Chevron Environmental Management Company

Progress Report No. 135 First Semi-Annual 2024 Groundwater Monitoring Report

Former Unocal Seattle Marketing Terminal 0724
3001 Elliott Avenue
Seattle, Washington

November 21, 2024

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Contents

Tables

Figures

Appendices

1 Introduction

Arcadis U.S., Inc. (Arcadis) has prepared this report on behalf of Chevron Environmental Management Company (CEMC) to document the first semi-annual 2024 groundwater sampling results for the former Seattle Marketing Terminal (Unocal 0724) located at 3001 Elliott Avenue in Seattle, Washington (Site). A Site location map is included as Figure 1. This report summarizes the results of the first and second quarter 2024 groundwater gauging and sampling events Arcadis conducted on March 12 and June 10-12, 2024.

The Site was formally known as the Unocal Seattle Marketing Terminal in the Washington State Department of Ecology (Ecology) database. Site identifiers are:

- Facility Site Identification Number (FSID): 2208
- Cleanup Site Identification Number (CSID): 1428.

CEMC is conducting cleanup of the Site as required by Ecology pursuant to Order on Consent DE88-N223 and Amendments 1 through 5 (Ecology 1989, 2007). The Site was previously on a quarterly/semi-annual groundwater monitoring and quarterly light non-aqueous phase liquid (LNAPL) monitoring and removal program, until May 23, 2024, when the Site was approved and updated to semi-annual gauging and sampling by Ecology via email. The Site was defined in Order on Consent DE88-N223 and is divided into four contiguous areas: Upper Yard, Elliott Avenue, Lower Yard, and the Offsite Area. The Upper Yard consists of the approximate area between Elliott Avenue and Western Avenue to the east and west, and Bay Street and Broad Street to the north and south. The Elliott Avenue area includes the length of Elliott Avenue between Bay Street and Broad Street. The Lower Yard consists of the area between Elliott Avenue and the Burlington Northern Santa Fe (BNSF) railroad tracks to the east and west, and Bay Street and Broad Street to the north and south. The Offsite Area generally comprises the BNSF railroad tracks right-of-way and Alaskan Way between Bay Street and Broad Street. A Site map is included as Figure 2. The Site history is summarized in Appendix A. Monitoring well history is summarized in Table 1.

2 Groundwater Monitoring

2.1 Methodology

During both quarters, gauging activities were conducted to ensure that groundwater levels were within the monitoring well screen intervals. Gauging activities were conducted using an oil/water interface probe to determine depth to water and (if present) LNAPL thickness. Groundwater elevation data are summarized in Table 2. Groundwater elevations for the March and June events are shown on Figures 3a and 3b, respectively.

During both quarters, monitoring wells with no measurable LNAPL were purged and sampled using a peristaltic pump in general accordance with the procedures outlined in the Arcadis Technical Guidance Instruction for Low-Flow Groundwater Purging and Sampling Procedures for Monitoring Wells (Appendix B). Based on a prior request from Ecology, tubing was placed within 6 inches of the groundwater surface in each monitoring well. Groundwater levels were measured in each well prior to purging to assure the tubing was placed correctly. New, disposable polyethylene tubing was used for sampling. Water quality parameters including temperature, pH, electrical conductivity, dissolved oxygen, oxidation/reduction potential, and turbidity were measured approximately every 3 minutes using an In-Situ® Aqua Troll 600 low-flow groundwater sampling system and were recorded on the field data sheets included in Appendix C to evaluate stability prior to sample collection.

Samples were collected in clean, laboratory-supplied containers with appropriate preservatives and were stored in ice-chilled coolers. Samples were then shipped via overnight delivery under chain-of-custody procedures to Eurofins Lancaster Laboratories in Lancaster, Pennsylvania. Groundwater samples were analyzed for the following:

- Total petroleum hydrocarbons as gasoline (TPH-G) by Northwest Method NWTPH-Gx;
- Total petroleum hydrocarbons as diesel and heavy oil (TPH-D and TPH-O) by Northwest Method NWTPH-Dx;
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX) by United States Environmental Protection Agency (USEPA) Method 8260D/UST; and
- Benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenz(a,h)anthracene, and indeno(1,2,3-c,d)pyrene, collectively referred to as carcinogenic polycyclic aromatic hydrocarbons (cPAHs), by USEPA Method 8270E SIM.

Analytical results are summarized in Table 3. Analytical results for TPH-G, TPH-D, TPH-O, and BTEX during both events are also summarized on Figure 4a. Analytical results for cPAHs during both events are summarized on Figure 4b. The laboratory reports and chain-of-custody documentation are provided in Appendix D.

2.2 First Quarter 2024 Groundwater Monitoring

On March 12, 2024, Arcadis conducted a groundwater gauging and sampling event at the Site. Arcadis gauged monitoring wells MW-30, MW-61-A-R, MW-70R, MW-200, MW-201, MW-202, and MW-204 through MW-207, and MW-209 through MW-211 according to the methodology described in Section 2.1. MW-203 was buried by hardened gravel during the event; Arcadis subsequently returned to the site to ensure it was uncovered for the second quarter event. No measurable LNAPL thickness was observed during this event in any of the wells gauged.

Depths to groundwater measured during the first quarter 2024 event ranged from 6.28 feet below top of casing (btoc) in MW-210 to 21.88 feet btoc in MW-205. Groundwater levels were within screened intervals for all wells gauged. Groundwater elevations ranged from 4.11 feet above mean sea level (amsl) in MW-206 to 10.35 feet amsl in MW-61 A-R. These measurements indicate groundwater is generally flowing in a southwesterly direction towards Elliott Bay (see Figure 3a) and were consistent with historical data.

Monitoring wells MW-70R, MW-209, MW-210, and MW-211 were sampled according to the methodology described in Section 2.1. Groundwater analytical results for the first quarter 2024 event indicated that no exceedances of the applicable BTEX, TPH-G, TPH-D, TPH-O or cPAH remedial action levels (RALs) were detected in the sampled wells. Groundwater analytical results were primarily non-detect; where there were detections, concentrations were below the applicable RALs. TPH-O and BTEX were generally not detected in any of the analyzed samples, with the exception of toluene in MW-209, which was detected at a concentration below the RAL.

2.3 Second Quarter 2024 Groundwater Monitoring

From June 10-12, 2024, Arcadis conducted a groundwater gauging and sampling event at the Site. Arcadis gauged monitoring wells MW-30, MW-61-A-R, MW-70R, MW-200 through MW-207, and MW-209 through MW-211 on June 10, 2024, according to the methodology described in Section 2.1. No measurable LNAPL thickness was observed during this event.

Depths to groundwater measured during the second quarter 2024 event ranged from 7.93 feet btoc in MW-211 to 19.18 feet btoc in MW-204. Groundwater elevations ranged from 3.23 feet amsl in MW-70R to 8.20 feet amsl in MW-61A-R. Groundwater levels were within screened intervals for all wells gauged. These measurements indicate groundwater is generally flowing in a southwesterly direction towards Elliott Bay (see Figure 3a) and were consistent with historical data.

Groundwater analytical results for the second quarter 2024 event indicated that no exceedances of the applicable BTEX, TPH-G, TPH-D, TPH-O, or cPAHs RALs were detected in the sampled wells. Groundwater analytical results were primarily non-detect; where there were detections, concentrations were below the applicable RALs. Benzene, ethylbenzene, and total xylenes were not detected in any of the analyzed samples.

2.4 Laboratory Data Verification Results

A trip bank sample for BTEX and TPH-G analysis was submitted with the groundwater samples for the first and second quarter 2024 events. Analyte concentrations were non-detect in the trip blanks.

During the first quarter event, a duplicate sample (DUP-1) was collected from monitoring well MW-70R; during the second quarter event, a duplicate sample was collected from monitoring well MW-205 (DUP-1) and a second duplicate was collected from monitoring well MW-61A-R (DUP-2) for quality assurance purposes. The duplicate samples were analyzed for the same constituents as the parent samples. The duplicate analytical results were comparable to the parent sample analytical results for both quarters.

All coolers were received in good condition within temperature requirements and samples were analyzed within holding times.

2.5 Groundwater Monitoring Compliance Summary

Historical analytical results are presented in Appendix E. Historical trend graphs depicting groundwater elevation and concentrations of TPH-G, TPH-D, and TPH-O in wells MW-30, MW-70R, MW-200 through MW-207, and MW-209 through MW-211 are provided in Appendix F.

As of the June 2024 event, nine monitoring wells (MW-70R, MW-200, MW-202, MW-203, MW-206, MW-207, MW-209, MW-210, and MW-211) have met a minimum of 13 consecutive sampling events in compliance with the RALs established for the Site. A summary of groundwater compliance as of the June 2024 event is included in Table 4.

3 Conclusions and Recommendations

Gauging and groundwater monitoring were conducted at the site on March 12 and from June 10-12, 2024. During the first and second quarter sampling events, there were no exceedances of BTEX, TPH-G, TPH-D, TPH-O, or cPAH RALs in the samples collected. Arcadis has conducted weekly monitoring since 2021 at monitoring wells MW-70R and MW-200 through MW-207 due to the prior presence of LNAPL. Since August 25, 2023, there has been no evidence of LNAPL during the weekly monitoring events and as such Arcadis discontinued weekly gauging on October 13, 2023 due to no evidence of sheen/LNAPL for 7 weeks. Weekly gauging results are summarized in Table 5.

Due to more than eight quarters of consecutive sampling events in compliance with the established RALs and the Ecology Amendment No. 5 to Order on Consent (2007), Arcadis previously recommended reducing the sampling frequency of wells MW-70R, MW-209, MW-210 and MW-211 to semi-annually (Arcadis 2023b); the reduced sampling frequency was approved by Ecology on May 23, 2024. Semi-annual monitoring of groundwater and LNAPL at the Site will continue to further evaluate groundwater quality and concentration trends. The 4Q24 groundwater monitoring event was completed in October 2024.

4 References

Arcadis. 2023a. Technical Guidance Instruction - Low Flow Groundwater Purging and Sampling Procedures for Monitoring Wells. April 5.

Arcadis. 2023b. First Semi-Annual 2023 Groundwater Monitoring Report, Former Unocal Seattle Marketing Terminal 0724, 3001 Elliott Avenue, Seattle, Washington.

Ecology. 1989. Order on Consent DE88-N223.

Ecology. 2007. Amendment No.5 to Order on Consent DE88-N223. March 13.

Tables

Table 1. Monitoring Well History
Progress Report No. 134
First Semi-Annual 2024 Groundwater Monitoring Report
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Well ID	Installation Date	Compliance Parameters	Compliance/Removal Date
Upper Yard			
MW-37	06/1990	**LNAPL-TPH - BTEX (MW-61A-R)**	12/1995
MW-38	06/1990		1992
MW-39	06/1990		1992
MW-40	06/1990		1992
MW-58	09/1995		01/2004
MW-61	1995		1997
MW-61A	01/1998		01/2004
MW-61A-R	**03/2006**		**not sampled**
MW-62	1995		1997
MW-62A	01/1998		01/2004
MW-63	1995		1997
MW-63A	01/1998		01/2004
MW-64	1995		01/2004
Elliott Avenue			
MW-30	**1989**		**not sampled**
MW-31	1989		12/2003
MW-32	1989		04/1991
MW-59	03/1998	**LNAPL - TPH - BTEX**	*no data*
MW-65	03/1998	**(MW-30)**	ABANDONED 12/07
MW-66	03/1998		ABANDONED 12/07
MW-69	*no data*		*no data*
Lower Yard			
MW-1	*no data*	**No wells in Lower Yard currently sampled for compliance parameters**	1998
MW-2	*no data*		1998
MW-18	*no data*		1998
MW-22	*no data*		1998
MW-23	*no data*		1998
MW-33	*no data*		1998
MW-34	*no data*		1998
MW-35	*no data*		1998
MW-49	*no data*		1998
MW-50	*no data*		1998
MW-51	*no data*		1998
MW-53	*no data*		1998
MW-54	*no data*		1998
MW-55	*no data*		1998
MW-56	*no data*		1998
MW-57	*no data*		1998
MW-60	*no data*		1998
MW-81	09/1998		06/2002
MW-82	09/1998		06/2002
MW-83	09/1998		06/2002
MW-84	09/1998		06/2002
MW-85	09/1998		06/2002
MW-86	09/1998		06/2002

Table 1. Monitoring Well History
Progress Report No. 134
First Semi-Annual 2024 Groundwater Monitoring Report
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Well ID	Installation Date	Compliance Parameters	Compliance/Removal Date
Offsite Area			
MW-8	01/1989		10/2005
MW-9	*no data*		07/2005
MW-10	01/1989		10/2005
MW-20	01/1989		10/2005
MW-25	01/1989		10/2005
MW-26	01/1989		10/2005
MW-27	01/1989		damaged 2006
MW-27R	12/2006		ABANDONED 12/07
MW-34	10/1989		*no data*
MW-35	10/1989	**LNAPL - TPH - BTEX - PAHs**	*no data*
MW-36	10/1989	**(MW-70R, MW-209 to MW-11)**	07/2005
MW-41	10/1990		12/2002
MW-42	10/1990		12/1991
MW-43	10/1990		12/1991
MW-44	*no data*		*no data*
MW-52	06/1998		10/2005
MW-67	03/1998		10/2005
MW-68	03/1998		07/2005
MW-69	03/1998		*no data*
MW-70	03/1998		10/2005
MW-70R	**09/2016**		**sampled**
MW-71	03/1998		10/2005
MW-72	03/1998		07/2005
MW-76	03/1998		10/2005
MW-209	**09/2016**		**sampled**
MW-210	**09/2016**		**sampled**
MW-211	**09/2016**		**sampled**
Offsite Area - Amendment No. 5 Point of Compliance Monitoring Wells			
MW-200	**10/2006**		**sampled**
MW-201	**10/2006**		**sampled**
MW-202	**10/2006**		**sampled**
MW-203	**10/2006**	**LNAPL - TPH - BTEX - PAHs**	**sampled**
MW-204	**10/2006**	**(MW-200 to MW-207)**	**sampled**
MW-205	**10/2006**		**sampled**
MW-206	**10/2006**		**sampled**
MW-207	**10/2006**		**sampled**

Notes:

LNAPL = Light non-aqueous phase liquid

TPH = Total petroleum hydrocarbons

BTEX = Benzene, Toluene, Ethylbenzene and Xylenes (Total)

PAHs = Polycyclic Aromatic Hydrocarbons

Items in bold represent compliance wells sampled in the most recent sampling event.

