0095	<0.0095	<0.0095	<0.0095	0.011	<0.0095	<0.0095
MW-6	06/09-11/10	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096
MW-6	09/09/10	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	0.019	<0.0098	0.010
MW-6	03/09/11	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.029	<0.0095	<0.0095
MW-6	09/14/11	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.028	<0.028	<0.0095
MW-6	03/08/12	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.029	<0.029	<0.0095
MW-6	09/11/12	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.029	<0.029	<0.0096
MW-6	03/14/13	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.030	<0.030	<0.010
MW-6	03/14/13 (D)	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	0.039	<0.029	<0.0096
MW-6	09/12/13	<0.010	<0.010	<6.8	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.030	<0.030	<0.010
MW-6	02/14/14	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.032	<0.032	<0.011
MW-6	09/18/14	--	<0.010	<0.010	<0.010	<0.010	0.012	0.013	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.031	<0.031	<0.010
MW-6	03/12/15																
MW-6	03/11/16	NOT SAMPLED DUE TO INACCESIBILITY															
MW-12	08/26/04	0.442	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	0.51	<0.100	<0.200	<0.100	<0.100
MW-12	11/09/04	<0.485	<0.485	<0.485	<0.485	<0.485	<0.485	<0.485	<0.485	<0.485	<0.971	<0.485	1.52	<0.485	<0.485	<0.485	<0.485
MW-12	02/02/05	0.657	<.100	<.100	<.100	<.100	<.100	<.100	<.100	<.100	<1.00	<1.00	0.593	<0.100	<0.450	<0.100	<0.100
MW-12	06/28/05	0.557	<.100	<.100	<.100	<.100	<.100	<.100	<.100	<.100	<1.00	<1.00	0.851	<0.100	<0.550	<0.100	<0.100
MW-12	07/27/05	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
MW-12	12/21/05	0.184	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943	<0.189	<0.0943	0.121	<0.0943	<0.0943	<0.0943	<0.0943
MW-12	03/21/06	0.508	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.198	<0.0990	0.635	<0.0990	<0.0990	<0.0990	<0.0990
MW-12	06/22/06	0.70	0.037	0.047	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	0.014	0.67	<0.02	0.12	0.012	0.028
MW-12	09/20/06	0.45	0.035	0.039	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.01	0.33	<0.02	0.092	<0.01	0.039
MW-12	12/19/06	0.64	0.047	0.045	<0.02	<0.02	<0.02	0.022	<0.01	<0.02	<0.02	0.024	0.51	<0.02	0.14	0.049	0.067
MW-12	02/27/07	0.045	0.33	0.041	<0.02	<0.02	0.04	0.033	<0.01	0.024	<0.02	0.05	0.27	0.02	<1	0.019	0.099
MW-12	06/14/07	1.1	0.078	0.41	0.011	0.019	0.028	0.024	<0.010	0.018	<0.010	0.037	0.93	0.019	0.16	0.016	0.056
MW-12	09/25/07	0.66	0.044	0.028	0.017	<0.017	<0.017	0.019	<0.017	<0.017	<0.017	0.038	0.53	<0.017	0.071	<0.017	0.042
MW-12	12/12/07	0.16	0.068	0.034	0.015	0.025	0.031	0.039	0.011	0.012	<0.010	0.046	0.060	0.027	0.061	0.034	0.082
MW-12	03/05/08	.17	<0.0098	0.23	0.032	0.030	0.041	0.025	<0.0098	0.09	<0.0098	0.086	.27	0.011	<0.0098	0.10	0.17
MW-12	06/03/08	0.030	0.031	0.016	<0.01	<0.01	0.011	<0.01	<0.01	<0.01	<0.01	0.013	<0.01	<0.01	0.07	0.011	0.019
MW-12	09/10/08	0.850	<0.011	<0.011	0.012	0.016	0.015	0.02	<0.011	0.017	<0.011	0.036	0.86	0.014	<0.011	<0.011	0.047
MW-12	12/11/08	0.990	0.058	0.056	<0.0094	0.012	0.01	0.013	<0.0094	0.013	<0.0094	0.051	0.89	<0.0094	0.05	<0.0094	0.044
MW-12	03/11/09	0.300	0.058	0.022	<0.0098	0.015	0.01	0.021	<0.0098	0.011	<0.0098	0.016	0.29	0.014	0.05	0.016	0.030

Appendix C
Table 3
Historical Groundwater Monitoring Data and Analytical Results
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

			Acenaphthene	Acenaphthylene	Anthracene	Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo (g,h,i) perylene	Benzo(k) fluoranthene	Chrysene	Dibenz(a,h)a nthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene
			(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
Proposed Screening Levels	**RBC (µg/L)**		>S	--	>S	>S	>S	>S	--	>S	>S	>S	>S	>S	>S	500	--	>S
	SLV (µg/L)		520	--	13	0.027	0.014	--	--	--	--	--	6.16	3.9	--	620	6.3	--
Well ID	**Date**																	
MW-12	06/09-11/09		0.95	0.029	0.098	0.063	0.077	0.12	0.11	0.040	0.076	0.021	0.21	0.70	0.083	0.26	<0.0099	0.21
MW-12	09/09-11/09		0.65	0.035	0.018	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	0.022	0.89	<0.0099	0.31	0.044	0.019
MW-12	12/07-09/09		1.2	0.16	0.22	0.042	0.057	0.070	0.084	0.023	0.055	0.015	0.11	1.7	0.056	0.39	0.091	0.22
MW-12	12/07-09/09	(D)	0.91	0.12	0.12	0.015	0.026	0.028	0.050	<0.010	0.023	<0.010	0.064	1.0	0.031	0.28	0.033	0.10
MW-12	03/09-11/10		1.2	0.062	0.090	0.014	0.026	0.029	0.044	0.011	0.029	<0.0095	0.073	1.6	0.025	0.43	0.061	0.14
MW-12	06/09-11/10		0.76	0.038	0.050	0.020	0.037	0.043	0.051	0.027	0.030	<0.0097	0.062	0.88	0.033	0.086	0.015	0.097
MW-12	09/09/10[7]		NOT SAMPLED DUE TO THE PRESENCE OF SHEEN															
MW-12	03/09/11		<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.029	<0.0096	<0.0096
MW-12	09/14/11		1.6	0.090	0.18	0.026	0.044	0.059	0.084	0.024	0.058	0.015	0.18	2.6	0.056	0.19	0.049	0.18
MW-12	3/8/2012[7]		NOT SAMPLED DUE TO THE PRESENCE OF SHEEN															
MW-12	09/12/12		0.67	0.018	0.039	<0.0096	<0.0096	<0.0096	0.012	<0.0096	<0.0096	<0.0096	0.017	1.1	<0.0096	0.36	<0.029	0.028
MW-12	03/13/13		NOT SAMPLED DUE TO THE PRESENCE OF SHEEN															
MW-12	09/12/13		10	0.69	49.0	0.011	0.012	0.014	0.020	<0.010	0.029	<0.010	0.040	0.94	0.023	<0.031	<0.031	0.065
MW-12	02/14/14		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.030	<0.030	<0.010
MW-12	09/18/14		0.6	<0.010	0.038	<0.010	<0.010	<0.010	0.022	<0.010	<0.010	<0.010	0.027	0.98	0.016	0.097	<0.031	0.048
MW-12	03/12/15		0.20	<0.011	0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	0.22	<0.011	<0.032	<0.032	<0.011
MW-12	09/15/2015		0.65	<0.010	0.035	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.92	<0.010	<0.030	0.12	0.013
MW-12	03/11/16		<0.010	<0.010	0.014	<0.010	<0.010	0.016	0.033	<0.010	0.013	<0.010	0.013	0.011	0.019	<0.030	<0.030	0.017
MW-12	09/09/16		0.43	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.4	<0.010	<0.030	<0.030	0.014
MW-12	03/15/17		<0.010	<0.010	0.021	0.022	0.027	0.026	0.048	<0.010	0.023	<0.010	0.025	0.02	0.025	<0.030	<0.030	0.024
MW-12	09/09/17		0.19	0.012	0.039	0.015	0.028	0.023	0.070	0.010	0.031	<0.010	0.046	0.84	0.043	<0.030	<0.030	0.065
MW-12	03/14/18		0.30	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.40	<0.01	<0.03	<0.03	<0.01
MW-12	03/14/18	(D)	0.40	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.50	<0.01	<0.03	<0.03	0.01
MW-12	09/06/18		0.20	0.02 J	0.1	<0.01	0.01 J	0.02 J	0.060	<0.01	0.03 J	<0.02	0.05	1.00	0.04 J	0.04 J	0.03 J	0.08
MW-12	3/13/2019		0.01 J	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.03	<0.03	<0.01
MW-14	06/28/05		<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
MW-14	09/27/05		<0.0952	<0.0952	<0.0952	<0.0952	<0.0952	<0.0952	<0.0952	<0.0952	<0.0952	<0.190	<0.0952	<0.0952	<0.0952	<0.0952	<0.0952	<0.0952
MW-14	12/20/05		<0.0952	<0.0952	<0.0952	<0.0952	<0.0952	<0.0952	<0.0952	<0.0952	<0.0952	<0.190	<0.0952	<0.0952	<0.0952	<0.0952	<0.0952	<0.0952
MW-14	03/21/06		<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.198	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990
MW-14	06/22/06		0.029	<0.02	0.029	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.01	0.082	<0.02	0.038	<0.01	<0.02
MW-14	09/21/06		0.038	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.01	0.047	<0.02	0.012	0.013	<0.02
MW-14	12/19/06		<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.01	0.059	<0.02	0.016	<0.01	<0.02
MW-14	02/27/07		0.023	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.01	0.084	<0.02	<1	0.013	<0.02
MW-14	06/14/07		<0.010	<0.010	0.014	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.028	<0.010	<0.010
MW-14	09/25/07		0.022	<0.0099	0.014	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	0.029	<0.0099	0.035	0.011	<0.0099
MW-14	12/13/07		0.035	<0.010	0.020	<0.010	0.018	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.069	<0.010	0.021	0.010	<0.010
MW-14	03/05/08		0.037	0.012	0.034	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	0.072	<0.0099	<0.0099	0.013	<0.0099
MW-14	06/04/08		<0.010	<0.010	0.016	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.011	<0.010	<0.010
MW-14	09/11/08		0.048	<0.010	0.016	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.054	<0.010	0.034	<0.010	<0.010
MW-14	12/10/08		<0.0099	<0.0099	0.012	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099
MW-14	03/12/09		.046	<0.0099	.017	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	.058	<0.0099	.015	<0.0099	<0.0099
MW-14	06/09-11/09		0.021	<0.0098	0.013	<0.0098	<0.0098	0.011	<0.0098	<0.0098	<0.0098	<0.0098	0.011	<0.0098	<0.0098	0.021	<0.0098	0.015
MW-14	09/09-11/09[5]		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
MW-14	12/07-09/09		0.015	<0.0096	0.027	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	0.025	<0.0096	0.016	<0.0096	<0.0096
MW-14	03/09-11/10		0.031	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	0.024	<0.0095	0.11	<0.0095	<0.0095
MW-14	06/09-11/10		0.041	<0.0096	0.016	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	0.010	<0.0096	0.015	<0.0096	<0.0096
MW-14	09/09/10		0.031	<0.0095	0.010	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	0.010	<0.0095	0.018	0.010	0.013
MW-14	09/09/10	(D)	0.036	<0.0099	0.012	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	0.020	<0.0099	0.013
MW-14	03/08/11		NO LONGER INCLUDED IN ROUTINE SAMPLING EVENTS															
MW-15	06/28/05**		<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
MW-15	09/27/05		<0.0952	<0.0952	<0.0952	<0.0952	<0.0952	<0.0952	<0.0952	<0.0952	<0.0952	<0.190	<0.0952	<0.0952	<0.0952	<0.0952	<0.0952	<0.0952
MW-15	12/20/05		<0.0943	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943	<0.189	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943
MW-15	03/21/06		<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100

Appendix C
Table 3
Historical Groundwater Monitoring Data and Analytical Results
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

			Acenaphthene	Acenaphthylene	Anthracene	Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo (g,h,i) perylene	Benzo(k) fluoranthene	Chrysene	Dibenz(a,h)a nthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene
			(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
Proposed Screening Levels	**RBC (µg/L)**		>S	--	>S	>S	>S	>S	--	>S	>S	>S	>S	>S	>S	500	--	>S
	SLV (µg/L)		520	--	13	0.027	0.014	--	--	--	--	--	6.16	3.9	--	620	6.3	--
Well ID	**Date**																	
MW-15	06/22/06		0.026	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.01	0.013	<0.02	<0.01	<0.01	<0.02
MW-15	09/21/06		0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.029	<0.02	<0.02	<0.01	<0.01	<0.02	<0.01	<0.01	<0.02
MW-15	12/19/06		0.023	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	0.012	0.011	<0.02	<0.01	<0.01	<0.02
MW-15	02/27/07		<0.02	0.028	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	0.014	<0.01	<0.02	<0.01	<0.01	<0.02
MW-15	06/14/07		0.021	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.012	<0.010	0.056	<0.010	<0.010
MW-15	09/25/07		0.017	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.026	<0.010	<0.010
MW-15	12/14/07		0.025	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	0.011	0.013	<0.0099	0.066	<0.0099	<0.0099
MW-15	12/14/07	(D)	0.024	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	<0.010	0.042	<0.010	<0.010
MW-15	03/05/08		0.024	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	0.011	<0.0096	<0.0096	<0.0096	<0.0096
MW-15	06/04/08		NOT SAMPLED DUE TO THE PRESENCE OF SHEEN															
MW-15	09/11/08		0.018	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	0.018	<0.0099	<0.0099
MW-15	12/11/08		0.025	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.023	<0.010	<0.010
MW-15	03/12/09																	
MW-15	06/09-11/09																	
MW-15	09/09-11/09																	
MW-15	12/07-09/09																	
MW-15	03/09-11/10																	
MW-15	06/09-11/10		NOT SAMPLED DUE TO THE PRESENCE OF SHEEN															
MW-15	09/09/10																	
MW-15	03/08/11																	
MW-15	09/14/11																	
MW-15	03/08/12																	
MW-15	03/09/12																	
MW-15	09/11/12																	
MW-15	03/13/13		NOT SAMPLED DUE TO HIGH LEVELS OF METHANE GAS															
MW-15	09/11/13																	
MW-15	02/14/14																	
MW-15	9/18/2014		NOT SAMPLED DUE TO THE PRESENCE OF SPH															
MW-15	03/12/15																	
MW-15	03/11/16		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.031	<0.031	<0.010
MW-15	09/09/16		<0.010	<0.010	<0.010	0.026	0.035	0.034	0.039	0.035	0.027	0.039	<0.010	<0.010	0.039	0.030	0.030	<0.010
MW-15	03/15/17		NOT SAMPLED DUE TO THE PRESENCE OF SPH															
MW-15	09/09/17		<0.010	<0.010	<0.010	0.015	0.015	0.024	0.026	0.020	0.017	0.018	0.017	<0.010	0.024	<0.030	<0.030	0.016
MW-15	03/14/18		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.03	<0.03	<0.01
MW-15	09/07/18		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	0.05 J	<0.03	0.01 J
MW-15	3/13/2019		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	0.01 J	<0.01	<0.03	<0.03	<0.01
MW-16	06/28/05		<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
MW-16	09/27/05		<0.0943	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943	<0.189	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943
MW-16	12/21/05		<0.0943	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943	<0.189	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943
MW-16	03/21/06		<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
MW-16	06/22/06		<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.01	<0.01	<0.02	<0.01	<0.01	<0.02
MW-16	09/20/06		<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.01	<0.01	<0.02	<0.01	<0.01	<0.02
MW-16	12/19/06		<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.01	<0.01	<0.02	<0.01	<0.01	<0.02
MW-16	02/27/07		<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.01	<0.01	<0.02	<0.01	<0.01	<0.02
MW-16	06/14/07		<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	0.021	<0.0095	<0.0095
MW-16	09/25/07		<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	0.017	<0.0099	0.01
MW-16	12/12/07		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MW-16	03/05/08		<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096
MW-16	06/03/08		<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	0.11	<0.11	310	0.11	<0.11
MW-16	09/10/08		<0.0096	<0.0096	0.012	0.017	<0.0096	<0.0096	<0.0096	<0.0096	0.017	<0.0096	<0.0096	<0.0096	<0.0096	0.74	0.018	0.039
MW-16	12/09/08		<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	0.19	0.013	0.013
MW-16	03/11/09		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.17	<0.010	<0.010
MW-16	06/09-11/09		<0.0099	<0.0099	<0.0099	0.011	<0.0099	<0.0099	0.011	<0.0099	0.010	<0.0099	<0.0099	<0.0099	<0.0099	7.9	<0.0099	0.028
MW-16	09/09-11/09		<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	21	<0.0098	0.021
MW-16	12/07-09/09		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	4.6	<0.010	<0.010

Appendix C
Table 3
Historical Groundwater Monitoring Data and Analytical Results
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

			Acenaphthene	Acenaphthylene	Anthracene	Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo (g,h,i) perylene	Benzo(k) fluoranthene	Chrysene	Dibenz(a,h)a nthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene
			(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
Proposed Screening Levels	**RBC (µg/L)**		>S	--	>S	>S	>S	>S	--	>S	>S	>S	>S	>S	>S	500	--	>S
	SLV (µg/L)		520	--	13	0.027	0.014	--	--	--	--	--	6.16	3.9	--	620	6.3	--
Well ID	**Date**																	
MW-16	03/09-11/10		<0.0095	<0.0095	<0.0095	0.011	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	16	<0.0095	<0.0095
MW-16	06/09-11/10		<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	0.023	<0.0099	<0.0099
MW-16	06/09-11/10	(D)	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098
MW-16	09/09/10		<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	0.023	<0.0097	<0.0097
MW-16	03/10/11		<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	0.011	0.020	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	0.049	<0.0095	<0.0095
MW-16	09/14/11		<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.029	<0.029	<0.0095
MW-16	03/08/12		<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.029	<0.029	<0.0096
MW-16	03/08/12	(D)	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.029	<0.029	<0.0096
MW-16	09/12/12		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.012	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.030	<0.030	0.014
MW-16	03/14/13		0.029	<0.0099	0.020	0.019	<0.0099	0.017	<0.0099	<0.0099	0.019	<0.0099	0.068	0.029	<0.0099	0.18	0.10	0.042
MW-16	09/12/13		0.16	<0.10	<6.8	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.031	<0.031	<0.10
MW-16	02/14/14		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.17	<0.030	<0.010
MW-16	09/18/14		<0.010	<0.010	<0.010	0.018	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.053	<0.030	<0.010
MW-16	03/12/15		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.031	<0.031	<0.010
MW-16	09/15/2015		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.031	<0.031	<0.010
MW-16	03/11/16		<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.032	<0.032	<0.011
MW-16	09/09/16		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.030	<0.030	<0.010
MW-16	03/15/17		NO LONGER INCLUDED IN ROUTINE SAMPLING EVENTS															
MW-17	06/28/05**		0.646	<0.200	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	0.847	<0.100	<0.800	0.220	<0.100
MW-17	06/28/05**	(D)	0.656	<0.150	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	0.890	<0.100	<0.900	0.268	<0.100
MW-17	09/27/05		0.522	<0.142	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943	<0.189	<0.0943	0.692	<0.0943	<1.27	<0.0943	<0.0943
MW-17	12/20/05		<0.0943	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943	<0.189	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943	<0.0943
MW-17	03/21/06		0.124	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	0.189	<0.100	<0.200	<0.100	<0.100
MW-17	06/22/06		0.21	<0.02	0.046	<0.02	<0.02	<0.02	<0.02	<0.009	<0.02	<0.02	<0.009	0.33	<0.02	0.23	0.018	<0.02
MW-17	09/21/06		0.32	<0.02	0.036	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.01	0.28	<0.02	0.27	0.021	<0.02
MW-17	12/19/06		<0.01	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.01	<0.01	<0.02	0.021	<0.01	<0.02
MW-17	02/27/07		<0.01	<0.02	0.041	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.01	<0.01	<0.02	<1	<0.01	<0.02
MW-17	06/14/07		<0.0096	<0.0096	0.02	<0.0096	0.01	0.013	0.015	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	0.026	0.01	0.022
MW-17	09/25/07		0.17	<0.010	0.039	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.12	<0.010	0.21	0.011	<0.010
MW-17	12/13/07		0.072	0.013	0.038	<0.010	0.015	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.12	<0.010	0.076	<0.010	<0.010
MW-17	03/05/08		0.21	<0.0098	0.046	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	0.25	<0.0098	0.38	0.023	<0.0098
MW-17	06/04/08		<0.0099	<0.0099	0.024	0.011	<0.0099	0.017	0.018	<0.0099	<0.0099	<0.0099	0.010	<0.0099	<0.0099	<0.0099	0.010	0.012
MW-17	09/11/08		0.084	0.015	0.035	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.15	<0.010	0.26	<0.010	<0.010
MW-17	09/11/08	(D)	0.060	0.017	0.042	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	0.086	<0.0099	0.076	<0.0099	<0.0099
MW-17	12/10/08		0.055	<0.030	0.032	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	0.012	0.11	<0.0095	<0.0095	0.018	0.012
MW-17	12/10/08	(D)	0.042	<0.010	0.024	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.012	0.065	<0.010	0.087	0.012	<0.010
MW-17	03/12/09		0.036	<0.0099	0.024	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	0.046	<0.0099	0.025	<0.0099	<0.0099
MW-17	06/09-11/09		0.13	<0.0098	0.022	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	0.21	<0.0098	0.25	<0.0098	<0.0098
MW-17	06/09-11/09	(D)	0.18	<0.0095	0.029	<0.0095	<0.0095	0.010	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	0.29	<0.0095	0.43	<0.0095	0.012
MW-17	09/09-11/09		0.062	<0.015[6]	0.027	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.15	<0.010	0.087	<0.010	<0.010
MW-17	09/09-11/09	(D)	0.084	<0.015[6]	0.023	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	0.19	<0.0098	0.36	<0.0098	<0.0098
MW-17	12/07-09/09		0.040	0.013	0.063	0.024	0.026	0.079	0.042	0.022	0.10	<0.0097	0.14	0.064	0.021	0.12	0.053	0.10
MW-17	03/09-11/10[8]		NOT SAMPLED DUE TO INACCESIBILITY															
MW-17	06/09-11/10		<0.0097	<0.0097	0.016	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	0.020	<0.0097	0.019	<0.0097	<0.0097
MW-17	09/09/10		0.15	<0.035	0.036	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	0.31	<0.0097	0.18	0.012	0.020
MW-17	09/09/16		NO LONGER INCLUDED IN ROUTINE SAMPLING EVENTS															
MW-18	06/28/05**		<0.400	<2.50	1.27	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	12.7	<0.100	<10.0	12.4	<0.100
MW-18	09/27/05		1.17	<0.472	<0.472	<0.472	<0.472	<0.472	<0.472	<0.472	<0.472	<0.943	<0.472	2.73	<0.472	<3.54	1.7	<0.472
MW-18	12/21/05		NOT SAMPLED DUE TO THE PRESENCE OF SHEEN															
MW-18	03/21/06		NOT SAMPLED DUE TO THE PRESENCE OF SPH															
MW-18	06/22/06		0.94	<0.02	0.68	0.067	0.026	<0.02	<0.02	<0.009	0.10	<0.02	0.061	2.3	<0.02	1.4	1.4	0.080

Appendix C
Table 3
Historical Groundwater Monitoring Data and Analytical Results
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

		Acenaphthene	Acenaphthylene	Anthracene	Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo (g,h,i) perylene	Benzo(k) fluoranthene	Chrysene	Dibenz(a,h)a nthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
Proposed Screening Levels	**RBC (µg/L)**	>S	--	>S	>S	>S	>S	--	>S	>S	>S	>S	>S	>S	500	--	>S
	SLV (µg/L)	520	--	13	0.027	0.014	--	--	--	--	--	6.16	3.9	--	620	6.3	--
Well ID	**Date**																
MW-18	09/20/06																
MW-18	12/19/06																
MW-18	02/27/07																
MW-18	06/21/07																
MW-18	09/25/07																
MW-18	12/13/07																
MW-18	03/05/08																
MW-18	06/04/08																
MW-18	09/11/08																
MW-18	12/10/08																
MW-18	03/11/09																
MW-18	06/09-11/09																
MW-18	09/09-11/09																
MW-18	12/07-09/09																
MW-18	03/09-11/10																
MW-18	06/09-11/10																
MW-18	09/09/10																
MW-18	03/08/11																
MW-18	09/14/11																
MW-18	03/08/12																
MW-18	09/11/12																
MW-18	03/13/13																
MW-18	09/11/13																
MW-18	02/14/14																
MW-18	09/18/14																
MW-18	03/12/15																
MW-18	09/15/2015		1	0.12	0.25	0.052	<0.010	0.022	<0.010	<0.010	0.16	<0.010	0.16	3.2	<0.010	<0.030	0.15	0.27
MW-18	03/11/16		0.82	0.15	0.085	<0.010	<0.010	<0.010	<0.010	<0.010	0.021	<0.010	0.019	2.0	<0.010	<0.030	0.23	0.025
MW-18	09/09/16																	
MW-18	03/15/17																	
MW-18	09/09/17																	
MW-18	03/14/18		0.9	0.06	0.10	0.04	0.02	0.02	<0.01	<0.01	0.10	<0.01	0.08	2.0	<0.01	<0.03	0.04	0.2
MW-18	09/07/18		1	<0.01	0.30	0.09	0.02 J	0.04 J	0.01 J	<0.01	0.30	<0.02	0.2	3.0	<0.01	0.6	0.06 J	0.5
MW-18	3/13/2019		2	0.5	0.8	0.1	0.04 J	0.08	0.03 J	0.01 J	0.3	0.02 J	0.3	7	<0.01	<0.03	0.3	0.5
MW-19	06/21/07		1.2	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	2.6	<0.10	<0.10	1.7	0.15
MW-19	09/24/07		0.36	0.051	0.037	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.017	0.36	<0.010	0.54	0.071	0.018
MW-19	12/13/07																	
MW-19	03/05/08		0.055	<0.0099	0.066	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	0.68	<0.0099	0.89	0.21	0.017
MW-19	06/04/08		0.3	<0.0099	0.032	<0.0099	0.018	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	0.49	<0.0099	<0.0099	0.082	<0.0099
MW-19	06/04/08	(D)	0.41	<0.010	0.034	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.61	<0.010	<0.010	0.1	<0.010
MW-19	09/11/08		0.52	0.10	0.040	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.68	<0.010	0.61	0.2	<0.010
MW-19	12/10/08		0.074	<0.030	0.023	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.32	<0.010	<0.010	0.032	<0.010
MW-19	03/12/09		0.24	<0.080	0.056	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.71	<0.010	<0.010	0.075	0.012
MW-19	06/09-11/09		0.34	<0.010	0.023	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.013	0.41	<0.010	0.90	0.096	0.027
MW-19	09/09-11/09		0.54	<0.15[6]	0.030	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	0.026	<0.0098	0.011	0.78	<0.0098	0.31	0.21	0.012
MW-19	12/07-09/09[8]																	
MW-19	03/09-11/10		0.42	0.050	0.031	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	0.96	<0.0096	0.76	0.028	<0.0096
MW-19	06/09-11/10		0.38	<0.070[6]	0.031	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	0.89	<0.0099	0.28	0.054	<0.0099
MW-19	09/09/10[7]																	
MW-19	03/09/11		0.14	0.013	0.050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.21	<0.010	0.21	0.015	<0.010
MW-19	09/14/11		0.87	0.15	0.046	0.014	<0.0096	0.025	<0.0096	<0.0096	0.043	<0.0096	0.034	1.2	<0.0096	1.0	0.34	0.072
MW-19	03/08/12		0.25	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	0.31	<0.0099	<0.030	<0.030	0.054
MW-19	09/12/12		0.70	0.10	0.086	<0.010	0.015	0.019	<0.010	<0.010	0.016	<0.010	0.019	0.88	<0.010	0.98	0.19	0.063
MW-19	3/13/13[8]																	

NOT SAMPLED DUE TO THE PRESENCE OF SHEEN

NOT SAMPLED DUE TO THE PRESENCE OF SPH

NOT SAMPLED DUE TO THE PRESENCE OF SPH

WELL GAUGED BUT NOT SAMPLED

NOT SAMPLED DUE TO INACCESIBILITY

NOT SAMPLED DUE TO INACCESIBILITY

NOT SAMPLED DUE TO THE PRESENCE OF SHEEN

UNABLE TO LOCATE

Appendix C
Table 3
Historical Groundwater Monitoring Data and Analytical Results
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

			Acenaphthene	Acenaphthylene	Anthracene	Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo (g,h,i) perylene	Benzo(k) fluoranthene	Chrysene	Dibenz(a,h)a nthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene
			(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
Proposed Screening Levels	**RBC (µg/L)**		>S	--	>S	>S	>S	>S	--	>S	>S	>S	>S	>S	>S	500	--	>S
	SLV (µg/L)		520	--	13	0.027	0.014	--	--	--	--	--	6.16	3.9	--	620	6.3	--
Well ID	**Date**																	
MW-19	09/11/13[7]		NOT SAMPLED DUE TO THE PRESENCE OF SHEEN															
MW-19	02/14/14		NOT SAMPLED DUE TO THE PRESENCE OF SPH															
MW-19	09/18/14		0.69	<0.010	0.034	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.8	<0.010	0.35	<0.031	0.012
MW-19	03/12/15		0.56	<0.010	0.031	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	1.0	<0.010	<0.031	<0.031	<0.010
MW-19	03/12/15	(D)	0.52	<0.010	0.020	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	1.1	<0.010	0.31	<0.031	<0.010
MW-19	03/11/16		<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.032	<0.032	<0.011
MW-19	09/09/16		0.35	<0.010	<0.010	<0.010	<0.010	0.015	0.012	<0.010	0.012	0.014	<0.010	0.28	0.015	<0.031	<0.031	0.012
MW-19	03/15/17		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.030	<0.030	<0.010
MW-19	09/09/17		0.028	0.020	0.022	<0.010	<0.010	<0.010	0.011	<0.010	<0.010	<0.010	0.032	0.031	<0.010	<0.030	<0.030	0.016
MW-19	03/14/18		<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.03	<0.03	<0.01
MW-19	09/06/18		0.03 J	<0.01	0.1	0.02 J	<0.01	0.01 J	0.03 J	<0.01	0.03 J	<0.02	0.05 J	0.1	<0.01	0.1	<0.03	0.04 J
MW-19	3/13/2019		0.01 J	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	0.08	<0.01	<0.03	<0.03	<0.01
MW-20	06/21/07		0.45	0.23	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.17	0.99	<0.10	0.22	1.1	0.33
MW-20	09/24/07		0.048	0.027	0.015	<0.010	<0.010	0.014	0.011	<0.010	<0.010	<0.010	0.026	0.067	<0.010	0.048	0.061	0.027
MW-20	12/13/07		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	03/05/08		0.022	<0.0098	0.057	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	0.045	<0.0098	0.051	0.011	<0.0098
MW-20	06/04/08		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-20	09/11/08		0.38	0.0095	0.038	0.0095	0.0095	0.0095	0.0095	0.0095	0.0095	0.0095	0.0095	0.92	0.0095	0.0095	0.13	0.0095
MW-20	12/10/08		0.056	<.020	0.053	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	.036	0.13	<0.010	<0.010	0.025	.026
MW-20	03/12/09		0.58	<0.090	0.031	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	1.1	<0.011	0.26	0.14	<0.011
MW-20	06/09-11/09[2]		0.19	<0.010	0.038	<0.010	<0.010	0.011	<0.010	<0.010	<0.010	<0.010	0.033	0.40	<0.010	0.39	0.12	0.031
MW-20	09/09-11/09[2]		0.21	<0.050[6]	0.042	0.016	<0.010	0.017	0.012	<0.010	0.019	<0.010	0.054	0.50	<0.10	0.48	0.12	0.050
MW-20	12/07-09/09[2]		0.11	<0.020[6]	0.047	0.012	<0.0098	0.017	0.011	<0.0098	<0.0098	<0.0098	0.033	0.23	<0.0098	0.25	0.037	0.029
MW-20	03/09-11/10[2]		0.34	0.026	0.032	0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.025	1.2	<0.010	0.58	0.11	0.026
MW-20	06/09-11/10		0.27	<0.025[6]	0.063	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	0.016	0.79	<0.0097	0.19	0.043	0.027
MW-20	09/09/10[2]		0.16	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.31	<0.10	0.013	<0.10	<0.10
MW-20	03/09/11[2]		0.10	0.019	0.031	0.12	0.17	0.22	0.16	0.18	0.13	0.15	0.041	0.36	0.17	0.19	0.028	0.047
MW-20	09/14/11[2]		0.09	0.011	0.012	<0.010	<0.010	0.013	0.012	<0.010	<0.010	<0.010	0.019	0.20	<0.010	0.055	<0.031	0.029
MW-20	03/07/12[2]		0.12	0.017	0.030	0.013	0.018	0.030	0.024	<0.0095	0.012	<0.0095	0.017	0.30	0.017	0.18	0.038	0.039
MW-20	09/12/12[2]		0.16	0.016	0.049	<0.0097	<0.0097	0.010	0.014	<0.0097	0.011	<0.0097	0.016	0.44	<0.0097	0.31	0.049	0.046
MW-20	09/12/12[2]	(D)	0.19	0.019	0.058	0.014	0.016	0.019	0.026	0.010	0.015	0.012	0.031	0.49	0.018	0.25	0.067	0.076
MW-20	03/14/13[2]		0.036	<0.010	0.022	<0.010	0.011	0.018	0.018	<0.010	<0.010	<0.010	<0.010	0.067	0.013	0.094	<0.030	0.022
MW-20	09/12/13[2]		10	0.69	18.4	<0.010	<0.010	<0.010	0.012	<0.010	<0.010	<0.010	<0.010	0.34	<0.010	<0.031	<0.031	0.021
MW-20	09/12/13[2]	(D)	0.15	<0.010	17.7	<0.010	0.016	0.020	0.021	<0.010	0.016	<0.010	<0.010	0.32	0.023	<0.031	<0.031	0.029
MW-20	02/14/14		0.19	0.014	0.012	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.37	<0.010	0.12	<0.030	<0.010
MW-20	09/18/14		0.26	<0.010	0.023	<0.010	<0.010	<0.010	0.016	<0.010	<0.010	<0.010	0.017	0.37	<0.010	0.078	0.038	0.036
MW-20	03/12/15		0.077	<0.010	0.015	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.16	<0.010	<0.030	<0.030	<0.010
MW-20	09/14/2015		0.31	<0.010	0.027	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.26	<0.010	<0.031	<0.031	0.013
MW-20	03/11/16		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.031	<0.031	<0.010
MW-20	09/09/16		0.19	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.048	<0.010	<0.030	<0.030	<0.010
MW-20	03/15/17		0.012	<0.010	<0.010	0.017	0.013	0.015	0.016	0.012	0.013	<0.010	0.012	0.017	0.013	0.038	<0.030	0.015
MW-20	09/09/17		0.12	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.12	<0.010	0.086	<0.030	0.015
MW-20	03/14/18		0.04	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.09	<0.01	<0.03	<0.03	<0.01
MW-20	09/06/18		0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	0.02 J	<0.01	0.5	<0.03	0.01 J
MW-20	3/13/2019		0.06	<0.01	<0.01	<0.01	<0.01	0.01 J	0.01 J	<0.01	<0.01	<0.02	<0.01	<0.01	0.01 J	<0.03	<0.03	0.01 J
MW-21	06/21/07		0.70	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.16	1.9	<0.10	0.25	2.1	0.27
MW-21	09/24/07		0.022	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.012	0.051	<0.010	0.033	0.032	0.015
MW-21	12/13/07		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-21	03/05/08		0.06	<0.0098	0.022	0.01	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	0.015	0.06	<0.0098	0.13	0.01	0.018
MW-21	06/04/08		0.019	<0.010	0.015	<0.010	<0.010	<0.010	<0.010	<0.010	0.012	<0.010	0.012	0.036	<0.010	<0.010	<0.010	0.016
MW-21	09/11/08		0.082	<0.0097	0.026	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	0.021	0.41	<0.0097	0.42	0.023	0.013

Appendix C
Table 3
Historical Groundwater Monitoring Data and Analytical Results
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

			Acenaphthene	Acenaphthylene	Anthracene	Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo (g,h,i) perylene	Benzo(k) fluoranthene	Chrysene	Dibenz(a,h)a nthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene
			(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
Proposed Screening Levels	**RBC (µg/L)**		>S	--	>S	>S	>S	>S	--	>S	>S	>S	>S	>S	>S	500	--	>S
	SLV (µg/L)		520	--	13	0.027	0.014	--	--	--	--	--	6.16	3.9	--	620	6.3	--
Well ID	**Date**																	
MW-21	12/10/08		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.013	<0.010	<0.010	<0.010	<0.010	0.015
MW-21	03/12/09		0.02	<0.010	0.021	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.02	0.024	<0.010	0.034	0.014	0.013
MW-21	06/09-11/09		<0.010	<0.010	0.017	<0.010	<0.010	0.012	<0.010	<0.010	<0.010	<0.010	0.018	<0.010	<0.010	<0.010	<0.010	0.014
MW-21	09/09-11/09[5]		0.29	<0.020	0.022	0.028	<0.020	<0.020	<0.020	<0.020	0.030	<0.020	<0.020	0.61	<0.020	0.24	<0.020	<0.020
MW-21	12/07-09/09[8]		NOT SAMPLED DUE TO INACCESIBILITY															
MW-21	03/09-11/10		0.11	<0.0099	0.014	0.023	0.025	0.045	0.023	0.016	0.024	<0.0099	0.031	0.16	0.018	0.32	<0.0099	0.046
MW-21	06/09-11/10		<0.0099	<0.0099	0.025	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099
MW-21	09/09/10		0.070	0.033	0.040	<0.010	<0.010	0.013	0.011	<0.010	<0.010	<0.010	0.023	0.053	<0.010	0.076	0.019	0.018
MW-21	09/09/16		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-21	03/15/17		NO LONGER INCLUDED IN ROUTINE SAMPLING EVENTS															
MW-22	06/20/07		2.6	<0.10	<0.10	0.13	<0.10	0.10	<0.10	<0.10	0.25	<0.10	0.76	5.9	<0.10	1.7	7.6	0.89
MW-22	09/24/07		NOT SAMPLED DUE TO THE PRESENCE OF SHEEN															
MW-22	12/13/2007		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	3/6/2008		NOT SAMPLED DUE TO THE PRESENCE OF SPH															
MW-22	6/4/2008																	
MW-22	9/11/2008																	
MW-22	12/10/2008																	
MW-22	3/12/2009																	
MW-22	06/09-11/09																	
MW-22	09/09-11/09																	
MW-22	12/07-09/09																	
MW-22	03/09-11/10																	
MW-22	06/09-11/10[3]		NOT SAMPLED DUE TO THE PRESENCE OF SHEEN															
MW-22	09/09/10[3]																	
MW-22	03/08/11[3]																	
MW-22	09/14/11[3]																	
MW-22	3/8/2012																	
MW-22	09/11/12[3]																	
MW-22	03/13/13[3]																	
MW-22	09/11/13[3]																	
MW-22	2/14/2014****																	
MW-22	9/18/2014		NOT SAMPLED DUE TO THE PRESENCE OF SPH															
MW-22	03/12/15		0.021	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.026	<0.010	<0.031	<0.031	0.021
MW-22	09/14/2015		0.031	<0.010	0.011	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.035	<0.010	<0.031	<0.031	0.018
MW-22	03/11/16		<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	0.087	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.032	<0.032	<0.011
MW-22	09/09/16		0.052	0.065	<0.010	<0.010	0.021	0.016	0.038	<0.010	<0.010	<0.010	<0.010	0.013	0.014	<0.031	<0.031	0.045
MW-22	09/09/16	(D)	0.041	0.072	<0.010	<0.010	0.022	0.018	0.042	<0.010	<0.010	<0.010	<0.010	0.011	0.015	<0.030	<0.030	0.055
MW-22	03/15/17		<0.10	1.0	0.53	0.38	0.50	0.39	1.0	0.16	0.52	0.11	0.91	0.31	0.33	1.5	0.90	1.0
MW-22	03/15/17	(D)	<0.10	0.45	0.26	0.32	0.39	0.35	0.65	0.13	0.34	<0.10	0.76	0.17	0.22	1.5	0.67	0.82
MW-22	09/09/17		<0.10	<0.10	<0.10	0.19	0.84	0.65	2.0	0.17	1.0	0.20	1.1	<0.10	0.66	<0.30	<0.30	2.2
MW-22	03/14/18		<0.1	1.0	<0.1	0.20	0.40	0.20	0.90	<0.1	0.40	<0.1	0.50	<0.1	0.40	<0.3	<0.3	0.60
MW-22	09/07/18		<0.05	1	1	0.2 J	0.3 J	0.2 J	0.6	0.05 J	0.4	<0.1	0.4	<0.05	0.2 J	<0.2	0.2 J	0.9
MW-22	3/13/2019		<0.01	0.06	<0.01	<0.01	<0.01	<0.01	0.04 J	<0.01	0.01 J	<0.02	<0.01	<0.01	0.01 J	<0.03	<0.03	0.02 J
MW-22	3/13/2019		<0.01	0.01 J	<0.01	<0.01	<0.01	<0.01	0.02 J	<0.01	<0.01	<0.02	<0.01	<0.01	0.01 J	<0.03	<0.03	<0.01
MW-23	06/20/07		0.27	<0.011	0.024	0.051	0.044	0.054	0.025	0.026	0.064	<0.011	0.12	0.70	0.023	0.63	0.39	0.11
MW-23	09/24/07		0.36	<0.012	0.1	0.14	0.12	0.15	0.072	0.057	0.17	0.024	0.27	0.91	0.063	2.3	0.8	0.29
MW-23	12/13/07		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-23	03/05/08		0.24	<0.010	0.078	0.033	0.027	0.034	0.019	0.014	0.035	<0.010	0.083	0.6	0.016	1.4	0.3	0.073
MW-23	06/06/08		0.1	<0.010	0.033	0.033	0.037	0.043	0.018	0.021	0.04	<0.010	0.098	0.44	0.015	<0.010	0.29	0.072
MW-23	09/11/08		0.19	<0.010	0.062	0.057	0.061	0.061	0.035	0.041	0.067	0.011	0.11	0.48	0.032	0.97	0.36	0.10
MW-23	12/10/08		0.13	0.034	0.054	0.05	0.052	0.038	0.022	0.049	0.059	<0.010	0.11	0.51	0.018	1.1	0.29	0.11
MW-23	03/12/09		0.16	<0.070	0.048	0.05	0.051	0.058	0.022	0.026	0.056	<0.010	0.13	0.42	0.021	0.32	0.29	0.097

Appendix C
Table 3
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Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

			Acenaphthene	Acenaphthylene	Anthracene	Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo (g,h,i) perylene	Benzo(k) fluoranthene	Chrysene	Dibenz(a,h)a nthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene
			(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
Proposed Screening Levels	**RBC (µg/L)**		>S	--	>S	>S	>S	>S	--	>S	>S	>S	>S	>S	>S	500	--	>S
	SLV (µg/L)		520	--	13	0.027	0.014	--	--	--	--	--	6.16	3.9	--	620	6.3	--
Well ID	**Date**																	
MW-23	06/09-11/09		0.19	<0.0095	0.045	0.030	0.020	0.030	<0.0095	0.012	0.036	<0.0095	0.091	0.38	<0.0095	1.6	0.34	0.076
MW-23	09/09-11/09																	
MW-23	12/07-09/09																	
MW-23	03/09-11/10							NOT SAMPLED DUE TO THE PRESENCE OF SHEEN										
MW-23	06/09-11/10																	
MW-23	09/09/10																	
MW-23	03/08/11							NO LONGER INCLUDED IN ROUTINE SAMPLING EVENTS										
MW-24	06/20/07		28	0.86	0.71	0.070	0.023	0.038	<0.0098	0.014	0.14	<0.0098	0.55	15	<0.0098	*690*	6.8	0.38
MW-24	9/24/2007		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	12/13/2007		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	3/6/2008																	
MW-24	6/3/2008							NOT SAMPLED DUE TO THE PRESENCE OF SPH										
MW-24	9/11/2008		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	12/11/2008		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	3/12/2009		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	06/09-11/09[3]																	
MW-24	09/09-11/09[3]																	
MW-24	12/07-09/09[3]																	
MW-24	03/09-11/10[3]																	
MW-24	06/09-11/10[3]																	
MW-24	09/09/10[3]							NOT SAMPLED DUE TO THE PRESENCE OF SPH										
MW-24	03/08/11[3]																	
MW-24	09/14/11[3]																	
MW-24	03/08/12[3]																	
MW-24	09/11/12[3]																	
MW-24	03/13/13[3]																	
MW-24	09/11/13[3]							NOT SAMPLED DUE TO THE PRESENCE OF SHEEN										
MW-24	2/14/2014****																	
MW-24	9/18/2014							NOT SAMPLED DUE TO THE PRESENCE OF SPH										
MW-24	3/12/2015																	
MW-24	09/14/2015		27	0.55	2.5	1.6	0.57	0.85	0.15	0.3	1.3	0.061	8.8	6.7	0.17	18	1.3	5.1
MW-24	09/09/16																	
MW-24	03/15/17							NOT SAMPLED DUE TO THE PRESENCE OF SPH										
MW-24	09/09/17		27	1.0	1.7	0.42	0.56	0.55	0.49	0.16	0.44	0.088	2.7	15	0.48	110	9.5	1.7
MW-24	03/14/18		4.0	0.1	0.1	0.04	0.08	0.07	0.08	0.02	0.04	0.01	0.2	1.0	0.09	0.20	0.20	0.10
MW-24	09/06/18								NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-24	3/13/2019		0.03 J	0.02 J	0.05 J	0.5	0.2	0.4	0.07	0.1	0.3	0.02 J	0.9	0.02 J	0.07	0.09	0.07 J	0.9
MW-25	06/21/07		0.22	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	0.45	<0.10	0.16	0.62	0.15
MW-25	06/21/07	(D)	0.19	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.38	<0.10	0.12	0.47	0.12
MW-25	09/24/07		0.018	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.014	0.025	<0.010	0.036	0.031	0.018
MW-25	12/13/07		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	03/05/08		<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	0.011	0.012	<0.0098	<0.0098	<0.0098	<0.0098
MW-25	06/03/08		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	09/11/08		0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.044	0.010	0.010
MW-25	12/10/08		<0.0099	<0.0099	0.028	0.016	0.017	0.024	<0.0099	0.013	0.017	<0.0099	0.047	0.016	<0.0099	0.011	0.013	0.028
MW-25	03/12/09		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.031	<0.010	0.019	0.012	<0.010
MW-25	06/09-11/09		<0.0099	<0.0099	0.020	0.035	0.033	0.056	0.028	0.022	0.042	<0.0099	0.12	<0.0099	0.025	0.069	0.037	0.060
MW-25	09/09-11/09		0.014	<0.010	<0.010	0.012	<0.010	0.013	<0.010	<0.010	0.010	<0.010	0.015	0.013	<0.010	0.084	<0.010	0.014
MW-25	12/07-09/09		0.027	0.020	0.028	0.013	<0.0095	0.010	0.011	<0.0095	<0.0095	<0.0095	0.027	0.036	<0.0095	0.13	0.013	0.016
MW-25	03/09-11/10		0.048	<0.0095	0.018	0.023	0.027	0.042	0.036	0.017	0.029	0.017	0.033	0.069	0.028	0.065	0.012	0.048
MW-25	06/09-11/10		<0.0095	<0.0095	0.035	0.029	0.038	0.062	0.036	0.025	0.040	0.010	0.028	0.018	0.027	0.052	0.011	0.047
MW-25	09/09/10		<0.0099	0.020	0.026	<0.0099	0.017	0.029	0.027	0.014	0.013	<0.0099	0.029	0.010	0.020	0.023	0.016	0.015

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		Acenaphthene	Acenaphthylene	Anthracene	Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo (g,h,i) perylene	Benzo(k) fluoranthene	Chrysene	Dibenz(a,h)a nthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
Proposed Screening Levels	**RBC (µg/L)**	>S	--	>S	>S	>S	>S	--	>S	>S	>S	>S	>S	>S	500	--	>S
	SLV (µg/L)	520	--	13	0.027	0.014	--	--	--	--	--	6.16	3.9	--	620	6.3	--
Well ID	**Date**																
MW-25	03/09/11	0.038	0.012	0.055	<0.0095	<0.0095	<0.0095	0.013	<0.0095	<0.0095	<0.0095	0.013	0.39	<0.0095	0.63	0.024	0.010
MW-25	03/09/11 (D)	0.038	0.012	0.048	<0.0095	<0.0095	<0.0095	0.012	<0.0095	<0.0095	<0.0095	0.012	0.39	<0.0095	0.63	0.027	0.011
MW-25	09/14/11	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	0.020	<0.0095	<0.029	<0.029	0.010
MW-25	09/14/11 (D)	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	0.018	<0.0095	<0.028	<0.028	<0.0095
MW-25	03/08/12	0.078	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	0.14	<0.0097	<0.029	<0.029	<0.0097
MW-25	09/12/12	<0.0096	<0.0096	0.011	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	0.012	<0.0096	0.052	<0.029	0.012
MW-25	03/14/13	0.017	<0.010	0.016	<0.010	0.017	0.037	0.020	0.017	0.015	<0.010	0.011	0.035	0.015	0.058	<0.030	0.018
MW-25	9/12/2013	0.16	<0.10	19.5	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	0.080	<0.011	<0.032	<0.032	<0.011
MW-25	02/14/14	0.13	0.021	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.29	<0.010	0.14	<0.030	<0.010
MW-25	02/14/14 (D)	0.32	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.81	<0.010	<0.030	<0.030	<0.010
MW-25	9/18/2014	0.074	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.15	<0.010	0.048	<0.031	<0.010
MW-25	9/18/2014 (D)	0.087	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.19	<0.010	0.053	<0.031	<0.010
MW-25	3/12/2015	0.057	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	0.14	<0.011	<0.032	<0.032	<0.011
MW-25	9/14/2015	0.018	<0.010	<0.010	<0.010	<0.010	0.014	0.016	<0.010	<0.010	0.011	0.02	0.047	0.014	<0.030	<0.030	0.023
MW-25	9/14/2015 (D)	0.011	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.033	<0.010	<0.030	<0.030	<0.010
MW-25	3/10/2016	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.016	0.011	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.031	< 0.031	0.016
MW-25	9/9/2016	0.044	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.088	<0.010	<0.030	<0.030	<0.010
MW-25	03/15/17	NO LONGER INCLUDED IN ROUTINE SAMPLING EVENTS															

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EXPLANATIONS:

(µg/L) = Micrograms per liter
-- = Not Measured/Not Analyzed
(D) = Duplicate
>S = RBC exceeds solubility limit
RBC = Risk Based Concentration for construction and excavation workers exposed to groundwater in an open excavation, which are provided in Appendix A to the Oregon Department of Environmental Quality document titled "Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites" (DEQ, September 22, 2003, last updated May 2018).
SLV = Screening Level Values for a Level II Screening Ecological Risk Assessment for aquatic receptors in fresh water, which are provided in Table 1 of the Oregon Department of Environmental Quality document titled "Guidance for Ecological Risk Assessment: Levels I, II, III, and IV" (DEQ, April 1998, last updated December 2001).

ANALYTICAL METHOD:

PAHs by EPA Method 8270C SIM
Results are presented in µg/L

* Low blank spike and surrogate recoveries. Sample was re-analyzed past hold time.
** Sample was extracted outside hold time.

[1] Monitoring wells MW-6 and MW-12 were previously designated W-6 and W-12, respectively.
[2] Matrix spike and duplicate matrix spike samples were collected from this well. Please refer to lab sheets for results.
[3] Not sampled per Arcadis due to high levels of Methane Gas.
[4] Not sampled due to the presence of SPH.
[5] Laboratory report indicates due to the nature of the sample matrix, a reduced aliquot was used for analysis. The reporting limit was raised accordingly.
[6] Laboratory report indicates due to the presence of an interferent near the retention time of acenaphthylene, the reporting limit was raised. This was due to the fact that the interferent had a significant abundance of ions at or near the mass of acenaphthylene.
[7] Not sampled due to the presence of sheen.
[8] Well inaccessible.

Starting 1Q 2011, wells MW-14, MW-17, MW-21 and MW-23 were removed from monitoring.
Starting 3Q 2016, well MW-6 was removed from monitoring

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Table 4
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			Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening		RBC	6,300	>S	130,000	9,400	--	3,000,000	--	1,100,000	>S	>S
Levels		SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID		**Date**										
DM-4		08/26/04	146	423	4.20	26.4	59,400	1,100	<1.00	<1.00	1,600	2.88
DM-4		11/09/04	51.2	174	<1.00	6.23	37,300	980	1.58	<1.00	260	0.816
DM-4		02/02/05	53.6	192	1.01	7.34	32,900	820	5.76	<1.00	286	0.677
DM-4	(D)	02/02/05	57.3	239	1.32	10.3	36,300	838	6.5	<1.00	432	<0.200
DM-4		06/28/05	--	--	--	--	--	--	--	--	--	--
DM-4		09/27/05	--	--	--	--	--	--	--	--	--	--
DM-4		12/20/05	--	--	--	--	--	--	--	--	--	--
DM-4		03/21/06	--	--	--	--	--	--	--	--	--	--
DM-4		06/23/06	25.2	141	<0.91	--	29,000	817	<9.4	<1.6	25.8	<0.056
DM-4		09/21/06	24.9	153	<0.91	--	28,600	832	<9.4	<1.6	70.0	<0.056
DM-4		12/20/06	57.3	222	2.1	--	36,100	892	<9.4	<1.6	783	0.25
DM-4		02/27/07	25.9	183	<0.91	--	28,400	740	<9.4	<1.6	198	0.14
DM-4		06/1407	35.4	158	<0.90	--	27,300	823	<9.4	<1.6	0.82	<0.056
DM-4		09/25/07	48.3	184	<0.90	--	32,400	886	<9.4	<1.6	103	0.14
DM-4		12/13/07	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
DM-4		03/05/08	26.5	170	1.6	5.9	26,600	708	<9.4	<1.6	140	<0.056
DM-4		06/03/08	32.9	286	<2	16.7	38,500	835	<10.7	<2.2	547	0.094
DM-4		09/11/08	27.2	144	<2	<3	22,700	709	<10.7	<2.2	20.1	<0.056
DM-4		12/11/08	19.2	163	<2	<3	22,800	757	<10.7	<2.2	25.6	<0.056
DM-4		03/11/09										
DM-4		06/09-11/09										
DM-4		09/09-11/09										
DM-4		12/07-09/09										
DM-4		03/09-11/10										
DM-4		06/09-11/10										
DM-4		09/09/10	NOT SAMPLED DUE TO HIGH LEVELS OF METHANE GAS									
DM-4		03/08/11										
DM-4		09/14/11										
DM-4		03/08/12										
DM-4		09/11/12										
DM-4		03/13/13										
DM-4		09/13/13	17.1	132	15.1	3.7	26,500	877	<8.4	<2.1	81.1	0.21
DM-4			WELL ABANDONED NOVEMBER 2013									
DM-5		08/26/04	6.42	388	<1.00	3.07	80,000	1,110	2.67	<1.00	18.6	<0.200

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			Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening		RBC	6,300	>S	130,000	9,400	--	3,000,000	--	1,100,000	>S	>S
Levels		SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID		**Date**										
DM-5		11/09/04	8.15	427	<1.00	2.42	132,000	1,110	5.54	<1.00	16	<0.200
DM-5		02/02/05	10.1	319	<1.00	<1.00	133,000	1,020	6.67	<1.00	1.00	<0.200
DM-5		06/28/05	--	--	--	--	--	--	--	--	--	--
DM-5		09/27/05	--	--	--	--	--	--	--	--	--	--
DM-5		12/20/05	--	--	--	--	--	--	--	--	--	--
DM-5		03/21/06	--	--	--	--	--	--	--	--	--	--
DM-5		06/23/06	<10	375	<0.91	--	133,000	1,040	<9.4	<1.6	<0.51	<0.056
DM-5		09/21/06	<10	288	<0.91	--	69,000	873	<9.4	<1.6	3.5	<0.056
DM-5		12/19/06	<10	377	2.3	--	125,000	1,060	<9.4	<1.6	4.9	<0.056
DM-5		02/27/07	<10	371	<0.91	--	129,000	1,080	<9.4	<1.6	4.6	<0.056
DM-5		06/14/07	<10	408	<0.90	--	136,000	1,030	10.2	1.7	9.6	<0.056
DM-5		09/25/07	11.2	411	3.5	--	142,000	1,200	<9.4	<1.6	7.3	<0.056
DM-5		12/13/07										
DM-5		03/05/08				NOT SAMPLED DUE TO THE PRESENCE OF SHEEN						
DM-5		06/03/08										
DM-5		09/11/08										
DM-5		12/11/08										
DM-5		03/11/09										
DM-5		06/09-11/09										
DM-5		09/09-11/09										
DM-5		12/07-09/09										
DM-5		03/09-11/10										
DM-5		06/09-11/10				NOT SAMPLED DUE TO HIGH LEVELS OF METHANE GAS						
DM-5		09/09/10										
DM-5		03/08/11										
DM-5		09/14/11										
DM-5		03/08/12										
DM-5		09/11/12										
DM-5		03/13/13										
DM-5		09/13/13	25.4	319	1.1	4.1	68,300	721	<8.4	<2.1	15.9	0.073
DM-5						WELL ABANDONED NOVEMBER 2013						
MW-3B		06/28/05	6.0	210	<1.00	14	--	--	<2.0	<1.0	120	<0.20
MW-3B	(D)	06/28/05	2.0	110	<1.00	2.4	--	--	<2.0	<1.0	23	<0.20
MW-3B		09/27/05	6.1	196	<1.00	12.2	56,000	1,240	<0.20	<1.0	47	<0.20

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Proposed Screening	RBC	6,300	>S	130,000	9,400	--	3,000,000	--	1,100,000	>S	>S
Levels	SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**										
MW-3B	12/21/05	--	--	--	--	--	--	--	--	--	--
MW-3B	03/21/06	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-3B	06/22/06										
MW-3B	09/20/06										
MW-3B	12/19/06										
MW-3B	02/27/07										
MW-3B	06/21/07										
MW-3B	09/24/07										
MW-3B	12/13/07										
MW-3B	03/05/08										
MW-3B	06/03/08										
MW-3B	09/11/08										
MW-3B	12/11/08										
MW-3B	03/11/09	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-3B	06/09-11/09										
MW-3B	09/09-11/09										
MW-3B	12/07-09/09										
MW-3B	03/09-11/10										
MW-3B	06/09-11/10										
MW-3B	09/09/10										
MW-3B	03/08/11										
MW-3B	09/14/11										
MW-3B	03/08/12										
MW-3B	09/11/12										
MW-3B	03/13/13	NOT SAMPLED DUE TO HIGH LEVELS OF METHANE GAS									

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		Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening Levels	RBC	6,300	>S	130,000	9,400	--	3,000,000	--	1,100,000	>S	>S
	SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**										
MW-3B	09/11/13										
MW-3B	02/14/14										
MW-3B	09/18/14										
MW-3B	03/12/15										
MW-3B	09/09/16										
MW-3B	03/15/17	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-3B	09/09/17										
MW-3B	03/14/18										
MW-3B	09/06/18										
MW-3B	3/13/2019										
MW-4B	06/28/05	14.0	380	1.1	68	--	--	4.40	<1.0	45	0.22
MW-4B	09/27/05	14.6	336	<1.00	54.1	122,000	1,650	2.50	<1.0	34.4	<0.20
MW-4B	12/21/05	1.15	64.2	<1.00	1.19	9,100	385	<0.20	<1.00	1.20	<0.20
MW-4B	03/21/06	6.11	114.0	<1.00	17.1	33,600	520	<0.20	<1.00	12.50	0.27
MW-4B	03/21/06	4.47	102.0	<1.00	14.4	30,000	471	<0.20	<1.00	9.52	0.234
MW-4B	06/22/06	<10	52.3	<0.91	--	18,700	415	<9.4	<1.6	0.61	<0.056
MW-4B (D)	06/22/06	<10	73.1	<0.91	--	25,400	546	<9.4	<1.6	1.20	<0.056
MW-4B	09/20/06	<10	262	<0.91	--	59,200	1,180	<9.4	<1.6	1.6	<0.056
MW-4B (D)	09/20/06	<10	189	<0.91	--	51,500	1,230	<9.4	<1.6	3.3	<0.056
MW-4B	12/19/06	<10	70.9	<0.91	--	18,400	492	<9.4	<1.6	2.0	<0.056
MW-4B (D)	12/19/06	<10	62.9	<0.91	--	17,900	464	<9.4	<1.6	0.69	<0.056
MW-4B	02/27/07	<10	52	<0.91	--	15,400	504	<9.4	<1.6	<0.51	<0.056
MW-4B (D)	02/27/07	<10	53.2	<0.91	--	16,200	496	<9.4	<1.6	<0.51	<0.056
MW-4B	06/14/07	<10	61.3	<0.90	--	15,200	395	<9.4	<1.6	1.4	<0.056
MW-4B (D)	06/14/07	<10	66.4	<0.90	--	18,900	449	<9.4	<1.6	1.2	<0.056
MW-4B	09/24/07	<10	118	<0.90	--	43,600	1,060	<9.4	<1.6	1.2	<0.056
MW-4B (D)	09/24/07	<10.0	108	<0.90	--	39,900	992	<9.4	<1.6	1	<0.056
MW-4B	12/13/07	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-4B	03/05/08	<10.0	38.3	<0.90	<2.3	14,000	291	<9.4	<1.6	1	<0.056
MW-4B (D)	03/05/08	<10.0	39.5	<0.90	<2.3	13,500	282	<9.4	<1.6	1.1	<0.056
MW-4B	06/03/08	<10.2	73.1	<2	<3	16,600	404	<10.7	<2.2	0.87	<0.056
MW-4B	09/10/08	<10.2	74.0	<2	<3	30,000	714	<10.7	<2.2	0.23	<0.056
MW-4B	12/11/08	<10.0	46.3	<2	<3	17,000	342	<10.7	<2.2	0.3	<0.056
MW-4B	03/11/09	<10.0	45.7	<2	<3	18,500	407	<10.7	<2.2	0.30	<0.056

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		Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening	RBC	6,300	>S	130,000	9,400	--	3,000,000	--	1,100,000	>S	>S
Levels	SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**										
MW-4B	03/12/09	<10.0	45.0	<2	<3	18,700	419	<10.7	<2.2	0.30	<0.056
MW-4B	06/09-11/09	<7.2	275	11.2	3.6	72,900	394	<8.9	<2.3	8.5	0.062
MW-4B	09/09-11/09	<7.2	82.0	2.7	<3.4	29,400	678	<8.9	<2.3	1.0	<0.056
MW-4B	12/07-09/09	<7.2	108	3.0	<3.4	37,000	375	<8.9	<2.3	0.94	0.10
MW-4B	03/09-11/10	<7.2	106	<2.0	<3.4	51,100	577	<8.9	<2.3	1.5	<0.056
MW-4B	06/09-11/10	<9.8	81.3	<2.0	<3.4	39,900	292	<8.9	<2.3	1.8	<0.056
MW-4B	09/09/10	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-4B	03/10/11	<9.8	51.9	<2.0	<3.4	33,900	223	<8.9	<2.3	3.8	<0.050
MW-4B	09/14/11	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-4B	03/08/12	6.7	34.3	1.2	1.6	35,100	241	<6.9	<0.91	1.9	<0.026
MW-4B	09/12/12	<6.8	97.7	2.4	4.4	37,000	502	<7.5	<1.2	7.8	<0.070
MW-4B	03/13/13	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-4B	09/11/13										
MW-4B	02/14/14	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-4B	09/18/14										
MW-4B	03/12/15	<7.2	23.7	<0.33	<1.3	14,600	225	<4.8	<1.8	0.19	<0.050
MW-4B	09/15/15	--	--	--	--	--	--	--	--	--	--
MW-4B	03/11/16	<7.8	48.3	<0.64	3.6	26,400	67.1	<8.2	<1.8	3.4	<0.050
MW-4B	(D) 03/11/16	<7.8	49.1	<0.64	3.6	30,900	63.9	<8.2	<1.8	4.1	<0.050
MW-4B	09/09/16	<9.7	69.7	0.72	<1.8	22,000	414	<9.7	<1.9	0.3	<0.050
MW-4B	03/15/17	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-4B	09/09/17	<9.6	207	<1.8	<3.3	44,100	606	<9.3	<2.4	7.0	<0.050
MW-4B	(D) 09/09/17	<9.6	194	<1.8	<3.3	46,100	623	<9.3	<2.4	8.2	<0.050
MW-4B	03/14/18	<9.6	48.9	<1.8	<3.3	25,800	155	<9.3	<2.4	3.1	<0.050
MW-4B	09/06/18	<16.0	152	<1.0	<5.3	52,100	647	<21.0	<5.0	12.2	0.064 J
MW-4B	(D) 09/06/18	<16.0	132	<1.0	<5.3	43,900	586	<21.0	<5.0	6.9	<0.050
MW-4B	03/13/19	<16.0	42.8	<1.0	<5.3	16,700	289	<21.0	<5.0	<1.1	<0.050
MW-6[1]	08/26/04	9.67	98.5	1.26	16.2	22,300	381	11.1	<1.00	19.0	<0.200
MW-6[1]	(D) 08/26/04	1.0	104	1.93	17.6	27,300	436	11.0	<1.00	21.2	<0.200
MW-6[1]	11/09/04	7.33	66.6	<1.00	2.68	2,600	146	23.3	<1.00	<1.00	<0.200
MW-6[1]	02/02/05	2.67	58.3	<1.00	29.5	21,800	161	6.91	<1.00	5.10	<0.200
MW-6[1]	06/28/05	8.4	76	<0.10	25	--	--	5.2	<1.0	20.00	<0.20
MW-6[1]	09/27/05	3.35	379	<1.00	5.84	106,000	2,190	<2.00	<1.00	16.80	<0.20
MW-6[1]	12/21/05	1.91	52.8	<1.00	<1.00	1,260	193	9.46	<1.00	1.47	<2.00

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			Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening Levels		RBC	6,300	>S	130,000	9,400	--	3,000,000	--	1,100,000	>S	>S
		SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID		**Date**										
MW-6[1]	(D)	12/21/05	1.84	52.7	<1.00	<1.00	1,150	150	8.89	<1.00	1.22	<0.200
MW-6[1]		03/21/06	<1.00	27	<1.00	<1.00	441	70	<2.0	<1.00	<1.00	<0.200
MW-6[1]		06/22/06	<10	15.1	<0.91	--	1,200	64.7	<9.4	<1.6	<0.51	<0.056
MW-6[1]		09/20/06	<10	125	<0.91	--	722	121	<9.4	<1.6	<0.51	<0.056
MW-6[1]		12/19/06	<10	27.0	<0.91	--	931	73.5	<9.4	<1.6	1.1	<0.056
MW-6[1]		02/27/07	<10	10.2	<0.91	--	1,120	109	<9.4	<1.6	0.98	<0.056
MW-6[1]		06/14/07	NOT SAMPLED DUE TO INACCESIBILITY									
MW-6[1]		09/25/07	<10	108	<0.91	--	1,860	445	<9.4	<1.6	2.7	<0.056
MW-6[1]		12/13/07	<10	68.7	<0.9	2.4	4,140	543	<9.4	<1.6	5.5	<0.056
MW-6[1]		03/05/08	<10	24.8	.90	<2.3	968	158	<9.4	<1.6	1.7	<0.056
MW-6[1]		06/03/08	<10.2	12.7	<2	<3	838	830	<10.7	<2.2	1	0.075
MW-6[1]		09/10/08	<10.2	91.1	<2	<3	12,400	2,090	<10.7	<2.2	1.7	<0.056
MW-6[1]		12/11/08	<10	15.1	<2	<3	4,190	322	<10.7	<2.2	0.94	<0.056
MW-6[1]		03/12/09	<10	22.3	<2	<3	3,680	215	<10.7	<2.2	2.3	<0.056
MW-6[1]		06/09-11/09	10.3	203	2.3	4.2	63,400	1,630	<8.9	<2.3	14.6	0.29
MW-6[1]		09/09-11/09	<7.2	65.2	<2.0	<3.4	12,900	547	<8.9	<2.3	2.5	0.079
MW-6[1]		12/07-09/09	8.7	82.7	<2.0	<3.4	20,400	503	<8.9	<2.3	6.2	0.15
MW-6[1]		03/09-11/10	10.7	135	<2.0	4.1	49,100	2,160	<8.9	<2.3	11.7	0.10
MW-6[1]	(D)	03/09-11/10	<7.2	82.9	<2.0	<3.4	32,700	1,310	<8.9	<2.3	6.7	<0.056
MW-6[1]		06/09-11/10	<9.8	25.4	<2.0	<3.4	4,960	212	<8.9	<2.3	3.1	0.062
MW-6[1]		09/09/10	<9.8	90.8	<2.0	6.2	16,200	889	<8.9	<2.3	12.5	<0.056
MW-6[1]		03/09/11	<9.8	20.4	<2.0	<3.4	4,080	203	<8.9	<2.3	3.4	<0.050
MW-6[1]		09/14/11	<5.1	57.0	0.58	2.2	4,260	341	<6.9	<0.91	5.6	0.078
MW-6[1]		03/08/12	<5.1	33.5	1.0	1.7	14,100	741	<6.9	<0.91	4.9	0.031
MW-6[1]		09/11/12	<6.8	38.4	1.2	<1.1	8,290	1,070	<7.5	<1.2	4.8	<0.070
MW-6[1]		03/14/13	<6.8	90.4	0.7	7.5	19,100	1,660	<7.5	<1.2	16.0	0.130
MW-6[1]	(D)	03/14/13	<6.8	75.9	1.0	6.0	14,900	1,130	<7.5	<1.2	13.8	0.20
MW-6[1]		09/12/13	<6.8	120.0	<0.76	2.4	9,170	728	<8.4	<2.1	2.9	<0.060
MW-6[1]		02/14/14	<6.8	21.4	<0.76	<1.6	4,560	327	<8.4	<2.1	2.3	<0.060
MW-6[1]		09/18/14	<7.2	215	1.2	6.5	14,300	1,560	<4.8	<1.8	9.6	<0.060
MW-6[1]		03/12/15	NOT SAMPLED DUE TO INACCESIBILITY									
MW-6[1]		03/11/16										
MW-12[1]		08/26/04	1.83	47.3	<1.00	1.18	20,600	480	<1.00	<1.00	5.58	<0.200
MW-12[1]		11/08/04	1.35	85.9	<1.00	8.7	26,600	382	2.21	<1.00	23.4	<0.200

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Proposed Screening	RBC	6,300	>S	130,000	9,400	--	3,000,000	--	1,100,000	>S	>S
Levels	SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**										
MW-12[1]	02/02/05	1.93	37.7	<1.00	1.65	11,700	250	<2.00	<1.00	7.46	<0.200
MW-12[1]	06/28/05	1.7	76	<1.0	5.6	--	--	<2.0	<1.0	15	<0.20
MW-12[1]	09/27/05	4.08	104	<1.00	<1.00	640	177	<2.00	<1.00	<1.00	<0.20
MW-12[1]	12/21/05	1.73	41.8	<1.00	2.06	12,500	277	<2.00	<1.00	9.89	<0.200
MW-12[1]	03/21/06	3.84	67.8	<1.00	9.56	20,600	275	<2.00	<1.00	14.8	0.218
MW-12[1]	06/22/06	<10	40.6	<0.91	--	9,660	340	<9.4	<1.6	3.7	<0.056
MW-12[1]	09/20/06	<10	51.8	<0.91	--	20,500	572	<9.4	<1.6	3.1	<0.056
MW-12[1]	12/19/06	<10	164	<0.91	--	35,900	349	<9.4	<1.6	45.3	<0.056
MW-12[1]	02/27/07	<10	39.8	<0.91	--	6,180	142	<9.4	<1.6	12.8	<0.056
MW-12[1]	06/14/07	<10	36.8	<0.90	--	11,100	321	<9.4	<1.6	2.1	<0.056
MW-12[1]	09/25/07	<10	90.7	1.2	--	36,300	849	<9.4	<1.6	3.4	<0.056
MW-12[1]	12/12/07	<10	29.8	1.8	<2.3	8,820	235	<9.4	<1.6	2.3	<0.056
MW-12[1]	03/05/08	<10	68.2	1.5	9.9	20,800	337	<9.4	<1.6	17.8	<0.056
MW-12[1]	06/03/08	<10.2	33.1	<2	<3	52.2	0.84	<10.7	<2.2	4.2	<0.056
MW-12[1]	09/10/08	<10.2	160	7.7	16.7	45,400	721	<10.7	<2.2	36.7	<0.056
MW-12[1]	12/11/08	<10	37.8	<2	<3	9,230	307	<10.7	<2.2	1.6	<0.056
MW-12[1]	03/11/09	<10	62.7	<2	8.8	21,300	323	<10.7	<2.2	16.3	.14
MW-12[1]	06/09-11/09	<7.2	218	3.4	38.1	50,300	521	<8.9	<2.3	73.7	0.37
MW-12[1]	09/09-11/09	8.9	224	4.1	28.5	60,500	826	<8.9	<2.3	63.3	0.33
MW-12[1]	12/07-09/09	8.5	125	<2.0	24.7	35,300	378	<8.9	<2.3	29.2	0.19
MW-12[1] (D)	12/07-09/09	9.2	133	<2.0	24.2	36,900	385	<8.9	<2.3	32.2	0.19
MW-12[1]	03/09-11/10	<7.2	141	<2.0	23.9	40,400	376	<8.9	<2.3	53.6	0.069
MW-12[1]	06/09-11/10	<9.8	124	2.0	20.4	37,600	396	<8.9	<2.3	42.2	0.077
MW-12[1]	09/09/10	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-12[1]	03/09/11	<9.8	137	<2.0	19.80	43,500	398	<8.9	<2.3	50.1	<0.050
MW-12[1]	09/14/11	<5.1	152	3.5	18.8	51,100	749	<6.9	<0.91	10.3	0.17
MW-12[1]	03/08/12	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-12[1]	09/12/12	<6.8	210	4.2	20.8	68,100	955	<7.5	<1.2	60.1	0.27
MW-12[1]	03/13/13	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-12[1]	09/12/13	49.0	1,270	10.4	248	269,000	1,730	<8.4	<2.1	131	1.5
MW-12[1]	02/14/14	7.3	244	<0.76	41.1	146,000	487	12.7	3.4	93.7	0.45
MW-12[1]	09/18/14	8.2	198	2.1	40.3	75,800	696	<4.8	<1.8	54.6	<0.060
MW-12[1]	03/12/15	<7.2	25.8	<0.33	1.4	17,900	232	<4.8	<1.8	2.7	<0.050
MW-12[1]	09/14/2015	<7.0	56.8	0.73	1.6	39,400	697	11.5	<1.4	1.4	<0.050
MW-12[1]	03/11/16	10.3	88	<0.64	12.8	55,100	216	<8.2	<1.8	35.7	0.14

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Proposed Screening		RBC	6,300	>S	130,000	9,400	--	3,000,000	--	1,100,000	>S	>S
Levels		SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID		**Date**										
MW-12[1]		09/09/16	<9.7	63.2	0.75	3.5	17,300	443	<9.7	2.8	12.0	<0.050
MW-12[1]		03/15/17	33	389	9.2	80.5	340,000	769	19.4	<1.9	178.0	0.86
MW-12[1]		09/09/17	<9.6	211	<1.8	16.0	87,800	1,280	<9.3	<2.4	36.0	0.20
MW-12[1]		03/14/18	<9.6	33.1	1.9	<3.3	52,500	236	<9.3	<2.4	5.5	<0.050
MW-12[1]	(D)	03/14/18	<9.6	19.2	<1.8	<3.3	12,800	213	<9.3	<2.4	0.83	<0.050
MW-12		09/06/18	<16.0	268	1.9 J	28.3	92,100	1,140	<21.0	<5.0	49.1	0.2
MW-12		03/13/19	<16.0	27.3	<1.0	<5.3	11,200	184	<21.0	<5.0	2.2 J	<0.050
MW-14		06/28/05	1.6	98	<1.00	5.3	--	--	2.1	<1.0	3.4	<0.20
MW-14		09/27/05	3.8	334	<1.00	2.87	58,500	1,680	<2.00	<1.00	3	<0.20
MW-14		12/20/05	<1.00	29.5	<1.00	<1.00	6,490	38.8	2.19	<1.00	<1.00	<0.20
MW-14		03/21/06	4.08	180	<1.00	6.81	71,000	562.0	<2.00	<1.00	5.05	<0.200
MW-14		06/22/06	<10	54.4	<0.91	--	18,000	392	<9.4	<1.6	<0.51	<0.056
MW-14		09/21/06	<10	285	<0.91	--	43,900	1,660	<9.4	<1.6	<0.51	<0.056
MW-14		12/19/06	<10	82.5	<0.91	--	11,800	911	<9.4	<1.6	0.19	<0.056
MW-14		02/27/07	<10	56.5	<0.91	--	14,800	293	<9.4	<1.6	<0.51	<0.056
MW-14		06/14/07	<10	43.3	<0.90	--	9,920	156	<9.4	<1.6	0.33	<0.056
MW-14		09/25/07	<10	222	1.5	--	56,400	1,140	<9.4	<1.6	0.79	<0.056
MW-14		12/13/07	<10	102	<0.9	<2.3	20,900	580	<9.4	<1.6	0.29	<0.056
MW-14		03/05/08	<10	45	<.90	<2.3	11,800	284	<9.4	<1.6	0.22	<0.056
MW-14		06/04/08	<10.2	33.9	<2	<3	7,900	148	<10.7	<2.2	0.41	0.058
MW-14		09/11/08	<10.2	50.7	<2	<3	13,900	416	<10.7	<2.2	0.21	<0.056
MW-14		12/10/08	<10	113	<2	<3	13,900	405	<10.7	<2.2	0.91	<0.056
MW-14		03/12/09	<10	60.2	<2	<3	8,330	240	<10.7	<2.2	0.34	<0.056
MW-14		06/09-11/09	<7.2	105	<2.0	<3.4	25,100	143	<8.9	<2.3	0.75	<0.056
MW-14		09/09-11/09	<7.2	199	<2.0	<3.4	31,000	929	<8.9	<2.3	0.61	0.061
MW-14		12/07-09/09	<7.2	274	<2.0	<3.4	80,500	518	<8.9	<2.3	0.35	<0.056
MW-14		03/09-11/10	<7.2	119	2.0	5.3	28,100	386	<8.9	<2.3	0.47	<0.056
MW-14		06/09-11/10	<9.8	213	<2.0	<3.4	72,900	287	<8.9	<2.3	0.67	<0.056
MW-14		09/09/10	<9.8	254	<2.0	3.6	38,000	588	<8.9	<2.3	1.2	<0.056
MW-14	(D)	09/09/10	<9.8	243	3.7	4.3	39,300	617	<8.9	<2.3	1.80	<0.056
MW-14		03/08/11	NO LONGER INCLUDED IN ROUTINE SAMPLING EVENTS									
MW-15		06/28/05	4.8	180	<1.0	7.0	--	--	3.7	<1.0	10.0	<0.20
MW-15		09/27/05	8.56	371	<1.00	4.5	43,100	1,270	<2.00	<1.00	10.0	<0.20

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Proposed Screening Levels	RBC		6,300	>S	130,000	9,400	--	3,000,000	--	1,100,000	>S	>S
	SLV		150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID		**Date**										
MW-15		12/20/05	5.58	281.0	<1.00	3.70	53,800	1,180	10.10	<1.00	7.07	<0.20
MW-15		03/21/06	<1.00	155.0	<1.00	1.21	33,500	798	<2.00	<2.00	1.46	<0.200
MW-15		06/22/06	<10	146	<0.91	--	31,000	651	<9.4	<1.6	3.2	0.92
MW-15		09/21/06	<10	357	<0.91	--	48,600	1,440	<9.4	<1.6	2.3	<0.056
MW-15		12/19/06	<10	300	0.93	--	58,400	1,330	<9.4	<1.6	3.8	<0.056
MW-15		02/27/07	<10	253	<0.91	--	49,600	1,130	<9.4	<1.6	4.4	<0.056
MW-15		06/14/07	<10	106	<0.90	--	22,000	497	<9.4	<1.6	3.2	<0.056
MW-15		09/25/07	<10	201	<0.90	--	33,000	804	<9.4	<1.6	10.7	<0.056
MW-15		12/14/07	<10	310	<0.9	<4.3	53,800	1,310	<9.4	<1.6	5.3	<0.056
MW-15	(D)	12/14/07	<10	319	<0.9	3.1	55,400	1,370	<9.4	<1.6	4.3	<0.056
MW-15		03/05/08	<10	205	1.2	<2.3	38,400	971	<9.4	<1.6	1.8	<0.056
MW-15		06/04/08	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-15		09/11/08	<10.2	146	<2	<3	18,000	649	<10.7	<2.2	0.055	<0.056
MW-15		12/11/08	<10	250	<2	<3	39,900	1,030	<10.7	<2.2	1.7	<0.056
MW-15		03/12/09										
MW-15		06/09-11/09										
MW-15		09/09-11/09										
MW-15		12/07-09/09										
MW-15		03/09-11/10										
MW-15		06/09-11/10										
MW-15		09/09/10	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-15		03/08/11										
MW-15		09/14/11										
MW-15		03/08/12										
MW-15		03/09/12										
MW-15		09/11/12										
MW-15		03/13/13	NOT SAMPLED DUE TO HIGH LEVELS OF METHANE GAS									

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		Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening Levels	RBC	6,300	>S	130,000	9,400	--	3,000,000	--	1,100,000	>S	>S
	SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**										
MW-15	09/11/13										
MW-15	02/14/14										
MW-15	09/18/14	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-15	03/12/15										
MW-15	03/11/16	8.2	23	<0.64	<2.0	5,600	60.1	<8.2	<1.8	1.1	<0.050
MW-15	09/09/16	<9.7	148	0.74	<1.8	22,700	663	<9.7	<1.9	0.61	<0.050
MW-15	03/15/17	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-15	09/09/17	20.4	222	2.9	14.5	72,300	662	<9.3	<2.4	34.9	0.096
MW-15	03/14/18	<9.6	97.4	<1.8	<3.3	26,800	328	<9.3	<2.4	0.50	<0.050
MW-15	09/07/18	<16.0	130	<1.0	<5.3	21,800	558	<21.0	<5.0	<1.1	<0.050
MW-15	03/13/19	<16.0	127	<1.0	<5.3	32,100	494	<21.0	<5.0	<1.1	<0.050
MW-16	06/28/05	<1.0	180	<1.0	2.8	--	--	6.50	<1.00	2.5	<0.20
MW-16	09/27/05	7.27	286	<1.00	9.89	135,000	2,510	<2.0	<1.00	10.8	<0.20
MW-16	12/21/05	3.42	146	<1.00	1.68	64,200	2,140	9.24	<1.00	2.32	<0.20
MW-16	03/21/06	3.32	162	<1.00	5.43	91,000	2,010	<2.0	<1.00	8.55	0.429
MW-16	06/22/06	<10	128	<0.91	--	58,700	2,030	<9.4	<1.6	<0.51	<0.056
MW-16	09/20/06	<10	235	<0.91	--	74,700	2,490	<9.4	<1.6	0.51	<0.056
MW-16	12/19/06	<10	149	<0.91	--	32,800	1,430	<9.4	<1.6	0.84	<0.056
MW-16	02/27/07	<10	53.9	<0.91	--	9,920	426	<9.4	<1.6	<0.51	<0.056
MW-16	06/14/07	<10	34.9	<0.90	--	20,000	345	<9.4	<1.6	2.0	<0.056
MW-16	09/25/07	<10	110	3.7	--	115,000	1,620	<9.4	<1.6	0.88	0.076
MW-16	12/12/07	<10	165	<0.9	<2.3	42,200	1,750	<9.4	<1.6	1.4	<0.056
MW-16	03/05/08	<10	97.4	2.1	<2.3	66,900	1,980	<9.4	<1.6	0.96	<0.056
MW-16	06/03/08	<10.2	90.4	2.3	<3	61,400	2,280	<10.7	<2.2	3.5	0.35
MW-16	09/10/08	<10.2	253	4.1	<3	128,000	2,160	<10.7	<2.2	2.9	<0.056
MW-16	12/09/08	<10	290	<2	<3	163,000	2,270	<10.7	<2.2	8.9	0.18
MW-16	03/11/09	12.9	253	5.3	<3	134,000	2,330	<10.7	<2.2	9	0.24
MW-16	06/09-11/09	<36.0	539	<10.0	20.6	681,000	2,910	<44.5	<2.3	112	2.9
MW-16	09/09-11/09	9.5	196	6.4	5.4	123,000	1,630	<8.9	<2.3	21.3	0.63
MW-16	12/07-09/09	<7.2	113	<2.0	6.2	66,700	1,600	<8.9	<2.3	12.3	0.35
MW-16	03/09-11/10	<7.2	75.0	<2.0	<3.4	49,800	1,170	<8.9	<2.3	11.7	0.23
MW-16	06/09-11/10	<9.8	86.1	30.2	4.3	64,400	760	<8.9	<2.3	8.8	0.16
MW-16	(D) 06/09-11/10	<9.8	87.7	18.7	4.6	54,900	660	<8.9	<2.3	11.1	0.072
MW-16	09/09/10	10.9	344	<2.0	10.9	209,000	2,080	15.6	<2.3	22.3	<0.056

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			Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening		RBC	6,300	>S	130,000	9,400	--	3,000,000	--	1,100,000	>S	>S
Levels		SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID		**Date**										
MW-16		03/10/11	<9.8	224	<2.0	18.6	176,000	1,530	<8.9	<2.3	84.9	2.0
MW-16		09/14/11	<5.1	51.3	1.4	2.2	38,100	380	<6.9	<0.91	21.9	0.67
MW-16		03/08/12	7.7	100	1.3	6.0	40,500	1,000	<6.9	0.98	16.4	0.39
MW-16	(D)	03/08/12	15.8	112	1.6	7.4	48,000	1,140	7.6	1.1	16.6	0.39
MW-16		09/12/12	<6.8	268	5.4	9.4	129,000	1,470	<7.5	<1.2	45.9	2.1
MW-16		03/14/13	<6.8	110	0.48	9.0	72,300	784	<7.5	<1.2	25.8	0.13
MW-16		09/12/13	<6.8	83.2	1.3	4.8	83,700	1,050	<8.4	2.9	13.4	0.32
MW-16		02/14/14	6.9	107	<0.76	3.0	72,400	1,250	<8.4	<2.1	6.9	0.14
MW-16		09/18/14	<7.2	68.3	1.2	3.5	86,600	903	<4.8	<1.8	6.7	<0.060
MW-16		03/12/15	<7.2	21.2	<0.33	<1.3	11,500	641	<4.8	<1.8	0.094	<0.050
MW-16		09/14/2015	<7.0	59.6	0.32	1.6	25,000	908	<8.2	<1.4	0.30	<0.050
MW-16		03/11/16	<7.8	42.1	<0.64	<2.0	9,940	711	<8.2	<1.8	0.29	<0.050
MW-16		09/09/16	<9.7	36.3	0.87	<1.8	26,000	465	<9.7	<1.9	0.27	<0.050
MW-16		03/15/17	NO LONGER INCLUDED IN ROUTINE SAMPLING EVENTS									
MW-17		06/28/05	9.3	290	<1.0	23	--	--	3.9	<1.0	20	<0.20
MW-17	(D)	06/28/05	11	300	<1.0	25	--	--	3.9	<1.0	22	<0.20
MW-17		09/27/05	5	9	<1.00	<1.00	72,300	1,390	<2.00	<1.00	<1.00	<0.20
MW-17		12/20/05	<1.00	38.9	<1.00	<1.00	5,260	56.6	2.61	<1.00	<1.00	<0.20
MW-17		03/21/06	1.11	67.2	<1.00	1.89	21,200	648.0	<2.0	<1.00	1.84	0.230
MW-17		06/22/06	<10	92.4	<0.91	--	35,400	893	<9.4	<1.6	<0.51	<0.056
MW-17		09/21/06	<10	106	<0.91	--	36,200	735	<9.4	<1.6	1.5	<0.056
MW-17		12/19/06	<10	67.3	<0.91	--	18,200	145	<9.4	<1.6	2.7	<0.056
MW-17		02/27/07	<10	37.2	<0.91	--	10,100	136	<9.4	<1.6	1.0	<0.056
MW-17		06/14/07	<10	20.5	<0.90	--	338	59.2	<9.4	<1.6	0.15	<0.056
MW-17		09/25/07	10.1	116	1.2	--	49,300	1,080.00	<9.4	<1.6	1.6	0.31
MW-17		12/13/07	<0.	61.9	<0.9	<2.3	13,300	271.00	<9.4	<1.6	1.3	<0.056
MW-17		03/05/08	<10	58.3	4.1	<2.3	28,400	487.00	<9.4	<1.6	1.1	<0.056
MW-17		06/04/08	<10.2	40.7	<2	<3	12,400	60.80	<10.7	<2.2	2.2	<0.056
MW-17		09/11/08	<10.2	61.9	<2	<3	34,900	667	<10.7	<2.2	0.52	<0.056
MW-17	(D)	09/11/08	<10.2	61.8	<2	<3	34,200	678	<10.7	<2.2	0.6	<0.056
MW-17		12/10/08	<10	65.8	4.4	<3	24,600	240	<10.7	<2.2	1.7	<0.056
MW-17	(D)	12/10/08	<10	66.7	3.9	<3	26,500	345	<10.7	<2.2	1.4	<0.056
MW-17		03/12/09	<10	55	<2	<3	24,300	129	<10.7	<2.2	1.3	<0.056
MW-17		06/09-11/09	<7.2	127	<2.0	3.8	69,600	624	<8.9	<2.3	3.7	<0.056

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			Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening Levels		RBC	6,300	>S	130,000	9,400	--	3,000,000	--	1,100,000	>S	>S
		SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID		**Date**										
MW-17	(D)	06/09-11/09	<7.2	122	<2.0	4.2	58,800	593	<8.9	<2.3	3.9	<0.056
MW-17		09/09-11/09	<7.2	194	<2.0	<3.4	61,100	992	<8.9	<2.3	2.6	0.086
MW-17	(D)	09/09-11/09	<7.2	255	<2.0	<3.4	66,500	1,130	<8.9	<2.3	2.6	0.075
MW-17		12/07-09/09	<7.2	197	11.7	6.1	51,600	331	<8.9	<2.3	5.1	<0.056
MW-17		03/09-11/10	NOT SAMPLED DUE TO INACCESIBILITY									
MW-17		06/09-11/10	15.3	191	14.4	5.1	140,000	266	<8.9	<2.3	5.6	0.10
MW-17		09/09/10	15.5	562	3.3	11.3	212,000	1650	20.20	<2.3	7.6	<0.056
MW-17		03/08/11	NO LONGER INCLUDED IN ROUTINE SAMPLING EVENTS									
MW-18		06/28/05	3.5	270	<1.0	12	--	--	5.0	<1.0	13	<0.20
MW-18		09/27/05	4.17	200	<1.00	7	53,000	991	<2.0	<1.00	8.79	<0.20
MW-18		12/21/05	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-18		03/21/06	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-18		06/22/06	<10	331	<0.91	--	103,000	1,880	<9.4	<1.6	3.4	0.074

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Proposed Screening	RBC	6,300	>S	130,000	9,400	--	3,000,000	--	1,100,000	>S	>S
Levels	SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**										
MW-18	09/20/06										
MW-18	12/19/06										
MW-18	02/27/07										
MW-18	06/21/07										
MW-18	09/25/07										
MW-18	12/13/07										
MW-18	03/05/08										
MW-18	06/04/08										
MW-18	09/11/08										
MW-18	12/10/08										
MW-18	03/11/09										
MW-18	06/09-11/09	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-18	09/09-11/09										
MW-18	12/07-09/09										
MW-18	03/09-11/10										
MW-18	06/09-11/10										
MW-18	09/09/10										
MW-18	03/08/11										
MW-18	09/14/11										
MW-18	03/08/12										
MW-18	09/11/12										
MW-18	03/13/13										
MW-18	09/11/13	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-18	02/14/14										
MW-18	09/18/14										
MW-18	03/12/15										
MW-18	09/14/2015	<7.0	279	1.3	2.8	68,200	1,310	14.5	<1.4	1.2	<0.050
MW-18	03/11/16	<7.8	41.9	<0.64	<2.0	11,900	220	<8.2	<1.8	<0.13	<0.050
MW-18	09/09/16	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-18	03/15/17										
MW-18	09/09/17	WELL GAUGED BUT NOT SAMPLED									
MW-18	03/14/18	<9.6	74.4	<1.8	<3.3	14,800	344	<9.3	<2.4	0.44	<0.050
MW-18	09/07/18	<16.0	167	<1.0	<5.3	32,000	850	<21.0	<5.0	<1.1	<0.050
MW-18	3/13/2019	<16.0	136	<1.0	<5.3	29,000	631	<21.0	<5.0	<1.1	<0.050