Table 2. Summary of Groundwater Elevation Data
Progress Report No. 134
First Semi-Annual 2024 Groundwater Monitoring Report
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Well Number	Date	Time	Depth to Groundwater	Depth to LNAPL	LNAPL Thickness	Top of Casing Elevation	Groundwater Elevation[1]	Top of Screen Elevation[3]	Comments[4]
MW-200	03/12/24	13:54	8.02	--	--	14.36	6.34	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	06/10/24	15:31	9.33	--	--	14.36	5.03	9.36	No evidence of sheen/LNAPL was encountered.
MW-201	03/12/24	13:44	8.82	--	--	14.86	6.04	9.86	No evidence of sheen/LNAPL was encountered.
MW-201	06/10/24	15:23	10.16	--	--	14.86	4.70	9.86	No evidence of sheen/LNAPL was encountered.
MW-202	03/12/24	13:27	8.86	--	--	14.58	5.72	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	06/10/24	14:26	10.35	--	--	14.58	4.23	6.78	No evidence of sheen/LNAPL was encountered. PID = 2.3
MW-203	03/12/24	--	--	--	--	17.55	--	7.05	Inaccesibe
MW-203	06/10/24	15:17	13.46	--	--	17.55	4.09	7.05	No evidence of sheen/LNAPL was encountered.
MW-204	03/12/24	14:06	17.81	--	--	23.93	6.12	6.58	No evidence of sheen/LNAPL was encountered. PID = 0.9
MW-204	06/10/24	15:05	19.18	--	--	23.93	4.75	6.58	No evidence of sheen/LNAPL was encountered.
MW-205	03/12/24	14:16	21.88	--	--	27.89	6.01	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	06/10/24	14:57	23.19	--	--	27.89	4.70	9.89	No evidence of sheen/LNAPL was encountered.
MW-206	03/12/24	13:23	11.04	--	--	15.15	4.11	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	06/10/24	14:20	12.80	--	--	15.15	2.35	4.15	No evidence of sheen/LNAPL was encountered.
MW-207	03/12/24	13:17	10.77	--	--	15.40	4.63	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	06/10/24	14:16	12.86	--	--	15.40	2.54	5.90	No evidence of sheen/LNAPL was encountered.
MW-209	03/12/24	14:26	8.61	--	--	15.53	6.92	12.53	No evidence of sheen/LNAPL was encountered.
MW-209	06/10/24	12:43	9.41	--	--	15.53	6.12	12.53	No evidence of sheen/LNAPL was encountered.
MW-210	03/12/24	14:29	6.28	--	--	15.13	8.85	12.13	No evidence of sheen/LNAPL was encountered.
MW-210	06/10/24	14:41	10.26	--	--	15.13	4.87	12.13	No evidence of sheen/LNAPL was encountered.
MW-211	03/12/24	14:31	8.13	--	--	15.02	6.89	12.02	No evidence of sheen/LNAPL was encountered.
MW-211	06/10/24	10:05	7.93	--	--	15.02	7.09	12.02	No evidence of sheen/LNAPL was encountered.
MW-30	03/12/24	14:41	12.12	--	--	20.85	8.73	15.85	LNAPL observed in probe tip.
MW-30	06/10/24	15:45	13.50	--	--	20.85	7.35	15.85	No evidence of sheen/LNAPL was encountered.
MW-70R	03/12/24	13:07	10.58	--	--	15.61	5.03	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	06/10/24	14:07	12.38	--	--	15.61	3.23	11.61	No evidence of sheen/LNAPL was encountered.
MW-61A-R	03/12/24	14:49	12.09	--	--	22.44	10.35	--	PID = 27.4
MW-61A-R	06/10/24	15:50	14.24	--	--	22.44	8.20	--	PID = 115.2

Notes:
btoc = below top of casing.
LNAPL = light non-aqueous phase liquid
"--" = not measured or not obtainable, no LNAPL signal produced by the electronic interface probe. Further details provided in the comments column as needed per note 4.

Footnotes:
[1] If LNAPL is present, groundwater elevation is corrected per the formula: (Top of casing elevation - Depth to Groundwater) + (0.8 x LNAPL thickness).
[2] Elevation referenced to city of Seattle datum.
[3] Top of well screen elevation data from historical records.
[4] LNAPL is assessed using an NAPL-water interface probe. The electronic interface probe is placed at the depth where the instrument produces a signal indicating a fluid interface (LNAPL and groundwater interfaces produce distinct signals). The interface probe is then brought back to the surface of the well and the tip of the interface probe is inspected for any indication of LNAPL. If a LNAPL signal is produced or LNAPL is observed on the tip of the probe, a bailer is used to confirm

Table 3. Summary of Groundwater Analytical Data
Progress Report No. 134
First Semi-Annual 2024 Groundwater Monitoring Report
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

		Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(k) fluoranthene	Chrysene	Dibenz(a,h) anthracene	Indeno(1,2,3-cd) Pyrene	Gasoline (C7-C12)	Diesel (C12-C24 w/Si Gel)	Heavy Oil (C24-C40 w/Si Gel)	Benzene	Ethylbenzene	Toluene	Xylene (total)
Remedial Action Levels		**0.03 [1]**	**0.03 [1]**	**0.03 [1]**	**0.03 [1]**	**0.03 [1]**	**0.03 [1]**	**0.03 [1]**	**1**	**10**	**15**	**40**	**1,400**	**14,300**	**4,400**
Location	**Date**	**(µg/L)**	**(µg/L)**	**(µg/L)**	**(µg/L)**	**(µg/L)**	**(µg/L)**	**(µg/L)**	**(mg/L)**	**(mg/L)**	**(mg/L)**	**(µg/L)**	**(µg/L)**	**(µg/L)**	**(µg/L)**
MW-200	6/11/2024	<0.011 cn	<0.011 cn	<0.011 cn	<0.011 cn	<0.011 cn	<0.021 cn	<0.021 cn	**0.065 J**	<0.053	<0.120	<0.30	<0.40	<0.30	<0.40
MW-201	6/11/2024	<0.011	<0.011	<0.011	<0.011	<0.011	<0.022	<0.022	**0.220 J cn**	**0.057 J cn**	**0.290 cn**	<0.30	<0.40	<0.30	<0.40
MW-202	6/11/2024	**0.011 J**	<0.011	<0.011	<0.011	<0.011	<0.022	<0.022	<0.043	<0.049	<0.110	<0.30	<0.40	<0.30	<0.40
MW-203	6/11/2024	<0.010	<0.010	<0.010	<0.010	<0.010	<0.020	<0.020	<0.043	<0.045	<0.100	<0.30	<0.40	<0.30	<0.40
MW-204	6/11/2024	<0.010	<0.010	<0.010	<0.010	<0.010	<0.020	<0.020	**0.500**	**0.140**	<0.100	<0.30	<0.40	<0.30	<0.40
MW-205	6/11/2024	<0.011	<0.011	<0.011	<0.011	<0.011	<0.022	<0.022	**0.050 J**	<0.051	<0.110	<0.30	<0.40	<0.30	<0.40
MW-205 (DUP-1)	6/11/2024	<0.011	<0.011	<0.011	<0.011	<0.011	<0.022	<0.022	**0.048 J**	<0.049	<0.110	<0.30	<0.40	<0.30	<0.40
MW-206	6/11/2024	<0.011	<0.011	<0.011	<0.011	<0.011	<0.021	<0.021	<0.043	<0.050	<0.110	<0.30	<0.40	<0.30	<0.40
MW-207	6/11/2024	**0.015 J**	<0.011	<0.011	<0.011	<0.011	<0.022	<0.022	<0.043	<0.047	<0.100	<0.30	<0.40	<0.30	<0.40
MW-209	3/12/2024	<0.011	<0.011	<0.011	<0.011	<0.011	<0.021	<0.021	**0.770 J B cn**	**0.089 J**	<0.110	<0.30	<0.40	**0.30 J**	<0.40
MW-209	6/10/2024	<0.011	<0.011	<0.011	<0.011	<0.011	<0.022	<0.022	**0.230 J**	<0.051	<0.110	<0.30	<0.40	<0.30	<0.40
MW-210	3/12/2024	<0.011	<0.011	<0.011	<0.011	<0.011	<0.022	<0.022	<0.043	<0.049	<0.110	<0.30	<0.40	<0.30	<0.40
MW-210	6/10/2024	<0.010	<0.010	<0.010	<0.010	<0.010	<0.021	<0.021	<0.043	<0.046	<0.100	<0.30 cn	<0.40	<0.30	<0.40
MW-211	3/12/2024	<0.011	<0.011	<0.011	<0.011	<0.011	<0.023	<0.023	**0.078 J B**	<0.048	<0.110	<0.30	<0.40	<0.30	<0.40
MW-211	6/10/2024	<0.011	<0.011	<0.011	<0.011	<0.011	<0.022	<0.022	<0.043	**0.061 J cn**	**0.430 cn**	<0.30	<0.40	<0.30	<0.40
MW-30	6/12/2024	<0.010	<0.010	<0.010	<0.010	<0.010	<0.021	<0.021	<0.043	<0.046 cn	<0.100 cn	<0.30	<0.40	<0.30	<0.40
MW-61A-R	6/12/2024	<0.011	<0.011	<0.011	<0.011	<0.011	<0.022	<0.022	**0.350**	**0.140**	<0.110	<0.30	<0.40	<0.30	<0.40
MW-61A-R (DUP-2)	6/12/2024	<0.011	<0.011	<0.011	<0.011	<0.011	<0.021	<0.021	**0.280**	**0.140**	<0.110	<0.30	<0.40	<0.30	<0.40
MW-70R	3/12/2024	<0.012	<0.012	<0.012	<0.012	<0.012	<0.023	<0.023	<0.043 F1	<0.051	<0.110	<0.30	<0.40	<0.30	<0.40
MW-70R (DUP)	3/12/2024	<0.011	<0.011	<0.011	<0.011	<0.011	<0.022	<0.022	<0.043	<0.050	<0.110	<0.30	<0.40	<0.30	<0.40
MW-70R	6/10/2024	<0.010	<0.010	<0.010	<0.010	<0.010	<0.021	<0.021	<0.043	<0.046	<0.100	<0.30 cn	<0.40	<0.30	<0.40
Trip Blank	3/12/2024	--	--	--	--	--	--	--	<0.043	--	--	<0.30	<0.40	<0.30	<0.40
Trip Blank	6/12/2024	--	--	--	--	--	--	--	<0.043	--	--	<0.30	<0.40	<0.30	<0.40

Notes:
<0.011 = Not detected at or above the laboratory Method Detection Limit (MDL)
µg/L = micrograms per liter
mg/L = milligrams per liter
BOLD = Detected Results
DUP = duplicate

Data Qualifiers:
F1 = MS and/or MSD recovery exceeds control limits.
J = Result is less than the reporting limit (equal to the practicable quantitation limit [PQL]) but greater than or equal to the MDL and the concentration is an approximate value.
B = Compound was found in the blank and sample.

cn = The surrogate recovery in the blanks (method blank and laboratory control sample) is below lower control limits. Since the recovery for target analytes in the laboratory control sample is within method control limits, the data is reported.

Footnotes:

*1 = the laboratory control sample/laboratory control sample duplicate relative percent difference exceeds control limits.

1. The Remedial Action Level (RAL) of 0.03 µg/L is below the laboratory PQL of 0.05 µg/L; thus, any detection results in concentration above the RAL. The PQL is the lowest constituent concentration at which a numerical concentration can be assigned with reasonable certainty that its value represents the constituent's actual concentration in the sample.

Table 4. Summary of Groundwater Compliance
Progress Report No. 134
First Semi-Annual 2024 Groundwater Monitoring Report
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Monitoring Well	Petroleum Constituents and Sheen (BTEX, Gasoline-range, Diesel-range)		cPAHs		Lead	
	Current Sampling Interval	Consecutive Sampling Events in Compliance[1]	Current Sampling Interval	Consecutive Sampling Events in Compliance[1]	Current Sampling Interval	Consecutive Sampling Events in Compliance[1]
Upper Yard						
MW-61A-R	semi-annually	1	semi-annually	2 [11]	none	N/A
Elliott Avenue						
MW-30	semi-annually	1	semi-annually	2 [12]	none	N/A
Offsite Area - Amendment No. 5 Point of Compliance Monitoring Wells						
MW-70R	quarterly	35	quarterly	36	none	N/A
MW-200	semi-annually	29 [7]	semi-annually[2]	15 [4,5,8]	none	13
MW-201	semi-annually	4	semi-annually[2]	6	none	13
MW-202	semi-annually	41	semi-annually[2]	37 [3, 4, 8, 10]	none	13
MW-203	semi-annually	42	semi-annually[2]	41 [4,8]	none	13
MW-204	semi-annually	8	semi-annually[2]	5	none	13
MW-205	semi-annually	5	semi-annually [2]	27 [4,8]	none	13
MW-206	semi-annually	41	semi-annually [2]	42 [4,6,8]	none	13
MW-207	semi-annually	41	semi-annually [2]	17	none	13
Offsite Area - 2016 Additional Delineation Wells						
MW-209	quarterly	20	quarterly	26	none	N/A
MW-210	quarterly	21	quarterly	17	none	N/A
MW-211	quarterly	26	quarterly	26	none	N/A

Notes:
BTEX = benzene, toluene, ethylbenzene, xylenes
cPAHs = carcinogenic polycyclic aromatic hydrocarbons
N/A = not applicable
RAL = Remedial Action Level

Footnotes:

[1] "Consecutive events" are number of consecutive sampling events prior to and including the current reporting period that are in compliance with the groundwater remediation action levels. Events prior to 3/97 are not counted. Refer to progress reports for results.

[2] Quarterly sampling beginning June 2007. Semi-annual sampling beginning 2010.

[3] Field-Filtered sample below RAL.

[4] Field-Filtered and Un-Filtered samples below RAL.

[5] 9/3/08 laboratory reporting limit above RAL.

[6] Confirmation samples indicate erroneous 9/4/08 field-filtered data.

[7] Sheen noted on groundwater during well redevelopment in August 2010.

[8] First Semi-Annual 2011 laboratory reporting limit above RAL.

[9] First Semi-Annual 2012 laboratory reporting limit above RAL.

[10] Second Semi-Annual 2012 laboratory reporting limit above RAL.

[11] MW-61A-R analyzed for cPAHs during the second semi-annual 2018 sampling event.

[12] MW-30 analyzed for cPAHs during three sampling events (first semi annual 2013, second semi annual 2018, first semi annual 2019).

Table 5. Summary of LNAPL Weekly Gauging
Progress Report No. 133
First Semi-Annual 2024 Groundwater Monitoring Report
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Well Number	Date	Time (hh:min)	Depth to Groundwater (feet btoc)	Depth to LNAPL (feet btoc)	LNAPL Thickness (feet)	Top of Casing Elevation (feet amsl)	Groundwater Elevation[1,2] (feet[2])	Top of Screen Elevation[3] (feet[2])	Comments[4]
MW-200	09/23/21	10:35	9.19	--	--	14.36	5.17	9.36	No evidence of sheen/LNAPL was encountered. Well shrimp observed on probe.
MW-200	09/28/21	11:40	9.29	--	--	14.36	5.07	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	10/07/21	12:46	9.48	--	--	14.36	4.88	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	10/12/21	11:39	9.49	--	--	14.36	4.87	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	10/22/21	11:50	8.45	--	--	14.36	5.91	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	10/27/21	11:11	8.80	--	--	14.36	5.56	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	11/04/21	11:37	8.89	--	--	14.36	5.47	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	11/09/21	10:33	8.00	--	--	14.36	6.36	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	11/16/21	10:56	8.36	--	--	14.36	6.00	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	11/23/21	10:30	8.38	--	--	14.36	5.98	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	12/01/21	9:46	8.49	--	--	14.36	5.87	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	12/09/21	12:13	8.18	--	--	14.36	6.18	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	12/15/21	10:47	8.10	--	--	14.36	6.26	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	12/21/21	9:49	8.02	--	--	14.36	6.34	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	01/04/22	12:57	6.75	--	--	14.36	7.61	9.36	No evidence of sheen/LNAPL was encountered. J Plug replaced
MW-200	01/11/22	12:25	7.64	--	--	14.36	6.72	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	01/18/22	11:02	7.89	--	--	14.36	6.47	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	01/25/22	10:50	8.86	--	--	14.36	5.50	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	02/01/22	10:35	8.33	--	--	14.36	6.03	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	02/08/22	11:41	8.92	--	--	14.36	5.44	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	02/15/22	9:54	8.70	--	--	14.36	5.66	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	02/22/22	12:45	8.99	--	--	14.36	5.37	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	03/04/22	10:07	8.33	--	--	14.36	6.03	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	03/09/22	12:28	8.65	--	--	14.36	5.71	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	03/17/22	10:30	8.75	--	--	14.36	5.61	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	03/22/22	10:59	8.26	--	--	14.36	6.10	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	03/30/22	11:46	8.94	--	--	14.36	5.42	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	04/05/22	9:21	8.29	--	--	14.36	6.07	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	04/12/22	10:29	9.01	--	--	14.36	5.35	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	04/21/22	11:05	7.82	--	--	14.36	6.54	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	04/29/22	9:50	9.06	--	--	14.36	5.30	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	05/05/22	14:00	8.95	--	--	14.36	5.41	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	05/11/22	15:15	8.99	--	--	14.36	5.37	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	05/20/22	9:37	8.09	--	--	14.36	6.27	9.36	Need new J Plug.
MW-200	05/26/22	9:41	9.20	--	--	14.36	5.16	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	06/08/22	10:35	9.08	--	--	14.36	5.28	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	06/17/22	10:30	9.32	--	--	14.36	5.04	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	06/24/22	8:55	9.19	--	--	14.36	5.17	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	06/29/22	11:20	8.42	--	--	14.36	5.94	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	07/05/22	15:30	9.26	--	--	14.36	5.10	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	07/15/22	12:10	8.96	--	--	14.36	5.40	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	07/21/22	15:55	9.12	--	--	14.36	5.24	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	07/29/22	13:51	9.37	--	--	14.36	4.99	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	08/05/22	13:54	9.21	--	--	14.36	5.15	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	08/11/22	11:19	8.85	--	--	14.36	5.51	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	08/19/22	10:53	9.60	--	--	14.36	4.76	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	08/26/22	10:29	9.67	--	--	14.36	4.69	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	08/31/22	15:40	9.53	--	--	14.36	4.83	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	09/07/22	7:58	9.00	--	--	14.36	5.36	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	09/16/22	7:41	9.20	--	--	14.36	5.16	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	09/23/22	13:01	9.80	--	--	14.36	4.56	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	09/29/22	10:22	9.04	--	--	14.36	5.32	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	10/04/22	10:00	9.78	--	--	14.36	4.58	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	10/14/22	11:00	9.23	--	--	14.36	5.13	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	10/24/22	11:03	9.36	--	--	14.36	5.00	9.36	No evidence of sheen/LNAPL was encountered.