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			Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening	RBC		6,300	>S	130,000	9,400	--	3,000,000	--	1,100,000	>S	>S
Levels	SLV		150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID		**Date**										
MW-19		06/21/07	*21.5*	483	<0.90	--	139,000	1,680	<9.4	8.2	38.9	<0.056
MW-19		09/24/07	<10	296	2.4	--	77,900	1,280	<9.4	<1.6	9.5	0.19
MW-19		12/13/07	NOT SAMPLED DUE TO INACCESIBILITY									
MW-19		03/05/08	<10	475	10.4	8.4	297,000	1,080	<9.4	<1.6	8.7	<0.056
MW-19		06/04/08	<10.2	90.4	<2	<3	26,300	689	<10.7	<2.2	1.7	<0.056
MW-19	(D)	06/04/08	<10.2	252	<2	24.3	79,000	827	<10.7	<2.2	12.1	<0.056
MW-19		09/11/08	<10.2	787.0	9.1	4.9	290,000	1,340	<10.7	6.2	4.1	<0.28
MW-19		12/10/08	<10	118	<2	<3	38,400	804	<10.7	<2.2	1.5	<0.056
MW-19		03/12/09	<10	112	2.5	<3	77,300	968	<10.7	<2.2	2.6	<0.056
MW-19		06/09-11/09	<7.2	554	<2.0	10.6	193,000	1,160	<8.9	<2.3	9.3	0.15
MW-19		09/09-11/09	<7.2	639	<2.0	<3.4	168,000	1,520	<8.9	<2.3	7.4	0.091
MW-19		12/07-09/09	NOT SAMPLED DUE TO INACCESIBILITY									
MW-19		03/09-11/10	<7.2	89.7	<2.0	3.6	71,600	914	<8.9	2.5	1.0	<0.056
MW-19		06/09-11/10	<9.8	660	<2.0	4.8	242,000	1,250	15.2	<2.3	7.4	0.15
MW-19		09/09/10	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-19		03/09/11	<9.8	99.3	<2.0	<3.4	83,100	832	<8.9	<2.3	2.0	<0.050
MW-19		09/14/11	12.2	174	4.2	3.9	142,000	1,340	7.1	<0.91	3	0.12
MW-19		03/08/12	13.0	359	3.6	10.2	150,000	971	26.9	1.5	8.1	0.11
MW-19		09/12/12	<6.8	288	5.3	12.3	160,000	1,100	<7.5	<1.2	14.8	0.30
MW-19		03/13/13	UNABLE TO LOCATE									
MW-19		09/11/13	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-19		02/14/14	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-19		09/18/14	<36.0	367.0	3.90	7.70	258,000	811.0	<24.0	<1.8	3.30	<0.060
MW-19		03/12/15	<7.2	57.3	0.59	<1.3	38,900	710	<4.8	<1.8	<0.082	<0.050
MW-19	(D)	03/12/15	<7.2	56.6	0.65	<1.3	38,500	706	<4.8	<1.8	<0.082	<0.050
MW-19		03/11/16	<7.8	50.3	0.74	<2.0	1570	20.5	<8.2	<1.8	1.1	<0.050
MW-19		09/09/16	<9.7	199	1.5	<1.8	87,200	2,050	<9.7	<1.9	0.2	<0.050
MW-19		03/15/17	<9.7	63.8	1.5	3.3	62,300	414	<9.7	<1.9	4.9	0.18
MW-19		09/09/17	<9.6	174	<1.8	8.8	89,600	978	<9.3	<2.4	10.3	0.21
MW-19		03/14/18	<9.6	19.9	<1.8	<3.3	3,680	119	<9.3	<2.4	0.57	<0.050
MW-19		09/06/18	<16.0	76.5	<1.0	<5.3	33,600	764	<21.0	<5.0	<1.1	<0.050
MW-19		3/13/2019	<16.0	**43.6**	<1.0	<5.3	**25,900**	**482**	<21.0	<5.0	<1.1	<0.050
MW-20		06/21/07	22.9	573	<4.5	--	166,000	1,750	10.9	10	41.6	<0.056
MW-20		09/24/07	<10	313	3.4	--	79,400	1,210	<9.4	<1.6	22.9	0.11

Appendix C
Table 4
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			Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening Levels		RBC	6,300	>S	130,000	9,400	--	3,000,000	--	1,100,000	>S	>S
		SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID		**Date**										
MW-20		12/13/07	--	--	--	--	--	--	--	--	--	--
MW-20		03/05/08	<10	179	2.1	2.9	52,500	928	<9.4	<1.6	5.1	<0.056
MW-20		06/04/08	--	--	--	--	--	--	--	--	--	--
MW-20		09/11/08	<10.2	144	<2	<3	54,500	857	<10.7	<2.2	1.7	<0.056
MW-20		12/10/08	<10	101	<2	<3	30,900	486	<10.7	<2.2	0.33	<0.056
MW-20		03/12/09	<10	207	2.7	<3	70,400	1,050	<10.7	<2.2	2.9	<0.056
MW-20		06/09-11/09[2]	<7.2	1,200	9.3	21.3	169,000	1,220	<8.9	<2.3	22.7	0.17
MW-20	(D)	06/09-11/09[2]	<7.2	1,230	9.6	23.0	170,000	1,250	<8.9	<2.3	21.7	0.17
MW-20		06/09-11/09	159	2,530	56.4	225	119,000	1,650	151	54.6	29.8	1.1
MW-20		06/09-11/09	151	2,730	54.5	224	134,000	1,610	142	53.0	33.6	1.1
MW-20		09/09-11/09[2]	<7.2	374	5.4	15.9	77,000	1,060	<8.9	<2.3	15.6	0.12
MW-20	(D)	09/09-11/09[2]	<7.2	386	5.7	16.1	78,900	1,090	<8.9	<2.3	15.4	0.10
MW-20		12/07-09/09[2]	<7.2	260	<2.0	14.5	93,600	962	<8.9	<2.3	10.9	<0.056
MW-20	(D)	12/07-09/09[2]	<7.2	257	<2.0	15.0	94,600	904	<8.9	<2.3	11.8	<0.056
MW-20		03/09-11/10[2]	<7.2	248	<2.0	5.6	111,000	999	<8.9	<2.3	4.9	<0.056
MW-20	(D)	03/09-11/10[2]	<7.2	256	<2.0	5.6	114,000	1,000	<8.9	<2.3	5.3	<0.056
MW-20		06/09-11/10[2]	<9.8	278	7.2	10.4	98,800	966	<8.9	<2.3	13.0	<0.056
MW-20	(D)	06/09-11/10[2]	<9.8	287	7.8	14.1	113,000	986	<8.9	<2.3	13.0	<0.056
MW-20		09/09/10[2]	10	607	<2.0	27.7	147,000	1,270	12.0	<2.3	20.0	<0.056
MW-20		03/09/11[2]	<9.8	155	<2.0	12.0	130,000	426	<8.9	<2.3	12.1	0.085
MW-20		09/14/11[2]	9.5	334	5.3	19.6	141,000	1,330	<6.9	<0.91	22.2	0.17
MW-20		3/7/2012[2]	13.1	169	2.0	10.3	65,900	710	10.40	<0.91	8.4	0.036
MW-20		09/12/12[2]	<6.8	224	3.7	15.1	84,500	780	<7.5	<1.2	20.0	0.25
MW-20	(D)	09/12/12[2]	<6.8	220	3.6	17.0	81,500	823	<7.5	<1.2	15.2	0.13
MW-20		03/14/13[2]	<6.8	209	0.66	32.0	97,200	517	<7.5	<1.2	27.5	0.36
MW-20		09/12/13[2]	18.4	282	1.10	17.1	59,500	709	<8.4	<2.1	19.3	0.091
MW-20	(D)	09/12/13[2]	17.7	303	1.00	14.0	52,900	732	<8.4	<2.1	13.0	0.089
MW-20		02/14/14	<6.8	158	<0.76	8.5	56,800	420	<8.4	<2.1	8.7	<0.060
MW-20		09/18/14	<7.2	443	2.4	31.5	93,700	992	<4.8	<1.8	26.4	<0.060
MW-20		03/12/15	<7.2	63.3	0.42	1.5	21,900	365	<4.8	<1.8	0.23	<0.050
MW-20		09/14/15	<7.0	203	0.61	2.1	41,600	811	11.9	<1.4	<0.13	<0.050
MW-20		03/11/16	<7.8	146	0.83	<2.0	557	10.0	<8.2	<1.8	0.39	<0.050
MW-20		09/09/16	<9.7	245	0.59	<1.8	33,900	678	<9.7	<1.9	<0.090	<0.050
MW-20		03/15/17	<9.7	87.6	0.76	<1.8	29,900	430	<9.7	<1.9	3.4	<0.050
MW-20		09/09/17	<9.6	279	<1.8	14.8	108,000	1,180	<9.3	<2.4	13.6	0.078

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		Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening	RBC	6,300	>S	130,000	9,400	--	3,000,000	--	1,100,000	>S	>S
Levels	SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**										
MW-20	03/14/18	<9.6	44.9	<1.8	<3.3	9,940	219	<9.3	<2.4	0.20	<0.050
MW-20	09/06/18	<16.0	175	<1.0	<5.3	46,600	757	<21.0	<5.0	3.2	<0.050
MW-20	3/13/2019	<16.0	87.1	<1.0	<5.3	17,400	348	<21.0	<5.0	<1.1	<0.050
MW-21	06/21/07	56.4	1,510	<0.90	--	247,000	2,530	9.7	15.9	116	1.1
MW-21	09/24/07	19.9	799	6.7	--	161,000	1,340	<9.4	<1.6	52.1	0.22
MW-21	12/13/07	NOT SAMPLED DUE TO INACCESIBILITY									
MW-21	03/05/08	<10	157	2.0	<2.3	57,000	1,190	<9.4	<1.6	2.9	<0.056
MW-21	06/04/08	<10.2	85.8	<2	3.8	25,600	348	<10.7	<2.2	4.9	<0.056
MW-21	09/11/08	<10.2	142	<2	<3	90,000	1,080	<10.7	<2.2	5	<0.056
MW-21	12/10/08	<10	157	<2	<3	11,200	154	<10.7	<2.2	11.5	<0.056
MW-21	03/12/09	12.2	130	2.1	3.5	51,400	306	<10.7	<2.2	4.6	<0.056
MW-21	06/09-11/09	<7.2	95.1	<2.0	6.4	85,700	202	<8.9	<2.3	8.1	0.081
MW-21	09/09-11/09	<7.2	339	2.3	<3.4	162,000	1,780	<8.9	<2.3	9.1	0.13
MW-21	12/07-09/09	INACCESSIBLE									
MW-21	03/09-11/10	<7.2	202	3.0	4.8	63,200	1,160	<8.9	3.3	3.8	<0.056
MW-21	06/09-11/10	10.8	95.0	<2.0	8.2	134,000	453	<8.9	<2.3	10.4	0.14
MW-21	09/09/10	22.7	435.0	<2.0	24.8	186,000	1,290	15.70	<2.3	18.0	<0.056
MW-21	03/08/11	NO LONGER INCLUDED IN ROUTINE SAMPLING EVENTS									
MW-22	06/20/07	34.1	816	6.9	--	191,000	2,530	11.5	11.2	147	0.64
MW-22	09/24/07	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-22	12/13/07	--	--	--	--	--	--	--	--	--	--
MW-22	03/05/08	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-22	06/04/08										
MW-22	09/11/08										
MW-22	12/10/08										
MW-22	03/12/09										
MW-22	06/09-11/09										
MW-22	09/09-11/09										
MW-22	12/07-09/09										
MW-22	03/09-11/10										
MW-22	06/09-11/10	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-22	09/09/10										
MW-22	03/08/11										

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			Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening	RBC		6,300	>S	130,000	9,400	--	3,000,000	--	1,100,000	>S	>S
Levels	SLV		150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID		**Date**										
MW-22		09/14/11										
MW-22		03/08/12										
MW-22		09/11/12										
MW-22		03/13/13										
MW-22		09/11/13										
MW-22		02/14/14										
MW-22		09/18/14	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-22		03/12/15	<7.2	30.1	0.93	<1.3	2,930	106	<4.8	<1.8	0.28	<0.050
MW-22		09/14/15	<7.0	97.3	2.1	1.6	6,120	207	<8.2	<1.4	0.26	<0.050
MW-22		03/11/16	8.5	51.7	3.8	2.7	4,880	60.6	< 8.2	< 1.8	13.2	< 0.050
MW-22		09/09/16	<9.7	135	130.0	7.9	16,300	364	<9.7	<1.9	17.8	<0.050
MW-22	(D)	09/09/16	<9.7	110	44.0	2.6	10,800	348	<9.7	<1.9	6.4	<0.050
MW-22		03/15/17	<9.7	72.2	116	10	20,000	120	<9.7	<1.9	45.1	0.096
MW-22	(D)	03/15/17	<9.7	57.9	61.0	8.6	16,800	114	<9.7	<1.9	18.3	0.064
MW-22		09/09/17	16	343.0	712.0	16	25,500	223	<9.3	<2.4	70	0.11
MW-22		03/14/18	<9.6	68.7	204	3.3	12,300	67.4	<9.3	<2.4	44.3	<0.050
MW-22		09/07/18	<16.0	33.2	<1.0	<5.3	3,860	98	<21.0	<5.0	<1.1	<0.050
MW-22		3/13/2019	<16.0	41.2	2.4 J	<5.3	1,390	31.7	<21.0	<5.0	<1.1	<0.050
MW-22	(D)	3/13/2019	<16.0	42.3	3.0 J	<5.3	1,670	35	<21.0	<5.0	<1.1	<0.050
MW-23		06/20/07	39.1	364	<0.90	--	102,000	637	<9.4	7.5	2,340	1.3
MW-23		09/24/07	40.1	58.2	<0.90	--	12,200	101	<9.4	<1.6	430	0.13
MW-23		12/13/07	--	--	--	--	--	--	--	--	--	--
MW-23		03/05/08	10.2	73.0	7.4	4.8	5,940	114	<9.4	<1.6	158	<0.056
MW-23		06/03/08	19.9	119.0	<2	12.7	22,400	276	<10.7	<2.2	825	0.13
MW-23		06/09-11/09	21.8	43.6	2.7	5.7	11,800	129	<8.9	<2.3	233	0.14
MW-23		09/11/08	<10.2	100	<2	12.6	14,000	129	<10.7	<2.2	244	<0.056
MW-23		12/10/08	20.1	72.4	<2	9.9	8,420	104	<10.7	<2.2	108	0.061
MW-23		03/12/09	23.3	65.1	<2	10.1	14,300	146	<10.7	<2.2	295	0.12
MW-23		06/09-11/09	21.8	43.6	2.7	5.7	11,800	129	<8.9	<2.3	233	0.14

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Proposed Screening	RBC	6,300	>S	130,000	9,400	--	3,000,000	--	1,100,000	>S	>S
Levels	SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**										
MW-23	09/09-11/09										
MW-23	12/07-09/09										
MW-23	03/09-11/10				NOT SAMPLED DUE TO THE PRESENCE OF SHEEN						
MW-23	06/09-11/10										
MW-23	09/09/10										
MW-23	03/08/11				NO LONGER INCLUDED IN ROUTINE SAMPLING EVENTS						
MW-24	06/20/07	25.4	473	<0.90	--	127,000	994	<9.4	7.5	54.6	<0.56
MW-24	09/24/07	--	--	--	--	--	--	--	--	--	--
MW-24	12/13/07	--	--	--	--	--	--	--	--	--	--
MW-24	03/05/08										
MW-24	06/03/08				NOT SAMPLED DUE TO THE PRESENCE OF SPH						
MW-24	09/11/08	--	--	--	--	--	--	--	--	--	--
MW-24	12/10/08	--	--	--	--	--	--	--	--	--	--
MW-24	03/12/09	--	--	--	--	--	--	--	--	--	--
MW-24	06/09-11/09										
MW-24	09/09-11/09										
MW-24	12/07-09/09										
MW-24	03/09-11/10										
MW-24	06/09-11/10										
MW-24	09/09/10				NOT SAMPLED DUE TO THE PRESENCE OF SPH						
MW-24	03/08/11										
MW-24	09/14/11										
MW-24	03/08/12										
MW-24	09/11/12										
MW-24	03/13/13										
MW-24	09/11/13				NOT SAMPLED DUE TO THE PRESENCE OF SHEEN						
MW-24	02/14/14										
MW-24	09/18/14				NOT SAMPLED DUE TO THE PRESENCE OF SPH						
MW-24	03/12/15										
MW-24	09/14/15	<7.0	185	0.30	1.6	21,800	75.9	<8.2	<1.4	2.0	<0.050
MW-24	09/09/16										
MW-24	03/15/17				NOT SAMPLED DUE TO THE PRESENCE OF SPH						
MW-24	09/09/17	11.9	140	<1.8	12.6	49,600	144	<9.3	<2.4	26.5	0.15
MW-24	03/14/18	<9.6	21.4	<1.8	<3.3	988	9.3	<9.3	<2.4	2.0	<0.050

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			Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening	RBC		6,300	>S	130,000	9,400	--	3,000,000	--	1,100,000	>S	>S
Levels	SLV		150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID		**Date**										
MW-24		09/06/18	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-24		3/13/2019	<16.0	38.3	<1.0	<5.3	1,930	11.1 J	<21.0	<5.0	1.8 J	<0.050
MW-25		06/21/07	<10.0	626	2.8	--	122,000	1,710	<9.4	<1.6	47.7	<0.56
MW-25	(D)	06/21/07	<10.0	516	2.3	--	110,000	1,550	<9.4	<1.6	68.5	<0.56
MW-25		09/24/07	<10.0	289	<0.90	--	75,900	1,030	<9.4	<1.6	15.3	<0.056
MW-25		12/13/07	--	--	--	--	--	--	--	--	--	--
MW-25		03/05/08	<10.0	262	1.7	<2.3	76,300	1,570	<9.4	<1.6	0.52	<0.056
MW-25		06/03/08	--	--	--	--	--	--	--	--	--	--
MW-25		09/11/08	<10.2	175	<2	<3	54,900	1,020	<10.7	<2.2	0.24	<0.056
MW-25		12/10/08	<10.0	221	<2	<3	61,600	1,360	<10.7	<2.2	0.33	<0.056
MW-25		03/12/09	<10.0	321	2.7	<3	86,300	1,460	<10.7	<2.2	0.42	<0.056
MW-25		06/09-11/09	<7.2	137	<2.0	<3.4	42,300	883	<8.9	<2.3	0.59	<0.056
MW-25		09/09-11/09	<7.2	192	<2.0	<3.4	52,400	1,080	<8.9	<2.3	1.2	<0.056
MW-25		12/07-09/09	<7.2	182	<2.0	<3.4	73,900	993	<8.9	<2.3	1.1	<0.056
MW-25		03/09-11/10	<7.2	154	2.4	<3.4	79,100	1,070	<8.9	3.2	1.4	<0.056
MW-25		06/09-11/10	<9.8	169	<2.0	<3.4	90,900	758	<8.9	<2.3	1.3	<0.056
MW-25		09/09/10	<9.8	307	<2.0	<3.4	89,000	1,440	<8.9	<2.3	1.7	<0.056
MW-25		03/08/11	<9.8	186	<2.0	<3.4	95,100	1,450	<8.9	<2.3	1.8	<0.050
MW-25	(D)	03/08/11	<9.8	178	<2.0	<3.4	84,900	1,450	<8.9	<2.3	1.3	<0.050
MW-25		09/14/11	7.8	297	3.3	2.5	97,000	1,210	7	<0.91	2	0.088
MW-25	(D)	09/14/11	7.9	248	3.1	2	85,400	1,180	<6.9	<0.91	1.40	0.080
MW-25		3/8/2012	14.5	287	2.5	3.3	83,400	1,030	15.0	1.4	2.5	<0.026
MW-25		9/12/2012	<6.8	372	4.1	3.8	117,000	1,010	<7.5	<1.2	3.7	<0.070
MW-25		3/14/2013	<6.8	138	1.2	3.1	53,500	695	<7.5	<1.2	3.3	0.45
MW-25		9/12/2013	19.5	148	<0.76	4.2	89,900	701	<8.4	<2.1	3.3	<0.060
MW-25		02/14/14	<6.8	125	<0.76	<1.6	38,500	829	<8.4	<2.1	1.1	<0.060
MW-25	(D)	02/14/14	<6.8	116	<0.76	2.1	39,600	842	<8.4	<2.1	1.6	<0.060
MW-25		09/18/14	<7.2	299	2.4	11	102,000	802	<4.8	<1.8	6.7	<0.060
MW-25	(D)	09/18/14	<7.2	215	1.6	6.9	78,700	748	<4.8	<1.8	4	<0.060
MW-25		3/12/2015	<7.2	129	0.95	<1.3	47,000	983	<4.8	<1.8	<0.082	<0.050
MW-25		9/14/2015	<7.0	180	1.4	5.2	54,600	781	14.0	<1.4	1.3	<0.050
MW-25	(D)	9/14/2015	<7.0	123	0.58	1.5	36,500	751	9.6	<1.4	0.74	<0.050
MW-25		3/10/2016	<7.8	98	<0.64	3.0	32,000	64.8	<8.2	<1.8	3.1	<0.050

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Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

		Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening Levels	RBC	6,300	>S	130,000	9,400	--	3,000,000	--	1,100,000	>S	>S
	SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**										
MW-25	9/9/2016	<9.7	126	0.98	<1.8	42,300	965	<9.7	<1.9	0.2	<0.050
MW-25	3/15/2017	NO LONGER INCLUDED IN ROUTINE SAMPLING EVENTS									

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Table 4
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EXPLANATIONS:

(µg/L) = Micrograms per liter
-- = Not Measured/Not Analyzed
>S = RBC exceeds solubility limit
(D) = Duplicate
RBC = Risk Based Concentration for construction and excavation workers exposed to groundwater in an open excavation, which are provided in Appendix A to the Oregon Department of Environmental Quality document titled "Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites" (DEQ, September 22, 2003, last updated May 2018).
SLV = Screening Level Values for a Level II Screening Ecological Risk Assessment for aquatic receptors in fresh water, which are provided in Table 1 of the Oregon Department of Environmental Quality document titled "Guidance for Ecological Risk Assessment: Levels I, II, III, and IV" (DEQ, April 1998, last updated December 2001).

[1] Monitoring wells MW-6 and MW-12 were previously designated W-6 and W-12, respectively.
[2] Matrix spike and duplicate matrix spike samples were collected from this well. Please refer to lab sheets for results.

Starting 1Q 2011, wells MW-14, MW-17, MW-21 and MW-23 were removed from monitoring.
Starting 3Q 2016, well MW-6 was removed from monitoring

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Table 5
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		Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening Level	RBC	6,300	>S	130,000	9,400	--	3,000,000	--	1,100,000	>S	>S
	SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**										
DM-4	08/26/04	58.7	166	<1.00	<1.00	--	--	1.09	<1.00	<1.00	<0.200
DM-4	11/09/04	4.7	157	<1.00	1.08	--	--	1.01	<1.00	<1.00	<0.200
DM-4	02/02/05	32.0	126	<1.00	<1.00	--	--	<2.00	<1.00	<1.00	<0.200
DM-4 (D)	02/02/05	32.6	128	<1.00	<1.00	--	--	<2.00	<1.00	<1.00	<0.200
DM-4	06/28/05	--	--	--	--	--	--	--	--	--	--
DM-4	09/27/05	--	--	--	--	--	--	--	--	--	--
DM-4	12/20/05	--	--	--	--	--	--	--	--	--	--
DM-4	03/21/06	--	--	--	--	--	--	--	--	--	--
DM-4	06/23/06	25.9	145	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056
DM-4	09/21/06	21.0	143	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056
DM-4	12/20/06	26.1	144	<0.91	<2.3	--	--	<9.4	<1.6	0.44	<0.056
DM-4	02/27/07	18.7	141	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056
DM-4	06/14/07	27.6	152	<0.90	<2.3	--	--	<9.4	<1.6	1.7	<0.056
DM-4	09/25/07	48.2	200	<0.90	<2.3	--	--	<9.4	<1.6	1.1	<0.056
DM-4	12/13/07	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
DM-4	03/05/08	18.7	121	1.1	<2.3	22,200	697	<9.4	<1.6	0.18	<0.056
DM-4	06/03/08	<10.2	130	<2	<3	22,000	706	<10.7	<2.2	0.05	<0.056
DM-4	09/11/08	17.9	134	<2	<3	17,300	651	<10.7	<2.2	0.13	<0.056
DM-4	12/11/08	13.3	142	<2	<3	19,700	751	<10.7	<2.2	0.081	<0.056
DM-4	03/11/09										
DM-4	06/09-11/09										
DM-4	09/09-11/09										
DM-4	12/07-09/09										
DM-4	03/09-11/10										
DM-4	06/09-11/10	NOT SAMPLED DUE TO HIGH LEVELS OF METHANE GAS									
DM-4	09/09/10										
DM-4	03/08/11										
DM-4	09/14/11										
DM-4	03/08/12										
DM-4	09/11/12										
DM-4	03/13/13										
DM-4	09/13/13	11.6	124	<0.76	<1.6	22,000	821	<8.4	<2.1	0.29	<0.060
DM-4		WELL ABANDONED NOVEMBER 2013									
DM-5	08/26/04	4.28	369	<1.00	1.40	--	--	3.48	<1.00	<1.00	<0.200

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		Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening Level	RBC	6,300	>S	130,000	9,400	--	3,000,000	--	1,100,000	>S	>S
	SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**										
DM-5	11/09/04	8.23	393	<1.00	1.23	--	--	2.62	<1.00	<1.00	<0.200
DM-5	02/02/05	8.80	356	<1.00	<1.00	--	--	3.01	<1.00	<1.00	<0.200
DM-5	06/28/05	--	--	--	--	--	--	--	--	--	--
DM-5	09/27/05	--	--	--	--	--	--	--	--	--	--
DM-5	12/20/05	--	--	--	--	--	--	--	--	--	--
DM-5	03/21/06	--	--	--	--	--	--	--	--	--	--
DM-5	06/23/06	<10	368	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056
DM-5	09/21/06	<10	268	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056
DM-5	12/19/06	<10	369	1.8	<2.3	--	--	<9.4	<1.6	0.18	<0.056
DM-5	02/27/07	10.6	388	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056
DM-5	06/14/07	<10	414	<0.90	<2.3	--	--	<9.4	2	0.17	<0.056
DM-5	09/25/07	<10	360	4	<2.3	--	--	<9.4	<1.6	0.066	<0.056
DM-5	12/13/07										
DM-5	03/05/08				NOT SAMPLED DUE TO THE PRESENCE OF SHEEN						
DM-5	06/03/08										
DM-5	09/11/08										
DM-5	12/11/08										
DM-5	03/11/09										
DM-5	06/09-11/09										
DM-5	09/09-11/09										
DM-5	12/07-09/09										
DM-5	03/09-11/10										
DM-5	06/09-11/10				NOT SAMPLED DUE TO HIGH LEVELS OF METHANE GAS						
DM-5	09/09/10										
DM-5	03/08/11										
DM-5	09/14/11										
DM-5	03/08/12										
DM-5	09/11/12										
DM-5	03/13/13										
DM-5	09/13/13	<6.8	308	<0.76	1.7	88,900	797	<8.4	<2.1	0.29	<0.060
DM-5					WELL ABANDONED NOVEMBER 2013						
MW-3B	06/28/05	1.7	75	<1.00	<2.0	--	--	<2.0	<1.0	<1.0	<0.20
MW-3B (D)	06/28/05	1.1	78	<1.00	<2.0	--	--	<2.0	<1.0	<1.0	<0.20
MW-3B	09/27/05	2.88	112	<1.00	<1.00	--	--	<2.00	<1.00	<1.00	<0.20

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Proposed Screening Level	RBC	6,300	>S	130,000	9,400	--	3,000,000	--	1,100,000	>S	>S
	SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**										
MW-3B	12/21/05	--	--	--	--	--	--	--	--	--	--
MW-3B	03/21/06	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-3B	06/22/06										
MW-3B	09/20/06										
MW-3B	12/19/06										
MW-3B	02/27/07										
MW-3B	06/21/07										
MW-3B	09/25/07										
MW-3B	12/13/07										
MW-3B	03/05/08										
MW-3B	06/03/08										
MW-3B	09/11/08										
MW-3B	12/11/08										
MW-3B	03/11/09	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-3B	06/09-11/09										
MW-3B	09/09-11/09										
MW-3B	12/07-09/09										
MW-3B	03/09-11/10										
MW-3B	06/09-11/10										
MW-3B	09/09/10										
MW-3B	03/08/11										
MW-3B	09/14/11										
MW-3B	03/08/12										
MW-3B	09/11/12										
MW-3B	03/13/13	NOT SAMPLED DUE TO HIGH LEVELS OF METHANE GAS									

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		Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening Level	RBC	6,300	>S	130,000	9,400	--	3,000,000	--	1,100,000	>S	>S
	SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**										
MW-3B	09/11/13										
MW-3B	02/14/14										
MW-3B	09/18/14										
MW-3B	03/12/15										
MW-3B	09/09/16										
MW-3B	03/15/17	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-3B	09/09/17										
MW-3B	03/14/18										
MW-3B	09/06/18										
MW-3B	3/13/2019										
MW-4B	06/28/05	1.1	73	<1.0	<2.0	--	--	2.3	<1.0	<1.0	<0.2
MW-4B	09/27/05	2.63	151	<1.0	<1.00	--	--	<2.0	<1.00	<1.00	<0.2
MW-4B	12/21/05	<1.00	61.7	<1.00	<1.00	--	--	<2.0	<1.00	<1.00	<0.2
MW-4B	03/21/06	2.51	48.1	<1.00	5.98	--	--	<2.0	<1.00	<1.00	<0.2
MW-4B (D)	03/21/06	1.93	46.5	<1.00	<1.00	--	--	<2.0	<1.00	<1.00	<0.2
MW-4B	06/22/06	<10	46	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	0.061
MW-4B (D)	06/22/06	<10	55.6	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056
MW-4B	09/20/06	<10	141	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056
MW-4B (D)	09/20/06	<10	143	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056
MW-4B	12/19/06	<10	65.1	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056
MW-4B (D)	12/19/06	<10	60.5	<0.91	<2.3	--	--	<9.4	<1.6	0.16	<0.056
MW-4B	02/27/07	<10	64.7	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056
MW-4B (D)	02/27/07	<10	61.1	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056
MW-4B	06/14/07	<10	54.1	<0.90	<2.3	--	--	<9.4	<1.6	0.17	<0.056
MW-4B (D)	06/14/07	<10	59	<0.90	<2.3	--	--	<9.4	<1.6	<0.047	<0.056
MW-4B	09/25/07	10	107	1.2	<2.3	--	--	<9.4	<1.6	<0.047	<0.056
MW-4B (D)	09/25/07	<10.0	110	<0.90	<2.3	--	--	<9.4	<1.6	0.094	<0.056
MW-4B	12/13/07	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-4B	03/05/08	<10	31.9	1.3	5.6	10,700	276	<9.4	<1.6	0.054	<0.056
MW-4B (D)	03/05/08	<10	31.8	0.99	<2.3	11,200	284	<9.4	<1.6	0.052	<0.056
MW-4B	06/03/08	<10.2	62.2	<2	<3	14,500	417	<10.7	<2.2	<0.050	<0.056
MW-4B	09/10/08	<10.2	73.4	<2	<3	29,500	743	<10.7	<2.2	0.33	<0.056
MW-4B	12/11/08	<10	37.5	<2	<3	10,400	267	<10.7	<2.2	0.11	<0.056
MW-4B	03/11/09	<10	41.7	<2	<3	16,300	407	<10.7	<2.2	0.26	<0.056

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Proposed Screening Level		RBC	6,300	>S	130,000	9,400	--	3,000,000	--	1,100,000	>S	>S
		SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID		**Date**										
MW-4B	(D)	03/12/09	<10	40.2	<2	<3	16,100	403	<10.7	<2.2	0.14	<0.056
MW-4B		06/09-11/09	<7.2	32.5	<2.0	<3.4	16,400	293	<8.9	<2.3	0.20	<0.056
MW-4B		09/09-11/09	<7.2	80.6	<2.0	<3.4	28,700	719	<8.9	<2.3	0.084	<0.056
MW-4B		12/07-09/09	<7.2	41.0	<2.0	<3.4	21,200	364	<8.9	<2.3	<0.050	<0.056
MW-4B		03/09-11/10	<7.2	63.2	<2.0	4.3	27,200	562	<8.9	<2.3	0.088	<0.056
MW-4B		06/09-11/10	<9.8	36.4	<2.0	<3.4	14,700	285	<8.9	<2.3	0.12	<0.056
MW-4B		09/09/10	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-4B		03/10/11	<9.8	22.0	<2.0	<3.4	10,100	202	<8.9	<2.3	0.079	<0.050
MW-4B		09/14/11	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-4B		03/08/12	<5.1	18.8	0.37	<1.1	8,900	196	<6.9	<0.91	0.13	0.057
MW-4B		09/12/12	<6.8	42.1	<0.36	1.4	19,500	479	<7.5	<1.2	0.045	<0.070
MW-4B		03/13/13	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-4B		09/11/13										
MW-4B		02/14/14	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-4B		09/18/14										
MW-4B		03/12/15	<7.2	24.1	<0.33	<1.3	15,400	234	<4.8	<1.8	<0.082	<0.050
MW-4B		09/15/15	--	--	--	--	--	--	--	--	--	--
MW-4B		03/11/16	<7.8	23.4	<0.64	<2.0	244	16	<8.2	<1.8	<0.65	<0.050
MW-4B	(D)	03/11/16	<7.8	22.7	<0.64	<2.0	319	19	<8.2	<1.8	<0.65	<0.050
MW-4B		09/09/16	<9.7	67.7	0.55	1.8	21,700	401	<9.7	<1.9	<0.090	<0.050
MW-4B		03/15/17	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-4B		09/09/17	<9.6	166	<1.8	<3.3	33,000	614	<9.3	<2.4	<0.11	<0.050
MW-4B	(D)	09/09/17	<9.6	164	<1.8	<3.3	30,600	599	9.4	<2.4	<0.11	<0.050
MW-4B		03/14/18	<9.6	20.8	<1.8	<3.3	8,520	165	<9.3	<2.4	<0.11	<0.050
MW-4B		09/06/18	<16.0	104	<1.0	<5.3	36,600	672	<21.0	<5.0	<1.1	<0.050
MW-4B	(D)	09/06/18	<16.0	98.7	<1.0	<5.3	35,900	641	<21.0	<5.0	<1.1	<0.050
MW-4B		3/13/2019	<16.0	42.6	<1.0	<5.3	16,400	304	<21.0	<5.0	<1.1	<0.050
MW-6[1]		08/26/04	2.73	69.7	<1.00	<1.00	--	--	11.9	<1.00	<1.00	<0.200
MW-6[1]	(D)	08/26/04	2.17	68.1	<1.00	<1.00	--	--	12.1	<1.00	<1.00	<0.200
MW-6[1]		11/09/04	2.1	68.4	<1.00	<1.00	--	--	12.2	<1.00	<1.00	<0.200
MW-6[1]		02/02/05	3.42	38.6	<1.00	<1.00	--	--	12.4	<1.00	<1.00	<0.200
MW-6[1]		06/28/05	<1.00	26	<1.0	<2.0	--	--	5.3	<1.0	<1.0	<0.200
MW-6[1]		09/27/05	2.18	350	<1.00	<1.00	--	--	<2.00	<1.00	<1.00	<0.200
MW-6[1]		12/21/05	2.26	44.2	<1.00	<1.00	--	--	8.42	<1.00	<1.00	<0.200

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Proposed Screening Level		RBC	6,300	>S	130,000	9,400	--	3,000,000	--	1,100,000	>S	>S
		SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID		**Date**										
MW-6[1]	(D)	12/21/05	1.66	44.8	<1.00	<1.00	--	--	8.55	<1.00	<1.00	<0.200
MW-6[1]		03/21/06	1.11	27.3	<1.00	2.83	--	--	<2.00	<1.00	<1.00	4.66
MW-6[1]		06/22/06	<0.01	8.1	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	0.073
MW-6[1]		09/20/06	<10	124	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056
MW-6[1]		12/19/06	<10	22.5	<0.91	<2.3	--	--	<9.4	<1.6	0.090	<0.056
MW-6[1]		02/27/07	<10	3.4	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056
MW-6[1]		06/14/07	NOT SAMPLED DUE TO INACCESIBILITY									
MW-6[1]		09/25/07	<10.0	90.9	<0.90	<2.3	--	--	<9.4	<1.6	0.12	<0.056
MW-6[1]		12/13/07	<10	41.6	<0.9	<2.3	4,140	--	<9.4	<1.6	0.047	<0.056
MW-6[1]		03/05/08	<10	17.3	1.0	<2.3	<52.2	<.84	<9.4	<1.6	<.050	<0.056
MW-6[1]		06/03/08	<10.2	8.4	<2	12.7	108	276	<10.7	<2.2	<.050	<0.056
MW-6[1]		09/10/08	<10.2	65.9	<2	<3	7,100	1,930	<10.7	<2.2	0.33	<0.056
MW-6[1]		12/11/08	<10	3.2	<2	<3	790	238	<10.7	<2.2	0.11	<0.056
MW-6[1]		03/12/09	<10	8.6	<2	<3	470	136	<10.7	<2.2	0.5	<0.056
MW-6[1]		06/09-11/09	<7.2	6.3	<2.0	<3.4	2,450	338	<8.9	<2.3	0.32	<0.056
MW-6[1]		09/09-11/09	<7.2	32.4	<2.0	<3.4	2,880	336	<8.9	<2.3	0.12	0.059
MW-6[1]		12/07-09/09	<7.2	13.6	<2.0	<3.4	1,380	159	<8.9	<2.3	<0.050	<0.056
MW-6[1]		03/09-11/10	<7.2	8.5	<2.0	3.4	826	81.3	<8.9	<2.3	0.12	<0.056
MW-6[1]	(D)	03/09-11/10	<7.2	9.5	<2.0	<3.4	1,510	126	<8.9	<2.3	0.31	<0.056
MW-6[1]		06/09-11/10	<9.8	4.7	<2.0	<3.4	486	95.1	<8.9	<2.3	0.16	<0.056
MW-6[1]		09/09/10	<9.8	28.2	<2.0	<3.4	<52.2	246	<8.9	<2.3	0.054	<0.056
MW-6[1]		03/09/11	<9.8	4.1	<2.0	<3.4	143	6.1	<8.9	<2.3	0.19	<0.050
MW-6[1]		09/14/11	<5.1	39.6	<0.27	<1.1	19.6	46.7	<6.9	<0.91	<0.080	0.048
MW-6[1]		03/08/12	<5.1	7.3	<0.27	<1.1	1,460	88.6	<6.9	<0.91	0.82	0.071
MW-6[1]		09/11/12	<6.8	7.8	<0.36	<1.1	38.4	180	<7.5	<1.2	0.038	<0.070
MW-6[1]		03/14/13	<6.8	8.7	<0.36	<1.1	1,080	80.3	<7.5	<1.2	1.0	<0.070
MW-6[1]	(D)	03/14/13	<6.8	20.4	<0.36	<1.1	777	51.5	<7.5	<1.2	0.79	<0.070
MW-6[1]		09/12/13	<6.8	60.3	<0.76	<1.6	25,400	556.0	<8.4	<2.1	<0.085	<0.060
MW-6[1]		02/14/14	<6.8	7.2	<0.76	<1.6	<43.0	2.5	<8.4	<2.1	<0.085	<0.060
MW-6[1]		09/18/14	<7.2	155	0.46	<1.3	<33.4	152	<4.8	<1.8	<0.082	<0.060
MW-6[1]		03/12/15	NOT SAMPLED DUE TO INACCESIBILITY									
MW-6[1]		03/11/16										
MW-12[1]		08/26/04	<1.00	43.0	<1.00	<1.0	--	--	<1.00	<1.00	<1.00	<0.200
MW-12[1]		11/09/04	<1.00	30.2	<1.00	<1.00	--	--	1.06	<1.00	<1.00	<0.200

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			Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening Level		RBC	6,300	>S	130,000	9,400	--	3,000,000	--	1,100,000	>S	>S
		SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**											
MW-12[1]	02/02/05		<1.00	24.1	<1.00	<1.00	--	--	<2.00	<1.00	<1.00	<0.200
MW-12[1]	06/28/05		<1.0	34.0	<1.0	<2.0	--	--	<2.0	<1.0	<1.0	<0.20
MW-12[1]	09/27/05		3.9	102.0	<1.00	<1.00	--	--	<2.00	<1.00	<1.00	<0.20
MW-12[1]	12/21/05		<1.00	27.7	<1.00	<1.00	--	--	<2.00	<1.00	<1.00	<0.200
MW-12[1]	03/21/06		<1.00	18.2	<1.00	<1.00	--	--	<2.00	<1.00	<1.00	<0.20
MW-12[1]	06/22/06		<10	36.2	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056
MW-12[1]	09/20/06		<10	49.3	<0.91	<2.3	--	--	<9.4	<1.6	0.77	<0.056
MW-12[1]	12/19/06		<10	20.7	<0.91	<2.3	--	--	<9.4	1.7	0.76	<0.056
MW-12[1]	02/27/07		<10	20.1	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056
MW-12[1]	06/14/07		<10	33.9	<0.90	<2.3	--	--	<9.4	<1.6	0.83	<0.056
MW-12[1]	09/25/07		<10	96	<0.90	<2.3	--	--	<9.4	<1.6	0.42	<0.056
MW-12[1]	12/12/07		<10	25.5	<0.9	<2.3	8,930	--	<9.4	<1.6	0.51	<0.056
MW-12[1]	03/05/08		<10	20.6	<.90	<2.3	10,700	280	<9.4	<1.6	0.66	<0.056
MW-12[1]	06/03/08		<10.2	30.7	<2	<3	8,300	288	<10.7	<2.2	0.53	<0.056
MW-12[1]	09/10/08		<10.2	92.6	<2	<3	40,500	830	<10.7	<2.2	0.77	0.58
MW-12[1]	12/11/08		<10	53.3	<2	<3	16,600	442	<10.7	<2.2	0.47	<0.056
MW-12[1]	03/11/09		<10	21.3	<2	<3	10,700	273	<10.7	<2.2	1.1	<0.056
MW-12[1]	06/09-11/09		<7.2	27.6	<2.0	<3.4	11,400	314	<8.9	<2.3	0.63	<0.056
MW-12[1]	09/09-11/09		<7.2	66.5	<2.0	<3.4	31,200	662	<8.9	<2.3	2.2	<0.056
MW-12[1]	12/07-09/09		<7.2	26.8	<2.0	<3.4	12,200	284	<8.9	<2.3	1.1	<0.056
MW-12[1]	(D) 12/07-09/09		<7.2	24.2	<2.0	<3.4	13,000	285	<8.9	<2.3	0.55	<0.056
MW-12[1]	03/09-11/10		<7.2	18.8	<2.0	4.2	9,960	258	<8.9	<2.3	0.66	<0.056
MW-12[1]	06/09-11/10		<9.8	29.9	<2.0	<3.4	12,100	300	<8.9	<2.3	2.3	<0.056
MW-12[1]	09/09/10		NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-12[1]	03/09/11		<9.8	23.5	<2.0	<3.4	11,400	275	<8.9	<2.3	0.8	<0.050
MW-12[1]	09/14/11		7.2	176	2.3	2.1	69,200	1,550	<6.9	<0.91	1.2	0.058
MW-12[1]	03/08/12		NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-12[1]	09/12/12		<6.8	102	1.1	1.6	55,300	1,100	<7.5	<1.2	0.29	<0.070
MW-12[1]	03/13/13		NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-12[1]	09/12/13		<6.8	60.3	<0.76	<1.6	25,400	556	<8.4	<2.1	0.66	<0.060
MW-12[1]	02/14/14		<6.8	25.2	<0.76	<1.6	865	170	<8.4	<2.1	0.32	<0.060
MW-12[1]	09/18/14		<7.2	54.7	<0.33	<1.3	28500	549	5.2	<1.8	0.3	<0.060
MW-12[1]	03/12/15		<7.2	18.8	0.41	<1.3	12,400	231	7.4	<1.8	0.30	<0.050
MW-12[1]	09/14/2015		<7.0	50.3	0.62	<1.5	36400	635	<8.2	<1.4	0.59	<0.050
MW-12[1]	03/11/16		<7.8	23.5	<0.64	<2.0	680	32.1	<8.2	<1.8	<0.65	<0.050

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			Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening Level		RBC	6,300	>S	130,000	9,400	--	3,000,000	--	1,100,000	>S	>S
		SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**											
MW-12[1]	09/09/16		<9.7	41.5	<0.49	<1.8	14,000	405	<9.7	<1.9	0.47	<0.050
MW-12[1]	03/15/17		<9.7	14.4	<0.49	<1.8	2,900	98.5	<9.7	<1.9	0.32	<0.050
MW-12[1]	09/09/17		<9.6	148	<1.8	<3.3	77,800	1,340	9.5	<2.4	0.15	<0.050
MW-12[1]	03/14/18		<9.6	18.1	<1.8	<3.3	9,830	219	<9.3	<2.4	0.31	<0.050
MW-12[1]	03/14/18	(D)	<9.6	18.0	<1.8	<3.3	9,720	222	<9.3	<2.4	0.27	<0.050
MW-12[1]	09/06/18		<16.0	132	<1.0	<5.3	62,100	1,090	<21.0	<5.0	<1.1	<0.050
MW-12	3/13/2019		<16.0	22.3	<1.0	<5.3	4,100	205	<21.0	<5.0	<1.1	<0.050
MW-14	06/28/05		<1.0	37	<1.0	<2.0	--	--	<2.0	<1.0	<1.0	<0.20
MW-14	09/27/05		1.56	281	<1.00	<1.00	--	--	<2.00	<1.00	<1.00	<0.20
MW-14	12/20/05		<1.00	19.3	<1.00	<1.00	--	--	<2.00	<1.00	<1.00	<0.20
MW-14	03/21/06		<1.00	40.2	<1.00	<1.00	--	--	<2.00	<1.00	<1.00	<0.20
MW-14	06/22/06		<10	0.2	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056
MW-14	09/21/06		<10	263	<0.91	<2.3	--	--	<9.4	<1.6	0.73	<0.056
MW-14	12/19/06		<10	77.4	<0.91	<2.3	--	--	<9.4	<1.6	0.055	<0.056
MW-14	02/27/07		<10	35.9	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056
MW-14	06/14/07		<10	14.6	<0.90	<2.3	--	--	<9.4	<1.6	0.18	<0.056
MW-14	09/25/07		<10	130	1.3	<2.3	--	--	<9.4	<1.6	0.19	<0.056
MW-14	12/13/07		<10	87.2	<0.9	<2.3	13,500	--	<9.4	<1.6	<0.05	<0.056
MW-14	03/05/08		<10	29.7	<0.9	<2.3	5,460	299	<9.4	<1.6	0.085	<.066
MW-14	06/04/08		<10.2	20	<2	<3	176	37.3	<10.7	2.2	<0.050	<0.056
MW-14	09/11/08		<10.2	38.3	<2	<3	12,400	528	<10.7	<2.2	0.41	<0.056
MW-14	12/10/08		<10	61.8	<2	<3	2,540	181	<10.7	<2.2	0.08	<0.056
MW-14	03/12/09		<10	41.9	<2	<3	3,680	222	<10.7	<2.2	0.35	<0.056
MW-14	06/09-11/09		<7.2	18.2	<2.0	<3.4	2,130	111	<8.9	<2.3	0.16	<0.056
MW-14	09/09-11/09		<7.2	186	<2.0	<3.4	27,800	972	<8.9	<2.3	0.087	0.061
MW-14	12/07-09/09		<7.2	163	<2.0	<3.4	34,700	469	<8.9	<2.3	0.41	<0.056
MW-14	03/09-11/10		<7.2	78.9	<2.0	<3.4	10,800	439	<8.9	<2.3	0.12	<0.056
MW-14	06/09-11/10		<9.8	39.5	<2.0	<3.4	3,450	178	<8.9	<2.3	0.065	<0.056
MW-14	09/09/10		<9.8	119	<2.0	<3.4	9,560	442	<8.9	<2.3	0.093	<0.056
MW-14	09/09/10	(D)	<9.8	116	<2.0	<3.4	9,990	466	<8.9	<2.3	0.120	<0.056
MW-14	03/08/11		NO LONGER INCLUDED IN ROUTINE SAMPLING EVENTS									
MW-15	06/28/05		<1.0	120	<1.0	<2.0	--	--	3.5	<1.0	<1.0	<0.20
MW-15	09/27/05		2.64	332	<1.00	<1.00	--	--	<2.00	<1.00	<1.00	<0.20