Table 5. Summary of LNAPL Weekly Gauging
Progress Report No. 133
First Semi-Annual 2024 Groundwater Monitoring Report
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Well Number	Date	Time (hh:min)	Depth to Groundwater (feet btoc)	Depth to LNAPL (feet btoc)	LNAPL Thickness (feet)	Top of Casing Elevation (feet amsl)	Groundwater Elevation[1,2] (feet[2])	Top of Screen Elevation[3] (feet[2])	Comments[4]
MW-200	11/01/22	10:45	9.09	--	--	14.36	5.27	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	11/11/22	12:45	9.27	--	--	14.36	5.09	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	11/18/22	10:29	9.89	--	--	14.36	4.47	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	11/23/22	--	--	--	--	14.36	--	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	12/01/22	11:10	8.52	--	--	14.36	5.84	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	12/05/22	--	--	--	--	14.36	--	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	12/12/22	12:38	7.59	--	--	14.36	6.77	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	12/22/22	13:13	8.23	--	--	14.36	6.13	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	12/28/22	14:00	6.59	--	--	14.36	7.77	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	01/05/23	13:45	7.08	--	--	14.36	7.28	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	01/13/23	--	--	--	--	14.36	--	9.36	Well box submerged in large puddle in rain and inaccessible.
MW-200	01/19/23	--	--	--	--	14.36	--	9.36	Not gauged. Too much ponding around well.
MW-200	01/26/23	--	8.93	--	--	14.36	5.43	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	02/02/23	12:12	8.34	--	--	14.36	6.02	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	02/09/23	15:01	9.92	--	--	14.36	4.44	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	02/13/23	13:21	8.39	--	--	14.36	5.97	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	02/20/23	13:47	--	--	--	14.36	--	9.36	Unable to gauge.
MW-200	03/03/23	8:59	9.48	--	--	14.36	4.88	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	03/09/23	10:14	8.60	--	--	14.36	5.76	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	03/17/23	11:04	8.33	--	--	14.36	6.03	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	03/21/23	12:12	8.63	--	--	14.36	5.73	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	03/30/23	10:55	8.51	--	--	14.36	5.85	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	04/06/23	12:53	10.15	--	--	14.36	4.21	9.36	One sock presented with discoloration. Sock left in well.
MW-200	04/14/23	13:14	8.18	--	--	14.36	6.18	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	04/20/23	14:29	9.32	--	--	14.36	5.04	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	04/27/23	14:12	9.01	--	--	14.36	5.35	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	05/04/23	15:51	8.13	--	--	14.36	6.23	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	05/11/23	12:59	8.33	--	--	14.36	6.03	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	05/15/23	13:11	9.18	--	--	14.36	5.18	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	05/24/23	12:04	8.69	--	--	14.36	5.67	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	05/31/23	14:37	9.50	--	--	14.36	4.86	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	06/06/23	16:08	9.40	--	--	14.36	4.96	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	06/12/23	13:30	4.79	--	--	14.36	9.57	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	06/20/23	13:04	8.99	--	--	14.36	5.37	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	06/30/23	12:13	9.64	--	--	14.36	4.72	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	07/06/23	12:25	8.60	--	--	14.36	5.76	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	07/14/23	10:45	10.08	--	--	14.36	4.28	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	07/18/23	11:39	8.97	--	--	14.36	5.39	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	07/28/23	14:44	9.45	--	--	14.36	4.91	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	08/01/23	11:42	8.99	--	--	14.36	5.37	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	08/11/23	12:28	9.63	--	--	14.36	4.73	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	08/16/23	12:06	8.89	--	--	14.36	5.47	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	08/25/23	9:57	9.71	--	--	14.36	4.65	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	08/29/23	10:02	9.08	--	--	14.36	5.28	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	09/07/23	15:40	9.01	--	--	14.36	5.35	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	09/14/23	10:25	9.31	--	--	14.36	5.05	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	09/19/23	7:37	9.56	--	--	14.36	4.80	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	09/28/23	10:17	8.55	--	--	14.36	5.81	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	10/06/23	12:00	9.38	--	--	14.36	4.98	9.36	No evidence of sheen/LNAPL was encountered.
MW-200	10/13/23	17:09	8.87	--	--	14.36	5.49	9.36	No evidence of sheen/LNAPL was encountered.
MW-201	09/23/21	10:41	9.84	--	--	14.86	5.02	9.86	No measurable LNAPL. Sheen observed on probe and bailer tip. Oil absorbent sock placed in well. Absorbent sock were added.
MW-201	09/28/21	11:45	10.03	--	--	14.86	4.83	9.86	No measurable LNAPL. Trace LNAPL observed on bailer tip only. Sock presented with discoloration. Sock replaced.
MW-201	10/07/21	12:51	10.29	--	--	14.86	4.57	9.86	No measurable LNAPL. Trace LNAPL observed on probe and bailer tip. Sock presented with discoloration. Sock replaced.
MW-201	10/12/21	11:50	10.16	--	--	14.86	4.70	9.86	No measurable LNAPL. Trace LNAPL observed on probe and bailer tip. Sock presented with discoloration. Sock replaced.

Table 5. Summary of LNAPL Weekly Gauging
Progress Report No. 133
First Semi-Annual 2024 Groundwater Monitoring Report
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Well Number	Date	Time (hh:min)	Depth to Groundwater (feet btoc)	Depth to LNAPL (feet btoc)	LNAPL Thickness (feet)	Top of Casing Elevation (feet amsl)	Groundwater Elevation[1,2] (feet[2])	Top of Screen Elevation[3] (feet[2])	Comments[4]
MW-201	10/22/21	12:00	9.02	--	--	14.86	5.84	9.86	No measurable LNAPL. Trace LNAPL observed on probe and bailer tip. Sock presented with discoloration. Sock replaced.
MW-201	10/27/21	11:28	9.42	--	--	14.86	5.44	9.86	No measurable LNAPL. Trace LNAPL observed on bailer tip only. Sock presented with discoloration. Sock replaced.
MW-201	11/04/21	11:55	9.35	--	--	14.86	5.51	9.86	No measurable LNAPL. Trace LNAPL observed on bailer tip only. Sock presented with discoloration. Sock replaced.
MW-201	11/09/21	10:39	8.71	--	--	14.86	6.15	9.86	No measurable LNAPL. Trace LNAPL observed on probe tip and bailer. Sock presented with discoloration. Sock replaced.
MW-201	11/16/21	11:12	9.32	--	--	14.86	5.54	9.86	No measurable LNAPL. Trace LNAPL observed on bailer tip only. Sock presented with discoloration. Sock replaced.
MW-201	11/23/21	10:40	9.08	--	--	14.86	5.78	9.86	No measurable LNAPL. Trace LNAPL observed on probe and bailer. Sock presented with discoloration. Sock replaced.
MW-201	12/01/21	9:50	9.28	--	--	14.86	5.58	9.86	No measurable LNAPL. Trace LNAPL observed on probe and bailer tip. Sock presented with discoloration. Sock replaced post GW sampling.
MW-201	12/09/21	12:18	8.91	--	--	14.86	5.95	9.86	No measurable LNAPL. Trace LNAPL observed on probe tip and bailer. Sock presented with discoloration.
MW-201	12/15/21	10:54	8.81	--	--	14.86	6.05	9.86	No measurable LNAPL. Trace LNAPL observed on probe tip and bailer. Sock presented with discoloration. Sock replaced.
MW-201	12/21/21	10:04	8.81	--	--	14.86	6.05	9.86	No measurable LNAPL. Trace LNAPL observed on bailer only. Sock presented with discoloration. Sock replaced.
MW-201	01/04/22	13:05	7.54	--	--	14.86	7.32	9.86	No measurable LNAPL. Trace LNAPL observed on probe tip and bailer. Sock presented with discoloration. Sock replaced.
MW-201	01/11/22	12:35	8.02	--	--	14.86	6.84	9.86	No measurable LNAPL. Sock presented with discoloration. Sock replaced.
MW-201	01/18/22	11:06	8.61	--	--	14.86	6.25	9.86	No measurable LNAPL. Trace LNAPL observed on bailer only. Sock presented with discoloration. Sock replaced.
MW-201	01/25/22	11:01	9.56	--	--	14.86	5.30	9.86	No measurable LNAPL. Trace LNAPL observed on bailer tip only. Sock presented with discoloration. Sock replaced.
MW-201	02/01/22	10:50	9.05	--	--	14.86	5.81	9.86	No measurable LNAPL. Trace LNAPL observed on probe tip and bailer. Sock presented with discoloration. Sock replaced.
MW-201	02/08/22	11:52	9.55	--	--	14.86	5.31	9.86	No measurable LNAPL. Trace LNAPL observed on probe tip and bailer. Sock presented with discoloration. Sock replaced.
MW-201	02/15/22	10:04	9.30	--	--	14.86	5.56	9.86	No measurable LNAPL. Trace LNAPL observed on bailer tip only. Sock presented with discoloration. Sock replaced.
MW-201	02/22/22	12:51	9.64	--	--	14.86	5.22	9.86	No measurable LNAPL. Trace LNAPL observed on probe tip and bailer. Sock presented with discoloration. Sock replaced.
MW-201	03/04/22	10:12	9.13	--	--	14.86	5.73	9.86	No measurable LNAPL. Sock replaced.
MW-201	03/09/22	12:40	9.22	--	--	14.86	5.64	9.86	No evidence of sheen/LNAPL was encountered.
MW-201	04/12/22	10:40	9.81	--	--	14.86	5.05	9.86	No measurable LNAPL. Trace LNAPL observed on probe tip and bailer. Sock left in place. Currently 3 socks in well.
MW-201	04/29/22	9:55	9.85	--	--	14.86	5.01	9.86	No measurable LNAPL. No LNAPL observed on probe tip. LNAPL observed on bailer. Sock left in place. 3 socks in well.
MW-201	05/05/22	14:05	9.74	--	--	14.86	5.12	9.86	No measurable LNAPL. Trace LNAPL observed on bailer tip only. Sock presented with discoloration. Sock replaced.
MW-201	05/11/22	15:17	9.21	--	--	14.86	5.65	9.86	No measurable LNAPL. LNAPL observed on bailer and probe tip. Sock left in place. 3 socks in well.
MW-201	05/20/22	9:40	8.74	--	--	14.86	6.12	9.86	No measurable LNAPL. Sock presented with discoloration. Sock left in place. Currently 3 socks in well.
MW-201	05/26/22	9:54	10.11	--	--	14.86	4.75	9.86	No measurable LNAPL. Trace LNAPL observed on probe tip and bailer. Sock left in place. Currently 3 socks in well.
MW-201	06/08/22	10:40	9.71	--	--	14.86	5.15	9.86	No measurable LNAPL. No LNAPL observed on probe tip. Left in place..
MW-201	06/17/22	10:35	9.51	--	--	14.86	5.35	9.86	No measurable LNAPL. Trace LNAPL observed on bailer tip only. Sock presented with discoloration. Sock replaced.
MW-201	06/24/22	9:00	9.26	--	--	14.86	5.60	9.86	No measurable LNAPL. Trace LNAPL observed on probe. Sock left in place.
MW-201	06/29/22	11:25	8.60	--	--	14.86	6.26	9.86	No measurable LNAPL. No LNAPL observed on probe or bailer. Socks left in place.
MW-201	07/05/22	15:35	9.44	--	--	14.86	5.42	9.86	No measurable LNAPL. No LNAPL observed on probe. Sock left in place.
MW-201	07/15/22	12:03	9.12	--	--	14.86	5.74	9.86	No evidence of sheen/LNAPL was encountered. Sock removed.
MW-201	07/21/22	15:59	9.93	--	--	14.86	4.93	9.86	No evidence of sheen/LNAPL was encountered.
MW-201	07/29/22	13:55	10.24	--	--	14.86	4.62	9.86	No measurable LNAPL. LNAPL observed on probe tip only.
MW-201	08/05/22	14:00	10.10	--	--	14.86	4.76	9.86	No evidence of sheen/LNAPL was encountered. Trace tone possible but could not replicate.
MW-201	08/11/22	11:24	9.55	--	--	14.86	5.31	9.86	No evidence of sheen/LNAPL was encountered.
MW-201	08/19/22	10:57	10.57	--	--	14.86	4.29	9.86	No evidence of sheen/LNAPL was encountered.
MW-201	08/26/22	10:36	10.66	--	--	14.86	4.20	9.86	No evidence of sheen/LNAPL was encountered.
MW-201	08/31/22	15:44	10.43	--	--	14.86	4.43	9.86	No evidence of sheen/LNAPL was encountered.
MW-201	09/07/22	8:00	9.61	--	--	14.86	5.25	9.86	No evidence of sheen/LNAPL was encountered.
MW-201	09/16/22	7:47	9.77	--	--	14.86	5.09	9.86	No evidence of sheen/LNAPL was encountered.
MW-201	09/23/22	13:03	10.85	--	--	14.86	4.01	9.86	No evidence of sheen/LNAPL was encountered.
MW-201	09/29/22	10:25	9.70	--	--	14.86	5.16	9.86	No evidence of sheen/LNAPL was encountered. Sock presented with discoloration. Sock left in well.
MW-201	10/04/22	10:07	10.96	--	--	14.86	3.90	9.86	'No evidence of sheen/LNAPL was encountered. Sock presented with discoloration. Sock left in place.
MW-201	10/14/22	11:07	9.97	--	--	14.86	4.89	9.86	No measurable LNAPL. Trace LNAPL observed on probe tip and bailer. Sock presented with discoloration. Sock left in well.
MW-201	10/24/22	11:10	10.20	--	--	14.86	4.66	9.86	No measurable LNAPL. No LNAPL observed on bailer or probe tip. Sock left in place.
MW-201	11/01/22	10:51	9.95	--	--	14.86	4.91	9.86	No measurable LNAPL. Trace LNAPL observed on probe tip. Sock left in place.
MW-201	11/11/22	12:48	10.11	--	--	14.86	4.75	9.86	No evidence of sheen/LNAPL was encountered.
MW-201	11/18/22	10:38	10.86	--	--	14.86	4.00	9.86	No measurable LNAPL. Trace LNAPL observed on bailer and probe. Sock left in place.
MW-201	11/23/22	11:45	8.61	--	--	14.86	6.25	9.86	No measurable LNAPL. Trace LNAPL observed on probe tip, bailer and absorbent sock. Sock left in place..
MW-201	12/01/22	11:15	9.42	--	--	14.86	5.44	9.86	No measurable LNAPL. No LNAPL observed on probe tip and absorbent sock. Sock left in place.
MW-201	12/05/22	12:55	8.75	--	--	14.86	6.11	9.86	No measurable LNAPL. No LNAPL observed on probe tip or bailer. LNAPL observed on sock. Sock left in place.
MW-201	12/12/22	12:44	8.32	--	--	14.86	6.54	9.86	No measurable LNAPL. No LNAPL observed on probe tip or bailer. LNAPL observed on sock. Sock left in place.
MW-201	12/22/22	13:18	8.90	--	--	14.86	5.96	9.86	No measurable LNAPL. Trace LNAPL observed on sock. Sock left in place.