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Proposed Screening Level	RBC	6,300	>S	130,000	9,400	--	3,000,000	--	1,100,000	>S	>S
	SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**										
MW-15	12/20/05	2.91	250	<1.00	<1.00	--	--	7.05	<1.00	<1.00	<0.20
MW-15	03/21/06	1.41	156	<1.00	<1.00	--	--	<2.00	<1.00	<1.00	5.61
MW-15	06/22/06	<10	130	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056
MW-15	09/21/06	<10	348	<0.91	<2.3	--	--	<9.4	<1.6	1.6	<0.056
MW-15	12/19/06	<10	280	<0.91	<2.3	--	--	<9.4	<1.6	0.16	<0.056
MW-15	02/27/07	<10	277	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056
MW-15	06/14/07	<10	97.4	<0.90	<2.3	--	--	<9.4	<1.6	0.13	<0.056
MW-15	09/25/07	<10	176	<0.90	<2.3	--	--	<9.4	<1.6	0.13	<0.056
MW-15	12/14/07	<10	333	<0.9	<2.3	56,600	--	<9.4	<1.6	0.047	<0.056
MW-15	(D) 12/14/07	<10	304	<0.9	<2.3	56,800	--	<9.4	<1.6	0.094	<0.056
MW-15	03/05/08	<10	190	<.90	<2.3	35,200	952	<9.4	<1.6	0.06	0.063
MW-15	06/04/08	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-15	09/11/08	<10.2	139	<2	<3	25,200	651	<10.7	<2.2	0.33	<0.056
MW-15	12/11/08	<10	235	<2	<3	39,200	1,040	<10.7	<2.2	0.071	<0.056
MW-15	03/12/09										
MW-15	06/09-11/09										
MW-15	09/09-11/09										
MW-15	12/07-09/09										
MW-15	03/09-11/10										
MW-15	06/09-11/10	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-15	09/09/10										
MW-15	03/08/11										
MW-15	09/14/11										
MW-15	03/08/12										
MW-15	09/11/12										
MW-15	03/13/13	NOT SAMPLED DUE TO HIGH LEVELS OF METHANE GAS									
MW-15	09/11/13										
MW-15	02/14/14										
MW-15	09/18/14	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-15	03/12/15										
MW-15	03/11/16	< 7.8	21	<0.64	<2.1	5,550	61	<8.2	<1.9	<0.65	<0.050
MW-15	09/09/16	<9.7	146	1.9	<1.8	24,400	643	<9.7	<1.9	<0.090	<0.050
MW-15	03/15/17	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-15	09/09/17	<9.6	152	<1.8	<3.3	26,000	626	<9.3	<2.4	0.21	<0.050
MW-15	03/14/18	<9.6	98.8	<1.8	<3.3	27,300	338	<9.3	<2.4	<0.11	<0.050

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Proposed Screening Level	RBC	6,300	>S	130,000	9,400	--	3,000,000	--	1,100,000	>S	>S
	SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**										
MW-15	09/07/18	<16.0	155	<1.0	<5.3	37,300	587	<21.0	<5.0	12.1	<0.050
MW-15	3/13/2019	<16.0	136	<1.0	<5.3	31,700	566	<21.0	<5.0	<1.1	<0.050
MW-16	06/28/05	<1.0	160	<1.0	<2.0	--	--	8.8	<1.0	<1.0	<0.20
MW-16	09/27/05	3.25	216	<1.00	<1.00	--	--	<2.00	<1.00	<1.00	<0.20
MW-16	12/21/05	1.75	130	<1.00	<1.00	--	--	9.72	<1.00	<1.00	<0.20
MW-16	03/21/06	2.4	146	<1.00	<1.00	--	--	<2.00	<1.00	<1.00	10.3
MW-16	06/22/06	<10	942	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056
MW-16	09/20/06	<10	244	<0.91	<2.3	--	--	<9.4	<1.6	1.3	<0.056
MW-16	12/19/06	<10	127	<0.91	<2.3	--	--	<9.4	<1.6	0.15	<0.056
MW-16	02/27/07	<10	59.5	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056
MW-16	06/14/07	<10	64	<0.90	<2.3	--	--	<9.4	<1.6	0.11	<0.056
MW-16	09/25/07	<10	88.1	1.5	<2.3	--	--	<9.4	<1.6	0.058	0.068
MW-16	12/12/07	<10	161	<0.9	<2.3	32,700	--	<9.4	<1.6	0.073	<0.056
MW-16	03/05/08	<10	92.2	<.050	2.8	42,800	2,020	<9.4	<1.6	0.96	<0.056
MW-16	06/03/08	<10.2	118	<2	<3	75,400	2,200	<10.7	<2.2	0.06	<0.056
MW-16	09/10/08	<10.2	227	3.6	<3	110,000	2,090	<10.7	3.8	0.26	<0.056
MW-16	12/09/08	<10	240	<2	<3	115,000	2,130	<10.7	<2.2	0.13	<0.056
MW-16	03/11/09	<10	220	<2	<3	111,000	2,160	<10.7	<2.2	0.19	<0.056
MW-16	06/09-11/09	<7.2	205	<2.0	<3.4	104,000	1,940	<8.9	<2.3	0.42	<0.056
MW-16	09/09-11/09	<7.2	167	2.7	<3.4	83,100	1,720	<8.9	<2.3	<0.050	<0.056
MW-16	12/07-09/09	<7.2	64.0	<2.0	<3.4	37,100	1,320	<8.9	<2.3	<0.050	<0.056
MW-16	03/09-11/10	<7.2	27.5	<2.0	<3.4	1,240	871	<8.9	<2.3	0.064	<0.056
MW-16	06/09-11/10	<9.8	47.9	<2.0	<3.4	4,510	441	<8.9	<2.3	0.14	<0.056
MW-16	(D) 06/09-11/10	<9.8	47.9	<2.0	<3.4	7,090	469	<8.9	<2.3	0.065	<0.056
MW-16	09/09/10	<9.8	153	4.6	<3.4	106,000	1,850	<8.9	4.1	1.1	<0.056
MW-16	03/10/11	<9.8	16	<2.0	<3.4	1,080	147	<8.9	<2.3	0.29	<0.050
MW-16	09/14/11	<5.1	10.5	0.35	<1.1	13,100	260	<6.9	<0.91	0.35	0.065
MW-16	03/08/12	<5.1	64.6	0.43	<1.1	6,940	672	<6.9	<0.91	0.085	0.065
MW-16	(D) 03/08/12	<5.1	64.9	0.32	<1.1	7,300	667	<6.9	<0.91	<0.080	0.065
MW-16	09/12/12	<6.8	7.5	<0.36	1.4	7,430	563	<7.5	<1.2	0.087	<0.070
MW-16	03/14/13	<6.8	11.4	<0.36	<1.1	1,550	288	<7.5	<1.2	0.11	0.071
MW-16	09/12/13	<6.8	13.0	<0.76	<1.6	18,300	471	<8.4	<2.1	<0.085	<0.060
MW-16	02/14/14	<6.8	19.6	<0.76	<1.6	3,730	790	<8.4	<2.1	<0.085	<0.060
MW-16	09/18/14	<7.2	13.7	<0.33	<1.3	22,100	555	6.3	<1.8	0.097	<0.060

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		Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening Level	RBC	6,300	>S	130,000	9,400	--	3,000,000	--	1,100,000	>S	>S
	SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**										
MW-16	03/12/15	<7.2	20.3	<0.33	<1.3	8,630	686	<4.8	<1.8	<0.082	<0.050
MW-16	09/14/2015	<7.0	227.0	0.66	2.3	50,600	1,220	12.6	<1.4	<0.13	<0.050
MW-16	03/11/16	<7.8	28.1	<0.64	<2.0	1,780	464	<8.2	<1.8	<0.65	<0.050
MW-16	09/09/16	<9.7	24.6	0.61	<1.8	21,900	451	9.9	<1.9	<0.090	<0.050
MW-16	03/15/17	NO LONGER INCLUDED IN ROUTINE SAMPLING EVENTS									
MW-17	06/28/05	<1.0	99	<1.0	<2.0	--	--	3.0	<1.0	<1.0	<0.20
MW-17 (D)	06/28/05	<1.0	100	<1.0	<2.0	--	--	2.9	<1.0	<1.0	<0.20
MW-17	09/27/05	1.18	134	<1.00	<1.00	--	--	<2.00	<1.00	<1.00	<0.20
MW-17	12/20/05	<1.00	31.8	<1.00	<1.00	--	--	2.52	<1.00	<1.00	<0.200
MW-17	03/21/06	<1.00	43.4	<1.00	<1.00	--	--	<2.00	<1.00	<1.00	<0.200
MW-17	06/22/06	<10	88.4	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056
MW-17	09/21/06	<10	116	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056
MW-17	12/19/06	<10	27.6	<0.91	<2.3	--	--	<9.4	<1.6	0.22	<0.056
MW-17	02/27/07	<10	14.6	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056
MW-17	06/14/07	<10	19.8	<0.90	<2.3	--	--	<9.4	<1.6	<0.047	<0.056
MW-17	09/25/07	<10	85.7	1	<2.3	--	--	<9.4	<1.6	0.12	0.34
MW-17	12/13/07	<10	49.4	<0.9	<2.3	5,090	--	<9.4	<1.6	0.073	<0.056
MW-17	03/05/08	<10	45.2	1.5	3.4	18,900	524	<9.4	<1.6	0.089	0.07
MW-17	06/04/08	<10.2	22.4	<2	<3	52.2	4.4	<10.7	<2.2	<0.050	<0.056
MW-17	09/11/08	<10.2	50	<2	<3	24,600	625	<10.7	<2.2	0.38	<0.056
MW-17 (D)	09/11/08	<10.2	51.7	<2	<3	25,700	659	<10.7	<2.2	0.37	<0.056
MW-17	12/10/08	<10	29.5	<2	<3	4,450	122	<10.7	<2.2	<0.050	<0.056
MW-17 (D)	12/10/08	<10	33.7	<2	<3	4,790	148	<10.7	<2.2	<0.050	<0.056
MW-17	3/12/09	<10	28.7	<2	<3	2,900	95.9	<10.7	<2.2	0.34	<0.056
MW-17	06/09-11/09	<7.2	58.4	<2.0	<3.4	26,700	673	<8.9	<2.3	0.21	<0.056
MW-17 (D)	06/09-11/09	<7.2	58.6	<2.0	<3.4	26,900	673	<8.9	<2.3	0.23	<0.056
MW-17	09/09-11/09	<7.2	120	<2.0	<3.4	41,100	1,110	<8.9	<2.3	0.061	<0.056
MW-17 (D)	09/09-11/09	<7.2	111	<2.0	<3.4	37,400	961	<8.9	<2.3	0.11	0.061
MW-17	12/07-09/09	<7.2	41.2	<2.0	<3.4	2,200	187	<8.9	2.4	0.12	<0.056
MW-17	03/09-11/10	NOT SAMPLED DUE TO INACCESIBILITY									
MW-17	06/09-11/10	<9.8	36.4	<2.0	<3.4	2,930	44.9	<8.9	<2.3	0.26	<0.056
MW-17	09/09/10	<9.8	142.0	2.4	<3.4	49,800	1,370	<8.9	<2.3	0.27	<0.056
MW-17	03/08/11	NO LONGER INCLUDED IN ROUTINE SAMPLING EVENTS									

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		Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening Level	RBC	6,300	>S	130,000	9,400	--	3,000,000	--	1,100,000	>S	>S
	SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**										
MW-18	06/28/05	<1.0	180	<1.0	<2.0	--	--	5.3	<1.0	<1.0	<0.20
MW-18	09/27/05	1.5	148	<1.00	<1.00	--	--	<2.00	<1.00	<1.00	<0.20
MW-18	12/21/05	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-18	03/21/06	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-18	06/22/06	<0.01	218	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056

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Proposed Screening Level	RBC	6,300	>S	130,000	9,400	--	3,000,000	--	1,100,000	>S	>S
	SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**										
MW-18	09/20/06										
MW-18	12/19/06										
MW-18	02/27/07										
MW-18	06/21/07										
MW-18	09/25/07										
MW-18	12/13/07										
MW-18	03/05/08										
MW-18	06/04/08										
MW-18	09/11/08										
MW-18	12/10/08										
MW-18	03/11/09										
MW-18	06/09-11/09	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-18	09/09-11/09										
MW-18	12/07-09/09										
MW-18	03/09-11/10										
MW-18	06/09-11/10										
MW-18	09/09/10										
MW-18	03/08/11										
MW-18	09/14/11										
MW-18	03/08/12										
MW-18	09/11/12										
MW-18	03/13/13										
MW-18	09/11/13										
MW-18	02/14/14	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-18	09/18/14										
MW-18	03/12/15										
MW-18	09/14/2015	<7.0	185.0	<0.30	1.5	726	1,200	<8.2	<1.4	0.22	<0.050
MW-18	03/11/16	<7.8	39.5	<0.64	<2.0	11,900	215	<8.2	<1.8	<0.65	<0.050
MW-18	09/09/16	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-18	03/15/17										
MW-18	09/09/17	WELL GAUGED BUT NOT SAMPLED									
MW-18	03/14/18	<9.6	75.3	<1.8	<3.3	16,700	430	<9.3	<2.4	<0.11	<0.050
MW-18	09/07/18	<16.0	222.0	<1.0	<5.3	48,600	855	<21.0	<5.0	1.7	<0.050
MW-18	3/13/2019	<16.0	116	<1.0	<5.3	25,600	645	<21.0	<5.0	<1.1	<0.050

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Proposed Screening Level	RBC	6,300	>S	130,000	9,400	--	3,000,000	--	1,100,000	>S	>S
	SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**										
MW-19	6/21/07	<10.0	120	<0.90	<2.3	--	--	<9.4	2.3	0.24	<0.056
MW-19	9/24/07	<10	102	1.5	<2.3	--	--	<9.4	<1.6	0.11	<0.056
MW-19	12/13/07	NOT SAMPLED DUE TO INACCESIBILITY									
MW-19	03/05/08	<10	48.7	1.4	4.3	38,600	722	<9.4	<1.6	0.058	<0.056
MW-19	06/04/08	<10.2	58.5	<2	<3	13,500	643	<10.7	<2.2	<0.050	0.059
MW-19	(D) 06/04/08	<10.2	252.0	<2	24.3	79,000	827	<10.7	<2.2	12.100	<0.056
MW-19	09/11/08	<10.2	76.4	<2	<3	51,600	1,050	<10.7	<2.2	<0.050	<0.056
MW-19	12/10/08	<10	83.3	<2	<3	26,900	839	<10.7	<2.2	0.110	<0.056
MW-19	03/12/09	<10	57.3	<2	<3	36,900	899	<10.7	<2.2	0.270	<0.056
MW-19	06/09-11/09	<7.2	73.4	<2.0	<3.4	30,500	813	<8.9	<2.3	0.20	<0.056
MW-19	09/09-11/09	<7.2	118	<2.0	<3.4	54,000	1,370	<8.9	<2.3	0.064	<0.056
MW-19	12/07-09/09	NOT SAMPLED DUE TO INACCESIBILITY									
MW-19	03/09-11/10	<7.2	41.1	<2.0	3.4	17,000	506	<8.9	<2.3	<0.050	<0.056
MW-19	06/09-11/10	<9.8	70.5	<2.0	<3.4	31,200	884	<8.9	<2.3	<0.050	<0.056
MW-19	09/09/10	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-19	03/09/11	<9.8	61.4	<2.0	<3.4	19,900	783	<8.9	<2.3	<0.052	<0.050
MW-19	09/14/11	6.4	98.3	1.7	<1.1	60,000	1,190	<6.9	<0.91	0.093	0.056
MW-19	03/08/12	<5.1	60.0	0.60	<1.1	35,700	842	<6.9	<0.91	0.17	0.075
MW-19	09/12/12	<6.8	73.8	0.85	2.1	35,900	793	<7.5	<1.2	0.37	<0.070
MW-19	03/13/13	UNABLE TO LOCATE									
MW-19	09/11/13	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-19	02/14/14	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-19	09/18/14	<7.2	61.3	<0.33	<1.3	31,900	594	<4.8	<1.8	<0.082	<0.060
MW-19	03/12/15	<7.2	60.6	0.64	<1.3	39,400	750	9.8	<1.8	<0.082	<0.050
MW-19	03/12/15	<7.2	57.9	0.76	<1.3	37,900	725	7.2	<1.8	<0.082	<0.050
MW-19	03/11/16	<7.8	46.7	<0.64	<2.0	124	5	<8.2	<1.8	<0.65	<0.050
MW-19	09/09/16	<9.7	203	1.6	<1.8	88,600	2,110	<9.7	2.3	0.13	<0.050
MW-19	03/15/17	<9.7	7.5	<0.49	<1.8	<74.7	25.3	10.30	<1.9	<0.090	<0.050
MW-19	09/09/17	<9.6	73.3	<1.8	<3.3	38,900	817	<9.3	<2.4	<0.11	<0.050
MW-19	03/14/18	<9.6	16.3	<1.8	<3.3	774	109	<9.3	<2.4	<0.11	<0.050
MW-19	09/06/18	<16.0	272	<1.0	15.5	146,000	1,070	<21.0	<5.0	24.5	0.53
MW-19	3/13/2019	<16.0	34.7	<1.0	<5.3	17,700	455	<21.0	<5.0	<1.1	<0.050
MW-20	6/21/07	<10.0	216	<0.90	<2.3	--	--	<9.4	3.4	0.19	<0.056
MW-20	9/24/07	<10	172	<0.90	<2.3	--	--	<9.4	<1.6	0.11	<0.056

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Proposed Screening Level	RBC	6,300	>S	130,000	9,400	--	3,000,000	--	1,100,000	>S	>S
	SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**										
MW-20	12/13/07	--	--	--	--	--	--	--	--	--	--
MW-20	03/05/08	<10	115.0	<0.9	<2.3	29300.0	690	<9.4	<1.6	0.10	<0.056
MW-20	06/04/08	--	--	--	--	--	--	--	--	--	--
MW-20	09/11/08	<10.2	149	<2	<3	51,900	940	<10.7	<2.2	0.33	<0.056
MW-20	12/10/08	<10	119	<2	<3	31,600	668	<10.7	<2.2	0.066	<0.056
MW-20	03/12/09	<10	134	<2	<3	45,900	880.0	<10.7	<2.2	0.22	<0.056
MW-20	06/09-11/09[2]	<7.2	182	<2.0	<3.4	46,900	974	<8.9	<2.3	0.46	<0.056
MW-20 (D)	06/09-11/09[2]	<7.2	184	<2.0	<3.4	47,700	979	<8.9	<2.3	0.48	<0.056
MW-20	06/09-11/09	154	2,140	48.5	193	47,800	1,460	148	53.8	15.2	0.90
MW-20 (D)	06/09-11/09	150	2,120	48.4	190	48,000	1,470	147	53.7	14.9	0.91
MW-20	09/09-11/09[2]	<7.2	252	<2.0	<3.4	38,300	975	<8.9	<2.3	0.24	<0.056
MW-20 (D)	09/09-11/09[2]	<7.2	256	<2.0	<3.4	38,400	991	<8.9	<2.3	0.25	<0.056
MW-20	12/07-09/09[2]	<7.2	164	<2.0	<3.4	41,000	852	<8.9	<2.3	<0.050	<0.056
MW-20 (D)	12/07-09/09[2]	<7.2	166	<2.0	<3.4	41,400	863	<8.9	<2.3	<0.050	<0.056
MW-20	03/09-11/10[2]	<7.2	156	<2.0	<3.4	45,800	923	<8.9	<2.3	0.084	<0.056
MW-20 (D)	03/09-11/10[2]	<7.2	159	<2.0	<3.4	51,400	941	<8.9	2.6	0.065	<0.056
MW-20	06/09-11/10[2]	<9.8	163	2.1	5.2	55,700	989	<8.9	<2.3	0.097	<0.056
MW-20 (D)	06/09-11/10[2]	<9.8	165	2.1	11.2	56,500	1,000	<8.9	<2.3	0.11	<0.056
MW-20	09/09/10[2]	<9.8	434	2.2	<3.4	45,300	1,120	<8.9	<2.3	0.67	<0.056
MW-20	03/09/11[2]	<9.8	125	<2.0	<3.4	35,000	798	<8.9	<2.3	<0.052	<0.050
MW-20	09/14/11[2]	5.2	243	1.8	<1.1	65,000	1,310	<6.9	<0.91	<0.080	0.055
MW-20	03/07/12[2]	<5.1	111	0.74	<1.1	32,800	634	<6.9	<0.91	0.12	0.072
MW-20	09/12/12[2]	<6.8	145	1.3	2.6	40,800	753	<7.5	<1.2	1.2	<0.070
MW-20 (D)	09/12/12[2]	<6.8	147	0.93	2.4	42,100	774	7.6	<1.2	0.99	<0.070
MW-20	03/14/13[2]	<6.8	101	0.87	1.7	32,400	562	<7.5	<1.2	0.81	0.12
MW-20	09/12/13[2]	<6.8	154	<0.76	<1.6	26,100	609	<8.4	<2.1	<0.085	<0.060
MW-20 (D)	09/12/13[2]	<6.8	155	<0.76	<1.6	19,800	568	<8.4	<2.1	<0.085	<0.060
MW-20	02/14/14	<6.8	113	<0.76	<1.6	30,900	593	<8.4	<2.1	0.42	<0.60
MW-20	09/18/14	<7.2	267	<0.33	1.4	35,500	811	<4.8	<1.8	<0.082	<0.60
MW-20	03/12/15	<7.2	108	<0.33	1.4	35,500	626	10.8	<1.8	<0.082	<0.050
MW-20	09/14/15	<7.0	197	0.56	2.2	40,200	792	10.8	<1.4	<0.13	<0.050
MW-20	03/10/16	10.2	146	<0.64	<2.0	56.2	7.7	< 8.2	<1.8	<0.65	<0.050
MW-20	09/09/16	<9.7	262	0.81	<1.8	42000	868	<9.7	<1.9	<0.090	<0.050
MW-20	03/15/17	<9.7	93.6	0.86	<1.8	19,900	544	<9.7	<1.9	<0.090	<0.050
MW-20	09/09/17	<9.6	220	<1.8	<3.3	55,400	1,100	<9.3	<2.4	<0.11	<0.050

Appendix C
Table 5
Historical Groundwater Monitoring Data and Analytical Results
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

		Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening Level	RBC	6,300	>S	130,000	9,400	--	3,000,000	--	1,100,000	>S	>S
	SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**										
MW-20	03/14/18	<9.6	49.7	<1.8	<3.3	10,000	245	<9.3	<2.4	<0.11	<0.050
MW-20	09/06/18	<16.0	169	<1.0	<5.3	39,100	807	<21.0	<5.0	<1.1	<0.050
MW-20	3/13/2019	<16.0	92.3	<1.0	<5.3	17,700	382	<21.0	<5.0	<1.1	<0.050
MW-21	6/21/07	<10.0	291	<0.90	<2.3	--	--	<9.4	3.5	0.81	<0.056
MW-21	9/24/07	<10.0	148	<0.90	<2.3	--	--	<9.4	<1.6	0.14	<0.056
MW-21	12/13/07	--	--	--	--	--	--	--	--	--	--
MW-21	03/05/08	<10.0	123.0	<1.5	<4.9	29,200	1,140	<9.4	<1.6	0.27	<0.056
MW-21	06/04/08	<10.2	128.0	<2	<3	11,500	719	<10.7	<2.2	<0.050	<0.056
MW-21	09/11/08	<10.2	96.9	<2	<3	30,600	1,060	<10.7	<2.2	0.76	<0.056
MW-21	12/10/08	<10	127	<2	<3	67.5	50.1	<10.7	<2.2	0.15	<0.056
MW-21	03/12/09	<10	81.7	2.4	<3	424	219	<10.7	<2.2	0.32	<0.056
MW-21	06/09-11/09	<7.2	18.3	<2.0	<3.4	2,120	25.2	<8.9	<2.3	0.43	<0.056
MW-21	09/09-11/09	<7.2	206	<2.0	<3.4	52,900	1,590	<8.9	<2.3	0.15	0.098
MW-21	12/07-09/09	INACCESSIBLE									
MW-21	03/09-11/10	<7.2	173	<2.0	3.5	19,500	1,100	<8.9	<2.3	0.33	<0.056
MW-21	06/09-11/10	<9.8	14.7	<2.0	<3.4	133	8.7	<8.9	<2.3	0.38	<0.056
MW-21	09/09/10	<9.8	278	<2.0	<3.4	39,400	1,120	<8.9	<2.3	0.27	<0.056
MW-21	03/08/11	NO LONGER INCLUDED IN ROUTINE SAMPLING EVENTS									
MW-22	6/20/07	<10.0	225	<0.90	<2.3	--	--	<9.4	2.5	0.47	<0.056
MW-22	9/24/07	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-22	12/13/07	--	--	--	--	--	--	--	--	--	--
MW-22	03/05/08	NOT SAMPLED DUE TO THE PRESENCE OF SPH									

Appendix C
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Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

		Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening Level	RBC	6,300	>S	130,000	9,400	--	3,000,000	--	1,100,000	>S	>S
	SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**										
MW-22	06/04/08										
MW-22	09/11/08										
MW-22	12/10/08										
MW-22	03/12/09										
MW-22	06/09-11/09										
MW-22	09/09-11/09										
MW-22	12/07-09/09										
MW-22	03/09-11/10										
MW-22	06/09-11/10	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-22	09/09/10										
MW-22	03/08/11										
MW-22	09/14/11										
MW-22	03/08/12										
MW-22	09/11/12										
MW-22	03/13/13										
MW-22	09/11/13										
MW-22	02/14/14										
MW-22	09/18/14	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-22	03/12/15	<7.2	30.3	<0.33	<1.3	3,000	106	5.2	<1.8	0.11	<0.050
MW-22	09/14/15	<7.0	89.7	<0.30	<1.5	5,160	187	<8.2	<1.4	<0.13	<0.050
MW-22	03/10/16	<7.8	37.2	2.7	<2.0	38	1.4	<8.2	<1.8	0.15	<0.050
MW-22	09/09/16	<9.7	96.2	1.1	<1.8	8,190	337	<9.7	<1.9	0.19	<0.050
MW-22	(D) 09/09/16	<9.7	97.3	<0.49	<1.8	8,380	344	<9.7	<1.9	0.098	<0.050
MW-22	03/15/17	<9.7	2.1	0.70	<1.8	<74.7	<1.8	<9.7	<1.9	0.59	<0.050
MW-22	03/15/17	<9.7	2.2	0.83	<1.8	80.8	<1.8	<9.7	<1.9	0.63	<0.050
MW-22	09/09/17	<9.6	223	3.4	<3.3	2,140	168	<9.3	<2.4	<0.11	<0.050
MW-22	03/14/18	<9.6	18.2	8.8	<3.3	1,190	28.8	<9.3	<2.4	2.6	<0.050
MW-22	09/07/18	16.2 J	263	314	30.4	67,400	273	<21.0	<5.0	114	0.27
MW-22	3/13/2019	<16.0	38.9	<1.0	<5.3	260	29.5	<21.0	<5.0	<1.1	<0.050
MW-22	(D) 3/13/2019	<16.0	38	<1.0	<5.3	239	27.5	<21.0	<5.0	<1.1	<0.050
MW-23	6/20/07	<10.0	23.1	<0.90	<2.3	--	--	<9.4	<1.6	1.6	<0.056
MW-23	9/24/07	35.1	10.4	<0.90	<2.3	--	--	<9.4	<1.6	14.3	<0.056
MW-23	12/13/07	--	--	--	--	--	--	--	--	--	--
MW-23	03/05/08	<10.0	27.0	<0.90	<2.3	77.6	6.4	<9.4	<1.6	1.5	0.0570

Appendix C
Table 5
Historical Groundwater Monitoring Data and Analytical Results
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

		Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening Level	RBC	6,300	>S	130,000	9,400	--	3,000,000	--	1,100,000	>S	>S
	SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**										
MW-23	06/03/08	<10.2	11.9	<2	<3	827	8.5	<10.7	<2.2	17.9	<0.056
MW-23	09/11/08	<10.2	13.1	<2	<3	160	9.4	<10.7	<2.2	3.7	<0.056
MW-23	12/10/08	13.6	14.2	<2	<3	191	14.3	<10.7	<2.2	3.4	<0.056
MW-23	03/12/09	12.3	20.4	<2	<3	1,100	31.9	<10.7	<2.2	11.9	<0.056
MW-23	06/09-11/09	<7.2	27.2	<2.0	<3.4	345	32.0	<8.9	<2.3	12.9	<0.056
MW-23	09/09-11/09										
MW-23	12/07-09/09										
MW-23	03/09-11/10	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-23	06/09-11/10[3]										
MW-23	09/09/10[3]										
MW-23	03/08/11	NO LONGER INCLUDED IN ROUTINE SAMPLING EVENTS									
MW-24	6/20/07	<10.0	234	<0.90	<2.3	--	--	<9.4	2.7	0.37	<0.056
MW-24	9/24/07	--	--	--	--	--	--	--	--	--	--
MW-24	12/13/07	--	--	--	--	--	--	--	--	--	--
MW-24	03/05/08										
MW-24	06/03/08	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-24	09/11/08	--	--	--	--	--	--	--	--	--	--
MW-24	12/10/08	--	--	--	--	--	--	--	--	--	--
MW-24	03/12/09	--	--	--	--	--	--	--	--	--	--
MW-24	06/09-11/09										
MW-24	09/09-11/09										
MW-24	12/07-09/09										
MW-24	03/09-11/10										
MW-24	06/09-11/10										
MW-24	09/09/10	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-24	03/08/11										
MW-24	09/14/11										
MW-24	03/08/12										
MW-24	09/11/12										
MW-24	03/13/13										
MW-24	09/11/13	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									

Appendix C
Table 5
Historical Groundwater Monitoring Data and Analytical Results
Former Chevron Bulk Facility #1001838
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		Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening Level	RBC	6,300	>S	130,000	9,400	--	3,000,000	--	1,100,000	>S	>S
	SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**										
MW-24	02/14/14										
MW-24	09/18/14	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-24	03/12/15										
MW-24	09/14/15	<7.0	183	<0.30	<1.5	18400	72.8	<8.2	<1.4	0.43	<0.050
MW-24	09/09/16										
MW-24	03/15/17	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-24	09/09/17	<9.6	97.8	<1.8	<3.3	40,400	99.6	<9.3	<2.4	0.20	<0.050
MW-24	03/14/18	<9.6	19.6	<1.8	<3.3	232	5.4	<9.3	<2.4	0.20	<0.050
MW-24	9/6/2018	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-24	3/13/2019	<16.0	35	<1.0	<5.3	681	6.7 J	<21.0	<5.0	<1.1	<0.050
MW-25	6/21/07	<10.0	192	<0.90	<2.3	--	--	<9.4	<1.6	<0.047	<0.056
MW-25	(D) 6/21/07	<10.0	196	<0.90	<2.3	--	--	<9.4	<1.6	<0.047	<0.056
MW-25	9/24/07	<10.0	148	<0.90	<2.3	--	--	<9.4	<1.6	0.11	<0.056
MW-25	12/13/07	--	--	--	--	--	--	--	--	--	--
MW-25	03/05/08	<10.0	223	1.40	3.30	71,500	1,630	<9.4	<1.6	<0.050	0.058
MW-25	06/03/08	--	--	--	--	--	--	--	--	--	--
MW-25	09/11/08	<10.2	166	<2	<3	50,600	1,000	<10.7	<2.2	0.29	<0.056
MW-25	12/10/08	<10.0	180	<2	<3	50,900	1,240	<10.7	<2.2	0.072	<0.056
MW-25	03/12/09	<10.0	226	<2	<3	62,700	1,360	<10.7	<2.2	0.28	<0.056
MW-25	06/09-11/09	<7.2	149	<2.0	<3.4	45,900	1,080	<8.9	<2.3	0.12	<0.056
MW-25	09/09-11/09	<7.2	180	<2.0	<3.4	49,600	1,180	<8.9	<2.3	0.066	<0.056
MW-25	12/07-09/09	<7.2	175	<2.0	<3.4	48,900	1,180	<8.9	<2.3	<0.050	<0.056
MW-25	03/09-11/10	<7.2	103	<2.0	<3.4	15,200	596	<8.9	<2.3	0.071	<0.056
MW-25	06/09-11/10	<9.8	80.7	<2.0	<3.4	18,000	568	<8.9	<2.3	0.089	<0.056
MW-25	09/09/10	<9.8	246	<2.0	<3.4	64,000	1,410	<8.9	<2.3	0.098	<0.056
MW-25	03/09/11	<9.8	142	<2.0	<3.4	46,100	1,550	<8.9	<2.3	<0.052	<0.050
MW-25	(D) 03/09/11	<9.8	144	<2.0	<3.4	46,600	1,610	<8.9	<2.3	<0.052	<0.050
MW-25	09/14/11	5.8	189	1.5	<1.1	52,700	1,090	<6.9	<0.91	<0.080	0.052
MW-25	(D) 09/14/11	5.4	191	1.5	1.2	53,000	1,100	<6.9	<0.91	<0.080	0.056
MW-25	3/8/2012	6.3	146	1.1	1.6	51,000	941	<6.9	<0.91	0.5	0.072
MW-25	9/12/2012	<6.8	156	1.2	1.5	46,300	956	<7.5	<1.2	0.17	<0.070
MW-25	3/14/2013	<6.8	111	0.82	1.1	36,300	765	<7.5	<1.2	<0.073	0.12
MW-25	9/12/2013	<6.8	91.6	<0.76	<1.3	30,200	638	<8.4	<2.1	<0.085	<0.060

Appendix C
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		Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening Level	RBC	6,300	>S	130,000	9,400	--	3,000,000	--	1,100,000	>S	>S
	SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**										
MW-25	02/14/14		<6.8	114	<0.76	<1.6	38,200	862	<8.4	<2.1	<0.085	<0.60
MW-25 (D)	02/14/14		<6.8	119	<0.76	<1.6	38,300	832	<8.4	<2.1	<0.085	<0.60
MW-25	9/18/2014		<7.2	109	<0.33	<1.3	30,600	695	<4.8	<1.8	<0.082	<0.60
MW-25	9/18/2014		<7.2	110	<0.33	<1.3	30,500	695	<4.8	<1.8	<0.082	<0.60
MW-25	3/12/2015		<7.2	127	0.65	1.6	44,400	1,020	<4.8	<1.8	<0.082	<0.050
MW-25	9/14/2015		<7.0	111	0.39	1.8	32,500	704	<8.2	<1.4	<0.13	<0.50
MW-25	9/14/2015	(D)	<7.0	109	0.48	<1.5	31,500	688	10.5	<1.4	0.16	<0.50
MW-25	3/10/2016		<7.8	57.8	<0.64	<2.0	143	4.4	<8.2	<1.8	<0.65	<0.050
MW-25	9/9/2016		<9.7	124	0.75	<1.8	43,300	981	<9.7	<1.9	<0.090	<0.050
MW-25	3/15/2017		NO LONGER INCLUDED IN ROUTINE SAMPLING EVENTS									

Appendix C
Table 5
Groundwater Monitoring Data and Analytical Results
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

EXPLANATIONS:

(µg/L) = Micrograms per liter
-- = Not Measured/Not Analyzed
(D) = Duplicate
>S = RBC exceeds solubility limit
RBC = Risk Based Concentration for construction and excavation workers exposed to groundwater in an open excavation, which are provided in Appendix A to the Oregon Department of Environmental Quality document titled "Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites" (DEQ, September 22, 2003, last updated May 2018).
SLV = Screening Level Values for a Level II Screening Ecological Risk Assessment for aquatic receptors in fresh water, which are provided in Table 1 of the Oregon Department of Environmental Quality document titled "Guidance for Ecological Risk Assessment: Levels I, II, III, and IV" (DEQ, April 1998, last updated December 2001).

[1] Monitoring wells MW-6 and MW-12 were previously designated W-6 and W-12, respectively.
[2] Matrix spike and duplicate matrix spike samples were collected from this well. Please refer to lab sheets for results.

Starting 1Q 2011, wells MW-14, MW-17, MW-21 and MW-23 were removed from monitoring.
Starting 3Q 2016, well MW-6 was removed from monitoring

Appendix C
Table 3
Groundwater Monitoring Data and Analytical Results
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

EXPLANATIONS:

(µg/L) = Micrograms per liter
-- = Not Measured/Not Analyzed
(D) = Duplicate
>S = RBC exceeds solubility limit
RBC = Risk Based Concentration for construction and excavation workers exposed to groundwater in an open excavation, which are provided in Appendix A to the Oregon Department of Environmental Quality document titled "Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites" (DEQ, September 22, 2003, last updated March 2007).
SLV = Screening Level Values for a Level II Screening Ecological Risk Assessment for aquatic receptors in fresh water, which are provided in Table 1 of the Oregon Department of Environmental Quality document titled "Guidance for Ecological Risk Assessment: Levels I, II, III, and IV" (DEQ, April 1998, last updated December 2001).

ANALYTICAL METHOD:

PAHs by EPA Method 8270C SIM
Results are presented in µg/L

* Low blank spike and surrogate recoveries. Sample was re-analyzed past hold time.
** Sample was extracted outside hold time.

[1] Monitoring wells MW-6 and MW-12 were previously designated W-6 and W-12, respectively.
[2] Matrix spike and duplicate matrix spike samples were collected from this well. Please refer to lab sheets for results.
[3] Not sampled per Arcadis due to high levels of Methane Gas.
[4] Not sampled due to the presence of SPH.
[5] Laboratory report indicates due to the nature of the sample matrix, a reduced aliquot was used for analysis. The reporting limit was raised accordingly.
[6] Laboratory report indicates due to the presence of an interferent near the retention time of acenaphthylene, the reporting limit was raised. This was due to the fact that the interferent had a significant abundance of ions at or near the mass of acenaphthylene.
[7] Not sampled due to the presence of sheen.
[8] Well inaccessible.

Starting 1Q 2011, wells MW-14, MW-17, MW-21 and MW-23 were removed from monitoring.
Starting 3Q 2016, well MW-6 was removed from monitoring

Appendix C
Table 4
Historical Groundwater Monitoring Data and Analytical Results
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

			Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening		RBC	5800	25,000,000	57,000	8,700	--	3,000,000	--	1,000,000	--	--
Levels		SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID		**Date**										
DM-4		08/26/04	146	423	4.20	26.4	59,400	1,100	<1.00	<1.00	1,600	2.88
DM-4		11/09/04	51.2	174	<1.00	6.23	37,300	980	1.58	<1.00	260	0.816
DM-4		02/02/05	53.6	192	1.01	7.34	32,900	820	5.76	<1.00	286	0.677
DM-4	(D)	02/02/05	57.3	239	1.32	10.3	36,300	838	6.5	<1.00	432	<0.200
DM-4		06/28/05	--	--	--	--	--	--	--	--	--	--
DM-4		09/27/05	--	--	--	--	--	--	--	--	--	--
DM-4		12/20/05	--	--	--	--	--	--	--	--	--	--
DM-4		03/21/06	--	--	--	--	--	--	--	--	--	--
DM-4		06/23/06	25.2	141	<0.91	--	29,000	817	<9.4	<1.6	25.8	<0.056
DM-4		09/21/06	24.9	153	<0.91	--	28,600	832	<9.4	<1.6	70.0	<0.056
DM-4		12/20/06	57.3	222	2.1	--	36,100	892	<9.4	<1.6	783	0.25
DM-4		02/27/07	25.9	183	<0.91	--	28,400	740	<9.4	<1.6	198	0.14
DM-4		06/1407	35.4	158	<0.90	--	27,300	823	<9.4	<1.6	0.82	<0.056
DM-4		09/25/07	48.3	184	<0.90	--	32,400	886	<9.4	<1.6	103	0.14
DM-4		12/13/07	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
DM-4		03/05/08	26.5	170	1.6	5.9	26,600	708	<9.4	<1.6	140	<0.056
DM-4		06/03/08	32.9	286	<2	16.7	38,500	835	<10.7	<2.2	547	0.094
DM-4		09/11/08	27.2	144	<2	<3	22,700	709	<10.7	<2.2	20.1	<0.056
DM-4		12/11/08	19.2	163	<2	<3	22,800	757	<10.7	<2.2	25.6	<0.056
DM-4		03/11/09										
DM-4		06/09-11/09										
DM-4		09/09-11/09										
DM-4		12/07-09/09										
DM-4		03/09-11/10										
DM-4		06/09-11/10										
DM-4		09/09/10	NOT SAMPLED DUE TO HIGH LEVELS OF METHANE GAS									
DM-4		03/08/11										
DM-4		09/14/11										
DM-4		03/08/12										
DM-4		09/11/12										
DM-4		03/13/13										
DM-4		09/13/13	17.1	132	15.1	3.7	26,500	877	<8.4	<2.1	81.1	0.21

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		Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening	RBC	5800	25,000,000	57,000	8,700	--	3,000,000	--	1,000,000	--	--
Levels	SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**										
DM-4		WELL ABANDONED NOVEMBER 2013									
DM-5	08/26/04	6.42	388	<1.00	3.07	80,000	1,110	2.67	<1.00	18.6	<0.200
DM-5	11/09/04	8.15	427	<1.00	2.42	132,000	1,110	5.54	<1.00	16	<0.200
DM-5	02/02/05	10.1	319	<1.00	<1.00	133,000	1,020	6.67	<1.00	1.00	<0.200
DM-5	06/28/05	--	--	--	--	--	--	--	--	--	--
DM-5	09/27/05	--	--	--	--	--	--	--	--	--	--
DM-5	12/20/05	--	--	--	--	--	--	--	--	--	--
DM-5	03/21/06	--	--	--	--	--	--	--	--	--	--
DM-5	06/23/06	<10	375	<0.91	--	133,000	1,040	<9.4	<1.6	<0.51	<0.056
DM-5	09/21/06	<10	288	<0.91	--	69,000	873	<9.4	<1.6	3.5	<0.056
DM-5	12/19/06	<10	377	2.3	--	125,000	1,060	<9.4	<1.6	4.9	<0.056
DM-5	02/27/07	<10	371	<0.91	--	129,000	1,080	<9.4	<1.6	4.6	<0.056
DM-5	06/14/07	<10	408	<0.90	--	136,000	1,030	10.2	1.7	9.6	<0.056
DM-5	09/25/07	11.2	411	3.5	--	142,000	1,200	<9.4	<1.6	7.3	<0.056
DM-5	12/13/07										
DM-5	03/05/08	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
DM-5	06/03/08										
DM-5	09/11/08										
DM-5	12/11/08										
DM-5	03/11/09										
DM-5	06/09-11/09										
DM-5	09/09-11/09										
DM-5	12/07-09/09										
DM-5	03/09-11/10										
DM-5	06/09-11/10	NOT SAMPLED DUE TO HIGH LEVELS OF METHANE GAS									
DM-5	09/09/10										
DM-5	03/08/11										
DM-5	09/14/11										
DM-5	03/08/12										
DM-5	09/11/12										
DM-5	03/13/13										

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		Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening	RBC	5800	25,000,000	57,000	8,700	--	3,000,000	--	1,000,000	--	--
Levels	SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**										
DM-5	09/13/13	25.4	319	1.1	4.1	68,300	721	<8.4	<2.1	15.9	0.073
DM-5		WELL ABANDONED NOVEMBER 2013									
MW-3B	06/28/05	6.0	210	<1.00	14	--	--	<2.0	<1.0	120	<0.20
MW-3B (D)	06/28/05	2.0	110	<1.00	2.4	--	--	<2.0	<1.0	23	<0.20
MW-3B	09/27/05	6.1	196	<1.00	12.2	56,000	1,240	<0.20	<1.0	47	<0.20
MW-3B	12/21/05	--	--	--	--	--	--	--	--	--	--
MW-3B	03/21/06	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-3B	06/22/06										
MW-3B	09/20/06										
MW-3B	12/19/06										
MW-3B	02/27/07										
MW-3B	06/21/07										
MW-3B	09/24/07										
MW-3B	12/13/07										
MW-3B	03/05/08										
MW-3B	06/03/08										
MW-3B	09/11/08										
MW-3B	12/11/08										
MW-3B	03/11/09	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-3B	06/09-11/09										
MW-3B	09/09-11/09										
MW-3B	12/07-09/09										
MW-3B	03/09-11/10										
MW-3B	06/09-11/10										
MW-3B	09/09/10										
MW-3B	03/08/11										
MW-3B	09/14/11										
MW-3B	03/08/12										
MW-3B	09/11/12										
MW-3B	03/13/13	NOT SAMPLED DUE TO HIGH LEVELS OF METHANE GAS									