Table 5. Summary of LNAPL Weekly Gauging
Progress Report No. 133
First Semi-Annual 2024 Groundwater Monitoring Report
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Well Number	Date	Time (hh:min)	Depth to Groundwater (feet btoc)	Depth to LNAPL (feet btoc)	LNAPL Thickness (feet)	Top of Casing Elevation (feet amsl)	Groundwater Elevation[1,2] (feet[2])	Top of Screen Elevation[3] (feet[2])	Comments[4]
MW-201	12/28/22	14:10	7.37	--	--	14.86	7.49	9.86	No measurable LNAPL. Trace LNAPL observed on probe tip, bailer and sock. Sock left in place.
MW-201	01/05/23	14:00	7.71	--	--	14.86	7.15	9.86	No measurable LNAPL. Trace LNAPL observed on bailer tip and probe tip. Sock presented with discoloration. Sock left in place.
MW-201	01/13/23	14:00	7.63	--	--	14.86	7.23	9.86	No measurable LNAPL. Trace LNAPL observed on bailer tip and probe tip. Sock presented with discoloration. Sock left in place.
MW-201	01/19/23	13:00	8.06	--	--	14.86	6.80	9.86	No measurable LNAPL. Trace LNAPL observed on bailer and probe tip. Sock presented with discoloration. Sock left in place.
MW-201	01/26/23	--	9.67	--	--	14.86	5.19	9.86	No measurable LNAPL. Trace LNAPL observed on bailer tip and probe tip. Sock presented with discoloration. Sock left in place.
MW-201	02/02/23	12:16	9.97	--	--	14.86	4.89	9.86	No measurable LNAPL. Trace LNAPL observed on bailer tip and probe tip. Sock presented with discoloration. Sock left in place. New sock placed in well.
MW-201	02/09/23	15:08	9.84	--	--	14.86	5.02	9.86	No measurable LNAPL. Sock presented with discoloration. Sock left in place. 2 socks in well.
MW-201	02/13/23	13:24	9.01	--	--	14.86	5.85	9.86	No measurable LNAPL. Trace LNAPL observed on probe and bailer tip. Socks presented with discoloration. Sock left in well.
MW-201	02/20/23	13:52	9.45	--	--	14.86	5.41	9.86	No measurable LNAPL. Trace LNAPL observed on bailer tip and probe tip. Sock presented with discoloration. Sock left in well.
MW-201	03/03/23	9:08	9.23	--	--	14.86	5.63	9.86	No measurable LNAPL. Trace LNAPL observed on bailer tip and probe tip. Sock presented with discoloration. Sock left in well.
MW-201	03/09/23	10:22	9.41	--	--	14.86	5.45	9.86	No measurable LNAPL. Trace LNAPL observed on probe tip and side of bailer.
MW-201	03/17/23	11:14	9.07	--	--	14.86	5.79	9.86	No measurable LNAPL. Trace LNAPL observed on bailer and probe tip. Sock presented with discoloration. Sock left in place.
MW-201	03/21/23	12:22	9.55	--	--	14.86	5.31	9.86	No measurable LNAPL. Trace LNAPL observed on probe and bailer. Sock presented with discoloration. Sock left in place.
MW-201	03/30/23	11:03	9.16	--	--	14.86	5.70	9.86	No measurable LNAPL. Trace LNAPL observed on bailer tip only. Sock replaced.
MW-201	04/06/23	13:08	9.28	--	--	14.86	5.58	9.86	No evidence of sheen/LNAPL was encountered.
MW-201	04/14/23	13:20	8.89	--	--	14.86	5.97	9.86	No measurable LNAPL. Trace LNAPL observed on bailer and probe tip. Sock presented with discoloration. Sock left in place.
MW-201	04/20/23	14:35	10.45	--	--	14.86	4.41	9.86	No measurable LNAPL. Trace LNAPL observed on bailer and probe tip. Sock presented with discoloration. Sock left in place.
MW-201	04/27/23	14:24	9.91	--	--	14.86	4.95	9.86	No measurable LNAPL. Trace LNAPL observed on bailer and probe tip. Sock presented with discoloration. Sock left in place.
MW-201	05/04/23	15:50	8.99	--	--	14.86	5.87	9.86	No measurable LNAPL. Trace LNAPL observed on bailer and probe tip. Sock presented with discoloration. Sock left in place.
MW-201	05/11/23	13:07	9.01	--	--	14.86	5.85	9.86	No measurable LNAPL. Trace LNAPL observed on bailer and probe tip. Sock presented with discoloration. Sock left in place.
MW-201	05/15/23	13:17	10.14	--	--	14.86	4.72	9.86	No measurable LNAPL. Trace LNAPL observed on bailer and probe tip. Sock presented with discoloration. Sock left in place.
MW-201	05/24/23	12:08	9.42	--	--	14.86	5.44	9.86	No measurable LNAPL. Trace LNAPL observed on bailer and probe tip. Sock presented with discoloration. Sock left in place.
MW-201	05/31/23	14:44	10.51	--	--	14.86	4.35	9.86	Sock presented with discoloration. Sock left in place.
MW-201	06/06/23	16:14	10.41	--	--	14.86	4.45	9.86	Sock presented with discoloration. Sock left in place.
MW-201	06/12/23	13:34	5.23	--	--	14.86	9.63	9.86	Sock presented with discoloration. Sock replaced.
MW-201	06/20/23	13:13	9.79	--	--	14.86	5.07	9.86	Sock presented with discoloration. Sock left in place.
MW-201	06/30/23	12:18	10.66	--	--	14.86	4.20	9.86	Sock presented with discoloration. Orange-light brown. Sock left in place.
MW-201	07/06/23	12:30	9.28	--	--	14.86	5.58	9.86	Sock presented with discoloration. Sock left in place.
MW-201	07/14/23	11:02	10.23	--	--	14.86	4.63	9.86	Sock presented with discoloration. Sock left in place.
MW-201	07/18/23	11:46	9.75	--	--	14.86	5.11	9.86	Sock presented with discoloration. Sock left in place.
MW-201	07/28/23	14:51	10.34	--	--	14.86	4.52	9.86	Sock presented with discoloration. Sock left in place.
MW-201	08/01/23	11:45	9.70	--	--	14.86	5.16	9.86	No evidence of sheen/LNAPL was encountered.
MW-201	08/11/23	12:36	10.71	--	--	14.86	4.15	9.86	No evidence of sheen/LNAPL was encountered.
MW-201	08/16/23	12:16	9.60	--	--	14.86	5.26	9.86	No evidence of sheen/LNAPL was encountered.
MW-201	08/25/23	10:01	10.60	--	--	14.86	4.26	9.86	No measurable LNAPL. Trace LNAPL observed on sides of bailer and probe.
MW-201	08/29/23	10:25	9.76	--	--	14.86	5.10	9.86	No evidence of sheen/LNAPL was encountered.
MW-201	09/07/23	16:05	9.54	--	--	14.86	5.32	9.86	New sock installed.
MW-201	09/14/23	10:33	10.10	--	--	14.86	4.76	9.86	No evidence of sheen/LNAPL was encountered.
MW-201	09/19/23	7:43	10.45	--	--	14.86	4.41	9.86	Sock left in place. Discoloration noted in Sock.
MW-201	09/28/23	10:29	9.49	--	--	14.86	5.37	9.86	Sock shows discoloration. Sock left in place.
MW-201	10/05/23	12:06	10.02	--	--	14.86	4.84	9.86	Sock shows discoloration. Sock left in place.
MW-201	10/13/23	17:18	9.53	--	--	14.86	5.33	9.86	Sock shows discoloration. Sock left in place.
MW-202	09/23/21	12:30	10.00	--	--	14.58	4.58	6.78	No evidence of sheen/LNAPL was encountered.

Table 5. Summary of LNAPL Weekly Gauging
Progress Report No. 133
First Semi-Annual 2024 Groundwater Monitoring Report
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Well Number	Date	Time (hh:min)	Depth to Groundwater (feet btoc)	Depth to LNAPL (feet btoc)	LNAPL Thickness (feet)	Top of Casing Elevation (feet amsl)	Groundwater Elevation[1,2] (feet[2])	Top of Screen Elevation[3] (feet[2])	Comments[4]
MW-202	09/28/21	11:32	9.80	--	--	14.58	4.78	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	10/07/21	12:40	10.25	--	--	14.58	4.33	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	10/12/21	11:31	10.02	--	--	14.58	4.56	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	10/22/21	11:43	8.62	--	--	14.58	5.96	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	10/27/21	11:04	9.09	--	--	14.58	5.49	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	11/04/21	11:35	9.03	--	--	14.58	5.55	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	11/09/21	10:28	7.92	--	--	14.58	6.66	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	11/16/21	10:47	9.56	--	--	14.58	5.02	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	11/23/21	10:25	8.30	--	--	14.58	6.28	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	12/01/21	9:42	8.99	--	--	14.58	5.59	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	12/09/21	12:07	8.10	--	--	14.58	6.48	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	12/15/21	10:41	8.45	--	--	14.58	6.13	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	12/21/21	9:43	7.94	--	--	14.58	6.64	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	01/04/22	12:49	7.22	--	--	14.58	7.36	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	01/11/22	12:15	7.66	--	--	14.58	6.92	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	01/18/22	10:56	7.93	--	--	14.58	6.65	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	01/25/22	10:42	8.93	--	--	14.58	5.65	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	02/01/22	10:26	8.51	--	--	14.58	6.07	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	02/08/22	11:35	8.91	--	--	14.58	5.67	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	02/15/22	9:45	8.75	--	--	14.58	5.83	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	02/22/22	12:30	9.16	--	--	14.58	5.42	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	03/04/22	10:02	8.60	--	--	14.58	5.98	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	03/09/22	12:20	9.02	--	--	14.58	5.56	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	04/12/22	10:23	9.59	--	--	14.58	4.99	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	04/29/22	9:45	9.59	--	--	14.58	4.99	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	05/05/22	13:55	9.96	--	--	14.58	4.62	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	05/11/22	15:12	9.48	--	--	14.58	5.10	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	05/20/22	9:30	8.23	--	--	14.58	6.35	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	05/26/22	9:35	10.06	--	--	14.58	4.52	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	06/08/22	10:30	9.76	--	--	14.58	4.82	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	06/17/22	10:25	9.84	--	--	14.58	4.74	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	06/24/22	8:52	10.16	--	--	14.58	4.42	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	06/29/22	11:16	9.36	--	--	14.58	5.22	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	07/05/22	15:26	9.87	--	--	14.58	4.71	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	07/15/22	12:13	9.51	--	--	14.58	5.07	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	07/21/22	15:53	9.61	--	--	14.58	4.97	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	07/29/22	13:48	10.70	--	--	14.58	3.88	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	08/05/22	13:51	10.68	--	--	14.58	3.90	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	08/11/22	11:14	10.03	--	--	14.58	4.55	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	08/19/22	10:50	10.73	--	--	14.58	3.85	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	08/26/22	10:25	10.75	--	--	14.58	3.83	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	08/31/22	15:36	10.58	--	--	14.58	4.00	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	09/07/22	7:53	9.86	--	--	14.58	4.72	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	09/16/22	7:37	9.93	--	--	14.58	4.65	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	09/23/22	12:58	11.10	--	--	14.58	3.48	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	09/29/22	10:19	9.01	--	--	14.58	5.57	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	10/04/22	9:57	11.81	--	--	14.58	2.77	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	10/14/22	10:57	9.27	--	--	14.58	5.31	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	10/24/22	10:59	10.03	--	--	14.58	4.55	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	11/01/22	10:38	9.19	--	--	14.58	5.39	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	11/11/22	12:40	9.35	--	--	14.58	5.23	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	11/18/22	10:24	11.07	--	--	14.58	3.51	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	11/23/22	11:40	9.28	--	--	14.58	5.30	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	12/01/22	11:06	9.04	--	--	14.58	5.54	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	12/05/22	12:48	9.41	--	--	14.58	5.17	6.78	No evidence of sheen/LNAPL was encountered.

Table 5. Summary of LNAPL Weekly Gauging
Progress Report No. 133
First Semi-Annual 2024 Groundwater Monitoring Report
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Well Number	Date	Time (hh:min)	Depth to Groundwater (feet btoc)	Depth to LNAPL (feet btoc)	LNAPL Thickness (feet)	Top of Casing Elevation (feet amsl)	Groundwater Elevation[1 2] (feet[2])	Top of Screen Elevation[3] (feet[2])	Comments[4]
MW-202	12/12/22	12:33	7.59	--	--	14.58	6.99	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	12/22/22	13:06	8.29	--	--	14.58	6.29	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	12/28/22	13:50	6.67	--	--	14.58	7.91	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	01/05/23	13:39	6.95	--	--	14.58	7.63	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	01/13/23	13:50	7.09	--	--	14.58	7.49	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	01/19/23	12:42	7.09	--	--	14.58	7.49	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	01/26/23	--	8.88	--	--	14.58	5.70	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	02/02/23	11:58	8.45	--	--	14.58	6.13	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	02/09/23	15:08	9.76	--	--	14.58	4.82	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	02/13/23	13:17	8.50	--	--	14.58	6.08	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	02/20/23	13:43	9.34	--	--	14.58	5.24	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	03/03/23	8:52	9.70	--	--	14.58	4.88	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	03/09/23	10:10	8.91	--	--	14.58	5.67	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	03/17/23	10:56	8.69	--	--	14.58	5.89	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	03/21/23	11:58	9.37	--	--	14.58	5.21	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	03/30/23	10:49	8.87	--	--	14.58	5.71	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	04/06/23	11:41	9.74	--	--	14.58	4.84	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	04/14/23	13:06	8.62	--	--	14.58	5.96	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	04/20/23	14:15	10.63	--	--	14.58	3.95	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	04/27/23	14:05	9.86	--	--	14.58	4.72	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	05/04/23	15:34	8.46	--	--	14.58	6.12	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	05/11/23	12:52	9.45	--	--	14.58	5.13	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	05/15/23	13:06	10.12	--	--	14.58	4.46	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	05/24/23	11:59	9.34	--	--	14.58	5.24	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	05/31/23	14:29	10.55	--	--	14.58	4.03	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	06/06/23	16:02	10.82	--	--	14.58	3.76	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	06/12/23	13:26	5.00	--	--	14.58	9.58	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	06/20/23	12:56	10.10	--	--	14.58	4.48	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	06/30/23	12:08	10.94	--	--	14.58	3.64	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	07/06/23	12:20	9.40	--	--	14.58	5.18	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	07/14/23	10:31	9.26	--	--	14.58	5.32	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	07/18/23	11:33	10.05	--	--	14.58	4.53	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	07/28/23	14:40	10.26	--	--	14.58	4.32	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	08/01/23	11:39	10.12	--	--	14.58	4.46	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	08/11/23	12:22	11.02	--	--	14.58	3.56	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	08/16/23	--	9.62	--	--	14.58	4.96	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	08/25/23	9:51	10.97	--	--	14.58	3.61	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	08/29/23	10:19	10.11	--	--	14.58	4.47	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	09/07/23	15:30	8.99	--	--	14.58	5.59	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	09/14/23	10:20	10.00	--	--	14.58	4.58	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	09/19/23	7:27	10.44	--	--	14.58	4.14	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	09/28/23	10:01	9.54	--	--	14.58	5.04	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	10/05/23	11:52	9.69	--	--	14.58	4.89	6.78	No evidence of sheen/LNAPL was encountered.
MW-202	10/13/23	17:05	9.00	--	--	14.58	5.58	6.78	No evidence of sheen/LNAPL was encountered.
MW-203	09/23/21	11:05	12.46	--	--	17.55	5.09	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	09/28/21	11:58	12.56	--	--	17.55	4.99	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	10/07/21	13:18	13.33	--	--	17.55	4.22	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	10/12/21	12:03	12.64	--	--	17.55	4.91	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	10/22/21	12:16	11.61	--	--	17.55	5.94	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	10/27/21	11:37	11.80	--	--	17.55	5.75	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	11/04/21	11:59	12.01	--	--	17.55	5.54	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	11/09/21	10:51	10.70	--	--	17.55	6.85	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	11/16/21	11:18	12.49	--	--	17.55	5.06	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	11/23/21	10:54	11.11	--	--	17.55	6.44	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	12/01/21	9:56	11.96	--	--	17.55	5.59	7.05	No evidence of sheen/LNAPL was encountered.

Table 5. Summary of LNAPL Weekly Gauging
Progress Report No. 133
First Semi-Annual 2024 Groundwater Monitoring Report
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Well Number	Date	Time (hh:min)	Depth to Groundwater (feet btoc)	Depth to LNAPL (feet btoc)	LNAPL Thickness (feet)	Top of Casing Elevation (feet amsl)	Groundwater Elevation[1,2] (feet[2])	Top of Screen Elevation[3] (feet[2])	Comments[4]
MW-203	12/09/21	12:31	10.93	--	--	17.55	6.62	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	12/15/21	11:06	11.31	--	--	17.55	6.24	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	12/21/21	10:20	10.79	--	--	17.55	6.76	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	01/04/22	13:22	10.21	--	--	17.55	7.34	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	01/11/22	12:44	10.55	--	--	17.55	7.00	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	01/18/22	11:18	10.92	--	--	17.55	6.63	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	01/25/22	11:09	11.82	--	--	17.55	5.73	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	02/01/22	11:05	11.59	--	--	17.55	5.96	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	02/08/22	12:06	11.81	--	--	17.55	5.74	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	02/15/22	10:25	11.76	--	--	17.55	5.79	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	02/22/22	13:02	12.25	--	--	17.55	5.30	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	03/04/22	10:20	11.60	--	--	17.55	5.95	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	03/09/22	12:46	12.06	--	--	17.55	5.49	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	04/12/22	10:52	12.58	--	--	17.55	4.97	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	04/29/22	10:05	12.66	--	--	17.55	4.89	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	05/05/22	14:15	13.01	--	--	17.55	4.54	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	05/11/22	15:25	12.31	--	--	17.55	5.24	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	05/20/22	9:55	11.18	--	--	17.55	6.37	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	05/26/22	10:08	13.14	--	--	17.55	4.41	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	06/08/22	10:45	12.87	--	--	17.55	4.68	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	06/17/22	10:40	13.01	--	--	17.55	4.54	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	06/24/22	9:05	13.16	--	--	17.55	4.39	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	06/29/22	11:32	11.97	--	--	17.55	5.58	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	07/05/22	15:41	12.55	--	--	17.55	5.00	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	07/15/22	11:40	12.23	--	--	17.55	5.32	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	07/21/22	16:05	12.78	--	--	17.55	4.77	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	07/29/22	14:00	13.63	--	--	17.55	3.92	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	08/05/22	14:08	13.55	--	--	17.55	4.00	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	08/11/22	11:29	13.01	--	--	17.55	4.54	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	08/19/22	11:02	13.58	--	--	17.55	3.97	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	08/26/22	10:42	13.70	--	--	17.55	3.85	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	08/31/22	15:50	13.51	--	--	17.55	4.04	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	09/07/22	8:05	12.83	--	--	17.55	4.72	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	09/16/22	7:59	13.01	--	--	17.55	4.54	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	09/23/22	13:10	14.05	--	--	17.55	3.50	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	09/29/22	10:33	11.91	--	--	17.55	5.64	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	10/04/22	10:12	14.11	--	--	17.55	3.44	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	10/14/22	11:13	12.15	--	--	17.55	5.40	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	10/24/22	11:23	10.03	--	--	17.55	7.52	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	11/01/22	11:05	12.11	--	--	17.55	5.44	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	11/11/22	12:55	12.40	--	--	17.55	5.15	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	11/18/22	10:53	13.88	--	--	17.55	3.67	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	11/23/22	11:53	12.12	--	--	17.55	5.43	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	12/01/22	11:23	11.86	--	--	17.55	5.69	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	12/05/22	13:04	12.38	--	--	17.55	5.17	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	12/12/22	12:56	10.55	--	--	17.55	7.00	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	12/22/22	13:29	11.14	--	--	17.55	6.41	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	12/28/22	14:20	9.88	--	--	17.55	7.67	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	01/05/23	14:07	9.82	--	--	17.55	7.73	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	01/13/23	14:18	10.13	--	--	17.55	7.42	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	01/19/23	13:04	9.96	--	--	17.55	7.59	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	01/26/23	--	10.82	--	--	17.55	6.73	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	02/02/23	12:42	11.27	--	--	17.55	6.28	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	02/09/23	15:18	12.73	--	--	17.55	4.82	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	02/13/23	13:35	11.49	--	--	17.55	6.06	7.05	No evidence of sheen/LNAPL was encountered.

Table 5. Summary of LNAPL Weekly Gauging
Progress Report No. 133
First Semi-Annual 2024 Groundwater Monitoring Report
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Well Number	Date	Time (hh:min)	Depth to Groundwater (feet btoc)	Depth to LNAPL (feet btoc)	LNAPL Thickness (feet)	Top of Casing Elevation (feet amsl)	Groundwater Elevation[1,2] (feet[2])	Top of Screen Elevation[3] (feet[2])	Comments[4]
MW-203	02/20/23	14:01	11.53	--	--	17.55	6.02	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	03/03/23	9:10	11.64	--	--	17.55	5.91	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	03/09/23	10:25	11.89	--	--	17.55	5.66	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	03/17/23	11:25	11.62	--	--	17.55	5.93	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	03/21/23	12:45	12.52	--	--	17.55	5.03	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	03/30/23	11:15	11.77	--	--	17.55	5.78	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	04/06/23	11:54	12.70	--	--	17.55	4.85	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	04/14/23	13:31	11.56	--	--	17.55	5.99	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	04/20/23	14:48	13.64	--	--	17.55	3.91	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	04/27/23	14:31	12.90	--	--	17.55	4.65	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	05/04/23	16:02	11.76	--	--	17.55	5.79	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	05/11/23	13:18	11.89	--	--	17.55	5.66	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	05/15/23	13:24	12.96	--	--	17.55	4.59	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	05/24/23	12:19	12.26	--	--	17.55	5.29	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	05/31/23	14:59	13.33	--	--	17.55	4.22	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	06/06/23	16:26	13.79	--	--	17.55	3.76	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	06/12/23	13:45	7.45	--	--	17.55	10.10	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	06/20/23	13:24	13.14	--	--	17.55	4.41	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	06/30/23	12:34	13.92	--	--	17.55	3.63	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	07/06/23	12:40	12.33	--	--	17.55	5.22	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	07/14/23	11:05	13.51	--	--	17.55	4.04	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	07/18/23	12:00	13.07	--	--	17.55	4.48	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	07/28/23	15:12	13.03	--	--	17.55	4.52	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	08/01/23	11:53	13.04	--	--	17.55	4.51	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	08/11/23	12:44	13.92	--	--	17.55	3.63	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	08/16/23	12:24	12.53	--	--	17.55	5.02	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	08/25/23	10:08	13.90	--	--	17.55	3.65	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	08/29/23	10:27	13.03	--	--	17.55	4.52	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	09/07/23	16:30	11.79	--	--	17.55	5.76	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	09/14/23	10:30	12.95	--	--	17.55	4.60	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	09/19/23	7:53	13.21	--	--	17.55	4.34	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	09/28/23	10:41	12.71	--	--	17.55	4.84	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	10/05/23	12:20	12.49	--	--	17.55	5.06	7.05	No evidence of sheen/LNAPL was encountered.
MW-203	10/13/23	17:22	11.87	--	--	17.55	5.68	7.05	No evidence of sheen/LNAPL was encountered.
MW-204	09/23/21	11:20	18.69	--	--	23.93	5.24	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	09/28/21	12:06	18.59	--	--	23.93	5.34	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	10/07/21	13:25	19.28	--	--	23.93	4.65	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	10/12/21	12:12	18.71	--	--	23.93	5.22	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	10/22/21	12:24	17.92	--	--	23.93	6.01	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	10/27/21	11:48	17.87	--	--	23.93	6.06	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	11/04/21	16:20	17.95	--	--	23.93	5.98	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	11/09/21	11:00	16.85	--	--	23.93	7.08	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	11/16/21	11:23	17.88	--	--	23.93	6.05	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	11/23/21	11:03	17.21	--	--	23.93	6.72	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	12/01/21	10:03	17.85	--	--	23.93	6.08	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	12/09/21	12:38	17.12	--	--	23.93	6.81	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	12/15/21	11:13	17.25	--	--	23.93	6.68	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	12/21/21	10:31	16.91	--	--	23.93	7.02	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	01/04/22	13:31	16.12	--	--	23.93	7.81	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	01/11/22	12:56	16.59	--	--	23.93	7.34	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	01/18/22	11:29	16.86	--	--	23.93	7.07	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	01/25/22	11:18	17.73	--	--	23.93	6.20	6.58	No measurable LNAPL. Trace LNAPL observed on probe and bailer tip. Sock presented with discoloration. Sock replaced.
MW-204	02/01/22	11:14	17.69	--	--	23.93	6.24	6.58	No measurable LNAPL. Trace LNAPL observed on probe and bailer tip. Sock presented with discoloration. Sock replaced.
MW-204	02/08/22	12:18	17.98	--	--	23.93	5.95	6.58	No measurable LNAPL. Trace LNAPL observed on probe tip or bailer. Sock presented with discoloration. Sock replaced.
MW-204	02/15/22	10:33	17.99	--	--	23.93	5.94	6.58	No measurable LNAPL. Trace LNAPL observed on probe tip or bailer. Sock presented with discoloration. Sock replaced.

Table 5. Summary of LNAPL Weekly Gauging
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Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Well Number	Date	Time (hh:min)	Depth to Groundwater (feet btoc)	Depth to LNAPL (feet btoc)	LNAPL Thickness (feet)	Top of Casing Elevation (feet amsl)	Groundwater Elevation[1,2] (feet[2])	Top of Screen Elevation[3] (feet[2])	Comments[4]
MW-204	02/22/22	13:10	18.41	--	--	23.93	5.52	6.58	No evidence of LNAPL. No LNAPL observed on probe tip or bailer. Sock did not present discoloration. Sock removed.
MW-204	03/04/22	10:24	17.54	--	--	23.93	6.39	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	03/09/22	12:57	18.03	--	--	23.93	5.90	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	04/12/22	11:00	18.55	--	--	23.93	5.38	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	04/29/22	10:10	18.67	--	--	23.93	5.26	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	05/05/22	14:20	18.74	--	--	23.93	5.19	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	05/11/22	15:28	18.52	--	--	23.93	5.41	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	05/20/22	10:02	17.43	--	--	23.93	6.50	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	05/26/22	10:15	19.02	--	--	23.93	4.91	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	06/08/22	10:50	18.72	--	--	23.93	5.21	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	06/17/22	10:45	18.83	--	--	23.93	5.10	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	06/24/22	9:07	19.02	--	--	23.93	4.91	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	06/29/22	11:37	18.15	--	--	23.93	5.78	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	07/05/22	15:44	18.79	--	--	23.93	5.14	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	07/15/22	11:35	18.44	--	--	23.93	5.49	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	07/21/22	16:12	18.84	--	--	23.93	5.09	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	07/29/22	14:03	19.37	--	--	23.93	4.56	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	08/05/22	14:12	19.32	--	--	23.93	4.61	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	08/11/22	11:35	18.87	--	--	23.93	5.06	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	08/19/22	11:05	19.30	--	--	23.93	4.63	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	08/26/22	10:47	19.31	--	--	23.93	4.62	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	08/31/22	15:52	19.31	--	--	23.93	4.62	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	09/07/22	8:10	18.78	--	--	23.93	5.15	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	09/16/22	8:10	19.14	--	--	23.93	4.79	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	09/23/22	13:13	19.74	--	--	23.93	4.19	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	09/29/22	10:36	18.20	--	--	23.93	5.73	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	10/04/22	10:17	19.76	--	--	23.93	4.17	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	10/14/22	11:18	18.41	--	--	23.93	5.52	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	10/24/22	11:30	19.06	--	--	23.93	4.87	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	11/01/22	11:10	18.33	--	--	23.93	5.60	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	11/11/22	13:01	18.53	--	--	23.93	5.40	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	11/18/22	11:07	19.46	--	--	23.93	4.47	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	11/23/22	11:58	18.22	--	--	23.93	5.71	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	12/01/22	11:28	17.74	--	--	23.93	6.19	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	12/05/22	13:08	18.44	--	--	23.93	5.49	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	12/12/22	13:01	16.71	--	--	23.93	7.22	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	12/22/22	13:35	17.29	--	--	23.93	6.64	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	12/28/22	14:24	15.90	--	--	23.93	8.03	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	01/05/23	14:13	16.02	--	--	23.93	7.91	6.58	No measurable LNAPL. Trace LNAPL observed on bailer tip and probe tip. Sock added.
MW-204	01/13/23	14:29	16.16	--	--	23.93	7.77	6.58	No evidence of LNAPL. Sock presented with no discoloration. Sock left in place.
MW-204	01/19/23	13:11	16.11	--	--	23.93	7.82	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	01/26/23	--	17.75	--	--	23.93	6.18	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	02/02/23	12:50	17.44	--	--	23.93	6.49	6.58	No measurable LNAPL. Trace LNAPL observed on bailer tip and probe tip. Sock presented with discoloration. Sock left in place.
MW-204	02/09/23	15:25	19.52	--	--	23.93	4.41	6.58	No measurable LNAPL. No LNAPL observed on probe tip or bailer. Sock presented with discoloration. Sock left in well.
MW-204	02/13/23	13:38	17.70	--	--	23.93	6.23	6.58	No measurable LNAPL. Trace LNAPL observed on probe and bailer tip. Socks presented with discoloration. Sock left in well.
MW-204	02/20/23	14:05	17.69	--	--	23.93	6.24	6.58	No measurable LNAPL. Trace LNAPL observed on bailer tip and probe tip. Sock presented with discoloration. Sock left in well.
MW-204	03/03/23	9:15	17.82	--	--	23.93	6.11	6.58	No measurable LNAPL. Trace LNAPL observed on bailer tip and probe tip. Sock presented with discoloration. Sock left in well.
MW-204	03/09/23	10:32	17.96	--	--	23.93	5.97	6.58	No measurable LNAPL. Trace LNAPL observed on probe tip and side of bailer.
MW-204	03/17/23	11:39	17.59	--	--	23.93	6.34	6.58	No measurable LNAPL. Trace LNAPL observed on bailer only. Sock presented with discoloration. Sock left in place.
MW-204	03/21/23	12:51	18.37	--	--	23.93	5.56	6.58	No measurable LNAPL. Trace LNAPL observed on bailer only. Sock presented with discoloration. Sock left in place.
MW-204	03/30/23	11:20	17.86	--	--	23.93	6.07	6.58	No measurable LNAPL. No LNAPL observed on bailer or probe tip. Sock replaced.
MW-204	04/06/23	12:05	18.71	--	--	23.93	5.22	6.58	One sock presented with discoloration and LNAPL. Sock left in well.