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			Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening	RBC		5800	25,000,000	57,000	8,700	--	3,000,000	--	1,000,000	--	--
Levels	SLV		150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID		**Date**										
MW-3B		09/11/13										
MW-3B		02/14/14										
MW-3B		09/18/14										
MW-3B		03/12/15										
MW-3B		09/09/16										
MW-3B		03/15/17				NOT SAMPLED DUE TO THE PRESENCE OF SPH						
MW-3B		09/09/17										
MW-3B		03/14/18										
MW-3B		09/06/18										
MW-3B		3/13/2019										
MW-4B		06/28/05	14.0	380	1.1	68	--	--	4.40	<1.0	45	0.22
MW-4B		09/27/05	14.6	336	<1.00	54.1	122,000	1,650	2.50	<1.0	34.4	<0.20
MW-4B		12/21/05	1.15	64.2	<1.00	1.19	9,100	385	<0.20	<1.00	1.20	<0.20
MW-4B		03/21/06	6.11	114.0	<1.00	17.1	33,600	520	<0.20	<1.00	12.50	0.27
MW-4B		03/21/06	4.47	102.0	<1.00	14.4	30,000	471	<0.20	<1.00	9.52	0.234
MW-4B		06/22/06	<10	52.3	<0.91	--	18,700	415	<9.4	<1.6	0.61	<0.056
MW-4B	(D)	06/22/06	<10	73.1	<0.91	--	25,400	546	<9.4	<1.6	1.20	<0.056
MW-4B		09/20/06	<10	262	<0.91	--	59,200	1,180	<9.4	<1.6	1.6	<0.056
MW-4B	(D)	09/20/06	<10	189	<0.91	--	51,500	1,230	<9.4	<1.6	3.3	<0.056
MW-4B		12/19/06	<10	70.9	<0.91	--	18,400	492	<9.4	<1.6	2.0	<0.056
MW-4B	(D)	12/19/06	<10	62.9	<0.91	--	17,900	464	<9.4	<1.6	0.69	<0.056
MW-4B		02/27/07	<10	52	<0.91	--	15,400	504	<9.4	<1.6	<0.51	<0.056
MW-4B	(D)	02/27/07	<10	53.2	<0.91	--	16,200	496	<9.4	<1.6	<0.51	<0.056
MW-4B		06/14/07	<10	61.3	<0.90	--	15,200	395	<9.4	<1.6	1.4	<0.056
MW-4B	(D)	06/14/07	<10	66.4	<0.90	--	18,900	449	<9.4	<1.6	1.2	<0.056
MW-4B		09/24/07	<10	118	<0.90	--	43,600	1,060	<9.4	<1.6	1.2	<0.056
MW-4B	(D)	09/24/07	<10.0	108	<0.90	--	39,900	992	<9.4	<1.6	1	<0.056
MW-4B		12/13/07				NOT SAMPLED DUE TO THE PRESENCE OF SPH						
MW-4B		03/05/08	<10.0	38.3	<0.90	<2.3	14,000	291	<9.4	<1.6	1	<0.056
MW-4B	(D)	03/05/08	<10.0	39.5	<0.90	<2.3	13,500	282	<9.4	<1.6	1.1	<0.056
MW-4B		06/03/08	<10.2	73.1	<2	<3	16,600	404	<10.7	<2.2	0.87	<0.056

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		Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening	RBC	5800	25,000,000	57,000	8,700	--	3,000,000	--	1,000,000	--	--
Levels	SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**										
MW-4B	09/10/08	<10.2	74.0	<2	<3	30,000	714	<10.7	<2.2	0.23	<0.056
MW-4B	12/11/08	<10.0	46.3	<2	<3	17,000	342	<10.7	<2.2	0.3	<0.056
MW-4B	03/11/09	<10.0	45.7	<2	<3	18,500	407	<10.7	<2.2	0.30	<0.056
MW-4B	03/12/09	<10.0	45.0	<2	<3	18,700	419	<10.7	<2.2	0.30	<0.056
MW-4B	06/09-11/09	<7.2	275	11.2	3.6	72,900	394	<8.9	<2.3	8.5	0.062
MW-4B	09/09-11/09	<7.2	82.0	2.7	<3.4	29,400	678	<8.9	<2.3	1.0	<0.056
MW-4B	12/07-09/09	<7.2	108	3.0	<3.4	37,000	375	<8.9	<2.3	0.94	0.10
MW-4B	03/09-11/10	<7.2	106	<2.0	<3.4	51,100	577	<8.9	<2.3	1.5	<0.056
MW-4B	06/09-11/10	<9.8	81.3	<2.0	<3.4	39,900	292	<8.9	<2.3	1.8	<0.056
MW-4B	09/09/10	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-4B	03/10/11	<9.8	51.9	<2.0	<3.4	33,900	223	<8.9	<2.3	3.8	<0.050
MW-4B	09/14/11	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-4B	03/08/12	6.7	34.3	1.2	1.6	35,100	241	<6.9	<0.91	1.9	<0.026
MW-4B	09/12/12	<6.8	97.7	2.4	4.4	37,000	502	<7.5	<1.2	7.8	<0.070
MW-4B	03/13/13	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-4B	09/11/13										
MW-4B	02/14/14	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-4B	09/18/14										
MW-4B	03/12/15	<7.2	23.7	<0.33	<1.3	14,600	225	<4.8	<1.8	0.19	<0.050
MW-4B	09/15/15	--	--	--	--	--	--	--	--	--	--
MW-4B	03/11/16	<7.8	48.3	<0.64	3.6	26,400	67.1	<8.2	<1.8	3.4	<0.050
MW-4B (D)	03/11/16	<7.8	49.1	<0.64	3.6	30,900	63.9	<8.2	<1.8	4.1	<0.050
MW-4B	09/09/16	<9.7	69.7	0.72	<1.8	22,000	414	<9.7	<1.9	0.3	<0.050
MW-4B	03/15/17	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-4B	09/09/17	<9.6	207	<1.8	<3.3	44,100	606	<9.3	<2.4	7.0	<0.050
MW-4B (D)	09/09/17	<9.6	194	<1.8	<3.3	46,100	623	<9.3	<2.4	8.2	<0.050
MW-4B	03/14/18	<9.6	48.9	<1.8	<3.3	25,800	155	<9.3	<2.4	3.1	<0.050
MW-4B	09/06/18	<16.0	152	<1.0	<5.3	52,100	647	<21.0	<5.0	12.2	0.064 J
MW-4B (D)	09/06/18	<16.0	132	<1.0	<5.3	43,900	586	<21.0	<5.0	6.9	<0.050
MW-4B	03/13/19	<16.0	42.8	<1.0	<5.3	16,700	289	<21.0	<5.0	<1.1	<0.050
MW-6[1]	08/26/04	9.67	98.5	1.26	16.2	22,300	381	11.1	<1.00	19.0	<0.200

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			Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening		RBC	5800	25,000,000	57,000	8,700	--	3,000,000	--	1,000,000	--	--
Levels		SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID		**Date**										
MW-6[1]	(D)	08/26/04	1.0	104	1.93	17.6	27,300	436	11.0	<1.00	21.2	<0.200
MW-6[1]		11/09/04	7.33	66.6	<1.00	2.68	2,600	146	23.3	<1.00	<1.00	<0.200
MW-6[1]		02/02/05	2.67	58.3	<1.00	29.5	21,800	161	6.91	<1.00	5.10	<0.200
MW-6[1]		06/28/05	8.4	76	<0.10	25	--	--	5.2	<1.0	20.00	<0.20
MW-6[1]		09/27/05	3.35	379	<1.00	5.84	106,000	2,190	<2.00	<1.00	16.80	<0.20
MW-6[1]		12/21/05	1.91	52.8	<1.00	<1.00	1,260	193	9.46	<1.00	1.47	<2.00
MW-6[1]	(D)	12/21/05	1.84	52.7	<1.00	<1.00	1,150	150	8.89	<1.00	1.22	<0.200
MW-6[1]		03/21/06	<1.00	27	<1.00	<1.00	441	70	<2.0	<1.00	<1.00	<0.200
MW-6[1]		06/22/06	<10	15.1	<0.91	--	1,200	64.7	<9.4	<1.6	<0.51	<0.056
MW-6[1]		09/20/06	<10	125	<0.91	--	722	121	<9.4	<1.6	<0.51	<0.056
MW-6[1]		12/19/06	<10	27.0	<0.91	--	931	73.5	<9.4	<1.6	1.1	<0.056
MW-6[1]		02/27/07	<10	10.2	<0.91	--	1,120	109	<9.4	<1.6	0.98	<0.056
MW-6[1]		06/14/07	NOT SAMPLED DUE TO INACCESIBILITY									
MW-6[1]		09/25/07	<10	108	<0.91	--	1,860	445	<9.4	<1.6	2.7	<0.056
MW-6[1]		12/13/07	<10	68.7	<0.9	2.4	4,140	543	<9.4	<1.6	5.5	<0.056
MW-6[1]		03/05/08	<10	24.8	.90	<2.3	968	158	<9.4	<1.6	1.7	<0.056
MW-6[1]		06/03/08	<10.2	12.7	<2	<3	838	830	<10.7	<2.2	1	0.075
MW-6[1]		09/10/08	<10.2	91.1	<2	<3	12,400	2,090	<10.7	<2.2	1.7	<0.056
MW-6[1]		12/11/08	<10	15.1	<2	<3	4,190	322	<10.7	<2.2	0.94	<0.056
MW-6[1]		03/12/09	<10	22.3	<2	<3	3,680	215	<10.7	<2.2	2.3	<0.056
MW-6[1]		06/09-11/09	10.3	203	2.3	4.2	63,400	1,630	<8.9	<2.3	14.6	0.29
MW-6[1]		09/09-11/09	<7.2	65.2	<2.0	<3.4	12,900	547	<8.9	<2.3	2.5	0.079
MW-6[1]		12/07-09/09	8.7	82.7	<2.0	<3.4	20,400	503	<8.9	<2.3	6.2	0.15
MW-6[1]		03/09-11/10	10.7	135	<2.0	4.1	49,100	2,160	<8.9	<2.3	11.7	0.10
MW-6[1]	(D)	03/09-11/10	<7.2	82.9	<2.0	<3.4	32,700	1,310	<8.9	<2.3	6.7	<0.056
MW-6[1]		06/09-11/10	<9.8	25.4	<2.0	<3.4	4,960	212	<8.9	<2.3	3.1	0.062
MW-6[1]		09/09/10	<9.8	90.8	<2.0	6.2	16,200	889	<8.9	<2.3	12.5	<0.056
MW-6[1]		03/09/11	<9.8	20.4	<2.0	<3.4	4,080	203	<8.9	<2.3	3.4	<0.050
MW-6[1]		09/14/11	<5.1	57.0	0.58	2.2	4,260	341	<6.9	<0.91	5.6	0.078
MW-6[1]		03/08/12	<5.1	33.5	1.0	1.7	14,100	741	<6.9	<0.91	4.9	0.031
MW-6[1]		09/11/12	<6.8	38.4	1.2	<1.1	8,290	1,070	<7.5	<1.2	4.8	<0.070
MW-6[1]		03/14/13	<6.8	90.4	0.7	7.5	19,100	1,660	<7.5	<1.2	16.0	0.130

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			Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening		RBC	5800	25,000,000	57,000	8,700	--	3,000,000	--	1,000,000	--	--
Levels		SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID		**Date**										
MW-6[1]	(D)	03/14/13	<6.8	75.9	1.0	6.0	14,900	1,130	<7.5	<1.2	13.8	0.20
MW-6[1]		09/12/13	<6.8	120.0	<0.76	2.4	9,170	728	<8.4	<2.1	2.9	<0.060
MW-6[1]		02/14/14	<6.8	21.4	<0.76	<1.6	4,560	327	<8.4	<2.1	2.3	<0.060
MW-6[1]		09/18/14	<7.2	215	1.2	6.5	14,300	1,560	<4.8	<1.8	9.6	<0.060
MW-6[1]		03/12/15	NOT SAMPLED DUE TO INACCESIBILITY									
MW-6[1]		03/11/16										
MW-12[1]		08/26/04	1.83	47.3	<1.00	1.18	20,600	480	<1.00	<1.00	5.58	<0.200
MW-12[1]		11/08/04	1.35	85.9	<1.00	8.7	26,600	382	2.21	<1.00	23.4	<0.200
MW-12[1]		02/02/05	1.93	37.7	<1.00	1.65	11,700	250	<2.00	<1.00	7.46	<0.200
MW-12[1]		06/28/05	1.7	76	<1.0	5.6	--	--	<2.0	<1.0	15	<0.20
MW-12[1]		09/27/05	4.08	104	<1.00	<1.00	640	177	<2.00	<1.00	<1.00	<0.20
MW-12[1]		12/21/05	1.73	41.8	<1.00	2.06	12,500	277	<2.00	<1.00	9.89	<0.200
MW-12[1]		03/21/06	3.84	67.8	<1.00	9.56	20,600	275	<2.00	<1.00	14.8	0.218
MW-12[1]		06/22/06	<10	40.6	<0.91	--	9,660	340	<9.4	<1.6	3.7	<0.056
MW-12[1]		09/20/06	<10	51.8	<0.91	--	20,500	572	<9.4	<1.6	3.1	<0.056
MW-12[1]		12/19/06	<10	164	<0.91	--	35,900	349	<9.4	<1.6	45.3	<0.056
MW-12[1]		02/27/07	<10	39.8	<0.91	--	6,180	142	<9.4	<1.6	12.8	<0.056
MW-12[1]		06/14/07	<10	36.8	<0.90	--	11,100	321	<9.4	<1.6	2.1	<0.056
MW-12[1]		09/25/07	<10	90.7	1.2	--	36,300	849	<9.4	<1.6	3.4	<0.056
MW-12[1]		12/12/07	<10	29.8	1.8	<2.3	8,820	235	<9.4	<1.6	2.3	<0.056
MW-12[1]		03/05/08	<10	68.2	1.5	9.9	20,800	337	<9.4	<1.6	17.8	<0.056
MW-12[1]		06/03/08	<10.2	33.1	<2	<3	52.2	0.84	<10.7	<2.2	4.2	<0.056
MW-12[1]		09/10/08	<10.2	160	7.7	16.7	45,400	721	<10.7	<2.2	36.7	<0.056
MW-12[1]		12/11/08	<10	37.8	<2	<3	9,230	307	<10.7	<2.2	1.6	<0.056
MW-12[1]		03/11/09	<10	62.7	<2	8.8	21,300	323	<10.7	<2.2	16.3	.14
MW-12[1]		06/09-11/09	<7.2	218	3.4	38.1	50,300	521	<8.9	<2.3	73.7	0.37
MW-12[1]		09/09-11/09	8.9	224	4.1	28.5	60,500	826	<8.9	<2.3	63.3	0.33
MW-12[1]		12/07-09/09	8.5	125	<2.0	24.7	35,300	378	<8.9	<2.3	29.2	0.19
MW-12[1]	(D)	12/07-09/09	9.2	133	<2.0	24.2	36,900	385	<8.9	<2.3	32.2	0.19
MW-12[1]		03/09-11/10	<7.2	141	<2.0	23.9	40,400	376	<8.9	<2.3	53.6	0.069
MW-12[1]		06/09-11/10	<9.8	124	2.0	20.4	37,600	396	<8.9	<2.3	42.2	0.077

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		Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening	RBC	5800	25,000,000	57,000	8,700	--	3,000,000	--	1,000,000	--	--
Levels	SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**										
MW-12[1]	09/09/10	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-12[1]	03/09/11	<9.8	137	<2.0	19.80	43,500	398	<8.9	<2.3	50.1	<0.050
MW-12[1]	09/14/11	<5.1	152	3.5	18.8	51,100	749	<6.9	<0.91	10.3	0.17
MW-12[1]	03/08/12	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-12[1]	09/12/12	<6.8	210	4.2	20.8	68,100	955	<7.5	<1.2	60.1	0.27
MW-12[1]	03/13/13	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-12[1]	09/12/13	49.0	1,270	10.4	248	269,000	1,730	<8.4	<2.1	131	1.5
MW-12[1]	02/14/14	7.3	244	<0.76	41.1	146,000	487	12.7	3.4	93.7	0.45
MW-12[1]	09/18/14	8.2	198	2.1	40.3	75,800	696	<4.8	<1.8	54.6	<0.060
MW-12[1]	03/12/15	<7.2	25.8	<0.33	1.4	17,900	232	<4.8	<1.8	2.7	<0.050
MW-12[1]	09/14/2015	<7.0	56.8	0.73	1.6	39,400	697	11.5	<1.4	1.4	<0.050
MW-12[1]	03/11/16	10.3	88	<0.64	12.8	55,100	216	<8.2	<1.8	35.7	0.14
MW-12[1]	09/09/16	<9.7	63.2	0.75	3.5	17,300	443	<9.7	2.8	12.0	<0.050
MW-12[1]	03/15/17	33	389	9.2	80.5	340,000	769	19.4	<1.9	178.0	0.86
MW-12[1]	09/09/17	<9.6	211	<1.8	16.0	87,800	1,280	<9.3	<2.4	36.0	0.20
MW-12[1]	03/14/18	<9.6	33.1	1.9	<3.3	52,500	236	<9.3	<2.4	5.5	<0.050
MW-12[1]	(D) 03/14/18	<9.6	19.2	<1.8	<3.3	12,800	213	<9.3	<2.4	0.83	<0.050
MW-12	09/06/18	<16.0	268	1.9 J	28.3	92,100	1,140	<21.0	<5.0	49.1	0.2
MW-12	03/13/19	<16.0	27.3	<1.0	<5.3	11,200	184	<21.0	<5.0	2.2 J	<0.050
MW-14	06/28/05	1.6	98	<1.00	5.3	--	--	2.1	<1.0	3.4	<0.20
MW-14	09/27/05	3.8	334	<1.00	2.87	58,500	1,680	<2.00	<1.00	3	<0.20
MW-14	12/20/05	<1.00	29.5	<1.00	<1.00	6,490	38.8	2.19	<1.00	<1.00	<0.20
MW-14	03/21/06	4.08	180	<1.00	6.81	71,000	562.0	<2.00	<1.00	5.05	<0.200
MW-14	06/22/06	<10	54.4	<0.91	--	18,000	392	<9.4	<1.6	<0.51	<0.056
MW-14	09/21/06	<10	285	<0.91	--	43,900	1,660	<9.4	<1.6	<0.51	<0.056
MW-14	12/19/06	<10	82.5	<0.91	--	11,800	911	<9.4	<1.6	0.19	<0.056
MW-14	02/27/07	<10	56.5	<0.91	--	14,800	293	<9.4	<1.6	<0.51	<0.056
MW-14	06/14/07	<10	43.3	<0.90	--	9,920	156	<9.4	<1.6	0.33	<0.056
MW-14	09/25/07	<10	222	1.5	--	56,400	1,140	<9.4	<1.6	0.79	<0.056
MW-14	12/13/07	<10	102	<0.9	<2.3	20,900	580	<9.4	<1.6	0.29	<0.056
MW-14	03/05/08	<10	45	<.90	<2.3	11,800	284	<9.4	<1.6	0.22	<0.056

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			Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening	RBC		5800	25,000,000	57,000	8,700	--	3,000,000	--	1,000,000	--	--
Levels	SLV		150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID		**Date**										
MW-14		06/04/08	<10.2	33.9	<2	<3	7,900	148	<10.7	<2.2	0.41	0.058
MW-14		09/11/08	<10.2	50.7	<2	<3	13,900	416	<10.7	<2.2	0.21	<0.056
MW-14		12/10/08	<10	113	<2	<3	13,900	405	<10.7	<2.2	0.91	<0.056
MW-14		03/12/09	<10	60.2	<2	<3	8,330	240	<10.7	<2.2	0.34	<0.056
MW-14		06/09-11/09	<7.2	105	<2.0	<3.4	25,100	143	<8.9	<2.3	0.75	<0.056
MW-14		09/09-11/09	<7.2	199	<2.0	<3.4	31,000	929	<8.9	<2.3	0.61	0.061
MW-14		12/07-09/09	<7.2	274	<2.0	<3.4	80,500	518	<8.9	<2.3	0.35	<0.056
MW-14		03/09-11/10	<7.2	119	2.0	5.3	28,100	386	<8.9	<2.3	0.47	<0.056
MW-14		06/09-11/10	<9.8	213	<2.0	<3.4	72,900	287	<8.9	<2.3	0.67	<0.056
MW-14		09/09/10	<9.8	254	<2.0	3.6	38,000	588	<8.9	<2.3	1.2	<0.056
MW-14	(D)	09/09/10	<9.8	243	3.7	4.3	39,300	617	<8.9	<2.3	1.80	<0.056
MW-14		03/08/11	NO LONGER INCLUDED IN ROUTINE SAMPLING EVENTS									
MW-15		06/28/05	4.8	180	<1.0	7.0	--	--	3.7	<1.0	10.0	<0.20
MW-15		09/27/05	8.56	371	<1.00	4.5	43,100	1,270	<2.00	<1.00	10.0	<0.20
MW-15		12/20/05	5.58	281.0	<1.00	3.70	53,800	1,180	10.10	<1.00	7.07	<0.20
MW-15		03/21/06	<1.00	155.0	<1.00	1.21	33,500	798	<2.00	<2.00	1.46	<0.200
MW-15		06/22/06	<10	146	<0.91	--	31,000	651	<9.4	<1.6	3.2	0.92
MW-15		09/21/06	<10	357	<0.91	--	48,600	1,440	<9.4	<1.6	2.3	<0.056
MW-15		12/19/06	<10	300	0.93	--	58,400	1,330	<9.4	<1.6	3.8	<0.056
MW-15		02/27/07	<10	253	<0.91	--	49,600	1,130	<9.4	<1.6	4.4	<0.056
MW-15		06/14/07	<10	106	<0.90	--	22,000	497	<9.4	<1.6	3.2	<0.056
MW-15		09/25/07	<10	201	<0.90	--	33,000	804	<9.4	<1.6	10.7	<0.056
MW-15		12/14/07	<10	310	<0.9	<4.3	53,800	1,310	<9.4	<1.6	5.3	<0.056
MW-15	(D)	12/14/07	<10	319	<0.9	3.1	55,400	1,370	<9.4	<1.6	4.3	<0.056
MW-15		03/05/08	<10	205	1.2	<2.3	38,400	971	<9.4	<1.6	1.8	<0.056
MW-15		06/04/08	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-15		09/11/08	<10.2	146	<2	<3	18,000	649	<10.7	<2.2	0.055	<0.056
MW-15		12/11/08	<10	250	<2	<3	39,900	1,030	<10.7	<2.2	1.7	<0.056
MW-15		03/12/09										
MW-15		06/09-11/09										
MW-15		09/09-11/09										

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Proposed Screening	RBC	5800	25,000,000	57,000	8,700	--	3,000,000	--	1,000,000	--	--
Levels	SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**										
MW-15	12/07-09/09										
MW-15	03/09-11/10										
MW-15	06/09-11/10										
MW-15	09/09/10	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-15	03/08/11										
MW-15	09/14/11										
MW-15	03/08/12										
MW-15	03/09/12										
MW-15	09/11/12										
MW-15	03/13/13	NOT SAMPLED DUE TO HIGH LEVELS OF METHANE GAS									

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		Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening	RBC	5800	25,000,000	57,000	8,700	--	3,000,000	--	1,000,000	--	--
Levels	SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**										
MW-15	09/11/13										
MW-15	02/14/14										
MW-15	09/18/14	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-15	03/12/15										
MW-15	03/11/16	8.2	23	<0.64	<2.0	5,600	60.1	<8.2	<1.8	1.1	<0.050
MW-15	09/09/16	<9.7	148	0.74	<1.8	22,700	663	<9.7	<1.9	0.61	<0.050
MW-15	03/15/17	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-15	09/09/17	20.4	222	2.9	14.5	72,300	662	<9.3	<2.4	34.9	0.096
MW-15	03/14/18	<9.6	97.4	<1.8	<3.3	26,800	328	<9.3	<2.4	0.50	<0.050
MW-15	09/07/18	<16.0	130	<1.0	<5.3	21,800	558	<21.0	<5.0	<1.1	<0.050
MW-15	03/13/19	<16.0	127	<1.0	<5.3	32,100	494	<21.0	<5.0	<1.1	<0.050
MW-16	06/28/05	<1.0	180	<1.0	2.8	--	--	6.50	<1.00	2.5	<0.20
MW-16	09/27/05	7.27	286	<1.00	9.89	135,000	2,510	<2.0	<1.00	10.8	<0.20
MW-16	12/21/05	3.42	146	<1.00	1.68	64,200	2,140	9.24	<1.00	2.32	<0.20
MW-16	03/21/06	3.32	162	<1.00	5.43	91,000	2,010	<2.0	<1.00	8.55	0.429
MW-16	06/22/06	<10	128	<0.91	--	58,700	2,030	<9.4	<1.6	<0.51	<0.056
MW-16	09/20/06	<10	235	<0.91	--	74,700	2,490	<9.4	<1.6	0.51	<0.056
MW-16	12/19/06	<10	149	<0.91	--	32,800	1,430	<9.4	<1.6	0.84	<0.056
MW-16	02/27/07	<10	53.9	<0.91	--	9,920	426	<9.4	<1.6	<0.51	<0.056
MW-16	06/14/07	<10	34.9	<0.90	--	20,000	345	<9.4	<1.6	2.0	<0.056
MW-16	09/25/07	<10	110	3.7	--	115,000	1,620	<9.4	<1.6	0.88	0.076
MW-16	12/12/07	<10	165	<0.9	<2.3	42,200	1,750	<9.4	<1.6	1.4	<0.056
MW-16	03/05/08	<10	97.4	2.1	<2.3	66,900	1,980	<9.4	<1.6	0.96	<0.056
MW-16	06/03/08	<10.2	90.4	2.3	<3	61,400	2,280	<10.7	<2.2	3.5	0.35
MW-16	09/10/08	<10.2	253	4.1	<3	128,000	2,160	<10.7	<2.2	2.9	<0.056
MW-16	12/09/08	<10	290	<2	<3	163,000	2,270	<10.7	<2.2	8.9	0.18
MW-16	03/11/09	12.9	253	5.3	<3	134,000	2,330	<10.7	<2.2	9	0.24
MW-16	06/09-11/09	<36.0	539	<10.0	20.6	681,000	2,910	<44.5	<2.3	112	2.9
MW-16	09/09-11/09	9.5	196	6.4	5.4	123,000	1,630	<8.9	<2.3	21.3	0.63
MW-16	12/07-09/09	<7.2	113	<2.0	6.2	66,700	1,600	<8.9	<2.3	12.3	0.35
MW-16	03/09-11/10	<7.2	75.0	<2.0	<3.4	49,800	1,170	<8.9	<2.3	11.7	0.23

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			Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening		RBC	5800	25,000,000	57,000	8,700	--	3,000,000	--	1,000,000	--	--
Levels		SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID		**Date**										
MW-16		06/09-11/10	<9.8	86.1	30.2	4.3	64,400	760	<8.9	<2.3	8.8	0.16
MW-16	(D)	06/09-11/10	<9.8	87.7	18.7	4.6	54,900	660	<8.9	<2.3	11.1	0.072
MW-16		09/09/10	10.9	344	<2.0	10.9	209,000	2,080	15.6	<2.3	22.3	<0.056
MW-16		03/10/11	<9.8	224	<2.0	18.6	176,000	1,530	<8.9	<2.3	84.9	2.0
MW-16		09/14/11	<5.1	51.3	1.4	2.2	38,100	380	<6.9	<0.91	21.9	0.67
MW-16		03/08/12	7.7	100	1.3	6.0	40,500	1,000	<6.9	0.98	16.4	0.39
MW-16	(D)	03/08/12	15.8	112	1.6	7.4	48,000	1,140	7.6	1.1	16.6	0.39
MW-16		09/12/12	<6.8	268	5.4	9.4	129,000	1,470	<7.5	<1.2	45.9	2.1
MW-16		03/14/13	<6.8	110	0.48	9.0	72,300	784	<7.5	<1.2	25.8	0.13
MW-16		09/12/13	<6.8	83.2	1.3	4.8	83,700	1,050	<8.4	2.9	13.4	0.32
MW-16		02/14/14	6.9	107	<0.76	3.0	72,400	1,250	<8.4	<2.1	6.9	0.14
MW-16		09/18/14	<7.2	68.3	1.2	3.5	86,600	903	<4.8	<1.8	6.7	<0.060
MW-16		03/12/15	<7.2	21.2	<0.33	<1.3	11,500	641	<4.8	<1.8	0.094	<0.050
MW-16		09/14/2015	<7.0	59.6	0.32	1.6	25,000	908	<8.2	<1.4	0.30	<0.050
MW-16		03/11/16	<7.8	42.1	<0.64	<2.0	9,940	711	<8.2	<1.8	0.29	<0.050
MW-16		09/09/16	<9.7	36.3	0.87	<1.8	26,000	465	<9.7	<1.9	0.27	<0.050
MW-16		03/15/17	NO LONGER INCLUDED IN ROUTINE SAMPLING EVENTS									
MW-17		06/28/05	9.3	290	<1.0	23	--	--	3.9	<1.0	20	<0.20
MW-17	(D)	06/28/05	11	300	<1.0	25	--	--	3.9	<1.0	22	<0.20
MW-17		09/27/05	5	9	<1.00	<1.00	72,300	1,390	<2.00	<1.00	<1.00	<0.20
MW-17		12/20/05	<1.00	38.9	<1.00	<1.00	5,260	56.6	2.61	<1.00	<1.00	<0.20
MW-17		03/21/06	1.11	67.2	<1.00	1.89	21,200	648.0	<2.0	<1.00	1.84	0.230
MW-17		06/22/06	<10	92.4	<0.91	--	35,400	893	<9.4	<1.6	<0.51	<0.056
MW-17		09/21/06	<10	106	<0.91	--	36,200	735	<9.4	<1.6	1.5	<0.056
MW-17		12/19/06	<10	67.3	<0.91	--	18,200	145	<9.4	<1.6	2.7	<0.056
MW-17		02/27/07	<10	37.2	<0.91	--	10,100	136	<9.4	<1.6	1.0	<0.056
MW-17		06/14/07	<10	20.5	<0.90	--	338	59.2	<9.4	<1.6	0.15	<0.056
MW-17		09/25/07	10.1	116	1.2	--	49,300	1,080.00	<9.4	<1.6	1.6	0.31
MW-17		12/13/07	<0.	61.9	<0.9	<2.3	13,300	271.00	<9.4	<1.6	1.3	<0.056
MW-17		03/05/08	<10	58.3	4.1	<2.3	28,400	487.00	<9.4	<1.6	1.1	<0.056
MW-17		06/04/08	<10.2	40.7	<2	<3	12,400	60.80	<10.7	<2.2	2.2	<0.056

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Table 4
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			Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening		RBC	5800	25,000,000	57,000	8,700	--	3,000,000	--	1,000,000	--	--
Levels		SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID		**Date**										
MW-17		09/11/08	<10.2	61.9	<2	<3	34,900	667	<10.7	<2.2	0.52	<0.056
MW-17	(D)	09/11/08	<10.2	61.8	<2	<3	34,200	678	<10.7	<2.2	0.6	<0.056
MW-17		12/10/08	<10	65.8	4.4	<3	24,600	240	<10.7	<2.2	1.7	<0.056
MW-17	(D)	12/10/08	<10	66.7	3.9	<3	26,500	345	<10.7	<2.2	1.4	<0.056
MW-17		03/12/09	<10	55	<2	<3	24,300	129	<10.7	<2.2	1.3	<0.056
MW-17		06/09-11/09	<7.2	127	<2.0	3.8	69,600	624	<8.9	<2.3	3.7	<0.056
MW-17	(D)	06/09-11/09	<7.2	122	<2.0	4.2	58,800	593	<8.9	<2.3	3.9	<0.056
MW-17		09/09-11/09	<7.2	194	<2.0	<3.4	61,100	992	<8.9	<2.3	2.6	0.086
MW-17	(D)	09/09-11/09	<7.2	255	<2.0	<3.4	66,500	1,130	<8.9	<2.3	2.6	0.075
MW-17		12/07-09/09	<7.2	197	11.7	6.1	51,600	331	<8.9	<2.3	5.1	<0.056
MW-17		03/09-11/10	NOT SAMPLED DUE TO INACCESIBILITY									
MW-17		06/09-11/10	15.3	191	14.4	5.1	140,000	266	<8.9	<2.3	5.6	0.10
MW-17		09/09/10	15.5	562	3.3	11.3	212,000	1650	20.20	<2.3	7.6	<0.056
MW-17		03/08/11	NO LONGER INCLUDED IN ROUTINE SAMPLING EVENTS									
MW-18		06/28/05	3.5	270	<1.0	12	--	--	5.0	<1.0	13	<0.20
MW-18		09/27/05	4.17	200	<1.00	7	53,000	991	<2.0	<1.00	8.79	<0.20
MW-18		12/21/05	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-18		03/21/06	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-18		06/22/06	<10	331	<0.91	--	103,000	1,880	<9.4	<1.6	3.4	0.074

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Proposed Screening	RBC	5800	25,000,000	57,000	8,700	--	3,000,000	--	1,000,000	--	--
Levels	SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**										
MW-18	09/20/06										
MW-18	12/19/06										
MW-18	02/27/07										
MW-18	06/21/07										
MW-18	09/25/07										
MW-18	12/13/07										
MW-18	03/05/08										
MW-18	06/04/08										
MW-18	09/11/08										
MW-18	12/10/08										
MW-18	03/11/09										
MW-18	06/09-11/09				NOT SAMPLED DUE TO THE PRESENCE OF SHEEN						
MW-18	09/09-11/09										
MW-18	12/07-09/09										
MW-18	03/09-11/10										
MW-18	06/09-11/10										
MW-18	09/09/10										
MW-18	03/08/11										
MW-18	09/14/11										
MW-18	03/08/12										
MW-18	09/11/12										
MW-18	03/13/13										
MW-18	09/11/13				NOT SAMPLED DUE TO THE PRESENCE OF SPH						
MW-18	02/14/14										
MW-18	09/18/14										
MW-18	03/12/15										
MW-18	09/14/2015	<7.0	279	1.3	2.8	68,200	1,310	14.5	<1.4	1.2	<0.050
MW-18	03/11/16	<7.8	41.9	<0.64	<2.0	11,900	220	<8.2	<1.8	<0.13	<0.050
MW-18	09/09/16				NOT SAMPLED DUE TO THE PRESENCE OF SPH						
MW-18	03/15/17										
MW-18	09/09/17				WELL GAUGED BUT NOT SAMPLED						
MW-18	03/14/18	<9.6	74.4	<1.8	<3.3	14,800	344	<9.3	<2.4	0.44	<0.050

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Proposed Screening	RBC	5800	25,000,000	57,000	8,700	--	3,000,000	--	1,000,000	--	--
Levels	SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**										
MW-18	09/07/18	<16.0	167	<1.0	<5.3	32,000	850	<21.0	<5.0	<1.1	<0.050
MW-18	3/13/2019	<16.0	136	<1.0	<5.3	29,000	631	<21.0	<5.0	<1.1	<0.050
MW-19	06/21/07	*21.5*	483	<0.90	--	139,000	1,680	<9.4	8.2	38.9	<0.056
MW-19	09/24/07	<10	296	2.4	--	77,900	1,280	<9.4	<1.6	9.5	0.19
MW-19	12/13/07	NOT SAMPLED DUE TO INACCESIBILITY									
MW-19	03/05/08	<10	475	10.4	8.4	297,000	1,080	<9.4	<1.6	8.7	<0.056
MW-19	06/04/08	<10.2	90.4	<2	<3	26,300	689	<10.7	<2.2	1.7	<0.056
MW-19 (D)	06/04/08	<10.2	252	<2	24.3	79,000	827	<10.7	<2.2	12.1	<0.056
MW-19	09/11/08	<10.2	787.0	9.1	4.9	290,000	1,340	<10.7	6.2	4.1	<0.28
MW-19	12/10/08	<10	118	<2	<3	38,400	804	<10.7	<2.2	1.5	<0.056
MW-19	03/12/09	<10	112	2.5	<3	77,300	968	<10.7	<2.2	2.6	<0.056
MW-19	06/09-11/09	<7.2	554	<2.0	10.6	193,000	1,160	<8.9	<2.3	9.3	0.15
MW-19	09/09-11/09	<7.2	639	<2.0	<3.4	168,000	1,520	<8.9	<2.3	7.4	0.091
MW-19	12/07-09/09	NOT SAMPLED DUE TO INACCESIBILITY									
MW-19	03/09-11/10	<7.2	89.7	<2.0	3.6	71,600	914	<8.9	2.5	1.0	<0.056
MW-19	06/09-11/10	<9.8	660	<2.0	4.8	242,000	1,250	15.2	<2.3	7.4	0.15
MW-19	09/09/10	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-19	03/09/11	<9.8	99.3	<2.0	<3.4	83,100	832	<8.9	<2.3	2.0	<0.050
MW-19	09/14/11	12.2	174	4.2	3.9	142,000	1,340	7.1	<0.91	3	0.12
MW-19	03/08/12	13.0	359	3.6	10.2	150,000	971	26.9	1.5	8.1	0.11
MW-19	09/12/12	<6.8	288	5.3	12.3	160,000	1,100	<7.5	<1.2	14.8	0.30
MW-19	03/13/13	UNABLE TO LOCATE									
MW-19	09/11/13	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-19	02/14/14	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-19	09/18/14	<36.0	367.0	3.90	7.70	258,000	811.0	<24.0	<1.8	3.30	<0.060
MW-19	03/12/15	<7.2	57.3	0.59	<1.3	38,900	710	<4.8	<1.8	<0.082	<0.050
MW-19 (D)	03/12/15	<7.2	56.6	0.65	<1.3	38,500	706	<4.8	<1.8	<0.082	<0.050
MW-19	03/11/16	<7.8	50.3	0.74	<2.0	1570	20.5	<8.2	<1.8	1.1	<0.050
MW-19	09/09/16	<9.7	199	1.5	<1.8	87,200	2,050	<9.7	<1.9	0.2	<0.050
MW-19	03/15/17	<9.7	63.8	1.5	3.3	62,300	414	<9.7	<1.9	4.9	0.18
MW-19	09/09/17	<9.6	174	<1.8	8.8	89,600	978	<9.3	<2.4	10.3	0.21

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Proposed Screening		RBC	5800	25,000,000	57,000	8,700	--	3,000,000	--	1,000,000	--	--
Levels		SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID		**Date**										
MW-19		03/14/18	<9.6	19.9	<1.8	<3.3	3,680	119	<9.3	<2.4	0.57	<0.050
MW-19		09/06/18	<16.0	76.5	<1.0	<5.3	33,600	764	<21.0	<5.0	<1.1	<0.050
MW-19		3/13/2019	<16.0	**43.6**	<1.0	<5.3	**25,900**	**482**	<21.0	<5.0	<1.1	<0.050
MW-20		06/21/07	22.9	573	<4.5	--	166,000	1,750	10.9	10	41.6	<0.056
MW-20		09/24/07	<10	313	3.4	--	79,400	1,210	<9.4	<1.6	22.9	0.11
MW-20		12/13/07	--	--	--	--	--	--	--	--	--	--
MW-20		03/05/08	<10	179	2.1	2.9	52,500	928	<9.4	<1.6	5.1	<0.056
MW-20		06/04/08	--	--	--	--	--	--	--	--	--	--
MW-20		09/11/08	<10.2	144	<2	<3	54,500	857	<10.7	<2.2	1.7	<0.056
MW-20		12/10/08	<10	101	<2	<3	30,900	486	<10.7	<2.2	0.33	<0.056
MW-20		03/12/09	<10	207	2.7	<3	70,400	1,050	<10.7	<2.2	2.9	<0.056
MW-20		06/09-11/09[2]	<7.2	1,200	9.3	21.3	169,000	1,220	<8.9	<2.3	22.7	0.17
MW-20	(D)	06/09-11/09[2]	<7.2	1,230	9.6	23.0	170,000	1,250	<8.9	<2.3	21.7	0.17
MW-20		06/09-11/09	159	2,530	56.4	225	119,000	1,650	151	54.6	29.8	1.1
MW-20		06/09-11/09	151	2,730	54.5	224	134,000	1,610	142	53.0	33.6	1.1
MW-20		09/09-11/09[2]	<7.2	374	5.4	15.9	77,000	1,060	<8.9	<2.3	15.6	0.12
MW-20	(D)	09/09-11/09[2]	<7.2	386	5.7	16.1	78,900	1,090	<8.9	<2.3	15.4	0.10
MW-20		12/07-09/09[2]	<7.2	260	<2.0	14.5	93,600	962	<8.9	<2.3	10.9	<0.056
MW-20	(D)	12/07-09/09[2]	<7.2	257	<2.0	15.0	94,600	904	<8.9	<2.3	11.8	<0.056
MW-20		03/09-11/10[2]	<7.2	248	<2.0	5.6	111,000	999	<8.9	<2.3	4.9	<0.056
MW-20	(D)	03/09-11/10[2]	<7.2	256	<2.0	5.6	114,000	1,000	<8.9	<2.3	5.3	<0.056
MW-20		06/09-11/10[2]	<9.8	278	7.2	10.4	98,800	966	<8.9	<2.3	13.0	<0.056
MW-20	(D)	06/09-11/10[2]	<9.8	287	7.8	14.1	113,000	986	<8.9	<2.3	13.0	<0.056
MW-20		09/09/10[2]	10	607	<2.0	27.7	147,000	1,270	12.0	<2.3	20.0	<0.056
MW-20		03/09/11[2]	<9.8	155	<2.0	12.0	130,000	426	<8.9	<2.3	12.1	0.085
MW-20		09/14/11[2]	9.5	334	5.3	19.6	141,000	1,330	<6.9	<0.91	22.2	0.17
MW-20		3/7/2012[2]	13.1	169	2.0	10.3	65,900	710	10.40	<0.91	8.4	0.036
MW-20		09/12/12[2]	<6.8	224	3.7	15.1	84,500	780	<7.5	<1.2	20.0	0.25
MW-20	(D)	09/12/12[2]	<6.8	220	3.6	17.0	81,500	823	<7.5	<1.2	15.2	0.13
MW-20		03/14/13[2]	<6.8	209	0.66	32.0	97,200	517	<7.5	<1.2	27.5	0.36
MW-20		09/12/13[2]	18.4	282	1.10	17.1	59,500	709	<8.4	<2.1	19.3	0.091

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Proposed Screening		RBC	5800	25,000,000	57,000	8,700	--	3,000,000	--	1,000,000	--	--
Levels		SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID		**Date**										
MW-20	(D)	09/12/13[2]	17.7	303	1.00	14.0	52,900	732	<8.4	<2.1	13.0	0.089
MW-20		02/14/14	<6.8	158	<0.76	8.5	56,800	420	<8.4	<2.1	8.7	<0.060
MW-20		09/18/14	<7.2	443	2.4	31.5	93,700	992	<4.8	<1.8	26.4	<0.060
MW-20		03/12/15	<7.2	63.3	0.42	1.5	21,900	365	<4.8	<1.8	0.23	<0.050
MW-20		09/14/15	<7.0	203	0.61	2.1	41,600	811	11.9	<1.4	<0.13	<0.050
MW-20		03/11/16	<7.8	146	0.83	<2.0	557	10.0	<8.2	<1.8	0.39	<0.050
MW-20		09/09/16	<9.7	245	0.59	<1.8	33,900	678	<9.7	<1.9	<0.090	<0.050
MW-20		03/15/17	<9.7	87.6	0.76	<1.8	29,900	430	<9.7	<1.9	3.4	<0.050
MW-20		09/09/17	<9.6	279	<1.8	14.8	108,000	1,180	<9.3	<2.4	13.6	0.078
MW-20		03/14/18	<9.6	44.9	<1.8	<3.3	9,940	219	<9.3	<2.4	0.20	<0.050
MW-20		09/06/18	<16.0	175	<1.0	<5.3	46,600	757	<21.0	<5.0	3.2	<0.050
MW-20		3/13/2019	<16.0	87.1	<1.0	<5.3	17,400	348	<21.0	<5.0	<1.1	<0.050
MW-21		06/21/07	56.4	1,510	<0.90	--	247,000	2,530	9.7	15.9	116	1.1
MW-21		09/24/07	19.9	799	6.7	--	161,000	1,340	<9.4	<1.6	52.1	0.22
MW-21		12/13/07	NOT SAMPLED DUE TO INACCESIBILITY									
MW-21		03/05/08	<10	157	2.0	<2.3	57,000	1,190	<9.4	<1.6	2.9	<0.056
MW-21		06/04/08	<10.2	85.8	<2	3.8	25,600	348	<10.7	<2.2	4.9	<0.056
MW-21		09/11/08	<10.2	142	<2	<3	90,000	1,080	<10.7	<2.2	5	<0.056
MW-21		12/10/08	<10	157	<2	<3	11,200	154	<10.7	<2.2	11.5	<0.056
MW-21		03/12/09	12.2	130	2.1	3.5	51,400	306	<10.7	<2.2	4.6	<0.056
MW-21		06/09-11/09	<7.2	95.1	<2.0	6.4	85,700	202	<8.9	<2.3	8.1	0.081
MW-21		09/09-11/09	<7.2	339	2.3	<3.4	162,000	1,780	<8.9	<2.3	9.1	0.13
MW-21		12/07-09/09	INACCESSIBLE									
MW-21		03/09-11/10	<7.2	202	3.0	4.8	63,200	1,160	<8.9	3.3	3.8	<0.056
MW-21		06/09-11/10	10.8	95.0	<2.0	8.2	134,000	453	<8.9	<2.3	10.4	0.14
MW-21		09/09/10	22.7	435.0	<2.0	24.8	186,000	1,290	15.70	<2.3	18.0	<0.056
MW-21		03/08/11	NO LONGER INCLUDED IN ROUTINE SAMPLING EVENTS									
MW-22		06/20/07	34.1	816	6.9	--	191,000	2,530	11.5	11.2	147	0.64
MW-22		09/24/07	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-22		12/13/07	--	--	--	--	--	--	--	--	--	--

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		Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening	RBC	5800	25,000,000	57,000	8,700	--	3,000,000	--	1,000,000	--	--
Levels	SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**										
MW-22	03/05/08	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-22	06/04/08										
MW-22	09/11/08										
MW-22	12/10/08										
MW-22	03/12/09										
MW-22	06/09-11/09										
MW-22	09/09-11/09										
MW-22	12/07-09/09										
MW-22	03/09-11/10										
MW-22	06/09-11/10	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-22	09/09/10										
MW-22	03/08/11										
MW-22	09/14/11										
MW-22	03/08/12										
MW-22	09/11/12										
MW-22	03/13/13										
MW-22	09/11/13										
MW-22	02/14/14	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-22	09/18/14										
MW-22	03/12/15	<7.2	30.1	0.93	<1.3	2,930	106	<4.8	<1.8	0.28	<0.050
MW-22	09/14/15	<7.0	97.3	2.1	1.6	6,120	207	<8.2	<1.4	0.26	<0.050
MW-22	03/11/16	8.5	51.7	3.8	2.7	4,880	60.6	< 8.2	< 1.8	13.2	< 0.050
MW-22	09/09/16	<9.7	135	130.0	7.9	16,300	364	<9.7	<1.9	17.8	<0.050
MW-22	(D) 09/09/16	<9.7	110	44.0	2.6	10,800	348	<9.7	<1.9	6.4	<0.050
MW-22	03/15/17	<9.7	72.2	116	10	20,000	120	<9.7	<1.9	45.1	0.096
MW-22	(D) 03/15/17	<9.7	57.9	61.0	8.6	16,800	114	<9.7	<1.9	18.3	0.064
MW-22	09/09/17	16	343.0	712.0	16	25,500	223	<9.3	<2.4	70	0.11
MW-22	03/14/18	<9.6	68.7	204	3.3	12,300	67.4	<9.3	<2.4	44.3	<0.050
MW-22	09/07/18	<16.0	33.2	<1.0	<5.3	3,860	98	<21.0	<5.0	<1.1	<0.050
MW-22	3/13/2019	<16.0	41.2	2.4 J	<5.3	1,390	31.7	<21.0	<5.0	<1.1	<0.050
MW-22	(D) 3/13/2019	<16.0	42.3	3.0 J	<5.3	1,670	35	<21.0	<5.0	<1.1	<0.050