Table 5. Summary of LNAPL Weekly Gauging
Progress Report No. 133
First Semi-Annual 2024 Groundwater Monitoring Report
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Well Number	Date	Time (hh:min)	Depth to Groundwater (feet btoc)	Depth to LNAPL (feet btoc)	LNAPL Thickness (feet)	Top of Casing Elevation (feet amsl)	Groundwater Elevation[1,2] (feet[2])	Top of Screen Elevation[3] (feet[2])	Comments[4]
MW-204	04/14/23	14:04	17.70	--	--	23.93	6.23	6.58	No measurable LNAPL. No LNAPL observed on bailer and probe tip. Sock presented with discoloration. Sock left in place.
MW-204	04/20/23	14:55	19.29	--	--	23.93	4.64	6.58	Sock presented with discoloration. Sock left in place.
MW-204	04/27/23	14:47	18.75	--	--	23.93	5.18	6.58	No measurable LNAPL. Sock presented with discoloration. Sock left in place.
MW-204	05/04/23	16:14	17.56	--	--	23.93	6.37	6.58	Sock presented with discoloration. Sock left in place.
MW-204	05/11/23	13:26	17.92	--	--	23.93	6.01	6.58	Sock presented with discoloration. Sock left in place.
MW-204	05/15/23	13:33	18.83	--	--	23.93	5.10	6.58	Sock presented with discoloration. Sock left in place.
MW-204	05/24/23	12:26	18.36	--	--	23.93	5.57	6.58	Sock presented with discoloration. Sock left in place.
MW-204	05/31/23	15:20	23.02	--	--	23.93	0.91	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	06/06/23	16:31	19.54	--	--	23.93	4.39	6.58	Sock presented with discoloration. Sock left in place.
MW-204	06/12/23	13:48	14.23	--	--	23.93	9.70	6.58	Sock presented with discoloration. Sock replaced.
MW-204	06/20/23	13:31	19.03	--	--	23.93	4.90	6.58	Sock presented with discoloration. Sock left in place.
MW-204	06/30/23	12:43	19.69	--	--	23.93	4.24	6.58	No measurable LNAPL. No observed LNAPL on probe tip and bailer. Sock showed light brown discoloration. Sock left in place
MW-204	07/06/23	12:52	18.51	--	--	23.93	5.42	6.58	Sock presented with discoloration. Sock left in place.
MW-204	07/14/23	11:08	19.32	--	--	23.93	4.61	6.58	Sock presented with discoloration. Sock left in place.
MW-204	07/18/23	12:05	18.97	--	--	23.93	4.96	6.58	Sock presented with discoloration. Sock left in place.
MW-204	07/28/23	15:20	18.94	--	--	23.93	4.99	6.58	Sock presented with discoloration. Sock left in place.
MW-204	08/01/23	11:56	18.93	--	--	23.93	5.00	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	08/11/23	12:51	19.52	--	--	23.93	4.41	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	08/16/23	12:34	18.60	--	--	23.93	5.33	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	08/25/23	10:14	19.58	--	--	23.93	4.35	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	08/29/23	10:30	15.96	--	--	23.93	7.97	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	09/07/23	16:40	18.07	--	--	23.93	5.86	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	09/14/23	10:40	19.02	--	--	23.93	4.91	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	09/19/23	7:58	19.10	--	--	23.93	4.83	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	09/28/23	10:48	18.57	--	--	23.93	5.36	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	10/05/23	12:24	18.49	--	--	23.93	5.44	6.58	No evidence of sheen/LNAPL was encountered.
MW-204	10/13/23	17:27	17.97	--	--	23.93	5.96	6.58	No evidence of sheen/LNAPL was encountered.
MW-205	09/23/21	11:30	22.66	--	--	27.89	5.23	9.89	No measurable LNAPL. Trace LNAPL observed on probe and bailer tip. Oil absorbent sock placed in well. Absorbent sock was added.
MW-205	09/28/21	12:20	22.51	--	--	27.89	5.38	9.89	No measurable LNAPL. Trace LNAPL observed on bailer tip only. Sock presented with discoloration. Sock replaced.
MW-205	10/07/21	13:30	23.35	--	--	27.89	4.54	9.89	No measurable LNAPL. Trace LNAPL observed on probe and bailer tip. Sock presented with discoloration. Sock replaced.
MW-205	10/12/21	12:30	22.55	--	--	27.89	5.34	9.89	No measurable LNAPL. Trace LNAPL observed on probe and bailer tip. Sock presented with discoloration. Sock replaced.
MW-205	10/22/21	12:35	21.91	--	--	27.89	5.98	9.89	No measurable LNAPL. Trace LNAPL observed on probe and bailer tip. Sock presented with discoloration. Sock replaced.
MW-205	10/27/21	12:15	21.73	--	--	27.89	6.16	9.89	No measurable LNAPL. Trace LNAPL observed on probe and bailer tip. Sock presented with discoloration. Sock replaced.
MW-205	11/04/21	12:15	21.98	--	--	27.89	5.91	9.89	No measurable LNAPL. Trace LNAPL observed on probe tip only. Sock presented with discoloration. Sock replaced.
MW-205	11/09/21	11:15	20.74	--	--	27.89	7.15	9.89	No measurable LNAPL. Trace LNAPL observed on bailer tip only. Sock presented dry, extended line and lowered sock into water column..
MW-205	11/16/21	11:48	21.87	--	--	27.89	6.02	9.89	No measurable LNAPL. No LNAPL observed on probe or bailer tip. Sock presented no discoloration. Sock removed.
MW-205	11/23/21	11:15	21.10	--	--	27.89	6.79	9.89	No Measureable LNAPL. No LNAPL observed on probe tip. LNAPL observed on bailer. Sock added
MW-205	12/01/21	10:12	21.82	--	--	27.89	6.07	9.89	No measurable LNAPL. Trace LNAPL observed on probe and bailer tip. Sock presented with discoloration. Sock replaced post GW sampling.
MW-205	12/09/21	12:46	21.03	--	--	27.89	6.86	9.89	No measurable LNAPL. Trace LNAPL observed on bailer. Sock presented with discoloration. Sock replaced.
MW-205	12/15/21	11:25	21.22	--	--	27.89	6.67	9.89	No measurable LNAPL. Trace LNAPL observed on probe tip and bailer. Sock presented with discoloration. Sock replaced.
MW-205	12/21/21	10:45	20.82	--	--	27.89	7.07	9.89	No measurable LNAPL. Trace LNAPL observed on probe tip and bailer. Sock presented with discoloration. Sock replaced.
MW-205	01/04/22	13:40	20.22	--	--	27.89	7.67	9.89	No measurable LNAPL. Trace LNAPL observed on probe and bailer tip. Sock presented with discoloration. Sock replaced.
MW-205	01/11/22	13:02	20.40	--	--	27.89	7.49	9.89	No measurable LNAPL. Trace LNAPL observed on probe tip and bailer. Sock presented with discoloration. Sock replaced.
MW-205	01/18/22	11:45	20.92	--	--	27.89	6.97	9.89	No measurable LNAPL. Trace LNAPL observed on probe tip and bailer. Sock presented with discoloration. Sock replaced.
MW-205	01/25/22	11:30	21.56	--	--	27.89	6.33	9.89	No measurable LNAPL. Trace LNAPL observed on probe and bailer tip. Sock presented with discoloration. Sock replaced.
MW-205	02/01/22	11:39	21.68	--	--	27.89	6.21	9.89	No measurable LNAPL. Trace LNAPL observed on probe tip and bailer. Sock presented with discoloration. Sock replaced.
MW-205	02/08/22	12:34	21.95	--	--	27.89	5.94	9.89	No measurable LNAPL. Trace LNAPL observed on probe tip and bailer. Sock presented with discoloration. Sock replaced.
MW-205	02/15/22	10:49	21.96	--	--	27.89	5.93	9.89	No measurable LNAPL. Trace LNAPL observed on probe tip and bailer. Sock presented with discoloration. Sock replaced.
MW-205	02/22/22	13:29	22.53	--	--	27.89	5.36	9.89	No measurable LNAPL. Trace LNAPL observed on probe tip and bailer. Sock presented with discoloration. Sock replaced.
MW-205	03/04/22	10:30	21.63	--	--	27.89	6.26	9.89	No measurable LNAPL. Trace LNAPL observed on probe tip and bailer. Sock presented with discoloration. Sock replaced.
MW-205	03/09/22	13:11	22.11	--	--	27.89	5.78	9.89	No evidence of sheen/LNAPL was encountered. Sock was found to be dry. Lowered sock into water column.
MW-205	04/12/22	11:11	22.61	--	--	27.89	5.28	9.89	No measurable LNAPL. Trace LNAPL observed on probe tip and bailer. Sock left in place. Currently 4 socks in well.

Table 5. Summary of LNAPL Weekly Gauging
Progress Report No. 133
First Semi-Annual 2024 Groundwater Monitoring Report
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Well Number	Date	Time (hh:min)	Depth to Groundwater (feet btoc)	Depth to LNAPL (feet btoc)	LNAPL Thickness (feet)	Top of Casing Elevation (feet amsl)	Groundwater Elevation[1,2] (feet[2])	Top of Screen Elevation[3] (feet[2])	Comments[4]
MW-205	04/29/22	10:15	22.84	--	--	27.89	5.05	9.89	No measurable LNAPL. LNAPL observed on sock, bailer and probe. Sock left in place. 4 socks in well.
MW-205	05/05/22	14:25	23.07	--	--	27.89	4.82	9.89	No measurable LNAPL. LNAPL observed on bailer but not on prove tip. LNAPL on sock. Sock left in place. 4 socks in well.
MW-205	05/11/22	15:33	22.48	--	--	27.89	5.41	9.89	No measurable LNAPL. No LNAPL observed on probe or bailer. LNAPL observed in sock. Sock left in place.
MW-205	05/20/22	10:10	21.43	--	--	27.89	6.46	9.89	No measurable LNAPL. Sock presented with discoloration. Sock left in place. Currently 4 socks in well.
MW-205	05/26/22	10:32	23.21	--	--	27.89	4.68	9.89	No measurable LNAPL. No LNAPL observed on probe tip and bailer. Sock presented with discoloration. Sock left in place. Currently 4 socks in well.
MW-205	06/08/22	11:00	22.90	--	--	27.89	4.99	9.89	No measurable LNAPL. No LNAPL observed on probe tip or bailer. Sock left in place.
MW-205	06/17/22	10:50	22.92	--	--	27.89	4.97	9.89	No measurable LNAPL. Trace LNAPL observed on probe and bailer tip. Sock presented with discoloration. Sock replaced.
MW-205	06/24/22	9:12	23.17	--	--	27.89	4.72	9.89	No measurable LNAPL. No LNAPL observed on probe or bailer. Sock left in place.
MW-205	06/29/22	11:45	22.31	--	--	27.89	5.58	9.89	No measurable LNAPL. No LNAPL observed on probe or bailer. Sock left in place.
MW-205	07/05/22	15:49	22.71	--	--	27.89	5.18	9.89	No measurable LNAPL. Trace LNAPL observed on probe but no LNAPL on bailer. Sock left in place.
MW-205	07/15/22	11:15	22.23	--	--	27.89	5.66	9.89	No evidence of sheen/LNAPL was encountered. Sock removed.
MW-205	07/21/22	16:20	23.01	--	--	27.89	4.88	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	07/29/22	14:05	23.52	--	--	27.89	4.37	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	08/05/22	14:20	23.58	--	--	27.89	4.31	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	08/11/22	11:42	23.01	--	--	27.89	4.88	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	08/19/22	11:15	23.24	--	--	27.89	4.65	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	08/26/22	10:53	23.30	--	--	27.89	4.59	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	08/31/22	15:55	23.39	--	--	27.89	4.50	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	09/07/22	8:15	22.90	--	--	27.89	4.99	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	09/16/22	8:17	23.86	--	--	27.89	4.03	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	09/23/22	13:15	23.87	--	--	27.89	4.02	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	09/29/22	10:42	21.12	--	--	27.89	6.77	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	10/04/22	10:20	23.87	--	--	27.89	4.02	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	10/14/22	11:23	22.26	--	--	27.89	5.63	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	10/24/22	11:34	23.11	--	--	27.89	4.78	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	11/01/22	11:16	22.20	--	--	27.89	5.69	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	11/11/22	13:07	22.39	--	--	27.89	5.50	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	11/18/22	11:16	23.41	--	--	27.89	4.48	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	11/23/22	12:03	22.16	--	--	27.89	5.73	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	12/01/22	11:35	21.64	--	--	27.89	6.25	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	12/05/22	13:13	22.27	--	--	27.89	5.62	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	12/12/22	13:08	20.73	--	--	27.89	7.16	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	12/22/22	13:44	21.18	--	--	27.89	6.71	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	12/28/22	14:28	20.04	--	--	27.89	7.85	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	01/05/23	14:25	20.10	--	--	27.89	7.79	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	01/13/23	14:45	20.30	--	--	27.89	7.59	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	01/19/23	13:22	20.14	--	--	27.89	7.75	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	01/26/23	--	21.66	--	--	27.89	6.23	9.89	No measurable LNAPL. Trace LNAPL observed on probe tip. Sock presented with discoloration. Sock left in place.
MW-205	02/02/23	13:08	21.33	--	--	27.89	6.56	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	02/09/23	15:38	22.57	--	--	27.89	5.32	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	02/13/23	13:51	21.68	--	--	27.89	6.21	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	02/20/23	14:21	21.49	--	--	27.89	6.40	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	03/03/23	9:25	21.78	--	--	27.89	6.11	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	03/09/23	10:36	21.92	--	--	27.89	5.97	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	03/17/23	11:49	21.48	--	--	27.89	6.41	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	03/21/23	13:07	22.46	--	--	27.89	5.43	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	03/30/23	11:33	21.84	--	--	27.89	6.05	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	04/06/23	12:38	22.90	--	--	27.89	4.99	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	04/14/23	14:08	20.68	--	--	27.89	7.21	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	04/20/23	15:03	21.38	--	--	27.89	6.51	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	04/27/23	14:59	22.83	--	--	27.89	5.06	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	05/04/23	16:29	20.93	--	--	27.89	6.96	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	05/11/23	13:38	21.93	--	--	27.89	5.96	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	05/15/23	13:42	22.74	--	--	27.89	5.15	9.89	No evidence of sheen/LNAPL was encountered.

Table 5. Summary of LNAPL Weekly Gauging
Progress Report No. 133
First Semi-Annual 2024 Groundwater Monitoring Report
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Well Number	Date	Time (hh:min)	Depth to Groundwater (feet btoc)	Depth to LNAPL (feet btoc)	LNAPL Thickness (feet)	Top of Casing Elevation (feet amsl)	Groundwater Elevation[1,2] (feet[2])	Top of Screen Elevation[3] (feet[2])	Comments[4]
MW-205	05/24/23	12:38	22.40	--	--	27.89	5.49	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	05/31/23	15:06	19.14	--	--	27.89	8.75	9.89	Sock presented with discoloration. Sock left in place.
MW-205	06/06/23	16:44	23.61	--	--	27.89	4.28	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	06/12/23	13:58	17.55	--	--	27.89	10.34	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	06/20/23	13:42	23.11	--	--	27.89	4.78	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	06/30/23	12:55	23.79	--	--	27.89	4.10	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	07/06/23	12:46	22.50	--	--	27.89	5.39	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	07/14/23	11:14	23.45	--	--	27.89	4.44	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	07/18/23	12:23	23.08	--	--	27.89	4.81	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	07/28/23	15:27	22.87	--	--	27.89	5.02	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	08/01/23	12:10	22.99	--	--	27.89	4.90	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	08/11/23	13:00	23.58	--	--	27.89	4.31	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	08/16/23	12:40	22.65	--	--	27.89	5.24	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	08/25/23	10:24	23.62	--	--	27.89	4.27	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	08/29/23	10:34	23.01	--	--	27.89	4.88	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	09/07/23	16:53	21.96	--	--	27.89	5.93	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	09/14/23	10:47	23.08	--	--	27.89	4.81	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	09/19/23	8:18	23.00	--	--	27.89	4.89	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	09/28/23	10:59	22.68	--	--	27.89	5.21	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	10/05/23	12:35	22.37	--	--	27.89	5.52	9.89	No evidence of sheen/LNAPL was encountered.
MW-205	10/13/23	17:32	21.89	--	--	27.89	6.00	9.89	No evidence of sheen/LNAPL was encountered.
MW-206	09/23/21	12:20	11.72	--	--	15.15	3.43	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	09/28/21	11:27	9.24	--	--	15.15	5.91	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	10/07/21	12:31	12.31	--	--	15.15	2.84	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	10/12/21	11:23	9.23	--	--	15.15	5.92	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	10/22/21	11:37	9.49	--	--	15.15	5.66	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	10/27/21	10:57	8.40	--	--	15.15	6.75	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	11/04/21	11:33	10.48	--	--	15.15	4.67	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	11/09/21	10:24	7.02	--	--	15.15	8.13	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	11/16/21	10:44	10.89	--	--	15.15	4.26	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	11/23/21	10:18	7.73	--	--	15.15	7.42	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	12/01/21	9:38	10.05	--	--	15.15	5.10	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	12/09/21	12:02	7.45	--	--	15.15	7.70	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	12/15/21	10:35	8.77	--	--	15.15	6.38	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	12/21/21	9:37	7.42	--	--	15.15	7.73	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	01/04/22	12:41	8.25	--	--	15.15	6.90	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	01/11/22	12:11	7.38	--	--	15.15	7.77	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	01/18/22	10:50	8.51	--	--	15.15	6.64	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	01/25/22	10:35	8.22	--	--	15.15	6.93	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	02/01/22	10:18	9.32	--	--	15.15	5.83	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	02/08/22	11:30	8.79	--	--	15.15	6.36	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	02/15/22	9:41	9.43	--	--	15.15	5.72	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	02/22/22	12:24	10.47	--	--	15.15	4.68	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	03/04/22	9:59	9.61	--	--	15.15	5.54	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	03/09/22	12:15	10.32	--	--	15.15	4.83	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	04/12/22	10:19	10.94	--	--	15.15	4.21	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	04/29/22	9:40	11.66	--	--	15.15	3.49	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	05/05/22	13:50	12.51	--	--	15.15	2.64	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	05/11/22	15:07	10.96	--	--	15.15	4.19	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	05/20/22	9:27	8.62	--	--	15.15	6.53	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	05/26/22	9:30	12.28	--	--	15.15	2.87	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	06/08/22	10:25	12.15	--	--	15.15	3.00	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	06/17/22	10:20	11.97	--	--	15.15	3.18	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	06/24/22	8:49	12.70	--	--	15.15	2.45	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	06/29/22	11:09	11.91	--	--	15.15	3.24	4.15	No evidence of sheen/LNAPL was encountered.

Table 5. Summary of LNAPL Weekly Gauging
Progress Report No. 133
First Semi-Annual 2024 Groundwater Monitoring Report
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Well Number	Date	Time (hh:min)	Depth to Groundwater (feet btoc)	Depth to LNAPL (feet btoc)	LNAPL Thickness (feet)	Top of Casing Elevation (feet amsl)	Groundwater Elevation[1,2] (feet[2])	Top of Screen Elevation[3] (feet[2])	Comments[4]
MW-206	07/05/22	15:22	11.05	--	--	15.15	4.10	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	07/15/22	12:16	10.81	--	--	15.15	4.34	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	07/21/22	15:48	11.58	--	--	15.15	3.57	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	07/29/22	13:45	13.03	--	--	15.15	2.12	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	08/05/22	13:48	12.98	--	--	15.15	2.17	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	08/11/22	11:11	12.76	--	--	15.15	2.39	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	08/19/22	10:47	10.66	--	--	15.15	4.49	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	08/26/22	10:21	10.69	--	--	15.15	4.46	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	08/31/22	15:33	12.25	--	--	15.15	2.90	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	09/07/22	7:50	12.47	--	--	15.15	2.68	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	09/16/22	7:33	12.59	--	--	15.15	2.56	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	09/23/22	12:55	12.84	--	--	15.15	2.31	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	09/29/22	10:16	8.71	--	--	15.15	6.44	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	10/04/22	9:53	12.63	--	--	15.15	2.52	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	10/14/22	10:54	8.69	--	--	15.15	6.46	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	10/24/22	10:54	11.72	--	--	15.15	3.43	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	11/01/22	10:33	8.61	--	--	15.15	6.54	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	11/11/22	12:35	8.78	--	--	15.15	6.37	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	11/18/22	10:18	10.76	--	--	15.15	4.39	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	11/23/22	11:37	9.96	--	--	15.15	5.19	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	12/01/22	11:00	8.19	--	--	15.15	6.96	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	12/05/22	13:13	10.07	--	--	15.15	5.08	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	12/12/22	12:29	8.06	--	--	15.15	7.09	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	12/22/22	13:04	8.16	--	--	15.15	6.99	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	12/28/22	13:45	7.89	--	--	15.15	7.26	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	01/05/23	13:35	7.06	--	--	15.15	8.09	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	01/13/23	13:46	8.00	--	--	15.15	7.15	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	01/19/23	12:38	7.08	--	--	15.15	8.07	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	01/26/23	--	8.13	--	--	15.15	7.02	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	02/02/23	11:54	8.75	--	--	15.15	6.40	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	02/09/23	14:50	11.38	--	--	15.15	3.77	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	02/13/23	13:14	9.69	--	--	15.15	5.46	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	02/20/23	13:39	9.82	--	--	15.15	5.33	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	03/03/23	8:47	9.43	--	--	15.15	5.72	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	03/09/23	10:07	10.02	--	--	15.15	5.13	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	03/17/23	10:52	9.20	--	--	15.15	5.95	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	03/21/23	11:54	11.41	--	--	15.15	3.74	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	03/30/23	10:47	9.60	--	--	15.15	5.55	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	04/06/23	11:33	11.90	--	--	15.15	3.25	4.15	Dented J-Plug; Poor seal
MW-206	04/14/23	12:58	9.30	--	--	15.15	5.85	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	04/20/23	14:08	13.02	--	--	15.15	2.13	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	04/27/23	13:59	11.66	--	--	15.15	3.49	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	05/04/23	15:29	9.73	--	--	15.15	5.42	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	05/11/23	12:46	10.32	--	--	15.15	4.83	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	05/15/23	12:59	10.54	--	--	15.15	4.61	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	05/24/23	11:54	11.07	--	--	15.15	4.08	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	05/31/23	14:22	10.63	--	--	15.15	4.52	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	06/06/23	15:58	13.13	--	--	15.15	2.02	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	06/12/23	13:22	5.70	--	--	15.15	9.45	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	06/20/23	12:51	12.73	--	--	15.15	2.42	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	06/30/23	12:02	13.20	--	--	15.15	1.95	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	07/06/23	12:14	11.92	--	--	15.15	3.23	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	07/14/23	10:26	10.47	--	--	15.15	4.68	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	07/18/23	11:26	12.61	--	--	15.15	2.54	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	07/28/23	14:32	9.96	--	--	15.15	5.19	4.15	No evidence of sheen/LNAPL was encountered.

Table 5. Summary of LNAPL Weekly Gauging
Progress Report No. 133
First Semi-Annual 2024 Groundwater Monitoring Report
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Well Number	Date	Time (hh:min)	Depth to Groundwater (feet btoc)	Depth to LNAPL (feet btoc)	LNAPL Thickness (feet)	Top of Casing Elevation (feet amsl)	Groundwater Elevation[1,2] (feet[2])	Top of Screen Elevation[3] (feet[2])	Comments[4]
MW-206	08/01/23	11:34	12.75	--	--	15.15	2.40	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	08/11/23	12:16	11.63	--	--	15.15	3.52	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	08/16/23	11:56	11.75	--	--	15.15	3.40	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	08/25/23	9:46	12.26	--	--	15.15	2.89	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	08/29/23	10:14	12.74	--	--	15.15	2.41	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	09/07/23	15:21	8.72	--	--	15.15	6.43	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	09/14/23	10:15	12.05	--	--	15.15	3.10	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	09/19/23	7:22	10.21	--	--	15.15	4.94	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	09/28/23	9:55	11.87	--	--	15.15	3.28	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	10/05/23	11:46	9.13	--	--	15.15	6.02	4.15	No evidence of sheen/LNAPL was encountered.
MW-206	10/13/23	17:03	8.38	--	--	15.15	6.77	4.15	No evidence of sheen/LNAPL was encountered.
MW-207	09/23/21	12:12	11.47	--	--	15.40	3.93	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	09/28/21	11:22	9.89	--	--	15.40	5.51	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	10/07/21	12:25	12.12	--	--	15.40	3.28	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	10/12/21	11:15	9.96	--	--	15.40	5.44	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	10/22/21	11:31	9.43	--	--	15.40	5.97	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	10/27/21	10:51	9.12	--	--	15.40	6.28	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	11/04/21	11:51	10.44	--	--	15.40	4.96	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	11/09/21	10:22	7.74	--	--	15.40	7.66	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	11/16/21	10:40	11.09	--	--	15.40	4.31	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	11/23/21	10:10	8.32	--	--	15.40	7.08	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	12/01/21	9:37	10.05	--	--	15.40	5.35	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	12/09/21	11:56	8.05	--	--	15.40	7.35	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	12/15/21	10:28	9.17	--	--	15.40	6.23	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	12/21/21	9:30	7.98	--	--	15.40	7.42	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	01/04/22	12:33	8.22	--	--	15.40	7.18	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	01/11/22	12:08	7.91	--	--	15.40	7.49	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	01/18/22	10:42	8.56	--	--	15.40	6.84	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	01/25/22	10:28	8.88	--	--	15.40	6.52	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	02/01/22	10:09	9.25	--	--	15.40	6.15	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	02/08/22	11:24	9.15	--	--	15.40	6.25	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	02/15/22	9:34	9.44	--	--	15.40	5.96	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	02/22/22	12:19	10.21	--	--	15.40	5.19	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	03/04/22	9:53	9.48	--	--	15.40	5.92	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	03/09/22	12:09	10.14	--	--	15.40	5.26	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	04/12/22	10:14	10.86	--	--	15.40	4.54	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	04/29/22	9:35	11.23	--	--	15.40	4.17	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	05/05/22	13:45	12.30	--	--	15.40	3.10	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	05/11/22	15:03	10.89	--	--	15.40	4.51	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	05/20/22	9:22	8.82	--	--	15.40	6.58	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	05/26/22	9:26	11.95	--	--	15.40	3.45	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	06/08/22	10:20	11.31	--	--	15.40	4.09	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	06/17/22	10:15	11.88	--	--	15.40	3.52	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	06/24/22	8:47	12.61	--	--	15.40	2.79	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	06/29/22	11:05	11.85	--	--	15.40	3.55	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	07/05/22	15:19	10.92	--	--	15.40	4.48	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	07/15/22	12:21	10.54	--	--	15.40	4.86	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	07/21/22	15:45	11.23	--	--	15.40	4.17	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	07/29/22	13:45	13.22	--	--	15.40	2.18	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	08/05/22	13:44	13.14	--	--	15.40	2.26	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	08/11/22	11:08	12.70	--	--	15.40	2.70	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	08/19/22	10:45	11.25	--	--	15.40	4.15	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	08/26/22	10:16	11.33	--	--	15.40	4.07	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	08/31/22	15:30	12.25	--	--	15.40	3.15	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	09/07/22	7:48	12.17	--	--	15.40	3.23	5.90	No evidence of sheen/LNAPL was encountered.

Table 5. Summary of LNAPL Weekly Gauging
Progress Report No. 133
First Semi-Annual 2024 Groundwater Monitoring Report
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Well Number	Date	Time (hh:min)	Depth to Groundwater (feet btoc)	Depth to LNAPL (feet btoc)	LNAPL Thickness (feet)	Top of Casing Elevation (feet amsl)	Groundwater Elevation[1,2] (feet[2])	Top of Screen Elevation[3] (feet[2])	Comments[4]
MW-207	09/16/22	7:28	12.21	--	--	15.40	3.19	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	09/23/22	12:52	13.07	--	--	15.40	2.33	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	09/29/22	10:14	9.19	--	--	15.40	6.21	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	10/04/22	9:50	12.87	--	--	15.40	2.53	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	10/14/22	10:50	9.29	--	--	15.40	6.11	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	10/24/22	10:49	11.50	--	--	15.40	3.90	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	11/01/22	10:29	9.25	--	--	15.40	6.15	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	11/11/22	12:32	9.51	--	--	15.40	5.89	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	11/18/22	10:13	11.41	--	--	15.40	3.99	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	11/23/22	11:34	10.21	--	--	15.40	5.19	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	12/01/22	10:55	9.00	--	--	15.40	6.40	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	12/05/22	12:40	10.36	--	--	15.40	5.04	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	12/12/22	12:25	8.16	--	--	15.40	7.24	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	12/22/22	13:00	9.07	--	--	15.40	6.33	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	12/28/22	13:40	7.55	--	--	15.40	7.85	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	01/05/23	13:32	7.54	--	--	15.40	7.86	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	01/13/23	13:40	7.89	--	--	15.40	7.51	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	01/19/23	12:35	7.61	--	--	15.40	7.79	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	01/26/23	--	8.78	--	--	15.40	6.62	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	02/02/23	11:48	9.07	--	--	15.40	6.33	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	02/09/23	14:47	11.38	--	--	15.40	4.02	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	02/13/23	13:10	9.45	--	--	15.40	5.95	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	02/20/23	13:35	10.23	--	--	15.40	5.17	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	03/03/23	8:43	9.45	--	--	15.40	5.95	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	03/09/23	10:03	9.83	--	--	15.40	5.57	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	03/17/23	10:46	9.52	--	--	15.40	5.88	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	03/21/23	11:46	11.02	--	--	15.40	4.38	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	03/30/23	10:44	9.75	--	--	15.40	5.65	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	04/06/23	11:30	11.50	--	--	15.40	3.90	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	04/14/23	12:50	9.45	--	--	15.40	5.95	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	04/20/23	14:00	13.19	--	--	15.40	2.21	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	04/27/23	13:51	11.39	--	--	15.40	4.01	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	05/04/23	15:25	9.86	--	--	15.40	5.54	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	05/11/23	12:39	10.46	--	--	15.40	4.94	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	05/15/23	12:54	11.03	--	--	15.40	4.37	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	05/24/23	11:49	10.79	--	--	15.40	4.61	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	05/31/23	14:13	11.26	--	--	15.40	4.14	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	06/06/23	15:51	13.41	--	--	15.40	1.99	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	06/12/23	13:19	5.77	--	--	15.40	9.63	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	06/20/23	12:44	12.69	--	--	15.40	2.71	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	06/30/23	11:57	13.41	--	--	15.40	1.99	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	07/06/23	12:07	12.42	--	--	15.40	2.98	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	07/14/23	10:23	12.90	--	--	15.40	2.50	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	07/18/23	11:21	12.42	--	--	15.40	2.98	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	07/28/23	14:22	10.66	--	--	15.40	4.74	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	08/01/23	11:31	12.73	--	--	15.40	2.67	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	08/11/23	12:10	12.13	--	--	15.40	3.27	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	08/16/23	11:50	11.31	--	--	15.40	4.09	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	08/25/23	9:41	12.61	--	--	15.40	2.79	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	08/29/23	10:07	12.65	--	--	15.40	2.75	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	09/07/23	15:10	9.24	--	--	15.40	6.16	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	09/14/23	10:11	11.68	--	--	15.40	3.72	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	09/19/23	7:15	10.88	--	--	15.40	4.52	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	09/28/23	9:51	11.44	--	--	15.40	3.96	5.90	No evidence of sheen/LNAPL was encountered.
MW-207	10/05/23	11:41	9.74	--	--	15.40	5.66	5.90	No evidence of sheen/LNAPL was encountered.