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Table 4
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		Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening	RBC	5800	25,000,000	57,000	8,700	--	3,000,000	--	1,000,000	--	--
Levels	SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**										
MW-23	06/20/07	39.1	364	<0.90	--	102,000	637	<9.4	7.5	2,340	1.3
MW-23	09/24/07	40.1	58.2	<0.90	--	12,200	101	<9.4	<1.6	430	0.13
MW-23	12/13/07	--	--	--	--	--	--	--	--	--	--
MW-23	03/05/08	10.2	73.0	7.4	4.8	5,940	114	<9.4	<1.6	158	<0.056
MW-23	06/03/08	19.9	119.0	<2	12.7	22,400	276	<10.7	<2.2	825	0.13
MW-23	06/09-11/09	21.8	43.6	2.7	5.7	11,800	129	<8.9	<2.3	233	0.14
MW-23	09/11/08	<10.2	100	<2	12.6	14,000	129	<10.7	<2.2	244	<0.056
MW-23	12/10/08	20.1	72.4	<2	9.9	8,420	104	<10.7	<2.2	108	0.061
MW-23	03/12/09	23.3	65.1	<2	10.1	14,300	146	<10.7	<2.2	295	0.12
MW-23	06/09-11/09	21.8	43.6	2.7	5.7	11,800	129	<8.9	<2.3	233	0.14

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		Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening	RBC	5800	25,000,000	57,000	8,700	--	3,000,000	--	1,000,000	--	--
Levels	SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**										
MW-23	09/09-11/09										
MW-23	12/07-09/09										
MW-23	03/09-11/10				NOT SAMPLED DUE TO THE PRESENCE OF SHEEN						
MW-23	06/09-11/10										
MW-23	09/09/10										
MW-23	03/08/11				NO LONGER INCLUDED IN ROUTINE SAMPLING EVENTS						
MW-24	06/20/07	25.4	473	<0.90	--	127,000	994	<9.4	7.5	54.6	<0.56
MW-24	09/24/07	--	--	--	--	--	--	--	--	--	--
MW-24	12/13/07	--	--	--	--	--	--	--	--	--	--
MW-24	03/05/08										
MW-24	06/03/08				NOT SAMPLED DUE TO THE PRESENCE OF SPH						
MW-24	09/11/08	--	--	--	--	--	--	--	--	--	--
MW-24	12/10/08	--	--	--	--	--	--	--	--	--	--
MW-24	03/12/09	--	--	--	--	--	--	--	--	--	--
MW-24	06/09-11/09										
MW-24	09/09-11/09										
MW-24	12/07-09/09										
MW-24	03/09-11/10										
MW-24	06/09-11/10										
MW-24	09/09/10				NOT SAMPLED DUE TO THE PRESENCE OF SPH						
MW-24	03/08/11										
MW-24	09/14/11										
MW-24	03/08/12										
MW-24	09/11/12										
MW-24	03/13/13										
MW-24	09/11/13				NOT SAMPLED DUE TO THE PRESENCE OF SHEEN						
MW-24	02/14/14										
MW-24	09/18/14				NOT SAMPLED DUE TO THE PRESENCE OF SPH						
MW-24	03/12/15										
MW-24	09/14/15	<7.0	185	0.30	1.6	21,800	75.9	<8.2	<1.4	2.0	<0.050
MW-24	09/09/16				NOT SAMPLED DUE TO THE PRESENCE OF SPH						

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Table 4
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		Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening	RBC	5800	25,000,000	57,000	8,700	--	3,000,000	--	1,000,000	--	--
Levels	SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**										
MW-24	03/15/17	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-24	09/09/17	11.9	140	<1.8	12.6	49,600	144	<9.3	<2.4	26.5	0.15
MW-24	03/14/18	<9.6	21.4	<1.8	<3.3	988	9.3	<9.3	<2.4	2.0	<0.050
MW-24	09/06/18	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-24	3/13/2019	<16.0	38.3	<1.0	<5.3	1,930	11.1 J	<21.0	<5.0	1.8 J	<0.050
MW-25	06/21/07	<10.0	626	2.8	--	122,000	1,710	<9.4	<1.6	47.7	<0.56
MW-25 (D)	06/21/07	<10.0	516	2.3	--	110,000	1,550	<9.4	<1.6	68.5	<0.56
MW-25	09/24/07	<10.0	289	<0.90	--	75,900	1,030	<9.4	<1.6	15.3	<0.056
MW-25	12/13/07	--	--	--	--	--	--	--	--	--	--
MW-25	03/05/08	<10.0	262	1.7	<2.3	76,300	1,570	<9.4	<1.6	0.52	<0.056
MW-25	06/03/08	--	--	--	--	--	--	--	--	--	--
MW-25	09/11/08	<10.2	175	<2	<3	54,900	1,020	<10.7	<2.2	0.24	<0.056
MW-25	12/10/08	<10.0	221	<2	<3	61,600	1,360	<10.7	<2.2	0.33	<0.056
MW-25	03/12/09	<10.0	321	2.7	<3	86,300	1,460	<10.7	<2.2	0.42	<0.056
MW-25	06/09-11/09	<7.2	137	<2.0	<3.4	42,300	883	<8.9	<2.3	0.59	<0.056
MW-25	09/09-11/09	<7.2	192	<2.0	<3.4	52,400	1,080	<8.9	<2.3	1.2	<0.056
MW-25	12/07-09/09	<7.2	182	<2.0	<3.4	73,900	993	<8.9	<2.3	1.1	<0.056
MW-25	03/09-11/10	<7.2	154	2.4	<3.4	79,100	1,070	<8.9	3.2	1.4	<0.056
MW-25	06/09-11/10	<9.8	169	<2.0	<3.4	90,900	758	<8.9	<2.3	1.3	<0.056
MW-25	09/09/10	<9.8	307	<2.0	<3.4	89,000	1,440	<8.9	<2.3	1.7	<0.056
MW-25	03/08/11	<9.8	186	<2.0	<3.4	95,100	1,450	<8.9	<2.3	1.8	<0.050
MW-25 (D)	03/08/11	<9.8	178	<2.0	<3.4	84,900	1,450	<8.9	<2.3	1.3	<0.050
MW-25	09/14/11	7.8	297	3.3	2.5	97,000	1,210	7	<0.91	2	0.088
MW-25 (D)	09/14/11	7.9	248	3.1	2	85,400	1,180	<6.9	<0.91	1.40	0.080
MW-25	3/8/2012	14.5	287	2.5	3.3	83,400	1,030	15.0	1.4	2.5	<0.026
MW-25	9/12/2012	<6.8	372	4.1	3.8	117,000	1,010	<7.5	<1.2	3.7	<0.070
MW-25	3/14/2013	<6.8	138	1.2	3.1	53,500	695	<7.5	<1.2	3.3	0.45
MW-25	9/12/2013	19.5	148	<0.76	4.2	89,900	701	<8.4	<2.1	3.3	<0.060
MW-25	02/14/14	<6.8	125	<0.76	<1.6	38,500	829	<8.4	<2.1	1.1	<0.060
MW-25 (D)	02/14/14	<6.8	116	<0.76	2.1	39,600	842	<8.4	<2.1	1.6	<0.060
MW-25	09/18/14	<7.2	299	2.4	11	102,000	802	<4.8	<1.8	6.7	<0.060

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			Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening		RBC	5800	25,000,000	57,000	8,700	--	3,000,000	--	1,000,000	--	--
Levels		SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID		**Date**										
MW-25	(D)	09/18/14	<7.2	215	1.6	6.9	78,700	748	<4.8	<1.8	4	<0.060
MW-25		3/12/2015	<7.2	129	0.95	<1.3	47,000	983	<4.8	<1.8	<0.082	<0.050
MW-25		9/14/2015	<7.0	180	1.4	5.2	54,600	781	14.0	<1.4	1.3	<0.050
MW-25	(D)	9/14/2015	<7.0	123	0.58	1.5	36,500	751	9.6	<1.4	0.74	<0.050
MW-25		3/10/2016	<7.8	98	<0.64	3.0	32,000	64.8	<8.2	<1.8	3.1	<0.050
MW-25		9/9/2016	<9.7	126	0.98	<1.8	42,300	965	<9.7	<1.9	0.2	<0.050
MW-25		3/15/2017	NO LONGER INCLUDED IN ROUTINE SAMPLING EVENTS									

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EXPLANATIONS:

(µg/L) = Micrograms per liter
-- = Not Measured/Not Analyzed
(D) = Duplicate
RBC = Risk Based Concentration for construction and excavation workers exposed to groundwater in an open excavation, which are provided in Appendix A to the Oregon Department of Environmental Quality document titled "Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites" (DEQ, September 22, 2003, last updated March 2007).
SLV = Screening Level Values for a Level II Screening Ecological Risk Assessment for aquatic receptors in fresh water, which are provided in Table 1 of the Oregon Department of Environmental Quality document titled "Guidance for Ecological Risk Assessment: Levels I, II, III, and IV" (DEQ, April 1998, last updated December 2001).

[1] Monitoring wells MW-6 and MW-12 were previously designated W-6 and W-12, respectively.

[2] Matrix spike and duplicate matrix spike samples were collected from this well. Please refer to lab sheets for results.

Starting 1Q 2011, wells MW-14, MW-17, MW-21 and MW-23 were removed from monitoring.
Starting 3Q 2016, well MW-6 was removed from monitoring

Appendix C
Table 5
Historical Groundwater Monitoring Data and Analytical Results
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			Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening Level		RBC	5,800	25,000,000	57000	8,700	--	3,000,000	--	1,000,000	--	--
		SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID		**Date**										
DM-4		08/26/04	58.7	166	<1.00	<1.00	--	--	1.09	<1.00	<1.00	<0.200
DM-4		11/09/04	4.7	157	<1.00	1.08	--	--	1.01	<1.00	<1.00	<0.200
DM-4		02/02/05	32.0	126	<1.00	<1.00	--	--	<2.00	<1.00	<1.00	<0.200
DM-4	(D)	02/02/05	32.6	128	<1.00	<1.00	--	--	<2.00	<1.00	<1.00	<0.200
DM-4		06/28/05	--	--	--	--	--	--	--	--	--	--
DM-4		09/27/05	--	--	--	--	--	--	--	--	--	--
DM-4		12/20/05	--	--	--	--	--	--	--	--	--	--
DM-4		03/21/06	--	--	--	--	--	--	--	--	--	--
DM-4		06/23/06	25.9	145	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056
DM-4		09/21/06	21.0	143	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056
DM-4		12/20/06	26.1	144	<0.91	<2.3	--	--	<9.4	<1.6	0.44	<0.056
DM-4		02/27/07	18.7	141	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056
DM-4		06/14/07	27.6	152	<0.90	<2.3	--	--	<9.4	<1.6	1.7	<0.056
DM-4		09/25/07	48.2	200	<0.90	<2.3	--	--	<9.4	<1.6	1.1	<0.056
DM-4		12/13/07	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
DM-4		03/05/08	18.7	121	1.1	<2.3	22,200	697	<9.4	<1.6	0.18	<0.056
DM-4		06/03/08	<10.2	130	<2	<3	22,000	706	<10.7	<2.2	0.05	<0.056
DM-4		09/11/08	17.9	134	<2	<3	17,300	651	<10.7	<2.2	0.13	<0.056
DM-4		12/11/08	13.3	142	<2	<3	19,700	751	<10.7	<2.2	0.081	<0.056
DM-4		03/11/09										
DM-4		06/09-11/09										
DM-4		09/09-11/09										
DM-4		12/07-09/09										
DM-4		03/09-11/10										
DM-4		06/09-11/10	NOT SAMPLED DUE TO HIGH LEVELS OF METHANE GAS									
DM-4		09/09/10										
DM-4		03/08/11										
DM-4		09/14/11										
DM-4		03/08/12										
DM-4		09/11/12										
DM-4		03/13/13										
DM-4		09/13/13	11.6	124	<0.76	<1.6	22,000	821	<8.4	<2.1	0.29	<0.060

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Table 5
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		Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening Level	RBC	5,800	25,000,000	57000	8,700	--	3,000,000	--	1,000,000	--	--
	SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**										
DM-4		WELL ABANDONED NOVEMBER 2013									
DM-5	08/26/04	4.28	369	<1.00	1.40	--	--	3.48	<1.00	<1.00	<0.200
DM-5	11/09/04	8.23	393	<1.00	1.23	--	--	2.62	<1.00	<1.00	<0.200
DM-5	02/02/05	8.80	356	<1.00	<1.00	--	--	3.01	<1.00	<1.00	<0.200
DM-5	06/28/05	--	--	--	--	--	--	--	--	--	--
DM-5	09/27/05	--	--	--	--	--	--	--	--	--	--
DM-5	12/20/05	--	--	--	--	--	--	--	--	--	--
DM-5	03/21/06	--	--	--	--	--	--	--	--	--	--
DM-5	06/23/06	<10	368	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056
DM-5	09/21/06	<10	268	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056
DM-5	12/19/06	<10	369	1.8	<2.3	--	--	<9.4	<1.6	0.18	<0.056
DM-5	02/27/07	10.6	388	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056
DM-5	06/14/07	<10	414	<0.90	<2.3	--	--	<9.4	2	0.17	<0.056
DM-5	09/25/07	<10	360	4	<2.3	--	--	<9.4	<1.6	0.066	<0.056
DM-5	12/13/07										
DM-5	03/05/08	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
DM-5	06/03/08										
DM-5	09/11/08										
DM-5	12/11/08										
DM-5	03/11/09										
DM-5	06/09-11/09										
DM-5	09/09-11/09										
DM-5	12/07-09/09										
DM-5	03/09-11/10										
DM-5	06/09-11/10	NOT SAMPLED DUE TO HIGH LEVELS OF METHANE GAS									
DM-5	09/09/10										
DM-5	03/08/11										
DM-5	09/14/11										
DM-5	03/08/12										
DM-5	09/11/12										
DM-5	03/13/13										

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		Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening Level	RBC	5,800	25,000,000	57000	8,700	--	3,000,000	--	1,000,000	--	--
	SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**										
DM-5	09/13/13	<6.8	308	<0.76	1.7	88,900	797	<8.4	<2.1	0.29	<0.060
DM-5		WELL ABANDONED NOVEMBER 2013									
MW-3B	06/28/05	1.7	75	<1.00	<2.0	--	--	<2.0	<1.0	<1.0	<0.20
MW-3B (D)	06/28/05	1.1	78	<1.00	<2.0	--	--	<2.0	<1.0	<1.0	<0.20
MW-3B	09/27/05	2.88	112	<1.00	<1.00	--	--	<2.00	<1.00	<1.00	<0.20
MW-3B	12/21/05	--	--	--	--	--	--	--	--	--	--
MW-3B	03/21/06	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-3B	06/22/06										
MW-3B	09/20/06										
MW-3B	12/19/06										
MW-3B	02/27/07										
MW-3B	06/21/07										
MW-3B	09/25/07										
MW-3B	12/13/07										
MW-3B	03/05/08										
MW-3B	06/03/08										
MW-3B	09/11/08										
MW-3B	12/11/08										
MW-3B	03/11/09	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-3B	06/09-11/09										
MW-3B	09/09-11/09										
MW-3B	12/07-09/09										
MW-3B	03/09-11/10										
MW-3B	06/09-11/10										
MW-3B	09/09/10										
MW-3B	03/08/11										
MW-3B	09/14/11										
MW-3B	03/08/12										
MW-3B	09/11/12										
MW-3B	03/13/13	NOT SAMPLED DUE TO HIGH LEVELS OF METHANE GAS									

Appendix C
Table 5
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10 5th Street
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		Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening Level	RBC	5,800	25,000,000	57000	8,700	--	3,000,000	--	1,000,000	--	--
	SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**										
MW-3B	09/11/13										
MW-3B	02/14/14										
MW-3B	09/18/14										
MW-3B	03/12/15										
MW-3B	09/09/16										
MW-3B	03/15/17				NOT SAMPLED DUE TO THE PRESENCE OF SPH						
MW-3B	09/09/17										
MW-3B	03/14/18										
MW-3B	09/06/18										
MW-3B	3/13/2019										
MW-4B	06/28/05	1.1	73	<1.0	<2.0	--	--	2.3	<1.0	<1.0	<0.2
MW-4B	09/27/05	2.63	151	<1.0	<1.00	--	--	<2.0	<1.00	<1.00	<0.2
MW-4B	12/21/05	<1.00	61.7	<1.00	<1.00	--	--	<2.0	<1.00	<1.00	<0.2
MW-4B	03/21/06	2.51	48.1	<1.00	5.98	--	--	<2.0	<1.00	<1.00	<0.2
MW-4B (D)	03/21/06	1.93	46.5	<1.00	<1.00	--	--	<2.0	<1.00	<1.00	<0.2
MW-4B	06/22/06	<10	46	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	0.061
MW-4B (D)	06/22/06	<10	55.6	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056
MW-4B	09/20/06	<10	141	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056
MW-4B (D)	09/20/06	<10	143	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056
MW-4B	12/19/06	<10	65.1	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056
MW-4B (D)	12/19/06	<10	60.5	<0.91	<2.3	--	--	<9.4	<1.6	0.16	<0.056
MW-4B	02/27/07	<10	64.7	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056
MW-4B (D)	02/27/07	<10	61.1	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056
MW-4B	06/14/07	<10	54.1	<0.90	<2.3	--	--	<9.4	<1.6	0.17	<0.056
MW-4B (D)	06/14/07	<10	59	<0.90	<2.3	--	--	<9.4	<1.6	<0.047	<0.056
MW-4B	09/25/07	10	107	1.2	<2.3	--	--	<9.4	<1.6	<0.047	<0.056
MW-4B (D)	09/25/07	<10.0	110	<0.90	<2.3	--	--	<9.4	<1.6	0.094	<0.056
MW-4B	12/13/07				NOT SAMPLED DUE TO THE PRESENCE OF SPH						
MW-4B	03/05/08	<10	31.9	1.3	5.6	10,700	276	<9.4	<1.6	0.054	<0.056
MW-4B (D)	03/05/08	<10	31.8	0.99	<2.3	11,200	284	<9.4	<1.6	0.052	<0.056
MW-4B	06/03/08	<10.2	62.2	<2	<3	14,500	417	<10.7	<2.2	<0.050	<0.056

Appendix C
Table 5
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			Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening Level		RBC	5,800	25,000,000	57000	8,700	--	3,000,000	--	1,000,000	--	--
		SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID		**Date**										
MW-4B		09/10/08	<10.2	73.4	<2	<3	29,500	743	<10.7	<2.2	0.33	<0.056
MW-4B		12/11/08	<10	37.5	<2	<3	10,400	267	<10.7	<2.2	0.11	<0.056
MW-4B		03/11/09	<10	41.7	<2	<3	16,300	407	<10.7	<2.2	0.26	<0.056
MW-4B	(D)	03/12/09	<10	40.2	<2	<3	16,100	403	<10.7	<2.2	0.14	<0.056
MW-4B		06/09-11/09	<7.2	32.5	<2.0	<3.4	16,400	293	<8.9	<2.3	0.20	<0.056
MW-4B		09/09-11/09	<7.2	80.6	<2.0	<3.4	28,700	719	<8.9	<2.3	0.084	<0.056
MW-4B		12/07-09/09	<7.2	41.0	<2.0	<3.4	21,200	364	<8.9	<2.3	<0.050	<0.056
MW-4B		03/09-11/10	<7.2	63.2	<2.0	4.3	27,200	562	<8.9	<2.3	0.088	<0.056
MW-4B		06/09-11/10	<9.8	36.4	<2.0	<3.4	14,700	285	<8.9	<2.3	0.12	<0.056
MW-4B		09/09/10	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-4B		03/10/11	<9.8	22.0	<2.0	<3.4	10,100	202	<8.9	<2.3	0.079	<0.050
MW-4B		09/14/11	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-4B		03/08/12	<5.1	18.8	0.37	<1.1	8,900	196	<6.9	<0.91	0.13	0.057
MW-4B		09/12/12	<6.8	42.1	<0.36	1.4	19,500	479	<7.5	<1.2	0.045	<0.070
MW-4B		03/13/13	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-4B		09/11/13										
MW-4B		02/14/14	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-4B		09/18/14										
MW-4B		03/12/15	<7.2	24.1	<0.33	<1.3	15,400	234	<4.8	<1.8	<0.082	<0.050
MW-4B		09/15/15	--	--	--	--	--	--	--	--	--	--
MW-4B		03/11/16	<7.8	23.4	<0.64	<2.0	244	16	<8.2	<1.8	<0.65	<0.050
MW-4B	(D)	03/11/16	<7.8	22.7	<0.64	<2.0	319	19	<8.2	<1.8	<0.65	<0.050
MW-4B		09/09/16	<9.7	67.7	0.55	1.8	21,700	401	<9.7	<1.9	<0.090	<0.050
MW-4B		03/15/17	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-4B		09/09/17	<9.6	166	<1.8	<3.3	33,000	614	<9.3	<2.4	<0.11	<0.050
MW-4B	(D)	09/09/17	<9.6	164	<1.8	<3.3	30,600	599	9.4	<2.4	<0.11	<0.050
MW-4B		03/14/18	<9.6	20.8	<1.8	<3.3	8,520	165	<9.3	<2.4	<0.11	<0.050
MW-4B		09/06/18	<16.0	104	<1.0	<5.3	36,600	672	<21.0	<5.0	<1.1	<0.050
MW-4B	(D)	09/06/18	<16.0	98.7	<1.0	<5.3	35,900	641	<21.0	<5.0	<1.1	<0.050
MW-4B		3/13/2019	<16.0	42.6	<1.0	<5.3	16,400	304	<21.0	<5.0	<1.1	<0.050
MW-6[1]		08/26/04	2.73	69.7	<1.00	<1.00	--	--	11.9	<1.00	<1.00	<0.200

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			Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening Level		RBC	5,800	25,000,000	57000	8,700	--	3,000,000	--	1,000,000	--	--
		SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID		**Date**										
MW-6[1]	(D)	08/26/04	2.17	68.1	<1.00	<1.00	--	--	12.1	<1.00	<1.00	<0.200
MW-6[1]		11/09/04	2.1	68.4	<1.00	<1.00	--	--	12.2	<1.00	<1.00	<0.200
MW-6[1]		02/02/05	3.42	38.6	<1.00	<1.00	--	--	12.4	<1.00	<1.00	<0.200
MW-6[1]		06/28/05	<1.00	26	<1.0	<2.0	--	--	5.3	<1.0	<1.0	<0.200
MW-6[1]		09/27/05	2.18	350	<1.00	<1.00	--	--	<2.00	<1.00	<1.00	<0.200
MW-6[1]		12/21/05	2.26	44.2	<1.00	<1.00	--	--	8.42	<1.00	<1.00	<0.200
MW-6[1]	(D)	12/21/05	1.66	44.8	<1.00	<1.00	--	--	8.55	<1.00	<1.00	<0.200
MW-6[1]		03/21/06	1.11	27.3	<1.00	2.83	--	--	<2.00	<1.00	<1.00	4.66
MW-6[1]		06/22/06	<0.01	8.1	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	0.073
MW-6[1]		09/20/06	<10	124	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056
MW-6[1]		12/19/06	<10	22.5	<0.91	<2.3	--	--	<9.4	<1.6	0.090	<0.056
MW-6[1]		02/27/07	<10	3.4	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056
MW-6[1]		06/14/07	NOT SAMPLED DUE TO INACCESIBILITY									
MW-6[1]		09/25/07	<10.0	90.9	<0.90	<2.3	--	--	<9.4	<1.6	0.12	<0.056
MW-6[1]		12/13/07	<10	41.6	<0.9	<2.3	4,140	--	<9.4	<1.6	0.047	<0.056
MW-6[1]		03/05/08	<10	17.3	1.0	<2.3	<52.2	<.84	<9.4	<1.6	<.050	<0.056
MW-6[1]		06/03/08	<10.2	8.4	<2	12.7	108	276	<10.7	<2.2	<.050	<0.056
MW-6[1]		09/10/08	<10.2	65.9	<2	<3	7,100	1,930	<10.7	<2.2	0.33	<0.056
MW-6[1]		12/11/08	<10	3.2	<2	<3	790	238	<10.7	<2.2	0.11	<0.056
MW-6[1]		03/12/09	<10	8.6	<2	<3	470	136	<10.7	<2.2	0.5	<0.056
MW-6[1]		06/09-11/09	<7.2	6.3	<2.0	<3.4	2,450	338	<8.9	<2.3	0.32	<0.056
MW-6[1]		09/09-11/09	<7.2	32.4	<2.0	<3.4	2,880	336	<8.9	<2.3	0.12	0.059
MW-6[1]		12/07-09/09	<7.2	13.6	<2.0	<3.4	1,380	159	<8.9	<2.3	<0.050	<0.056
MW-6[1]		03/09-11/10	<7.2	8.5	<2.0	3.4	826	81.3	<8.9	<2.3	0.12	<0.056
MW-6[1]	(D)	03/09-11/10	<7.2	9.5	<2.0	<3.4	1,510	126	<8.9	<2.3	0.31	<0.056
MW-6[1]		06/09-11/10	<9.8	4.7	<2.0	<3.4	486	95.1	<8.9	<2.3	0.16	<0.056
MW-6[1]		09/09/10	<9.8	28.2	<2.0	<3.4	<52.2	246	<8.9	<2.3	0.054	<0.056
MW-6[1]		03/09/11	<9.8	4.1	<2.0	<3.4	143	6.1	<8.9	<2.3	0.19	<0.050
MW-6[1]		09/14/11	<5.1	39.6	<0.27	<1.1	19.6	46.7	<6.9	<0.91	<0.080	0.048
MW-6[1]		03/08/12	<5.1	7.3	<0.27	<1.1	1,460	88.6	<6.9	<0.91	0.82	0.071
MW-6[1]		09/11/12	<6.8	7.8	<0.36	<1.1	38.4	180	<7.5	<1.2	0.038	<0.070
MW-6[1]		03/14/13	<6.8	8.7	<0.36	<1.1	1,080	80.3	<7.5	<1.2	1.0	<0.070

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			Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening Level		RBC	5,800	25,000,000	57000	8,700	--	3,000,000	--	1,000,000	--	--
		SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID		**Date**										
MW-6[1]	(D)	03/14/13	<6.8	20.4	<0.36	<1.1	777	51.5	<7.5	<1.2	0.79	<0.070
MW-6[1]		09/12/13	<6.8	60.3	<0.76	<1.6	25,400	556.0	<8.4	<2.1	<0.085	<0.060
MW-6[1]		02/14/14	<6.8	7.2	<0.76	<1.6	<43.0	2.5	<8.4	<2.1	<0.085	<0.060
MW-6[1]		09/18/14	<7.2	155	0.46	<1.3	<33.4	152	<4.8	<1.8	<0.082	<0.060
MW-6[1]		03/12/15	NOT SAMPLED DUE TO INACCESIBILITY									
MW-6[1]		03/11/16										
MW-12[1]		08/26/04	<1.00	43.0	<1.00	<1.0	--	--	<1.00	<1.00	<1.00	<0.200
MW-12[1]		11/09/04	<1.00	30.2	<1.00	<1.00	--	--	1.06	<1.00	<1.00	<0.200
MW-12[1]		02/02/05	<1.00	24.1	<1.00	<1.00	--	--	<2.00	<1.00	<1.00	<0.200
MW-12[1]		06/28/05	<1.0	34.0	<1.0	<2.0	--	--	<2.0	<1.0	<1.0	<0.20
MW-12[1]		09/27/05	3.9	102.0	<1.00	<1.00	--	--	<2.00	<1.00	<1.00	<0.20
MW-12[1]		12/21/05	<1.00	27.7	<1.00	<1.00	--	--	<2.00	<1.00	<1.00	<0.200
MW-12[1]		03/21/06	<1.00	18.2	<1.00	<1.00	--	--	<2.00	<1.00	<1.00	<0.20
MW-12[1]		06/22/06	<10	36.2	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056
MW-12[1]		09/20/06	<10	49.3	<0.91	<2.3	--	--	<9.4	<1.6	0.77	<0.056
MW-12[1]		12/19/06	<10	20.7	<0.91	<2.3	--	--	<9.4	1.7	0.76	<0.056
MW-12[1]		02/27/07	<10	20.1	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056
MW-12[1]		06/14/07	<10	33.9	<0.90	<2.3	--	--	<9.4	<1.6	0.83	<0.056
MW-12[1]		09/25/07	<10	96	<0.90	<2.3	--	--	<9.4	<1.6	0.42	<0.056
MW-12[1]		12/12/07	<10	25.5	<0.9	<2.3	8,930	--	<9.4	<1.6	0.51	<0.056
MW-12[1]		03/05/08	<10	20.6	<.90	<2.3	10,700	280	<9.4	<1.6	0.66	<0.056
MW-12[1]		06/03/08	<10.2	30.7	<2	<3	8,300	288	<10.7	<2.2	0.53	<0.056
MW-12[1]		09/10/08	<10.2	92.6	<2	<3	40,500	830	<10.7	<2.2	0.77	0.58
MW-12[1]		12/11/08	<10	53.3	<2	<3	16,600	442	<10.7	<2.2	0.47	<0.056
MW-12[1]		03/11/09	<10	21.3	<2	<3	10,700	273	<10.7	<2.2	1.1	<0.056
MW-12[1]		06/09-11/09	<7.2	27.6	<2.0	<3.4	11,400	314	<8.9	<2.3	0.63	<0.056
MW-12[1]		09/09-11/09	<7.2	66.5	<2.0	<3.4	31,200	662	<8.9	<2.3	2.2	<0.056
MW-12[1]		12/07-09/09	<7.2	26.8	<2.0	<3.4	12,200	284	<8.9	<2.3	1.1	<0.056
MW-12[1]	(D)	12/07-09/09	<7.2	24.2	<2.0	<3.4	13,000	285	<8.9	<2.3	0.55	<0.056
MW-12[1]		03/09-11/10	<7.2	18.8	<2.0	4.2	9,960	258	<8.9	<2.3	0.66	<0.056
MW-12[1]		06/09-11/10	<9.8	29.9	<2.0	<3.4	12,100	300	<8.9	<2.3	2.3	<0.056

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		Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening Level	RBC	5,800	25,000,000	57000	8,700	--	3,000,000	--	1,000,000	--	--
	SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**										
MW-12[1]	09/09/10	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-12[1]	03/09/11	<9.8	23.5	<2.0	<3.4	11,400	275	<8.9	<2.3	0.8	<0.050
MW-12[1]	09/14/11	7.2	176	2.3	2.1	69,200	1,550	<6.9	<0.91	1.2	0.058
MW-12[1]	03/08/12	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-12[1]	09/12/12	<6.8	102	1.1	1.6	55,300	1,100	<7.5	<1.2	0.29	<0.070
MW-12[1]	03/13/13	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-12[1]	09/12/13	<6.8	60.3	<0.76	<1.6	25,400	556	<8.4	<2.1	0.66	<0.060
MW-12[1]	02/14/14	<6.8	25.2	<0.76	<1.6	865	170	<8.4	<2.1	0.32	<0.060
MW-12[1]	09/18/14	<7.2	54.7	<0.33	<1.3	28500	549	5.2	<1.8	0.3	<0.060
MW-12[1]	03/12/15	<7.2	18.8	0.41	<1.3	12,400	231	7.4	<1.8	0.30	<0.050
MW-12[1]	09/14/2015	<7.0	50.3	0.62	<1.5	36400	635	<8.2	<1.4	0.59	<0.050
MW-12[1]	03/11/16	<7.8	23.5	<0.64	<2.0	680	32.1	<8.2	<1.8	<0.65	<0.050
MW-12[1]	09/09/16	<9.7	41.5	<0.49	<1.8	14,000	405	<9.7	<1.9	0.47	<0.050
MW-12[1]	03/15/17	<9.7	14.4	<0.49	<1.8	2,900	98.5	<9.7	<1.9	0.32	<0.050
MW-12[1]	09/09/17	<9.6	148	<1.8	<3.3	77,800	1,340	9.5	<2.4	0.15	<0.050
MW-12[1]	03/14/18	<9.6	18.1	<1.8	<3.3	9,830	219	<9.3	<2.4	0.31	<0.050
MW-12[1]	03/14/18	(D) <9.6	18.0	<1.8	<3.3	9,720	222	<9.3	<2.4	0.27	<0.050
MW-12[1]	09/06/18	<16.0	132	<1.0	<5.3	62,100	1,090	<21.0	<5.0	<1.1	<0.050
MW-12	3/13/2019	<16.0	22.3	<1.0	<5.3	4,100	205	<21.0	<5.0	<1.1	<0.050
MW-14	06/28/05	<1.0	37	<1.0	<2.0	--	--	<2.0	<1.0	<1.0	<0.20
MW-14	09/27/05	1.56	281	<1.00	<1.00	--	--	<2.00	<1.00	<1.00	<0.20
MW-14	12/20/05	<1.00	19.3	<1.00	<1.00	--	--	<2.00	<1.00	<1.00	<0.20
MW-14	03/21/06	<1.00	40.2	<1.00	<1.00	--	--	<2.00	<1.00	<1.00	<0.20
MW-14	06/22/06	<10	0.2	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056
MW-14	09/21/06	<10	263	<0.91	<2.3	--	--	<9.4	<1.6	0.73	<0.056
MW-14	12/19/06	<10	77.4	<0.91	<2.3	--	--	<9.4	<1.6	0.055	<0.056
MW-14	02/27/07	<10	35.9	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056
MW-14	06/14/07	<10	14.6	<0.90	<2.3	--	--	<9.4	<1.6	0.18	<0.056
MW-14	09/25/07	<10	130	1.3	<2.3	--	--	<9.4	<1.6	0.19	<0.056
MW-14	12/13/07	<10	87.2	<0.9	<2.3	13,500	--	<9.4	<1.6	<0.05	<0.056
MW-14	03/05/08	<10	29.7	<0.9	<2.3	5,460	299	<9.4	<1.6	0.085	<.066

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		Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening Level	RBC	5,800	25,000,000	57000	8,700	--	3,000,000	--	1,000,000	--	--
	SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**										
MW-14	06/04/08	<10.2	20	<2	<3	176	37.3	<10.7	2.2	<0.050	<0.056
MW-14	09/11/08	<10.2	38.3	<2	<3	12,400	528	<10.7	<2.2	0.41	<0.056
MW-14	12/10/08	<10	61.8	<2	<3	2,540	181	<10.7	<2.2	0.08	<0.056
MW-14	03/12/09	<10	41.9	<2	<3	3,680	222	<10.7	<2.2	0.35	<0.056
MW-14	06/09-11/09	<7.2	18.2	<2.0	<3.4	2,130	111	<8.9	<2.3	0.16	<0.056
MW-14	09/09-11/09	<7.2	186	<2.0	<3.4	27,800	972	<8.9	<2.3	0.087	0.061
MW-14	12/07-09/09	<7.2	163	<2.0	<3.4	34,700	469	<8.9	<2.3	0.41	<0.056
MW-14	03/09-11/10	<7.2	78.9	<2.0	<3.4	10,800	439	<8.9	<2.3	0.12	<0.056
MW-14	06/09-11/10	<9.8	39.5	<2.0	<3.4	3,450	178	<8.9	<2.3	0.065	<0.056
MW-14	09/09/10	<9.8	119	<2.0	<3.4	9,560	442	<8.9	<2.3	0.093	<0.056
MW-14	(D) 09/09/10	<9.8	116	<2.0	<3.4	9,990	466	<8.9	<2.3	0.120	<0.056
MW-14	03/08/11	NO LONGER INCLUDED IN ROUTINE SAMPLING EVENTS									
MW-15	06/28/05	<1.0	120	<1.0	<2.0	--	--	3.5	<1.0	<1.0	<0.20
MW-15	09/27/05	2.64	332	<1.00	<1.00	--	--	<2.00	<1.00	<1.00	<0.20
MW-15	12/20/05	2.91	250	<1.00	<1.00	--	--	7.05	<1.00	<1.00	<0.20
MW-15	03/21/06	1.41	156	<1.00	<1.00	--	--	<2.00	<1.00	<1.00	5.61
MW-15	06/22/06	<10	130	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056
MW-15	09/21/06	<10	348	<0.91	<2.3	--	--	<9.4	<1.6	1.6	<0.056
MW-15	12/19/06	<10	280	<0.91	<2.3	--	--	<9.4	<1.6	0.16	<0.056
MW-15	02/27/07	<10	277	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056
MW-15	06/14/07	<10	97.4	<0.90	<2.3	--	--	<9.4	<1.6	0.13	<0.056
MW-15	09/25/07	<10	176	<0.90	<2.3	--	--	<9.4	<1.6	0.13	<0.056
MW-15	12/14/07	<10	333	<0.9	<2.3	56,600	--	<9.4	<1.6	0.047	<0.056
MW-15	(D) 12/14/07	<10	304	<0.9	<2.3	56,800	--	<9.4	<1.6	0.094	<0.056
MW-15	03/05/08	<10	190	<.90	<2.3	35,200	952	<9.4	<1.6	0.06	0.063
MW-15	06/04/08	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-15	09/11/08	<10.2	139	<2	<3	25,200	651	<10.7	<2.2	0.33	<0.056
MW-15	12/11/08	<10	235	<2	<3	39,200	1,040	<10.7	<2.2	0.071	<0.056
MW-15	03/12/09										
MW-15	06/09-11/09										
MW-15	09/09-11/09										

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		Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening Level	RBC	5,800	25,000,000	57000	8,700	--	3,000,000	--	1,000,000	--	--
	SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**										
MW-15	12/07-09/09										
MW-15	03/09-11/10										
MW-15	06/09-11/10	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-15	09/09/10										
MW-15	03/08/11										
MW-15	09/14/11										
MW-15	03/08/12										
MW-15	09/11/12										
MW-15	03/13/13	NOT SAMPLED DUE TO HIGH LEVELS OF METHANE GAS									
MW-15	09/11/13										
MW-15	02/14/14										
MW-15	09/18/14	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-15	03/12/15										
MW-15	03/11/16	< 7.8	21	<0.64	<2.1	5,550	61	<8.2	<1.9	<0.65	<0.050
MW-15	09/09/16	<9.7	146	1.9	<1.8	24,400	643	<9.7	<1.9	<0.090	<0.050
MW-15	03/15/17	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-15	09/09/17	<9.6	152	<1.8	<3.3	26,000	626	<9.3	<2.4	0.21	<0.050
MW-15	03/14/18	<9.6	98.8	<1.8	<3.3	27,300	338	<9.3	<2.4	<0.11	<0.050
MW-15	09/07/18	<16.0	155	<1.0	<5.3	37,300	587	<21.0	<5.0	12.1	<0.050
MW-15	3/13/2019	<16.0	136	<1.0	<5.3	31,700	566	<21.0	<5.0	<1.1	<0.050
MW-16	06/28/05	<1.0	160	<1.0	<2.0	--	--	8.8	<1.0	<1.0	<0.20
MW-16	09/27/05	3.25	216	<1.00	<1.00	--	--	<2.00	<1.00	<1.00	<0.20
MW-16	12/21/05	1.75	130	<1.00	<1.00	--	--	9.72	<1.00	<1.00	<0.20
MW-16	03/21/06	2.4	146	<1.00	<1.00	--	--	<2.00	<1.00	<1.00	10.3
MW-16	06/22/06	<10	942	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056
MW-16	09/20/06	<10	244	<0.91	<2.3	--	--	<9.4	<1.6	1.3	<0.056
MW-16	12/19/06	<10	127	<0.91	<2.3	--	--	<9.4	<1.6	0.15	<0.056
MW-16	02/27/07	<10	59.5	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056
MW-16	06/14/07	<10	64	<0.90	<2.3	--	--	<9.4	<1.6	0.11	<0.056
MW-16	09/25/07	<10	88.1	1.5	<2.3	--	--	<9.4	<1.6	0.058	0.068
MW-16	12/12/07	<10	161	<0.9	<2.3	32,700	--	<9.4	<1.6	0.073	<0.056
MW-16	03/05/08	<10	92.2	<.050	2.8	42,800	2,020	<9.4	<1.6	0.96	<0.056

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			Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening Level		RBC	5,800	25,000,000	57000	8,700	--	3,000,000	--	1,000,000	--	--
		SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID		**Date**										
MW-16		06/03/08	<10.2	118	<2	<3	75,400	2,200	<10.7	<2.2	0.06	<0.056
MW-16		09/10/08	<10.2	227	3.6	<3	110,000	2,090	<10.7	3.8	0.26	<0.056
MW-16		12/09/08	<10	240	<2	<3	115,000	2,130	<10.7	<2.2	0.13	<0.056
MW-16		03/11/09	<10	220	<2	<3	111,000	2,160	<10.7	<2.2	0.19	<0.056
MW-16		06/09-11/09	<7.2	205	<2.0	<3.4	104,000	1,940	<8.9	<2.3	0.42	<0.056
MW-16		09/09-11/09	<7.2	167	2.7	<3.4	83,100	1,720	<8.9	<2.3	<0.050	<0.056
MW-16		12/07-09/09	<7.2	64.0	<2.0	<3.4	37,100	1,320	<8.9	<2.3	<0.050	<0.056
MW-16		03/09-11/10	<7.2	27.5	<2.0	<3.4	1,240	871	<8.9	<2.3	0.064	<0.056
MW-16		06/09-11/10	<9.8	47.9	<2.0	<3.4	4,510	441	<8.9	<2.3	0.14	<0.056
MW-16	(D)	06/09-11/10	<9.8	47.9	<2.0	<3.4	7,090	469	<8.9	<2.3	0.065	<0.056
MW-16		09/09/10	<9.8	153	4.6	<3.4	106,000	1,850	<8.9	4.1	1.1	<0.056
MW-16		03/10/11	<9.8	16	<2.0	<3.4	1,080	147	<8.9	<2.3	0.29	<0.050
MW-16		09/14/11	<5.1	10.5	0.35	<1.1	13,100	260	<6.9	<0.91	0.35	0.065
MW-16		03/08/12	<5.1	64.6	0.43	<1.1	6,940	672	<6.9	<0.91	0.085	0.065
MW-16	(D)	03/08/12	<5.1	64.9	0.32	<1.1	7,300	667	<6.9	<0.91	<0.080	0.065
MW-16		09/12/12	<6.8	7.5	<0.36	1.4	7,430	563	<7.5	<1.2	0.087	<0.070
MW-16		03/14/13	<6.8	11.4	<0.36	<1.1	1,550	288	<7.5	<1.2	0.11	0.071
MW-16		09/12/13	<6.8	13.0	<0.76	<1.6	18,300	471	<8.4	<2.1	<0.085	<0.060
MW-16		02/14/14	<6.8	19.6	<0.76	<1.6	3,730	790	<8.4	<2.1	<0.085	<0.060
MW-16		09/18/14	<7.2	13.7	<0.33	<1.3	22,100	555	6.3	<1.8	0.097	<0.060
MW-16		03/12/15	<7.2	20.3	<0.33	<1.3	8,630	686	<4.8	<1.8	<0.082	<0.050
MW-16		09/14/2015	<7.0	227.0	0.66	2.3	50,600	1,220	12.6	<1.4	<0.13	<0.050
MW-16		03/11/16	<7.8	28.1	<0.64	<2.0	1,780	464	<8.2	<1.8	<0.65	<0.050
MW-16		09/09/16	<9.7	24.6	0.61	<1.8	21,900	451	9.9	<1.9	<0.090	<0.050
MW-16		03/15/17	NO LONGER INCLUDED IN ROUTINE SAMPLING EVENTS									
MW-17		06/28/05	<1.0	99	<1.0	<2.0	--	--	3.0	<1.0	<1.0	<0.20
MW-17	(D)	06/28/05	<1.0	100	<1.0	<2.0	--	--	2.9	<1.0	<1.0	<0.20
MW-17		09/27/05	1.18	134	<1.00	<1.00	--	--	<2.00	<1.00	<1.00	<0.20
MW-17		12/20/05	<1.00	31.8	<1.00	<1.00	--	--	2.52	<1.00	<1.00	<0.200
MW-17		03/21/06	<1.00	43.4	<1.00	<1.00	--	--	<2.00	<1.00	<1.00	<0.200
MW-17		06/22/06	<10	88.4	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056

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			Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening Level		RBC	5,800	25,000,000	57000	8,700	--	3,000,000	--	1,000,000	--	--
		SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID		**Date**										
MW-17		09/21/06	<10	116	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056
MW-17		12/19/06	<10	27.6	<0.91	<2.3	--	--	<9.4	<1.6	0.22	<0.056
MW-17		02/27/07	<10	14.6	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056
MW-17		06/14/07	<10	19.8	<0.90	<2.3	--	--	<9.4	<1.6	<0.047	<0.056
MW-17		09/25/07	<10	85.7	1	<2.3	--	--	<9.4	<1.6	0.12	0.34
MW-17		12/13/07	<10	49.4	<0.9	<2.3	5,090	--	<9.4	<1.6	0.073	<0.056
MW-17		03/05/08	<10	45.2	1.5	3.4	18,900	524	<9.4	<1.6	0.089	0.07
MW-17		06/04/08	<10.2	22.4	<2	<3	52.2	4.4	<10.7	<2.2	<0.050	<0.056
MW-17		09/11/08	<10.2	50	<2	<3	24,600	625	<10.7	<2.2	0.38	<0.056
MW-17	(D)	09/11/08	<10.2	51.7	<2	<3	25,700	659	<10.7	<2.2	0.37	<0.056
MW-17		12/10/08	<10	29.5	<2	<3	4,450	122	<10.7	<2.2	<0.050	<0.056
MW-17	(D)	12/10/08	<10	33.7	<2	<3	4,790	148	<10.7	<2.2	<0.050	<0.056
MW-17		3/12/09	<10	28.7	<2	<3	2,900	95.9	<10.7	<2.2	0.34	<0.056
MW-17		06/09-11/09	<7.2	58.4	<2.0	<3.4	26,700	673	<8.9	<2.3	0.21	<0.056
MW-17	(D)	06/09-11/09	<7.2	58.6	<2.0	<3.4	26,900	673	<8.9	<2.3	0.23	<0.056
MW-17		09/09-11/09	<7.2	120	<2.0	<3.4	41,100	1,110	<8.9	<2.3	0.061	<0.056
MW-17	(D)	09/09-11/09	<7.2	111	<2.0	<3.4	37,400	961	<8.9	<2.3	0.11	0.061
MW-17		12/07-09/09	<7.2	41.2	<2.0	<3.4	2,200	187	<8.9	2.4	0.12	<0.056
MW-17		03/09-11/10	NOT SAMPLED DUE TO INACCESIBILITY									
MW-17		06/09-11/10	<9.8	36.4	<2.0	<3.4	2,930	44.9	<8.9	<2.3	0.26	<0.056
MW-17		09/09/10	<9.8	142.0	2.4	<3.4	49,800	1,370	<8.9	<2.3	0.27	<0.056
MW-17		03/08/11	NO LONGER INCLUDED IN ROUTINE SAMPLING EVENTS									
MW-18		06/28/05	<1.0	180	<1.0	<2.0	--	--	5.3	<1.0	<1.0	<0.20
MW-18		09/27/05	1.5	148	<1.00	<1.00	--	--	<2.00	<1.00	<1.00	<0.20
MW-18		12/21/05	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-18		03/21/06	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-18		06/22/06	<0.01	218	<0.91	<2.3	--	--	<9.4	<1.6	<0.51	<0.056

Appendix C
Table 5
Historical Groundwater Monitoring Data and Analytical Results
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

		Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening Level	RBC	5,800	25,000,000	57000	8,700	--	3,000,000	--	1,000,000	--	--
	SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**										
MW-18	09/20/06										
MW-18	12/19/06										
MW-18	02/27/07										
MW-18	06/21/07										
MW-18	09/25/07										
MW-18	12/13/07										
MW-18	03/05/08										
MW-18	06/04/08										
MW-18	09/11/08										
MW-18	12/10/08										
MW-18	03/11/09										
MW-18	06/09-11/09	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-18	09/09-11/09										
MW-18	12/07-09/09										
MW-18	03/09-11/10										
MW-18	06/09-11/10										
MW-18	09/09/10										
MW-18	03/08/11										
MW-18	09/14/11										
MW-18	03/08/12										
MW-18	09/11/12										
MW-18	03/13/13										
MW-18	09/11/13										
MW-18	02/14/14	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-18	09/18/14										
MW-18	03/12/15										
MW-18	09/14/2015	<7.0	185.0	<0.30	1.5	726	1,200	<8.2	<1.4	0.22	<0.050
MW-18	03/11/16	<7.8	39.5	<0.64	<2.0	11,900	215	<8.2	<1.8	<0.65	<0.050
MW-18	09/09/16	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-18	03/15/17										
MW-18	09/09/17	WELL GAUGED BUT NOT SAMPLED									
MW-18	03/14/18	<9.6	75.3	<1.8	<3.3	16,700	430	<9.3	<2.4	<0.11	<0.050

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Proposed Screening Level		RBC	5,800	25,000,000	57000	8,700	--	3,000,000	--	1,000,000	--	--
		SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID		**Date**										
MW-18		09/07/18	<16.0	222.0	<1.0	<5.3	48,600	855	<21.0	<5.0	1.7	<0.050
MW-18		3/13/2019	<16.0	116	<1.0	<5.3	25,600	645	<21.0	<5.0	<1.1	<0.050
MW-19		6/21/07	<10.0	120	<0.90	<2.3	--	--	<9.4	2.3	0.24	<0.056
MW-19		9/24/07	<10	102	1.5	<2.3	--	--	<9.4	<1.6	0.11	<0.056
MW-19		12/13/07	NOT SAMPLED DUE TO INACCESIBILITY									
MW-19		03/05/08	<10	48.7	1.4	4.3	38,600	722	<9.4	<1.6	0.058	<0.056
MW-19		06/04/08	<10.2	58.5	<2	<3	13,500	643	<10.7	<2.2	<0.050	0.059
MW-19	(D)	06/04/08	<10.2	252.0	<2	24.3	79,000	827	<10.7	<2.2	12.100	<0.056
MW-19		09/11/08	<10.2	76.4	<2	<3	51,600	1,050	<10.7	<2.2	<0.050	<0.056
MW-19		12/10/08	<10	83.3	<2	<3	26,900	839	<10.7	<2.2	0.110	<0.056
MW-19		03/12/09	<10	57.3	<2	<3	36,900	899	<10.7	<2.2	0.270	<0.056
MW-19		06/09-11/09	<7.2	73.4	<2.0	<3.4	30,500	813	<8.9	<2.3	0.20	<0.056
MW-19		09/09-11/09	<7.2	118	<2.0	<3.4	54,000	1,370	<8.9	<2.3	0.064	<0.056
MW-19		12/07-09/09	NOT SAMPLED DUE TO INACCESIBILITY									
MW-19		03/09-11/10	<7.2	41.1	<2.0	3.4	17,000	506	<8.9	<2.3	<0.050	<0.056
MW-19		06/09-11/10	<9.8	70.5	<2.0	<3.4	31,200	884	<8.9	<2.3	<0.050	<0.056
MW-19		09/09/10	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-19		03/09/11	<9.8	61.4	<2.0	<3.4	19,900	783	<8.9	<2.3	<0.052	<0.050
MW-19		09/14/11	6.4	98.3	1.7	<1.1	60,000	1,190	<6.9	<0.91	0.093	0.056
MW-19		03/08/12	<5.1	60.0	0.60	<1.1	35,700	842	<6.9	<0.91	0.17	0.075
MW-19		09/12/12	<6.8	73.8	0.85	2.1	35,900	793	<7.5	<1.2	0.37	<0.070
MW-19		03/13/13	UNABLE TO LOCATE									
MW-19		09/11/13	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-19		02/14/14	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-19		09/18/14	<7.2	61.3	<0.33	<1.3	31,900	594	<4.8	<1.8	<0.082	<0.060
MW-19		03/12/15	<7.2	60.6	0.64	<1.3	39,400	750	9.8	<1.8	<0.082	<0.050
MW-19		03/12/15	<7.2	57.9	0.76	<1.3	37,900	725	7.2	<1.8	<0.082	<0.050
MW-19		03/11/16	<7.8	46.7	<0.64	<2.0	124	5	<8.2	<1.8	<0.65	<0.050
MW-19		09/09/16	<9.7	203	1.6	<1.8	88,600	2,110	<9.7	2.3	0.13	<0.050
MW-19		03/15/17	<9.7	7.5	<0.49	<1.8	<74.7	25.3	10.30	<1.9	<0.090	<0.050
MW-19		09/09/17	<9.6	73.3	<1.8	<3.3	38,900	817	<9.3	<2.4	<0.11	<0.050

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		Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening Level	RBC	5,800	25,000,000	57000	8,700	--	3,000,000	--	1,000,000	--	--
	SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**										
MW-19	03/14/18	<9.6	16.3	<1.8	<3.3	774	109	<9.3	<2.4	<0.11	<0.050
MW-19	09/06/18	<16.0	272	<1.0	15.5	146,000	1,070	<21.0	<5.0	24.5	0.53
MW-19	3/13/2019	<16.0	34.7	<1.0	<5.3	17,700	455	<21.0	<5.0	<1.1	<0.050
MW-20	6/21/07	<10.0	216	<0.90	<2.3	--	--	<9.4	3.4	0.19	<0.056
MW-20	9/24/07	<10	172	<0.90	<2.3	--	--	<9.4	<1.6	0.11	<0.056
MW-20	12/13/07	--	--	--	--	--	--	--	--	--	--
MW-20	03/05/08	<10	115.0	<0.9	<2.3	29300.0	690	<9.4	<1.6	0.10	<0.056
MW-20	06/04/08	--	--	--	--	--	--	--	--	--	--
MW-20	09/11/08	<10.2	149	<2	<3	51,900	940	<10.7	<2.2	0.33	<0.056
MW-20	12/10/08	<10	119	<2	<3	31,600	668	<10.7	<2.2	0.066	<0.056
MW-20	03/12/09	<10	134	<2	<3	45,900	880.0	<10.7	<2.2	0.22	<0.056
MW-20	06/09-11/09[2]	<7.2	182	<2.0	<3.4	46,900	974	<8.9	<2.3	0.46	<0.056
MW-20	(D) 06/09-11/09[2]	<7.2	184	<2.0	<3.4	47,700	979	<8.9	<2.3	0.48	<0.056
MW-20	06/09-11/09	154	2,140	48.5	193	47,800	1,460	148	53.8	15.2	0.90
MW-20	(D) 06/09-11/09	150	2,120	48.4	190	48,000	1,470	147	53.7	14.9	0.91
MW-20	09/09-11/09[2]	<7.2	252	<2.0	<3.4	38,300	975	<8.9	<2.3	0.24	<0.056
MW-20	(D) 09/09-11/09[2]	<7.2	256	<2.0	<3.4	38,400	991	<8.9	<2.3	0.25	<0.056
MW-20	12/07-09/09[2]	<7.2	164	<2.0	<3.4	41,000	852	<8.9	<2.3	<0.050	<0.056
MW-20	(D) 12/07-09/09[2]	<7.2	166	<2.0	<3.4	41,400	863	<8.9	<2.3	<0.050	<0.056
MW-20	03/09-11/10[2]	<7.2	156	<2.0	<3.4	45,800	923	<8.9	<2.3	0.084	<0.056
MW-20	(D) 03/09-11/10[2]	<7.2	159	<2.0	<3.4	51,400	941	<8.9	2.6	0.065	<0.056
MW-20	06/09-11/10[2]	<9.8	163	2.1	5.2	55,700	989	<8.9	<2.3	0.097	<0.056
MW-20	(D) 06/09-11/10[2]	<9.8	165	2.1	11.2	56,500	1,000	<8.9	<2.3	0.11	<0.056
MW-20	09/09/10[2]	<9.8	434	2.2	<3.4	45,300	1,120	<8.9	<2.3	0.67	<0.056
MW-20	03/09/11[2]	<9.8	125	<2.0	<3.4	35,000	798	<8.9	<2.3	<0.052	<0.050
MW-20	09/14/11[2]	5.2	243	1.8	<1.1	65,000	1,310	<6.9	<0.91	<0.080	0.055
MW-20	03/07/12[2]	<5.1	111	0.74	<1.1	32,800	634	<6.9	<0.91	0.12	0.072
MW-20	09/12/12[2]	<6.8	145	1.3	2.6	40,800	753	<7.5	<1.2	1.2	<0.070
MW-20	(D) 09/12/12[2]	<6.8	147	0.93	2.4	42,100	774	7.6	<1.2	0.99	<0.070
MW-20	03/14/13[2]	<6.8	101	0.87	1.7	32,400	562	<7.5	<1.2	0.81	0.12
MW-20	09/12/13[2]	<6.8	154	<0.76	<1.6	26,100	609	<8.4	<2.1	<0.085	<0.060

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Proposed Screening Level	RBC	5,800	25,000,000	57000	8,700	--	3,000,000	--	1,000,000	--	--
	SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**										
MW-20 (D)	09/12/13[2]	<6.8	155	<0.76	<1.6	19,800	568	<8.4	<2.1	<0.085	<0.060
MW-20	02/14/14	<6.8	113	<0.76	<1.6	30,900	593	<8.4	<2.1	0.42	<0.60
MW-20	09/18/14	<7.2	267	<0.33	1.4	35,500	811	<4.8	<1.8	<0.082	<0.60
MW-20	03/12/15	<7.2	108	<0.33	1.4	35,500	626	10.8	<1.8	<0.082	<0.050
MW-20	09/14/15	<7.0	197	0.56	2.2	40,200	792	10.8	<1.4	<0.13	<0.050
MW-20	03/10/16	10.2	146	<0.64	<2.0	56.2	7.7	< 8.2	<1.8	<0.65	<0.050
MW-20	09/09/16	<9.7	262	0.81	<1.8	42000	868	<9.7	<1.9	<0.090	<0.050
MW-20	03/15/17	<9.7	93.6	0.86	<1.8	19,900	544	<9.7	<1.9	<0.090	<0.050
MW-20	09/09/17	<9.6	220	<1.8	<3.3	55,400	1,100	<9.3	<2.4	<0.11	<0.050
MW-20	03/14/18	<9.6	49.7	<1.8	<3.3	10,000	245	<9.3	<2.4	<0.11	<0.050
MW-20	09/06/18	<16.0	169	<1.0	<5.3	39,100	807	<21.0	<5.0	<1.1	<0.050
MW-20	3/13/2019	<16.0	92.3	<1.0	<5.3	17,700	382	<21.0	<5.0	<1.1	<0.050
MW-21	6/21/07	<10.0	291	<0.90	<2.3	--	--	<9.4	3.5	0.81	<0.056
MW-21	9/24/07	<10.0	148	<0.90	<2.3	--	--	<9.4	<1.6	0.14	<0.056
MW-21	12/13/07	--	--	--	--	--	--	--	--	--	--
MW-21	03/05/08	<10.0	123.0	<1.5	<4.9	29,200	1,140	<9.4	<1.6	0.27	<0.056
MW-21	06/04/08	<10.2	128.0	<2	<3	11,500	719	<10.7	<2.2	<0.050	<0.056
MW-21	09/11/08	<10.2	96.9	<2	<3	30,600	1,060	<10.7	<2.2	0.76	<0.056
MW-21	12/10/08	<10	127	<2	<3	67.5	50.1	<10.7	<2.2	0.15	<0.056
MW-21	03/12/09	<10	81.7	2.4	<3	424	219	<10.7	<2.2	0.32	<0.056
MW-21	06/09-11/09	<7.2	18.3	<2.0	<3.4	2,120	25.2	<8.9	<2.3	0.43	<0.056
MW-21	09/09-11/09	<7.2	206	<2.0	<3.4	52,900	1,590	<8.9	<2.3	0.15	0.098
MW-21	12/07-09/09	INACCESSIBLE									
MW-21	03/09-11/10	<7.2	173	<2.0	3.5	19,500	1,100	<8.9	<2.3	0.33	<0.056
MW-21	06/09-11/10	<9.8	14.7	<2.0	<3.4	133	8.7	<8.9	<2.3	0.38	<0.056
MW-21	09/09/10	<9.8	278	<2.0	<3.4	39,400	1,120	<8.9	<2.3	0.27	<0.056
MW-21	03/08/11	NO LONGER INCLUDED IN ROUTINE SAMPLING EVENTS									
MW-22	6/20/07	<10.0	225	<0.90	<2.3	--	--	<9.4	2.5	0.47	<0.056
MW-22	9/24/07	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-22	12/13/07	--	--	--	--	--	--	--	--	--	--

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		Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening Level	RBC	5,800	25,000,000	57000	8,700	--	3,000,000	--	1,000,000	--	--
	SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**										
MW-22	03/05/08	NOT SAMPLED DUE TO THE PRESENCE OF SPH									

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		Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening Level	RBC	5,800	25,000,000	57000	8,700	--	3,000,000	--	1,000,000	--	--
	SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**										
MW-22	06/04/08	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-22	09/11/08										
MW-22	12/10/08										
MW-22	03/12/09										
MW-22	06/09-11/09										
MW-22	09/09-11/09										
MW-22	12/07-09/09										
MW-22	03/09-11/10										
MW-22	06/09-11/10										
MW-22	09/09/10										
MW-22	03/08/11										
MW-22	09/14/11										
MW-22	03/08/12										
MW-22	09/11/12										
MW-22	03/13/13										
MW-22	09/11/13										
MW-22	02/14/14	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-22	09/18/14										
MW-22	03/12/15	<7.2	30.3	<0.33	<1.3	3,000	106	5.2	<1.8	0.11	<0.050
MW-22	09/14/15	<7.0	89.7	<0.30	<1.5	5,160	187	<8.2	<1.4	<0.13	<0.050
MW-22	03/10/16	<7.8	37.2	2.7	<2.0	38	1.4	<8.2	<1.8	0.15	<0.050
MW-22	09/09/16	<9.7	96.2	1.1	<1.8	8,190	337	<9.7	<1.9	0.19	<0.050
MW-22 (D)	09/09/16	<9.7	97.3	<0.49	<1.8	8,380	344	<9.7	<1.9	0.098	<0.050
MW-22	03/15/17	<9.7	2.1	0.70	<1.8	<74.7	<1.8	<9.7	<1.9	0.59	<0.050
MW-22	03/15/17	<9.7	2.2	0.83	<1.8	80.8	<1.8	<9.7	<1.9	0.63	<0.050
MW-22	09/09/17	<9.6	223	3.4	<3.3	2,140	168	<9.3	<2.4	<0.11	<0.050
MW-22	03/14/18	<9.6	18.2	8.8	<3.3	1,190	28.8	<9.3	<2.4	2.6	<0.050
MW-22	09/07/18	16.2 J	263	314	30.4	67,400	273	<21.0	<5.0	114	0.27
MW-22	3/13/2019	<16.0	38.9	<1.0	<5.3	260	29.5	<21.0	<5.0	<1.1	<0.050
MW-22 (D)	3/13/2019	<16.0	38	<1.0	<5.3	239	27.5	<21.0	<5.0	<1.1	<0.050
MW-23	6/20/07	<10.0	23.1	<0.90	<2.3	--	--	<9.4	<1.6	1.6	<0.056

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		Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening Level	RBC	5,800	25,000,000	57000	8,700	--	3,000,000	--	1,000,000	--	--
	SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**										
MW-23	9/24/07	35.1	10.4	<0.90	<2.3	--	--	<9.4	<1.6	14.3	<0.056
MW-23	12/13/07	--	--	--	--	--	--	--	--	--	--
MW-23	03/05/08	<10.0	27.0	<0.90	<2.3	77.6	6.4	<9.4	<1.6	1.5	0.0570
MW-23	06/03/08	<10.2	11.9	<2	<3	827	8.5	<10.7	<2.2	17.9	<0.056
MW-23	09/11/08	<10.2	13.1	<2	<3	160	9.4	<10.7	<2.2	3.7	<0.056
MW-23	12/10/08	13.6	14.2	<2	<3	191	14.3	<10.7	<2.2	3.4	<0.056
MW-23	03/12/09	12.3	20.4	<2	<3	1,100	31.9	<10.7	<2.2	11.9	<0.056
MW-23	06/09-11/09	<7.2	27.2	<2.0	<3.4	345	32.0	<8.9	<2.3	12.9	<0.056
MW-23	09/09-11/09										
MW-23	12/07-09/09										
MW-23	03/09-11/10				NOT SAMPLED DUE TO THE PRESENCE OF SHEEN						
MW-23	06/09-11/10[c]										
MW-23	09/09/10[c]										
MW-23	03/08/11				NO LONGER INCLUDED IN ROUTINE SAMPLING EVENTS						
MW-24	6/20/07	<10.0	234	<0.90	<2.3	--	--	<9.4	2.7	0.37	<0.056
MW-24	9/24/07	--	--	--	--	--	--	--	--	--	--
MW-24	12/13/07	--	--	--	--	--	--	--	--	--	--
MW-24	03/05/08										
MW-24	06/03/08				NOT SAMPLED DUE TO THE PRESENCE OF SHEEN						
MW-24	09/11/08	--	--	--	--	--	--	--	--	--	--
MW-24	12/10/08	--	--	--	--	--	--	--	--	--	--
MW-24	03/12/09	--	--	--	--	--	--	--	--	--	--
MW-24	06/09-11/09										
MW-24	09/09-11/09										
MW-24	12/07-09/09										
MW-24	03/09-11/10										
MW-24	06/09-11/10										
MW-24	09/09/10				NOT SAMPLED DUE TO THE PRESENCE OF SPH						
MW-24	03/08/11										
MW-24	09/14/11										
MW-24	03/08/12										

Appendix C
Table 5
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Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

		Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening Level	RBC	5,800	25,000,000	57000	8,700	--	3,000,000	--	1,000,000	--	--
	SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**										
MW-24	09/11/12										
MW-24	03/13/13										
MW-24	09/11/13	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									

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Table 5
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Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

		Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening Level	RBC	5,800	25,000,000	57000	8,700	--	3,000,000	--	1,000,000	--	--
	SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID	**Date**										
MW-24	02/14/14										
MW-24	09/18/14	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-24	03/12/15										
MW-24	09/14/15	<7.0	183	<0.30	<1.5	18400	72.8	<8.2	<1.4	0.43	<0.050
MW-24	09/09/16										
MW-24	03/15/17	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-24	09/09/17	<9.6	97.8	<1.8	<3.3	40,400	99.6	<9.3	<2.4	0.20	<0.050
MW-24	03/14/18	<9.6	19.6	<1.8	<3.3	232	5.4	<9.3	<2.4	0.20	<0.050
MW-24	9/6/2018	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-24	3/13/2019	<16.0	35	<1.0	<5.3	681	6.7 J	<21.0	<5.0	<1.1	<0.050
MW-25	6/21/07	<10.0	192	<0.90	<2.3	--	--	<9.4	<1.6	<0.047	<0.056
MW-25 (D)	6/21/07	<10.0	196	<0.90	<2.3	--	--	<9.4	<1.6	<0.047	<0.056
MW-25	9/24/07	<10.0	148	<0.90	<2.3	--	--	<9.4	<1.6	0.11	<0.056
MW-25	12/13/07	--	--	--	--	--	--	--	--	--	--
MW-25	03/05/08	<10.0	223	1.40	3.30	71,500	1,630	<9.4	<1.6	<0.050	0.058
MW-25	06/03/08	--	--	--	--	--	--	--	--	--	--
MW-25	09/11/08	<10.2	166	<2	<3	50,600	1,000	<10.7	<2.2	0.29	<0.056
MW-25	12/10/08	<10.0	180	<2	<3	50,900	1,240	<10.7	<2.2	0.072	<0.056
MW-25	03/12/09	<10.0	226	<2	<3	62,700	1,360	<10.7	<2.2	0.28	<0.056
MW-25	06/09-11/09	<7.2	149	<2.0	<3.4	45,900	1,080	<8.9	<2.3	0.12	<0.056
MW-25	09/09-11/09	<7.2	180	<2.0	<3.4	49,600	1,180	<8.9	<2.3	0.066	<0.056
MW-25	12/07-09/09	<7.2	175	<2.0	<3.4	48,900	1,180	<8.9	<2.3	<0.050	<0.056
MW-25	03/09-11/10	<7.2	103	<2.0	<3.4	15,200	596	<8.9	<2.3	0.071	<0.056
MW-25	06/09-11/10	<9.8	80.7	<2.0	<3.4	18,000	568	<8.9	<2.3	0.089	<0.056
MW-25	09/09/10	<9.8	246	<2.0	<3.4	64,000	1,410	<8.9	<2.3	0.098	<0.056
MW-25	03/09/11	<9.8	142	<2.0	<3.4	46,100	1,550	<8.9	<2.3	<0.052	<0.050
MW-25 (D)	03/09/11	<9.8	144	<2.0	<3.4	46,600	1,610	<8.9	<2.3	<0.052	<0.050
MW-25	09/14/11	5.8	189	1.5	<1.1	52,700	1,090	<6.9	<0.91	<0.080	0.052
MW-25 (D)	09/14/11	5.4	191	1.5	1.2	53,000	1,100	<6.9	<0.91	<0.080	0.056
MW-25	3/8/2012	6.3	146	1.1	1.6	51,000	941	<6.9	<0.91	0.5	0.072
MW-25	9/12/2012	<6.8	156	1.2	1.5	46,300	956	<7.5	<1.2	0.17	<0.070

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			Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Iron (µg/L)	Manganese (µg/L)	Selenium (µg/L)	Silver (µg/L)	Lead (µg/L)	Mercury (µg/L)
Proposed Screening Level		RBC	5,800	25,000,000	57000	8,700	--	3,000,000	--	1,000,000	--	--
		SLV	150	4	2.2	74	1,000	82,000	5	0.12	2.5	0.77
WELL ID		**Date**										
MW-25		3/14/2013		<6.8	111	0.82	1.1	36,300	765	<7.5	<1.2	<0.073	0.12
MW-25		9/12/2013		<6.8	91.6	<0.76	<1.3	30,200	638	<8.4	<2.1	<0.085	<0.060
MW-25		02/14/14		<6.8	114	<0.76	<1.6	38,200	862	<8.4	<2.1	<0.085	<0.60
MW-25	(D)	02/14/14		<6.8	119	<0.76	<1.6	38,300	832	<8.4	<2.1	<0.085	<0.60
MW-25		9/18/2014		<7.2	109	<0.33	<1.3	30,600	695	<4.8	<1.8	<0.082	<0.60
MW-25		9/18/2014		<7.2	110	<0.33	<1.3	30,500	695	<4.8	<1.8	<0.082	<0.60
MW-25		3/12/2015		<7.2	127	0.65	1.6	44,400	1,020	<4.8	<1.8	<0.082	<0.050
MW-25		9/14/2015		<7.0	111	0.39	1.8	32,500	704	<8.2	<1.4	<0.13	<0.50
MW-25		9/14/2015	(D)	<7.0	109	0.48	<1.5	31,500	688	10.5	<1.4	0.16	<0.50
MW-25		3/10/2016		<7.8	57.8	<0.64	<2.0	143	4.4	<8.2	<1.8	<0.65	<0.050
MW-25		9/9/2016		<9.7	124	0.75	<1.8	43,300	981	<9.7	<1.9	<0.090	<0.050
MW-25		3/15/2017		NO LONGER INCLUDED IN ROUTINE SAMPLING EVENTS									

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Table 5
Groundwater Monitoring Data and Analytical Results
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

EXPLANATIONS:

(µg/L) = Micrograms per liter
-- = Not Measured/Not Analyzed
(D) = Duplicate
RBC = Risk Based Concentration for construction and excavation workers exposed to groundwater in an open excavation, which are provided in Appendix A to the Oregon Department of Environmental Quality document titled "Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites" (DEQ, September 22, 2003, last updated March 2007).
SLV = Screening Level Values for a Level II Screening Ecological Risk Assessment for aquatic receptors in fresh water, which are provided in Table 1 of the Oregon Department of Environmental Quality document titled "Guidance for Ecological Risk Assessment: Levels I, II, III, and IV" (DEQ, April 1998, last updated December 2001).

[1] Monitoring wells MW-6 and MW-12 were previously designated W-6 and W-12, respectively.

[2] Matrix spike and duplicate matrix spike samples were collected from this well. Please refer to lab sheets for results.

Starting 1Q 2011, wells MW-14, MW-17, MW-21 and MW-23 were removed from monitoring.
Starting 3Q 2016, well MW-6 was removed from monitoring

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Table 6
Groundwater Monitoring Data and Analytical Results
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

EXPLANATIONS:

(µg/L) = Micrograms per liter
-- = Not Measured/Not Analyzed
(D) = Duplicate

ANALYTICAL METHOD:

Nitrate Nitrogen and Sulfate analyzed by EPA Method 300.0
Carbon Dioxide analyzed by SM20 4500

[1] Monitoring wells MW-6 and MW-12 were previously designated W-6 and W-12, respectively.

[2] Laboratory report indicates the holding time was not met.

[3] Matrix spike and duplicate matrix spike samples were collected from this well. Please refer to lab sheets for results.

[4] Laboratory report indicates this sample was originally analyzed within the 48 hour holding time for nitrate, however the continuing calibration blank/standard bracketing the sample is not within the specification. The analysis was repeated on September 12, 2009. The continuing calibration blank/standard bracketing the sample on the second trial is within specification. The first trial result is being reported because it was analyzed within the holding time.

Starting 1Q 2011, wells MW-14, MW-17, MW-21 and MW-23 were removed from monitoring.
Starting 3Q 2016, well MW-6 was removed from monitoring

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Table 7
Groundwater Monitoring Data and Analytical Results
Former Chevron Bulk Facility #1001838
10 5th Street
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WELL ID	Date Sampled		Methane *(µg/L)*
DM-4	06/23/06		9,000
DM-4	09/21/06		--
DM-4	12/20/06		12,000
DM-4	02/27/07		6,500
DM-4	06/14/07		11,000
DM-4	09/25/07		3,800
DM-4	12/13/07		NOT SAMPLED DUE TO THE PRESENCE OF SHEEN
DM-4	03/06/08		9,400
DM-4	06/03/08		2,800
DM-4	09/11/08		12,000
DM-4	12/11/08		12,000
DM-4	03/11/09		
DM-4	06/09-11/09		
DM-4	09/09-11/09		
DM-4	12/07-09/09		
DM-4	03/09-11/10		
DM-4	06/09-11/10		NOT SAMPLED DUE TO HIGH LEVELS OF METHANE GAS
DM-4	09/09/10		
DM-4	03/08/11		
DM-4	09/14/11		
DM-4	03/08/12		
DM-4	09/11/12		
DM-4	03/13/13		
DM-4	09/13/13		8,300
DM-4			WELL ABANDONED NOVEMBER 2013
DM-5	06/23/06		11,000
DM-5	09/21/06		--
DM-5	12/19/06		13,000
DM-5	02/27/07		6,500
DM-5	06/14/07		11,000
DM-5	09/25/07		3,800
DM-5	12/13/07		
DM-5	03/06/08		NOT SAMPLED DUE TO THE PRESENCE OF SHEEN
DM-5	06/03/08		
DM-5	09/11/08		
DM-5	12/11/08		
DM-5	03/11/09		
DM-5	06/09-11/09		
DM-5	09/09-11/09		
DM-5	12/07-09/09		
DM-5	03/09-11/10		
DM-5	06/09-11/10		NOT SAMPLED DUE TO HIGH LEVELS OF METHANE GAS
DM-5	09/09/10		
DM-5	03/08/11		
DM-5	09/14/11		
DM-5	03/08/12		
DM-5	09/11/12		
DM-5	03/13/13		

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Table 7
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WELL ID	Date Sampled		Methane *(µg/L)*
DM-5	09/13/13		8,900
DM-5			WELL ABANDONED NOVEMBER 2013
MW-3B	06/09-11/09		NOT SAMPLED DUE TO THE PRESENCE OF SHEEN
MW-3B	09/09-11/09		
MW-3B	12/07-09/09		
MW-3B	03/09-11/10		
MW-3B	06/09-11/10		
MW-3B	09/09/10		
MW-3B	03/08/11		
MW-3B	09/14/11		
MW-3B	03/08/12		
MW-3B	09/11/12		
MW-3B	03/13/13		NOT SAMPLED DUE TO HIGH LEVELS OF METHANE GAS
MW-3B	09/11/13		NOT SAMPLED DUE TO THE PRESENCE OF SPH
MW-3B	02/14/14		
MW-3B	09/18/14		
MW-3B	03/12/15		
MW-3B	03/11/16		
MW-3B	09/09/16		
MW-12	02/27/07		7,300
MW-12	06/14/07		13,000
MW-12	09/25/07		4,300
MW-14	12/12/07		--
MW-12	03/06/08		--
MW-12	06/03/08		--
MW-12	09/10/08		--
MW-12	12/10/08		--
MW-12	03/11/09		--
MW-12	06/09-11/09		--
MW-12	09/09-11/09		--
MW-12	12/07-09/09		--
MW-12	12/07-09/09		--
MW-12	03/09-11/10		--
MW-12	06/09-11/10		--
MW-12	09/09/10		NOT SAMPLED DUE TO THE PRESENCE OF SHEEN
MW-12	03/09/11		--
MW-12	09/14/11		--
MW-12	03/08/12		NOT SAMPLED DUE TO THE PRESENCE OF SHEEN
MW-12	09/12/12		--
MW-12	03/13/13		NOT SAMPLED DUE TO THE PRESENCE OF SHEEN
MW-12	09/12/13		2,100
MW-12	02/14/14		--
MW-12	09/18/14		--
MW-12	03/12/15		--
MW-12	09/14/15		5,200
MW-12	03/11/16		--
MW-12	09/09/16		--

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Table 7
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WELL ID	Date Sampled		Methane *(µg/L)*
MW-14	06/22/06		580[1]
MW-14	09/21/06		--
MW-14	12/19/06		41
MW-14	02/27/07		220
MW-14	06/14/07		150
MW-14	09/25/07		260
MW-14	12/13/07		--
MW-14	03/06/08		300
MW-14	06/04/08		100
MW-14	09/11/08		500
MW-14	12/10/08		29
MW-14	03/12/09		310
MW-14	06/09-11/09		200
MW-14	09/09-11/09		170
MW-14	12/07-09/09		74
MW-14	03/09-11/10		220
MW-14	06/09-11/10		170
MW-14	09/09/10	(D)	--
MW-14	09/09/10		40
MW-15	06/22/06		1,300[1]
MW-15	09/21/06		--
MW-15	12/19/06		2,500
MW-15	02/27/07		--
MW-15	06/14/07		--
MW-15	09/25/07		--
MW-15	12/14/07		--
MW-15	12/14/07	(D)	--
MW-15	03/06/08		--
MW-15	06/04/08		NOT SAMPLED DUE TO THE PRESENCE OF SHEEN
MW-15	09/11/08		2,900
MW-15	12/11/08		2,600
MW-15	03/12/09		
MW-15	06/09-11/09		
MW-15	09/09-11/09		
MW-15	12/07-09/09		
MW-15	03/09-11/10		
MW-15	06/09-11/10		NOT SAMPLED DUE TO THE PRESENCE OF SHEEN
MW-15	09/09/10		
MW-15	03/08/11		
MW-15	09/14/11		
MW-15	03/08/12		
MW-15	09/11/12		
MW-15	03/13/13		NOT SAMPLED DUE TO HIGH LEVELS OF METHANE GAS
MW-15	09/11/13		
MW-15	02/14/14		NOT SAMPLED DUE TO THE PRESENCE OF SPH
MW-15	09/18/14		
MW-15	03/12/15		

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WELL ID	Date Sampled		Methane *(µg/L)*
MW-15	03/11/16		18,000
MW-15	09/09/16		2,300
MW-16	02/27/07		1,800
MW-16	06/14/07		1,900
MW-16	9/25/2007		770
MW-16	12/12/2007		--
MW-16	3/6/2008		2,900
MW-16	6/4/2008		--
MW-16	9/10/2008		--
MW-16	12/9/2008		--
MW-16	3/11/2009		--
MW-16	06/09-11/09		--
MW-16	09/09-11/09		--
MW-16	12/07-09/09		--
MW-16	03/09-11/10		--
MW-16	06/09-11/10		--
MW-16	06/09-11/10	(D)	--
MW-16	09/09/10		--
MW-16	03/10/11		--
MW-16	09/14/11		--
MW-16	3/8/2012		--
MW-16	3/8/2012	(D)	120
MW-16	9/12/2012		--
MW-16	3/13/2013		--
MW-16	9/12/2013		360
MW-16	2/14/2014		--
MW-16	9/18/2014		--
MW-16	3/12/2015		--
MW-16	9/14/2015		670
MW-16	3/11/2016		--
MW-16	9/9/2016		--
MW-17	06/22/06		1,900[1]
MW-17	09/21/06		--
MW-17	12/19/06		1,700
MW-17	02/27/07		45
MW-17	06/14/07		32
MW-17	9/25/2007		1,200
MW-17	12/13/2007		--
MW-17	3/6/2008		3,400
MW-17	6/4/2008		<2
MW-17	9/11/2008		930
MW-17	9/11/2008	(D)	2,500
MW-17	12/10/2008		440
MW-17	12/10/2008	(D)	1,800
MW-17	3/12/2009		930
MW-17	06/09-11/09		1,700
MW-17	06/09-11/09	(D)	1,900

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Table 7
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WELL ID	Date Sampled		Methane (µg/L)
MW-17	09/09-11/09		2,500
MW-17	09/09-11/09	(D)	2,800
MW-17	12/07-09/09		1,600
MW-17	03/09-11/10		NOT SAMPLED DUE TO INACCESIBILITY
MW-17	06/09-11/10		74
MW-17	09/09/10		1,400
MW-18[c]	06/22/06		330[L]
MW-18[c]	09/20/06		
MW-18[c]	12/19/06		
MW-18[c]	02/27/07		NOT SAMPLED DUE TO THE PRESENCE OF SHEEN
MW-18[c]	06/21/07		
MW-18[c]	09/25/07		
MW-18[c]	12/13/07		
MW-18[c]	03/06/08		5,200
MW-18[c]	06/04/08		
MW-18[c]	09/11/08		
MW-18[c]	12/10/08		
MW-18[c]	03/11/09		
MW-18[c]	06/09-11/09		
MW-18[c]	03/09-11/10		
MW-18[c]	06/09-11/10		NOT SAMPLED DUE TO THE PRESENCE OF SHEEN
MW-18[c]	09/09/10		
MW-18[c]	03/08/11		
MW-18[c]	09/14/11		
MW-18[c]	03/08/12		
MW-18[c]	09/11/12		
MW-18[c]	03/13/13		
MW-18[c]	09/11/13		
MW-18[c]	02/14/14		NOT SAMPLED DUE TO THE PRESENCE OF SPH
MW-18[c]	09/18/14		
MW-18[c]	03/12/15		
MW-18[c]	09/14/15		5,600
MW-18[c]	03/11/16		990
MW-18[c]	09/09/16		NOT SAMPLED DUE TO THE PRESENCE OF SPH
MW-19	03/06/08		140
MW-19	06/04/08		--
MW-19	09/11/08		4,000
MW-19	12/10/08		18
MW-19	03/12/09		4,800
MW-19	06/09-11/09		1,500
MW-19	09/09-11/09		3,600
MW-19	12/07-09/09		NOT SAMPLED DUE TO INACCESIBILITY
MW-19	03/09-11/10		3,600
MW-19	06/09-11/10		5,900
MW-19	09/09/10		NOT SAMPLED DUE TO THE PRESENCE OF SHEEN
MW-19	03/09/11		1,900
MW-19	09/14/11		1,900

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Table 7
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WELL ID	Date Sampled		Methane *(µg/L)*
MW-19	03/08/12		2,600
MW-19	09/12/12		4,000
MW-19	03/13/13		UNABLE TO LOCATE
MW-19	09/11/13		NOT SAMPLED DUE TO THE PRESENCE OF SHEEN
MW-19	02/14/14		NOT SAMPLED DUE TO THE PRESENCE OF SPH
MW-19	09/18/14		1,600
MW-19	03/12/15		3,600
MW-19	03/12/15		3,800
MW-19	03/11/16		<3.0
MW-19	9/9/2016		2,900
MW-20	03/06/08		140
MW-20	06/04/08		--
MW-20	09/11/08		6,800
MW-20	12/10/08		4,200
MW-20	03/12/09		4,400
MW-20	06/09-11/09[3]		3,400
MW-20	06/09-11/09		1,600
MW-20	06/09-11/09	(D)	1,600
MW-20	12/07-09/09[3]		2,200
MW-20	03/09-11/10[3]		4,100
MW-20	06/09-11/10[3]		2,100
MW-20	09/09/10[3]		2,800
MW-20	03/09/11[3]		880
MW-20	09/14/11[3]		3,200
MW-20	3/7/12[3]		2,400
MW-20	9/12/12[3]		4,300
MW-20	9/12/12[3]	(D)	3,700
MW-20	3/13/13[3]		4,700
MW-20	9/12/13[3]		4,300
MW-20	9/12/13[3]	(D)	4,100
MW-20	02/14/14		5,800
MW-20	09/18/14		5,400
MW-20	03/12/15		2,300
MW-20	03/10/16		< 3.0
MW-20	09/09/16		2,700
MW-21	03/06/08		2,100
MW-21	06/06/08		210
MW-21	09/11/08		2,300
MW-21	12/10/08		14
MW-21	03/12/09		87
MW-21	06/09-11/09		45
MW-21	09/09-11/09		4,700
MW-21	12/07-09/09		INACCESSIBLE
MW-21	03/09-11/10		1,200
MW-21	06/09-11/10		5.1
MW-21	09/09/10		1,600
MW-21	03/08/11		NO LONGER INCLUDED IN ROUTINE SAMPLING EVENTS

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WELL ID	Date Sampled		Methane *(µg/L)*

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WELL ID	Date Sampled		Methane *(µg/L)*
MW-22	06/09-11/09		
MW-22	09/09-11/09		
MW-22	12/07-09/09		
MW-22	03/09-11/10		
MW-22	06/09-11/10		
MW-22	09/09/10		NOT SAMPLED DUE TO THE PRESENCE OF SHEEN
MW-22	03/08/11		
MW-22	09/14/11		
MW-22	03/08/12		
MW-22	09/11/12		
MW-22	03/13/13		
MW-22	09/11/13		
MW-22	02/14/14		NOT SAMPLED DUE TO THE PRESENCE OF SPH
MW-22	09/18/14		
MW-22	03/12/15		1,700
MW-22	03/10/16		< 3.0
MW-22	09/09/16		1,400
MW-22	09/09/16	(D)	1,600
MW-23	03/06/08		1,100
MW-23	06/03/08		--
MW-23	09/11/08		--
MW-23	12/10/08		--
MW-23	03/12/09		--
MW-23	06/09-11/09		--
MW-23	09/09-11/09		
MW-23	12/07-09/09		
MW-23	03/09-11/10		NOT SAMPLED DUE TO THE PRESENCE OF SHEEN
MW-23	06/09-11/10		
MW-23	09/09/10		
MW-23	03/08/11		NO LONGER INCLUDED IN ROUTINE SAMPLING EVENTS
MW-24	06/09-11/09		
MW-24	09/09-11/09		
MW-24	12/07-09/09		
MW-24	03/09-11/10		
MW-24	06/09-11/10		
MW-24	09/09/10		NOT SAMPLED DUE TO THE PRESENCE OF SPH
MW-24	03/08/11		
MW-24	09/14/11		
MW-24	03/08/12		
MW-24	09/12/12		
MW-24	03/13/13		
MW-24	09/11/13		NOT SAMPLED DUE TO THE PRESENCE OF SHEEN
MW-24	02/14/14		
MW-24	09/18/14		
MW-24	03/12/15		NOT SAMPLED DUE TO THE PRESENCE OF SPH
MW-24	03/10/16		
MW-24	09/09/16		

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WELL ID	Date Sampled		Methane *(µg/L)*
MW-25	03/06/08		1,000
MW-25	06/03/08		--
MW-25	09/11/08		1,600
MW-25	12/10/08		1,300
MW-25	03/12/09		730
MW-25	06/09-11/09		1,600
MW-25	09/09-11/09		2,200
MW-25	12/07-09/09		2,700
MW-25	03/09-11/10		2,000
MW-25	06/09-11/10		1,700
MW-25	09/09/10		680
MW-25	3/9/2011		1,600
MW-25	3/9/2011	(D)	1,600
MW-25	09/14/11		1,100
MW-25	09/14/11	(D)	1,100
MW-25	03/08/12		1,700
MW-25	09/12/12		940
MW-25	03/14/13		1,300
MW-25	9/12/2013		1,400
MW-25	02/14/14		5,100
MW-25	02/14/14	(D)	5,400
MW-25	9/18/2014		510
MW-25	9/18/2014	(D)	370
MW-25	3/12/2015		2,200
MW-25	9/14/2015		1,500
MW-25	9/14/2015	(D)	1,500
MW-25	3/10/2016		< 3.0
MW-25	9/9/2016		1,500

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EXPLANATIONS:

(µg/L) = Micrograms per liter
-- = Not Measured/Not Analyzed
(D) = Duplicate

ANALYTICAL METHOD:

Methane analyzed by RSKSOP-175 08/11/94

[1] Due to laboratory irregularities the result is reported from analysis past the method hold time.

[2] Monitoring well MW-18 has not been sampled since June 2006 due to sheen in the well.

[3] Matrix spike and duplicate matrix spike samples were collected from this well. Please refer to lab sheets for results.

[4] Monitoring wells MW-6 and MW-12 were previously designated W-6 and W-12, respectively.

Starting 1Q 2011, wells MW-14, MW-17, MW-21 and MW-23 were removed from monitoring.
Starting 3Q 2016, well MW-6 was removed from monitoring

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WELL ID		Date Sampled	Temp (°C)	pH Std. Units	Conductivity (mS/cm)	ORP (mV)	Dissolved Oxygen (mg/L)	Ferrous Iron (mg/L)	Turbidity (NTU)	PID (ppm)	Alkalinity to pH 4.5 (µg/L as $CaCO_3$)	Alkalinity to pH 8.3 (µg/L as $CaCO_3$)
DM-4		08/26/04	19.0	6.77	0.435	-276	0.12	--	892	112	--	--
DM-4		11/09/04	12.4	7.35	0.548	-480	2.15	--	161	--	--	--
DM-4		06/28/05	--	--	--	--	--	--	--	--	--	--
DM-4		09/27/05	--	--	--	--	--	--	--	--	--	--
DM-4		12/20/05	--	--	--	--	--	--	--	--	--	--
DM-4		03/21/06	--	--	--	--	--	--	--	--	--	--
DM-4		06/23/06	17.4	6.6	0.7	--	0.2	--	800.0	--	--	--
DM-4		07/06/06	-	-	-	-42	--	3.4	--	--	--	--
DM-4		09/21/06	17.0	6.23	0.930	-51	0.55	3.2	250.0	--	--	--
DM-4		12/20/06	13.8	6.88	0.741	-15	2.27	3.4	999	--	--	--
DM-4		02/27/07	10.7	6.56	0.930	-50	10.01	7.6	907	--	--	--
DM-4		06/14/07	13.3	6.35	0.836	--	2.02	3.2	999	--	--	--
DM-4		09/25/07	17.0	6.50	0.910	--	1.14	3	999	--	--	--
DM-4		12/13/07	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
DM-4		03/06/08	12.6	6.67	82.6	1	0.1	2.8	41	--	--	--
DM-4		06/03/08	12.62	6.4	0.9	-68	0.05	--	167	--	--	--
DM-4		09/11/08	16.7	6.5	0.795	-83.7	7.47	--	114.5	--	411,000	<460
DM-4		12/11/08	15.44	6.4	--	-44.1	0	--	40.5	--	445,000	<460
DM-4		03/11/09	NOT SAMPLED DUE TO HIGH LEVELS OF METHANE GAS									
DM-4		06/09-11/09										
DM-4		09/09-11/09										
DM-4		12/07-09/09										
DM-4		03/09-11/10										
DM-4		06/09-11/10										
DM-4		09/09/10										
DM-4		03/08/11										
DM-4		09/14/11										
DM-4		03/08/12										
DM-4		09/11/12										
DM-4		03/13/13										
DM-4		09/13/13	--	6.8	--	--	--	--	--	--	354,000	--
DM-4			WELL ABANDONED NOVEMBER 2013									
DM-5		08/26/04	15.7	6.28	0.827	-489	0.08	--	299	204	--	--
DM-5		11/09/04	11.8	6.78	0.917	-70	6.30	--	11	--	--	--
DM-5		06/28/05	--	--	--	--	--	--	--	--	--	--

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		Date	Temp	pH	Conductivity	ORP	Dissolved Oxygen	Ferrous Iron	Turbidity	PID	Alkalinity to pH 4.5	Alkalinity to pH 8.3
WELL ID		Sampled	(°C)	Std. Units	(mS/cm)	(mV)	(mg/L)	(mg/L)	(NTU)	(ppm)	(µg/L as $CaCO_3$)	(µg/L as $CaCO_3$)
DM-5		09/27/05	--	--	--	--	--	--	--	--	--	--
DM-5		12/20/05	--	--	--	--	--	--	--	--	--	--
DM-5		03/21/06	--	--	--	--	--	--	--	--	--	--
DM-5		06/23/06	15.8	6.41	1.51	39	--	4.6	204	--	--	--
DM-5		09/21/06	14.3	6.20	1.64	-82	0.48	4.0	367	--	--	--
DM-5		12/19/06	14.5	6.93	1.46	-60	0.86	3.0	130	--	--	--
DM-5		02/27/07	13.2	6.29	1.53	-66	9.11	5.4	999	--	--	--
DM-5		06/14/07	13.9	6.58	1.60	-38	1.53	5.5	304	--	--	--
DM-5		09/25/07	14.2	6.33	1.55	-	1.17	1.4	187	--	--	--
DM-5		12/13/07										
DM-5		03/06/08					NOT SAMPLED DUE TO THE PRESENCE OF SHEEN					
DM-5		06/03/08										
DM-5		09/11/08										
DM-5		12/11/08										
DM-5		03/11/09										
DM-5		06/09-11/09										
DM-5		09/09-11/09										
DM-5		12/07-09/09										
DM-5		03/09-11/10					NOT SAMPLED DUE TO HIGH LEVELS OF METHANE GAS					
DM-5		06/09-11/10										
DM-5		09/09/10										
DM-5		03/08/11										
DM-5		09/14/11										
DM-5		03/08/12										
DM-5		09/11/12										
DM-5		03/13/13										
DM-5		09/13/13	--	6.5	--	--	--	--	--	--	55,000	--
DM-5							WELL ABANDONED NOVEMBER 2013					
MW-3B		06/28/05	16.3	6.55	0.469	-90	2.21	2.8	979	--	--	--
MW-3B		09/27/05	18.7	6.46	0.463	-124	0.62	4.8	999	--	--	--
MW-3B		12/21/05	--	--	--	--	--	--	--	--	--	--
MW-3B		03/21/06					NOT SAMPLED DUE TO THE PRESENCE OF SPH					
MW-3B		06/22/06										

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		Date	Temp	pH	Conductivity	ORP	Dissolved Oxygen	Ferrous Iron	Turbidity	PID	Alkalinity to pH 4.5	Alkalinity to pH 8.3
WELL ID		**Sampled**	**(°C)**	**Std. Units**	**(mS/cm)**	**(mV)**	**(mg/L)**	**(mg/L)**	**(NTU)**	**(ppm)**	**(µg/L as $CaCO_3$)**	**(µg/L as $CaCO_3$)**
MW-3B		09/20/06										
MW-3B		12/20/06										
MW-3B		02/27/00										
MW-3B		06/21/07										
MW-3B		09/24/07										
MW-3B		12/13/07										
MW-3B		03/06/08										
MW-3B		06/03/08										
MW-3B		09/11/08										
MW-3B		12/11/08										
MW-3B		03/11/09	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-3B		06/09-11/09										
MW-3B		09/09-11/09										
MW-3B		12/07-09/09										
MW-3B		03/09-11/10										
MW-3B		06/09-11/10										
MW-3B		09/09/10										
MW-3B		03/08/11										
MW-3B		09/14/11										
MW-3B		03/08/12										
MW-3B		09/11/12										
MW-3B		03/13/13	NOT SAMPLED DUE TO HIGH LEVELS OF METHANE GAS									
MW-3B		09/11/13										
MW-3B		02/14/14										
MW-3B		09/18/14										
MW-3B		03/12/15	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-3B		03/11/16										
MW-3B		09/09/16										
MW-4B		06/28/05	15.1	6.45	1.37	112	16.14	2.4	250	--	--	--
MW-4B		09/27/05	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-4B		12/21/05	13.7	6.23	0.905	--	2.9	--	176	--	--	--
MW-4B	(D)	03/21/06	--	--	--	--	--	--	--	--	--	--
MW-4B		03/21/06	12.6	6.53	0.93	--	2.41	--	423	--	--	--
MW-4B	(D)	06/22/06	--	--	--	--	--	--	--	--	--	--

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		Date	Temp	pH	Conductivity	ORP	Dissolved Oxygen	Ferrous Iron	Turbidity	PID	Alkalinity to pH 4.5	Alkalinity to pH 8.3
WELL ID		Sampled	(°C)	Std. Units	(mS/cm)	(mV)	(mg/L)	(mg/L)	(NTU)	(ppm)	(µg/L as $CaCO_3$)	(µg/L as $CaCO_3$)
MW-4B		06/22/06	15.8	6.75	0.564	--	0.51	--	--	--	--	--
MW-4B		07/06/06	--	--	--	96	--	4.8	--	--	--	--
MW-4B	(D)	09/20/06	--	--	--	--	--	--	--	--	--	--
MW-4B		09/20/06	16.1	6.35	2.27	-81	0.38	4	287	--	--	--
MW-4B	(D)	12/19/06	--	--	--	--	--	--	--	--	--	--
MW-4B		12/19/06	14.9	6.89	1.20	-55	1.34	3.8	100	--	--	--
MW-4B	(D)	02/27/07	--	--	--	--	--	--	--	--	--	--
MW-4B		02/27/07	12.2	6.51	0.79	-63	1.35	4.2	91	--	--	--
MW-4B	(D)	06/14/07	--	--	--	--	--	--	--	--	--	--
MW-4B		06/14/07	14.4	6.77	0.864	-50	1.00	2.2	333	--	--	--
MW-4B	(D)	09/24/07	--	--	--	--	--	--	--	--	--	--
MW-4B		09/24/07	16.0	6.73	1.660	61	1.21	0.8	--	--	--	--
MW-4B		12/13/07	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-4B		03/06/08	11.91	6.36	0.8	-74	0.38	2	16.6	--	--	--
MW-4B		06/03/08	12.59	6.5	0.91	-33	0.2	--	7	--	--	--
MW-4B		09/10/08	16.34	6.5	--	-120.00	1.88	--	232.00	--	163,000	<460
MW-4B		12/11/08	15.13	7.14	--	281	9.63	--	--	--	184,00	<460
MW-4B		03/11/09	12.35	6.6	0.588	-163	0	5.80	16.1	--	133,000	<460
MW-4B	(D)	03/12/09	--	6.5	--	--	--	--	--	--	135,000	<460
MW-4B		06/09-11/09	--	6.3	--	--	--	--	--	--	136,000	<460
MW-4B		09/09-11/09	--	--	--	--	--	--	--	--	198,000	<460
MW-4B		12/07-09/09	--	--	--	--	--	--	--	--	157,000	<460
MW-4B		03/09-11/10	--	--	--	--	--	--	--	--	78,600	<460
MW-4B		06/09-11/10	--	--	--	--	--	--	--	--	129,000	<460
MW-4B		09/09/10	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-4B		03/10/11	--	--	--	--	--	--	--	--	109,000	<460
MW-4B		09/14/11	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-4B		03/08/12	11.6	7.42	0.632	--	--	--	--	--	121,000	<460
MW-4B		09/12/12	14.6	6.56	0.71	--	--	--	--	--	176,000	<700
MW-4B		03/13/13	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-4B		09/11/13										
MW-4B		02/14/14	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-4B		09/18/14										
MW-4B		03/12/15	--	6.9	--	--	--	--	--	--	128,000	--
MW-4B	(D)	03/11/16	--	7.3	--	--	--	--	--	--	95,000	--
MW-4B	(D)	03/11/16	--	7.4	--	--	--	--	--	--	97,400	--

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		Date	Temp	pH	Conductivity	ORP	Dissolved Oxygen	Ferrous Iron	Turbidity	PID	Alkalinity to pH 4.5	Alkalinity to pH 8.3
WELL ID		**Sampled**	**(°C)**	**Std. Units**	**(mS/cm)**	**(mV)**	**(mg/L)**	**(mg/L)**	**(NTU)**	**(ppm)**	**(µg/L as $CaCO_3$)**	**(µg/L as $CaCO_3$)**
MW-4B		09/09/16	22.9	7.1	--	--	--	--	--	--	108,000	108,000
MW-6[1]		08/26/04	17.9	7.41	2.63	-589	0.12	--	330	221	--	--
MW-6[1]		11/09/04	10.4	7.33	2.42	-13	7.24	--	-10	--	--	--
MW-6[1]		02/02/05	--	--	--	--	--	--	--	--	--	--
MW-6[1]		06/28/05	14.5	6.66	2.32	110	15.73	0.80	120	--	--	--
MW-6[1]		09/27/05	16.9	6.49	4.87	89	1.69	1.20	41	--	--	--
MW-6[1]	(D)	12/21/05	--	--	--	--	--	--	--	--	--	--
MW-6[1]		12/21/05	12.2	5.66	2.57	--	5.75	--	10	--	--	--
MW-6[1]		03/21/06	11.3	6.40	1.78	--	5.09	--	13	--	--	--
MW-6[1]		06/22/06	15.1	7.28	0.45	--	1.71	--	--	--	--	--
MW-6[1]		07/06/06	--	--	--	-53	--	0.8	--	--	--	--
MW-6[1]		09/20/06	15.8	6.11	5.55	-119	2.10	0.5	135	--	--	--
MW-6[1]		12/19/06	12.1	6.33	1.84	35	9.05	0	177	--	--	--
MW-6[1]		02/27/07	8.7	6.42	0.201	36	7.30	0.4	78	--	--	--
MW-6[1]		06/14/07	NOT SAMPLED DUE TO INACCESIBILITY									
MW-6[1]		09/24/07	16.3	7.06	4.63	190	1.56	0.6	--	--	--	--
MW-6[1]		12/13/07	13.62	6.07	2.48	294	--	0.2	27.9	--	--	--
MW-6[1]		03/04/08	11.3	6.55	90.3	328	5.75	0	17.5	--	--	--
MW-6[1]		06/03/08	12.15	6.1	0.54	223	1.32	--	47	--	--	--
MW-6[1]		09/10/08	15.05	6.7	1.573	-150.1	5.81	--	179.9	--	251,000	<460
MW-6[1]		12/11/08	--	7.1	--	57.4	183.96	--	33.1	--	145,000	<460
MW-6[1]		03/12/09	11.7	6.9	46.7	116	3.13	--	39.4	--	93,200	<460
MW-6[1]		06/09-11/09	--	6.6	--	--	--	--	--	--	109,000	<460
MW-6[1]		09/09-11/09	--	--	--	--	--	--	--	--	72,100	<460
MW-6[1]		12/07-09/09	--	--	--	--	--	--	--	--	140,000	<460
MW-6[1]		03/09-11/10	--	--	--	--	--	--	--	--	62,300	<460
MW-6[1]	(D)	03/09-11/10	--	--	--	--	--	--	--	--	61,700	<460
MW-6[1]		06/09-11/10	--	--	--	--	--	--	--	--	47,200	<460
MW-6[1]		09/09/10	--	--	--	--	--	--	--	--	53,000	<460
MW-6[1]		03/09/11	--	--	--	--	--	--	--	--	29,900	<460
MW-6[1]		09/14/11	15.8	7.57	0.643	--	--	--	--	--	49,700	<460
MW-6[1]		03/08/12	11.9	7.20	0.763	--	--	--	--	--	50,900	<460
MW-6[1]		09/11/12	14.2	6.93	0.63	--	--	--	--	--	69,200	<700
MW-6[1]		03/14/13	11.4	7.59	0.206	--	--	--	--	--	34,500	--
MW-6[1]	(D)	03/14/13	11.4	7.59	0.206	--	--	--	--	--	32,000	--

Appendix C
Table 8
Groundwater Monitoring Data and Analytical Results
Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

WELL ID		Date Sampled	Temp (°C)	pH Std. Units	Conductivity (mS/cm)	ORP (mV)	Dissolved Oxygen (mg/L)	Ferrous Iron (mg/L)	Turbidity (NTU)	PID (ppm)	Alkalinity to pH 4.5 (µg/L as $CaCO_3$)	Alkalinity to pH 8.3 (µg/L as $CaCO_3$)
MW-6[1]		09/12/13	--	6.70	--	--	--	--	--	--	34,900	--
MW-6[1]		02/14/14	--	6.80	--	--	--	--	--	--	16,500	--
MW-6[1]		09/18/14	--	6.80	--	--	--	--	--	--	33,100	--
MW-6[1]		03/12/15	NOT SAMPLED DUE TO INACCESIBILITY									
MW-12[1]		08/26/04	18.0	6.03	0.183	-495	0.09	--	96	--	--	--
MW-12[1]		11/09/04	12.9	6.35	0.119	-70	2.95	--	-10	--	--	--
MW-12[1]		06/28/05	15.1	6.09	0.320	0	15.21	2.10	363	--	--	--
MW-12[1]		09/27/05	0.9	6.52	3.630	-166	2.13	3.20	159	--	--	--
MW-12[1]		12/20/05	13.7	6.14	0.16	--	1.83	--	128	--	--	--
MW-12[1]		03/21/06	12.6	5.91	0.17	--	3.56	--	263	--	--	--
MW-12[1]		06/22/06	16.2	6.45	0.33	--	--	--	--	--	--	--
MW-12[1]		07/06/06	--	--	--	44	--	5.2	--	--	--	--
MW-12[1]		09/20/06	16.2	5.76	0.385	-13	3.07	6	477	--	--	--
MW-12[1]		12/19/06	13.9	7.00	0.215	22	1.23	4.6	554	--	--	--
MW-12[1]		02/27/07	10.3	6.03	0.102	22	10.17	3.8	862	--	--	--
MW-12[1]		06/14/07	14.0	6.40	0.190	3	1.06	2.6	600	--	--	--
MW-12[1]		09/24/07	15.7	6.36	0.438	1	1.43	1.5	201	--	--	--
MW-12[1]		12/13/07	15.5	5.49	0.274	-9	--	5.4	62	--	--	--
MW-12[1]		03/05/08	12.0	6.09	0.282	19	8.91	4.4	23	--	--	--
MW-12[1]		06/03/08	12.54	5.80	0.470	75	3.40	--	63	--	--	--
MW-12[1]		09/10/08	16.70	6.10	0.651	-67	0.00	--	0.0	--	107,000	<460
MW-12[1]		12/11/08	16.75	6.03	--	4	10.57	--	40.3	--	50,400	<460
MW-12[1]		03/11/09	10.94	6.00	17.200	78	8.50	2.10	44	--	52,500	<460
MW-12[1]		06/09-11/09	--	6.0	--	--	--	--	--	--	70,200	<460
MW-12[1]		09/09-11/09	--	--	--	--	--	--	--	--	126,000	<460
MW-12[1]		12/07-09/09	--	--	--	--	--	--	--	--	45,600	<460
MW-12[1]	(D)	12/07-09/09	--	--	--	--	--	--	--	--	45,100	<460
MW-12[1]		03/09-11/10	--	--	--	--	--	--	--	--	46,200	<460
MW-12[1]		06/09-11/10	--	--	--	--	--	--	--	--	55,100	<460
MW-12[1]		09/09/10	NOT MEASURED DUE TO THE PRESENCE OF SHEEN									
MW-12[1]		03/09/11	--	--	--	--	--	--	--	--	48,400	<460
MW-12[1]		09/14/11	15.1	7.22	0.501	--	--	--	--	--	65,300	<460
MW-12[1]		03/08/12	NOT MEASURED DUE TO THE PRESENCE OF SHEEN									
MW-12[1]		09/12/12	14.7	6.24	0.91	--	--	--	--	--	57,700	<700
MW-12[1]		03/13/13	NOT MEASURED DUE TO THE PRESENCE OF SHEEN									

Appendix C
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Former Chevron Bulk Facility #1001838
10 5th Street
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WELL ID		Date Sampled	Temp (°C)	pH Std. Units	Conductivity (mS/cm)	ORP (mV)	Dissolved Oxygen (mg/L)	Ferrous Iron (mg/L)	Turbidity (NTU)	PID (ppm)	Alkalinity to pH 4.5 (µg/L as $CaCO_3$)	Alkalinity to pH 8.3 (µg/L as $CaCO_3$)
MW-12[1]		09/12/13	--	6.5	--	--	--	--	--	--	112,000	--
MW-12[1]		02/14/14	--	6.0	--	--	--	--	--	--	43,900	--
MW-12[1]		09/18/14	--	6.5	--	--	--	--	--	--	77,800	--
MW-12[1]		03/12/15	--	6.7	--	--	--	--	--	--	56,200	--
MW-12[1]		09/14/15	--	6.7	--	--	--	--	--	--	132,000	--
MW-12[1]		03/12/16	--	6.8	--	--	--	--	--	--	57,000	--
MW-12[1]		09/09/16	22.9	6.8	--	--	--	--	--	--	69,800	69,800
MW-14		06/28/05	13.9	6.05	0.695	-40	9.9	1.9	999	--	--	--
MW-14		09/27/05	17.4	6.55	2.41	-124	1	4.2	666	--	--	--
MW-14		12/20/05	13.4	6.71	0.585	--	8.85	--	481	--	--	--
MW-14		03/21/06	12.2	6.59	0.778	--	5.15	--	999	--	--	--
MW-14		06/22/06	14.6	7.12	0.474	--	0.44	--	--	--	--	--
MW-14		07/06/06	--	--	--	-42	--	3.8	--	--	--	--
MW-14		09/21/06	16.8	6.29	2.80	-42	0.43	3	78	--	--	--
MW-14		12/19/06	13.9	6.99	1.70	32	2.73	2.4	163	--	--	--
MW-14		02/27/07	10.7	6.69	0.709	5	10.22	2.6	985	--	--	--
MW-14		06/14/07	12.9	7.03	0.589	-2	6.30	1.8	165	--	--	--
MW-14		09/24/07	15.8	6.22	2.28	--	1.63	2.4	--	--	--	--
MW-14		12/13/07	14.92	6.45	1.87	-94	--	5	170	--	--	--
MW-14		03/06/08	12	6.86	84.00	7	0.23	3.5	43	--	--	--
MW-14		06/04/08	12.18	6.5	0.90	86	8.31	--	165	--	--	--
MW-14		09/11/08	17.15	6.6	--	-124	0.00	--	--	--	114,000	<460
MW-14		12/10/08	15.39	6.52	--	-27.8	0.00	--	33.6	--	62,400	<460
MW-14		03/12/09	11.82	6.8	0.13	-1	0.85	--	32	--	87,200	<460
MW-14		06/09-11/09	--	6.7	--	--	--	--	--	--	101,000	<460
MW-14		09/09-11/09	--	--	--	--	--	--	--	--	40,800	<460
MW-14		12/07-09/09	--	--	--	--	--	--	--	--	60,600	<460
MW-14		03/09-11/10	--	--	--	--	--	--	--	--	87,200	<460
MW-14		06/09-11/10	--	--	--	--	--	--	--	--	95,700	<460
MW-14		09/09/10	--	--	--	--	--	--	--	--	64,500	<460
MW-14	(D)	09/09/10	--	--	--	--	--	--	--	--	59,000	<460
MW-14		03/08/11	NO LONGER INCLUDED IN ROUTINE SAMPLING EVENTS									
MW-14		02/14/14										
MW-14		09/18/14	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-14		03/12/15										

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Table 8
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Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

		Date	Temp	pH	Conductivity	ORP	Dissolved Oxygen	Ferrous Iron	Turbidity	PID	Alkalinity to pH 4.5	Alkalinity to pH 8.3
WELL ID		Sampled	(°C)	Std. Units	(mS/cm)	(mV)	(mg/L)	(mg/L)	(NTU)	(ppm)	(µg/L as $CaCO_3$)	(µg/L as $CaCO_3$)
MW-15		06/28/05	15.3	6.48	1.79	0.11	1.0	22	493	--	--	--
MW-15		09/27/05	17.4	6.36	4.16	-123	1.7	3.6	206	--	--	--
MW-15		12/20/05	16.0	6.37	2.66	--	b	--	90	--	--	--
MW-15		03/21/06	14.6	6.22	2.35	--	2.71	--	187	--	--	--
MW-15		06/22/06	15.8	6.42	1.5	--	0.20	--	--	--	--	--
MW-15		07/06/06	--	--	--	-37	--	4.2	--	--	--	--
MW-15		09/21/06	16.0	6.11	4.06	-20	0.4	3.4	114	--	--	--
MW-15		12/19/06	15.6	6.86	3.21	-33	1.32	2.8	123	--	--	--
MW-15		02/27/07	14.1	6.29	2.78	-31	1.61	3.4	536	--	--	--
MW-15		06/14/07	13.6	6.35	1.66	-35	1.20	2.4	350	--	--	--
MW-15		09/25/07	15.5	6.24	2.59	--	0.60	0.8	40	--	--	--
MW-15		12/13/07	15.2	6.06	3.06	-106	--	4.2	17.2	--	--	--
MW-15		03/06/08	14.7	6.40	0.29	-5	0.00	2.9	35.7	--	--	--
MW-15		06/04/08	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-15		09/11/08	17.47	6.3	1.41	-116	0.84	--	2.00	--	170,000	<460
MW-15		12/11/08	16.08	6.13	--	-25.3	0.00	--	32.60	--	170,000	<460

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Former Chevron Bulk Facility #1001838
10 5th Street
Astoria, Oregon

		Date	Temp	pH	Conductivity	ORP	Dissolved Oxygen	Ferrous Iron	Turbidity	PID	Alkalinity to pH 4.5	Alkalinity to pH 8.3
WELL ID		**Sampled**	**(°C)**	**Std. Units**	**(mS/cm)**	**(mV)**	**(mg/L)**	**(mg/L)**	**(NTU)**	**(ppm)**	**(µg/L as $CaCO_3$)**	**(µg/L as $CaCO_3$)**
MW-15		03/12/09										
MW-15		06/09-11/09										
MW-15		09/09-11/09										
MW-15		12/07-09/09										
MW-15		03/09-11/10										
MW-15		06/09-11/10					NOT SAMPLED DUE TO THE PRESENCE OF SHEEN					
MW-15		09/09/10										
MW-15		03/08/11										
MW-15		09/14/11										
MW-15		03/08/12										
MW-15		09/11/12										
MW-15		03/13/13					NOT SAMPLED DUE TO HIGH LEVELS OF METHANE GAS					
MW-15		09/11/13										
MW-15		02/14/14										
MW-15		09/18/14					NOT SAMPLED DUE TO THE PRESENCE OF SPH					
MW-15		03/12/15										
MW-15		03/11/16	--	6.7	--	--	--	--	--	--	100,000	--
MW-15		09/09/16	22.9	7.0	--	--	--	--	--	--	202,000	202,000
MW-16		06/28/05	14.7	6.46	3.62	-91	2.10	3.4	226	--	--	--
MW-16		09/27/05	15.4	6.43	3.56	-181	1.71	3.2	530	--	--	--
MW-16		12/21/05	13.8	5.02	2.68	--	3.97	--	785	--	--	--
MW-16		03/21/06	13	6.14	2.98	--	2.02	--	604	--	--	--
MW-16		06/22/06	14.0	6.40	2.4	-37	0.3	3.2	-	--	--	--
MW-16		09/20/06	15.0	6.14	4.92	-0.31	1.15	6.2	260	--	--	--
MW-16		12/19/06	14.0	6.43	2.66	58	1.50	5.1	595	--	--	--
MW-16		02/27/07	12.1	6.03	1.13	33	4.06	2.6	608	--	--	--
MW-16		06/14/07	13.8	6.92	1.08	-4	2.51	1.6	530	--	--	--
MW-16		09/23/07	15.1	6.49	2.83	-5	0.92	--	--	--	--	--
MW-16		12/13/07	15.42	5.49	3.98	83	--	6.2	109.4	--	--	--
MW-16		03/05/08	13.60	6.07	0.313	78	0.00	3.4	29.2	--	--	--
MW-16		06/03/08	13.62	5.90	1.35	22	0.00	--	249	--	--	--
MW-16		09/10/08	16.10	6.40	4.21	-139.3	5.63	--	37.1	--	116,000	<460
MW-16		12/09/08	17.74	5.90	--	108.7	9.19	--	35.8	--	125,000	<460
MW-16		03/11/09	14.05	6.80	0.339	-96	8.25	2.10	15.1	--	69,000	<460
MW-16		06/09-11/09	--	6.2	--	--	--	--	--	--	14,100	<460

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		Date	Temp	pH	Conductivity	ORP	Dissolved Oxygen	Ferrous Iron	Turbidity	PID	Alkalinity to pH 4.5	Alkalinity to pH 8.3
WELL ID		Sampled	(°C)	Std. Units	(mS/cm)	(mV)	(mg/L)	(mg/L)	(NTU)	(ppm)	(µg/L as $CaCO_3$)	(µg/L as $CaCO_3$)
MW-16		09/09-11/09	--	--	--	--	--	--	--	--	264,000	<460
MW-16		12/07-09/09	--	--	--	--	--	--	--	--	206,000	<460
MW-16		03/09-11/10	--	--	--	--	--	--	--	--	161,000	<460
MW-16		06/09-11/10	--	--	--	--	--	--	--	--	42,900	<460
MW-16	(D)	06/09-11/10	--	--	--	--	--	--	--	--	41,800	<460
MW-16		09/09/10	--	--	--	--	--	--	--	--	172,000	<460
MW-16		03/10/11	--	--	--	--	--	--	--	--	63,900	<460
MW-16		09/14/11	15.4	7.26	0.743	--	--	--	--	--	79,300	<460
MW-16		03/08/12	12.1	7.26	0.621	--	--	--	--	--	108,000	<460
MW-16	(D)	03/08/12	--	--	--	--	--	--	--	--	88,100	<460
MW-16		09/12/12	15.6	6.44	0.44	--	--	--	--	--	90,800	<700
MW-16		03/14/13	11.1	6.91	0.486	--	--	--	--	--	91,300	--
MW-16		09/12/13	--	6.7	--	--	--	--	--	--	89,100	--
MW-16		02/14/14	--	6.6	--	--	--	--	--	--	75,900	--
MW-16		09/18/14	--	6.8	--	--	--	--	--	--	95,500	--
MW-16		03/12/15	--	7.0	--	--	--	--	--	--	118,000	--
MW-16		09/14/15	--	6.7	--	--	--	--	--	--	85,900	--
MW-16		03/11/16	--	6.9	--	--	--	--	--	--	56,500	--
MW-16		09/09/16	22.8	7.2	--	--	--	--	--	--	106,000	106,000
MW-17		06/28/05	14.7	6.81	1.36	-86	1.63	2.4	999	--	--	--
MW-17		09/27/05	16.8	6.7	1.47	-150	1	1.9	468	--	--	--
MW-17		12/20/05	14.4	6.86	0.497	--	6.31	--	265	--	--	--
MW-17		03/21/06	12.1	6.57	0.733	--	2.19	--	42	--	--	--
MW-17		06/22/06	14.2	6.88	0.661	-64	--	8.2	--	--	--	--
MW-17		09/21/06	16.7	6.52	1.46	-54	0.22	4.2	236	--	--	--
MW-17		12/19/06	14.1	7.16	0.381	128	2.17	0.8	239	--	--	--
MW-17		02/27/07	10.4	6.69	0.321	71	4.44	0.8	289	--	--	--
MW-17		06/14/07	13.2	7.00	0.450	16	5.01	1.2	285	--	--	--
MW-17		09/24/07	15.7	6.60	0.980	--	1.22	1.4	--	--	--	--
MW-17		12/13/07	14.75	6.47	0.920	-30	--	1.4	27.3	--	--	--
MW-17		03/06/08	11.86	6.37	0.809	0.36	0.88	--	17.6	--	--	--
MW-17		06/04/08	12.95	6.40	0.850	75	8.80	--	--	--	--	--
MW-17		09/11/08	16.33	6.60	0.743	-67.6	7.45	--	50.90	--	124,000	<460
MW-17	(D)	09/11/08	--	6.6	--	--	--	--	--	--	124,000	<460
MW-17		12/10/08	15.32	6.53	--	-35.5	0.00	--	33.40	--	90,400	<460

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10 5th Street
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		Date	Temp	pH	Conductivity	ORP	Dissolved Oxygen	Ferrous Iron	Turbidity	PID	Alkalinity to pH 4.5	Alkalinity to pH 8.3
WELL ID		**Sampled**	**(°C)**	**Std. Units**	**(mS/cm)**	**(mV)**	**(mg/L)**	**(mg/L)**	**(NTU)**	**(ppm)**	**(µg/L as $CaCO_3$)**	**(µg/L as $CaCO_3$)**
MW-17	(D)	12/10/08	--	--	--	--	--	--	--	--	101,000	<460
MW-17		03/12/09	11.47	6.8	1.2	-4	3.39	--	2.60	--	90,400	<460
MW-17		06/09-11/09	--	6.5	--	--	--	--	--	--	98,600	<460
MW-17	(D)	06/09-11/09	--	6.4	--	--	--	--	--	--	97,100	<460
MW-17		09/09-11/09	--	--	--	--	--	--	--	--	101,000	<460
MW-17	(D)	09/09-11/09	--	--	--	--	--	--	--	--	94,800	<460
MW-17		12/07-09/09	--	--	--	--	--	--	--	--	123,000	<460
MW-17		03/09-11/10	NOT SAMPLED DUE TO INACCESIBILITY									
MW-17		06/09-11/10	--	--	--	--	--	--	--	--	65,700	<460
MW-17		09/09/10	--	--	--	--	--	--	--	--	86,300	<460
MW-17		03/08/11	NO LONGER INCLUDED IN ROUTINE SAMPLING EVENTS									
MW-18		06/28/05	14.7	6.65	2.37	85	15.29	2.2	600	--	--	--
MW-18		09/27/05	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-18		12/20/05										
MW-18		03/21/06	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-18		06/22/06										
MW-18		09/20/06										
MW-18		12/20/06										
MW-18		02/27/07										
MW-18		06/21/07										
MW-18		09/24/07										
MW-18		12/13/07										
MW-18		03/06/08										
MW-18		06/04/08										
MW-18		09/11/08										
MW-18		12/10/08										
MW-18		03/11/09	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-18		06/09-11/09										
MW-18		09/09-11/09										
MW-18		12/07-09/09										
MW-18		03/09-11/10										
MW-18		06/09-11/10										
MW-18		09/09/10										
MW-18		03/08/11										
MW-18		09/14/11										

Appendix C
Table 8
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		Date	Temp	pH	Conductivity	ORP	Dissolved Oxygen	Ferrous Iron	Turbidity	PID	Alkalinity to pH 4.5	Alkalinity to pH 8.3
WELL ID		Sampled	(°C)	Std. Units	(mS/cm)	(mV)	(mg/L)	(mg/L)	(NTU)	(ppm)	(µg/L as $CaCO_3$)	(µg/L as $CaCO_3$)
MW-18		03/08/12										
MW-18		09/11/12										
MW-18		03/13/13										
MW-18		09/11/13										
MW-18		02/14/14										
MW-18		09/18/14					NOT SAMPLED DUE TO THE PRESENCE OF SPH					
MW-18		03/12/15										
MW-18		03/11/16	--	7.1	--	--	--	--	--	--	101,000	--
MW-18		09/08/16	22.9	6.6	--	--	--	--	--	--	24,300	24,300
MW-19		6/21/07	13.1	6.14	1.72	--	1.57	--	999	--	--	--
MW-19		9/24/07	15.4	6.46	1.48	10	1.27	--	999	--	--	--
MW-19		12/13/07					NOT SAMPLED DUE TO INACCESIBILITY					
MW-19		03/06/08	11.54	6.25	1	-97	0.46	3.1	32.9	--	--	--
MW-19		06/04/08	11.91	6.5	0.69	111	2.96	--	154	--	--	--
MW-19		09/11/08	16.02	6.5	1.437	-96.5	6.03	--	86.1	--	110,000	<460
MW-19		12/10/08	15.14	6.44	--	-60.4	0	--	48.7	--	46,700	<460
MW-19		03/12/09	12.2	6.6	1.39	-73	11.14	--	53	--	122,000	<460
MW-19		06/09-11/09	--	6.3	--	--	--	--	--	--	94,300	<460
MW-19		09/09-11/09	--	--	--	--	--	--	--	--	75,000	<460
MW-19		12/07-09/09					NOT SAMPLED DUE TO INACCESIBILITY					
MW-19		03/09-11/10	--	--	--	--	--	--	--	--	140,000	<460
MW-19		06/09-11/10	--	--	--	--	--	--	--	--	123,000	<460
MW-19		09/09/10					NOT SAMPLED DUE TO THE PRESENCE OF SHEEN					
MW-19		03/09/11	--	--	--	--	--	--	--	--	70,000	<460
MW-19		09/14/11	15.1	7.39	1.163	--	--	--	--	--	105,000	<460
MW-19		03/08/12	11.9	7.37	0.670	--	--	--	--	--	115,000	<460
MW-19		09/12/12	16.3	6.61	1.310	--	--	--	--	--	111,000	<700
MW-19		03/13/13					UNABLE TO LOCATE					
MW-19		09/11/13					NOT SAMPLED DUE TO THE PRESENCE OF SHEEN					
MW-19		02/14/14					NOT SAMPLED DUE TO THE PRESENCE OF SPH					
MW-19		09/18/14	--	6.8	--	--	--	--	--	--	107,000	--
MW-19		03/12/15	--	6.8	--	--	--	--	--	--	118,000	--
MW-19		03/12/15	--	6.8	--	--	--	--	--	--	118,001	--
MW-19		03/11/16	--	7.1	--	--	--	--	--	--	118,002	--
MW-19		09/09/16	--	6.6	--	--	--	--	--	--	24,300	--

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		Date	Temp	pH	Conductivity	ORP	Dissolved Oxygen	Ferrous Iron	Turbidity	PID	Alkalinity to pH 4.5	Alkalinity to pH 8.3
WELL ID		Sampled	(°C)	Std. Units	(mS/cm)	(mV)	(mg/L)	(mg/L)	(NTU)	(ppm)	(µg/L as $CaCO_3$)	(µg/L as $CaCO_3$)
MW-20		6/21/07	13.3	6.25	2.01	-54	0.81	--	999	--	--	--
MW-20		9/24/07	15.4	6.59	1.93	-29	0.40	--	999	--	--	--
MW-20		12/13/07	--	--	--	--	--	--	-	--	--	--
MW-20		03/04/08	11.53	6.42	1.47	-66	1.52	6	39.4	--	--	--
MW-20		06/04/08	--	--	--	--	--	--	--	--	--	--
MW-20		09/11/08	15.25	6.4	--	-159	0	--	386	--	157,000	<460
MW-20		12/10/08	15.05	6.52	--	-40.1	0	--	38.6	--	111,000	<460
MW-20		03/12/09	10.13	6.5	1.51	-97	10.6	--	23.4	--	114,000	<460
MW-20		06/09-11/09[3]	--	6.1	--	--	--	--	--	--	73,900	<460
MW-20	(D)	06/09-11/09[3]	--	6.2	--	--	--	--	--	--	76,000	<460
MW-20		06/09-11/09	--	--	--	--	--	--	--	--	266,000	<460
MW-20	(D)	06/09-11/09	--	--	--	--	--	--	--	--	267,000	<460
MW-20		09/09-11/09	--	--	--	--	--	--	--	--	92,900	<460
MW-20	(D)	09/09-11/09	--	--	--	--	--	--	--	--	92,300	<460
MW-20		12/07-09/09[3]	--	--	--	--	--	--	--	--	150,000	<460
MW-20	(D)	12/07-09/09[3]	--	--	--	--	--	--	--	--	151,000	<460
MW-20		03/09-11/10[3]	--	--	--	--	--	--	--	--	125,000	<460
MW-20	(D)	03/09-11/10[3]	--	--	--	--	--	--	--	--	123,000	<460
MW-20		06/09-11/10[3]	--	--	--	--	--	--	--	--	128,000	<460
MW-20	(D)	06/09-11/10[3]	--	--	--	--	--	--	--	--	127,000	<460
MW-20		09/09/10[3]	--	--	--	--	--	--	--	--	45,900	<460
MW-20		03/09/11[3]	--	--	--	--	--	--	--	--	79,900	<460
MW-20		09/14/11[3]	15.1	7.22	1.215	--	--	--	--	--	126,000	<460
MW-20		03/07/12	12.1	7.43	1.039	--	--	--	--	--	100,000	<460
MW-20		09/12/12	16.0	6.39	1.73	--	--	--	--	--	118,000	<700
MW-20	(D)	09/12/12	--	--	--	--	--	--	--	--	119,000	<700
MW-20		03/14/13	11.4	7.04	1.106	--	--	--	--	--	82,400	--
MW-20		09/12/13[3]	--	6.6	--	--	--	--	--	--	74,400	--
MW-20	(D)	09/12/13[3]	--	6.7	--	--	--	--	--	--	98,700	--
MW-20		02/14/14	--	6.5	--	--	--	--	--	--	70,900	--
MW-20		09/18/14	--	6.8	--	--	--	--	--	--	94,700	--
MW-20		03/12/15	--	6.9	--	--	--	--	--	--	79,800	--
MW-20		09/14/15	--	6.7	--	--	--	--	--	--	109,000	--
MW-20		03/10/16	--	7.2	--	--	--	--	--	--	50,700	--
MW-20		09/09/16	22.8	6.6	--	--	--	--	--	--	35,000	35,000

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WELL ID		Date Sampled	Temp (°C)	pH Std. Units	Conductivity (mS/cm)	ORP (mV)	Dissolved Oxygen (mg/L)	Ferrous Iron (mg/L)	Turbidity (NTU)	PID (ppm)	Alkalinity to pH 4.5 (µg/L as $CaCO_3$)	Alkalinity to pH 8.3 (µg/L as $CaCO_3$)
MW-21		6/21/07	13.6	6.30	2.35	-5.0	0.9	--	999	--	--	--
MW-21		9/24/07	15.8	6.60	1.7	-	0.38	--	999	--	--	--
MW-21		12/13/07	--	--	--	--	--	--	--	--	--	--
MW-21		3/5/08	13.0	6.25	0.21	10.0	0.	--	103	--	--	--
MW-21		6/4/08	12.2	6.00	0.9	188.0	7.8	--	78	--	--	--
MW-21		9/11/08	16.1	6.10	--	-84.0	5.36	--	--	--	84,300	<460
MW-21		12/10/08	16.2	5.83	--	20.1	9.59	--	39.4	--	39,000	<460
MW-21		3/12/09	13.06	6.00	0.208	22.0	0.	--	672	--	27,200	<460
MW-21		06/09-11/09	--	6.4	--	--	--	--	--	--	54,000	<460
MW-21		09/09-11/09	--	--	--	--	--	--	--	--	102,000	<460
MW-21		12/07-09/09	NOT SAMPLED DUE TO INACCESIBILITY									
MW-21		03/09-11/10	--	--	--	--	--	--	--	--	9,800	<460
MW-21		06/09-11/10	--	--	--	--	--	--	--	--	39,500	<460
MW-21		09/09/10	--	--	--	--	--	--	--	--	46,900	<460
MW-21		03/08/11	NO LONGER INCLUDED IN ROUTINE SAMPLING EVENTS									
MW-22		6/20/07	14.8	6.23	1.730	-53	0.71	--	999	--	--	--
MW-22		9/24/07	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-22		12/13/07	--	--	--	--	--	--	--	--	--	--
MW-22		03/06/08	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-22		06/04/08										
MW-22		09/11/08										
MW-22		12/10/08										
MW-22		03/12/09										
MW-22		06/09-11/09										
MW-22		09/09-11/09										
MW-22		12/07-09/09										
MW-22		03/09-11/10										
MW-22		06/09-11/10	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-22		09/09/10										
MW-22		03/08/11										
MW-22		09/14/11										
MW-22		03/08/12										
MW-22		09/11/12										
MW-22		03/13/13										

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		Date	Temp	pH	Conductivity	ORP	Dissolved Oxygen	Ferrous Iron	Turbidity	PID	Alkalinity to pH 4.5	Alkalinity to pH 8.3
WELL ID		**Sampled**	**(°C)**	**Std. Units**	**(mS/cm)**	**(mV)**	**(mg/L)**	**(mg/L)**	**(NTU)**	**(ppm)**	**(µg/L as $CaCO_3$)**	**(µg/L as $CaCO_3$)**
MW-22		09/11/13										
MW-22		02/14/14										
MW-22		09/18/14					NOT SAMPLED DUE TO THE PRESENCE OF SPH					
MW-22		03/12/15	--	7.2	--	--	--	--	--	--	101,000	--
MW-22		09/14/15	--	7.3	--	--	--	--	--	--	154,000	--
MW-22		03/11/16	--	7.2	--	--	--	--	--	--	38,000	--
MW-22		09/09/16	22.8	7.4	--	--	--	--	--	--	148,000	148,000
MW-22	(D)	09/09/16	22.8	7.3	--	--	--	--	--	--	141,000	141,000
MW-23		6/20/07	16.0	8.78	0.86	-96	3.45	--	999	--	--	--
MW-23		9/24/07	16.3	10.84	20.1	--	0.8	--	999	--	--	--
MW-23		12/13/07	--	--	--	--	--	--	--	--	--	--
MW-23		03/05/08	10.2	9.2	1.3	-174	0.38	0.6	79.3	--	--	--
MW-23		06/03/08	11.89	10.3	1.06	52	2.89	--	116	--	--	--
MW-23		09/11/08	16.6	8.9	--	28	2.58	--	349	--	253,000	11,600
MW-23		12/10/08	--	--	--	--	--	--	--	--	292,000	34,600
MW-23		03/12/09	10.48	9.5	1.17	-76	9.7	--	98.2	--	259,000	41,100
MW-23		06/09-11/09	--	9.4	--	--	--	--	--	--	254,000	36,900
MW-23		09/09-11/09										
MW-23		12/07-09/09										
MW-23		03/09-11/10					NOT SAMPLED DUE TO THE PRESENCE OF SHEEN					
MW-23		06/09-11/10										
MW-23		09/09/10										
MW-23		03/08/11					NO LONGER INCLUDED IN ROUTINE SAMPLING EVENTS					
MW-24		6/20/07	14.3	6.40	2.09	-148	1.06	--	999	--	--	--
MW-24		9/24/07					NOT SAMPLED DUE TO THE PRESENCE OF SHEEN					
MW-24		12/13/07	--	--	--	--	--	--	--	--	--	--
MW-24		03/06/08										
MW-24		06/03/08										
MW-24		09/11/08										
MW-24		12/10/08										
MW-24		03/12/09										
MW-24		06/09-11/09										
MW-24		09/09-11/09										
MW-24		12/07-09/09					NOT SAMPLED DUE TO THE PRESENCE OF SPH					

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WELL ID		Date Sampled	Temp (°C)	pH Std. Units	Conductivity (mS/cm)	ORP (mV)	Dissolved Oxygen (mg/L)	Ferrous Iron (mg/L)	Turbidity (NTU)	PID (ppm)	Alkalinity to pH 4.5 (µg/L as $CaCO_3$)	Alkalinity to pH 8.3 (µg/L as $CaCO_3$)
MW-24		03/09-11/10	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-24		06/09-11/10										
MW-24		09/09/10										
MW-24		03/08/11										
MW-24		09/14/11										
MW-24		03/08/12										
MW-24		09/11/12										
MW-24		03/13/13										
MW-24		09/11/13	NOT SAMPLED DUE TO THE PRESENCE OF SHEEN									
MW-24		02/14/14										
MW-24		09/18/14										
MW-24		03/12/15	NOT SAMPLED DUE TO THE PRESENCE OF SPH									
MW-24		03/11/16										
MW-24		09/09/16										
MW-25		6/21/07	14.7	6.36	2.47	-49	0.36	--	999	--	--	--
MW-25	(D)	6/21/07	--	--	--	--	--	--	--	--	--	--
MW-25		9/24/07	15.90	7.03	1.94	-	0.41	--	999	--	--	--
MW-25		12/13/07	--	--	--	--	--	--	--	--	--	--
MW-25		03/06/08	12.8	6.72	0.317	-63	0	3	46.4	--	--	--
MW-25		06/03/08	--	--	--	--	--	--	--	--	--	--
MW-25		09/11/08	16.16	6.2	1.96	-111.7	5.58	--	141.30	--	79,200	<460
MW-25		12/10/08	16.44	5.79	--	-35.8	9.28	--	31.80	--	65,700	<460
MW-25		03/12/09	13.4	6.6	0.314	-82.0	0.0	--	23.90	--	90,200	<460
MW-25		06/09-11/09	--	6.1	--	--	--	--	--	--	73,200	<460
MW-25		09/09-11/09	--	--	--	--	--	--	--	--	105,000	<460
MW-25		12/07-09/09	--	--	--	--	--	--	--	--	51,500	<460
MW-25		03/09-11/10	--	--	--	--	--	--	--	--	70,500	<460
MW-25		06/09-11/10	--	--	--	--	--	--	--	--	72,600	<460
MW-25		09/09/10	--	--	--	--	--	--	--	--	83,800	<460
MW-25		03/09/11	--	--	--	--	--	--	--	--	71,800	<460
MW-25	(D)	03/09/11	--	--	--	--	--	--	--	--	63,800	<460
MW-25		09/14/11	15.2	7.16	0.493	--	--	--	--	--	77,400	<460
MW-25	(D)	09/14/11	15.2	7.16	0.493	--	--	--	--	--	79,700	<460
MW-25		3/8/12	11.6	7.39	0.62	--	--	--	--	--	92,800	<460
MW-25		9/12/12	16.4	6.62	1.90	--	--	--	--	--	79,700	<700

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		Date	Temp	pH	Conductivity	ORP	Dissolved Oxygen	Ferrous Iron	Turbidity	PID	Alkalinity to pH 4.5	Alkalinity to pH 8.3
WELL ID		**Sampled**	**(°C)**	**Std. Units**	**(mS/cm)**	**(mV)**	**(mg/L)**	**(mg/L)**	**(NTU)**	**(ppm)**	**(µg/L as $CaCO_3$)**	**(µg/L as $CaCO_3$)**
MW-25		3/14/13	11.4	6.86	0.67	--	--	--	--	--	82,600	--
MW-25		9/12/13	--	6.8	--	--	--	--	--	--	122,000	--
MW-25		02/14/14	--	6.6	--	--	--	--	--	--	99,800	--
MW-25	(D)	02/14/14	--	6.5	--	--	--	--	--	--	103,000	--
MW-25		09/18/14	--	6.8	--	--	--	--	--	--	107,000	--
MW-25	(D)	09/18/14	--	6.8	--	--	--	--	--	--	101,000	--
MW-25		03/12/15	--	6.7	--	--	--	--	--	--	86,900	--
MW-25		09/14/15	--	6.8	--	--	--	--	--	--	98,800	--
MW-25	(D)	09/14/15	--	6.8	--	--	--	--	--	--	101,000	--
MW-25		03/10/16	--	7.1	--	--	--	--	--	--	42,100	--
MW-25		09/09/16	22.8	6.8	--	--	--	--	--	--	66,200	66,200

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EXPLANATIONS:

pH = Potential Hydrogen Ions
(µmhos/cm) = Micromhos per cubic centimeter
(°C/F°) = Degrees Celsius/ Fahrenheit
D.O. = Dissolved Oxygen Concentrations
(mg/L) = Milligrams per liter
ORP = Oxidation Reduction Potential
(mV) = Millivolts
-- = Not Measured
(D) = Duplicate

ANALYTICAL METHOD:

Alkalinity analyzed by SM20 2320B

[1] Monitoring wells MW-6 and MW-12 were previously designated W-6 and W-12, respectively.
[2] Turbidity sensor not operational during MW-17 purging.
[3] Matrix spike and duplicate matrix spike samples were collected from this well. Please refer to lab sheets for results.

Starting 1Q 2011, wells MW-14, MW-17, MW-21 and MW-23 were removed from monitoring.
Starting 3Q 2016, well MW-6 was removed from monitoring