Table 5. Summary of LNAPL Weekly Gauging
Progress Report No. 133
First Semi-Annual 2024 Groundwater Monitoring Report
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Well Number	Date	Time (hh:min)	Depth to Groundwater (feet btoc)	Depth to LNAPL (feet btoc)	LNAPL Thickness (feet)	Top of Casing Elevation (feet amsl)	Groundwater Elevation[1,2] (feet[2])	Top of Screen Elevation[3] (feet[2])	Comments[4]
MW-207	10/13/23	16:59	9.02	--	--	15.40	6.38	5.90	No evidence of sheen/LNAPL was encountered.
MW-209	08/11/22	12:06	9.62	--	--	15.53	5.91	12.53	No evidence of sheen/LNAPL was encountered.
MW-209	10/24/22	11:58	10.20	--	--	15.53	5.33	12.53	No evidence of sheen/LNAPL was encountered.
MW-209	03/21/23	14:00	9.25	--	--	15.53	6.28	12.53	No evidence of sheen/LNAPL was encountered.
MW-209	06/20/23	14:01	9.74	--	--	15.53	5.79	12.53	No evidence of sheen/LNAPL was encountered.
MW-209	08/29/23	10:48	9.73	--	--	15.53	5.80	12.53	No evidence of sheen/LNAPL was encountered.
MW-210	08/11/22	12:01	8.83	--	--	15.13	6.30	12.13	No evidence of sheen/LNAPL was encountered.
MW-210	10/24/22	11:54	9.51	--	--	15.13	5.62	12.13	No evidence of sheen/LNAPL was encountered.
MW-210	03/21/23	13:55	6.52	--	--	15.13	8.61	12.13	No evidence of sheen/LNAPL was encountered.
MW-210	06/20/23	13:56	9.91	--	--	15.13	5.22	12.13	No evidence of sheen/LNAPL was encountered.
MW-210	08/29/23	10:45	8.98	--	--	15.13	6.15	12.13	No evidence of sheen/LNAPL was encountered.
MW-211	08/11/22	11:58	9.09	--	--	15.02	5.93	12.02	No evidence of sheen/LNAPL was encountered.
MW-211	10/24/22	11:50	9.60	--	--	15.02	5.42	12.02	No evidence of sheen/LNAPL was encountered.
MW-211	03/21/23	13:51	8.76	--	--	15.02	6.26	12.02	No evidence of sheen/LNAPL was encountered.
MW-211	06/20/23	13:51	9.18	--	--	15.02	5.84	12.02	No evidence of sheen/LNAPL was encountered.
MW-211	08/29/23	10:43	10.20	--	--	15.02	4.82	12.02	No evidence of sheen/LNAPL was encountered.
MW-30	08/11/22	15:20	13.22	--	--	20.85	7.63	15.85	No evidence of sheen/LNAPL was encountered.
MW-30	10/24/22	12:17	14.19	--	--	20.85	6.66	15.85	No evidence of sheen/LNAPL was encountered.
MW-30	03/21/23	13:33	12.81	--	--	20.85	8.04	15.85	No evidence of sheen/LNAPL was encountered.
MW-30	06/20/23	14:12	13.76	--	--	20.85	7.09	15.85	Sock showed discoloration and presence of LNAPL.
MW-30	08/29/23	11:02	13.93	--	--	20.85	6.92	15.85	No evidence of sheen/LNAPL was encountered.
MW-61A-R	08/11/22	15:51	14.32	--	--	22.44	8.12	--	No evidence of sheen/LNAPL was encountered.
MW-61A-R	10/24/22	12:06	14.96	14.88	0.08	22.44	7.54	--	PID = 176.3
MW-61A-R	03/21/23	--	--	--	--	22.44	--	--	Inaccessible
MW-61A-R	06/20/23	14:23	14.39	--	--	22.44	8.05	--	PID = 135.8 Sock presented with discoloration. Sock left in place.
MW-61A-R	08/29/23	10:54	14.66	--	--	22.44	7.78	--	No evidence of sheen/LNAPL was encountered.
MW-70R	09/23/21	12:00	11.33	--	--	15.61	4.28	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	09/28/21	11:17	10.43	--	--	15.61	5.18	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	10/07/21	12:15	11.84	--	--	15.61	3.77	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	10/12/21	11:05	10.55	--	--	15.61	5.06	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	10/22/21	11:24	9.52	--	--	15.61	6.09	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	10/27/21	10:45	9.62	--	--	15.61	5.99	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	11/04/21	11:30	10.14	--	--	15.61	5.47	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	11/09/21	10:19	8.16	--	--	15.61	7.45	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	11/16/21	10:33	11.15	--	--	15.61	4.46	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	11/23/21	10:06	8.66	--	--	15.61	6.95	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	12/01/21	9:32	10.15	--	--	15.61	5.46	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	12/09/21	11:50	8.40	--	--	15.61	7.21	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	12/15/21	10:20	9.46	--	--	15.61	6.15	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	12/21/21	9:22	8.33	--	--	15.61	7.28	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	01/04/22	12:25	8.33	--	--	15.61	7.28	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	01/11/22	12:03	8.20	--	--	15.61	7.41	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	01/18/22	10:35	8.76	--	--	15.61	6.85	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	01/25/22	10:21	9.35	--	--	15.61	6.26	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	02/01/22	10:00	9.39	--	--	15.61	6.22	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	02/08/22	11:17	9.47	--	--	15.61	6.14	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	02/15/22	9:27	9.60	--	--	15.61	6.01	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	02/22/22	12:09	10.22	--	--	15.61	5.39	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	03/04/22	9:51	9.59	--	--	15.61	6.02	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	03/09/22	12:00	10.12	--	--	15.61	5.49	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	04/12/22	10:08	10.89	--	--	15.61	4.72	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	04/29/22	9:30	11.10	--	--	15.61	4.51	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	05/05/22	13:40	11.97	--	--	15.61	3.64	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	05/11/22	14:50	10.80	--	--	15.61	4.81	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	05/20/22	9:18	9.01	--	--	15.61	6.60	11.61	No evidence of sheen/LNAPL was encountered.

Table 5. Summary of LNAPL Weekly Gauging
Progress Report No. 133
First Semi-Annual 2024 Groundwater Monitoring Report
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Well Number	Date	Time (hh:min)	Depth to Groundwater (feet btoc)	Depth to LNAPL (feet btoc)	LNAPL Thickness (feet)	Top of Casing Elevation (feet amsl)	Groundwater Elevation[1,2] (feet[2])	Top of Screen Elevation[3] (feet[2])	Comments[4]
MW-70R	05/26/22	9:18	11.79	--	--	15.61	3.82	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	06/08/22	10:15	11.18	--	--	15.61	4.43	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	06/17/22	10:10	11.67	--	--	15.61	3.94	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	06/24/22	8:45	12.20	--	--	15.61	3.41	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	06/29/22	10:55	11.43	--	--	15.61	4.18	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	07/05/22	15:15	10.83	--	--	15.61	4.78	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	07/15/22	12:25	10.47	--	--	15.61	5.14	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	07/21/22	15:40	11.15	--	--	15.61	4.46	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	07/29/22	13:41	12.85	--	--	15.61	2.76	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	08/05/22	13:40	12.82	--	--	15.61	2.79	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	08/11/22	11:04	12.22	--	--	15.61	3.39	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	08/19/22	10:42	11.69	--	--	15.61	3.92	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	08/26/22	10:12	11.72	--	--	15.61	3.89	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	08/31/22	15:25	12.21	--	--	15.61	3.40	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	09/07/22	7:45	11.89	--	--	15.61	3.72	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	09/16/22	7:25	12.02	--	--	15.61	3.59	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	09/23/22	12:49	13.13	--	--	15.61	2.48	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	09/29/22	10:11	9.52	--	--	15.61	6.09	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	10/04/22	9:45	13.05	--	--	15.61	2.56	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	10/14/22	10:47	9.71	--	--	15.61	5.90	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	10/24/22	10:44	11.46	--	--	15.61	4.15	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	11/01/22	10:25	9.67	--	--	15.61	5.94	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	11/11/22	12:28	9.81	--	--	15.61	5.80	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	11/18/22	10:08	11.84	--	--	15.61	3.77	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	11/23/22	11:30	10.33	--	--	15.61	5.28	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	12/01/22	10:50	9.52	--	--	15.61	6.09	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	12/05/22	12:35	10.43	--	--	15.61	5.18	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	12/12/22	12:21	8.33	--	--	15.61	7.28	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	12/22/22	12:52	8.98	--	--	15.61	6.63	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	12/28/22	13:35	7.92	--	--	15.61	7.69	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	01/05/23	13:27	7.71	--	--	15.61	7.90	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	01/13/23	13:34	8.03	--	--	15.61	7.58	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	01/19/23	12:32	7.82	--	--	15.61	7.79	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	01/26/23	--	9.25	--	--	15.61	6.36	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	02/02/23	11:46	9.29	--	--	15.61	6.32	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	02/09/23	14:43	11.31	--	--	15.61	4.30	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	02/13/23	13:07	9.59	--	--	15.61	6.02	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	02/20/23	13:33	10.42	--	--	15.61	5.19	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	03/03/23	8:40	9.60	--	--	15.61	6.01	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	03/09/23	10:00	9.97	--	--	15.61	5.64	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	03/17/23	10:35	9.61	--	--	15.61	6.00	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	03/21/23	11:45	10.88	--	--	15.61	4.73	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	03/30/23	10:40	9.89	--	--	15.61	5.72	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	04/06/23	11:25	11.36	--	--	15.61	4.25	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	04/14/23	12:36	9.51	--	--	15.61	6.10	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	04/20/23	13:46	12.78	--	--	15.61	2.83	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	04/27/23	13:42	11.31	--	--	15.61	4.30	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	05/04/23	15:13	9.97	--	--	15.61	5.64	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	05/11/23	12:31	10.22	--	--	15.61	5.39	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	05/15/23	12:47	11.31	--	--	15.61	4.30	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	05/24/23	11:43	10.71	--	--	15.61	4.90	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	05/31/23	14:06	11.71	--	--	15.61	3.90	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	06/06/23	15:43	13.06	--	--	15.61	2.55	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	06/12/23	13:16	5.89	--	--	15.61	9.72	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	06/20/23	12:41	12.20	--	--	15.61	3.41	11.61	No evidence of sheen/LNAPL was encountered.

Table 5. Summary of LNAPL Weekly Gauging
Progress Report No. 133
First Semi-Annual 2024 Groundwater Monitoring Report
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

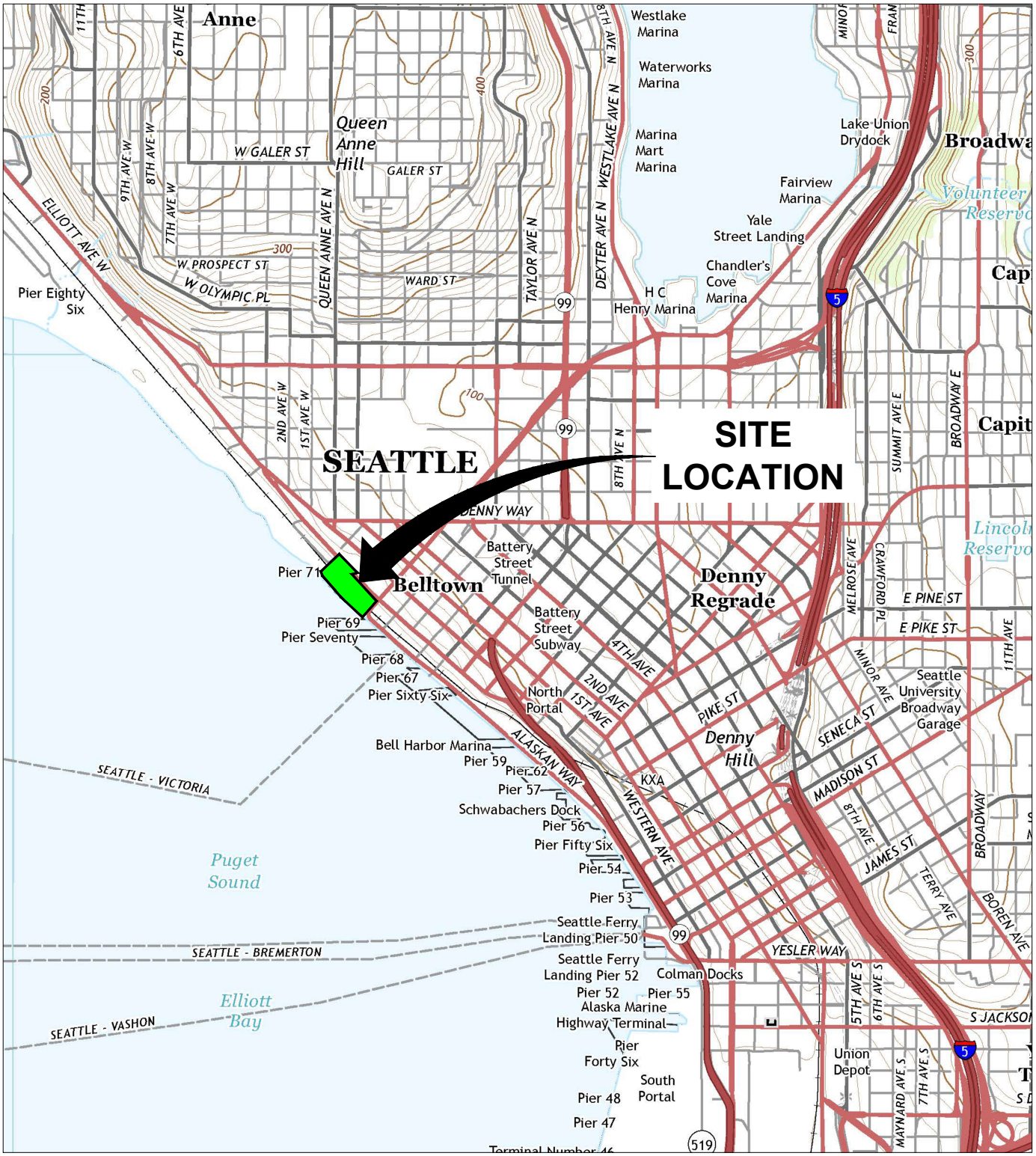
Well Number	Date	Time (hh:min)	Depth to Groundwater (feet btoc)	Depth to LNAPL (feet btoc)	LNAPL Thickness (feet)	Top of Casing Elevation (feet amsl)	Groundwater Elevation[1,2] (feet[2])	Top of Screen Elevation[3] (feet[2])	Comments[4]
MW-70R	06/30/23	11:50	13.19	--	--	15.61	2.42	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	07/06/23	12:00	11.11	--	--	15.61	4.50	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	07/14/23	10:20	13.02	--	--	15.61	2.59	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	07/18/23	11:15	12.02	--	--	15.61	3.59	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	07/28/23	14:17	11.13	--	--	15.61	4.48	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	08/01/23	11:27	12.33	--	--	15.61	3.28	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	08/11/23	12:04	12.45	--	--	15.61	3.16	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	08/16/23	11:45	11.27	--	--	15.61	4.34	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	08/25/23	9:45	12.80	--	--	15.61	2.81	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	08/29/23	10:02	12.25	--	--	15.61	3.36	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	09/07/23	14:54	9.62	--	--	15.61	5.99	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	09/14/23	10:08	11.60	--	--	15.61	4.01	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	09/19/23	7:05	11.43	--	--	15.61	4.18	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	09/28/23	9:45	11.32	--	--	15.61	4.29	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	10/05/23	11:36	10.26	--	--	15.61	5.35	11.61	No evidence of sheen/LNAPL was encountered.
MW-70R	10/13/23	16:54	9.49	--	--	15.61	6.12	11.61	No evidence of sheen/LNAPL was encountered.

Table 5. Summary of LNAPL Weekly Gauging
Progress Report No. 133
First Semi-Annual 2024 Groundwater Monitoring Report
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

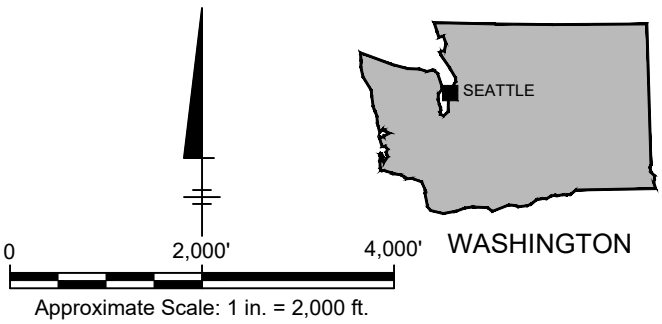
Notes:
amsl = above mean sea level
btoc = below top of casing.
hh:mm = hours:minutes
LNAPL = light non-aqueous phase liquid
"--" = not measured or not obtainable, no LNAPL signal produced by the electronic interface probe. Further details provided in the comments column as nee

Footnotes:
[1] If LNAPL is present, groundwater elevation is corrected per the formula: (Top of casing elevation - Depth to Groundwater) + (0.8 x LNAPL thickness)
[2] Elevation referenced to city of Seattle datum.
[3] Top of well screen elevation data from historic records.
[4] LNAPL is assessed using an NAPL-water interface probe. The electronic interface probe is placed at the depth where the instrument produces a signal indicating a fluid interface (LNAPL and groundwater interfaces produce distinct signals). The interface probe is then brought back to the surface of the well and the tip of the interface probe is inspected for any indication of LNAPL. If a LNAPL signal is produced or LNAPL is observed on the tip of the probe, a bailer is used to confirm the absence/presence of LNAPL.

Figures



REFERENCE: BASE MAP USGS 7.5. MIN. TOPO. QUAD., SEATTLE SOUTH AND SEATTLE NORTH, WASHINGTON, 2014.



FORMER UNOCAL SEATTLE MARKETING TERMINAL
SEATTLE, WASHINGTON

GROUNDWATER MONITORING REPORT
FIRST SEMI-ANNUAL 2024

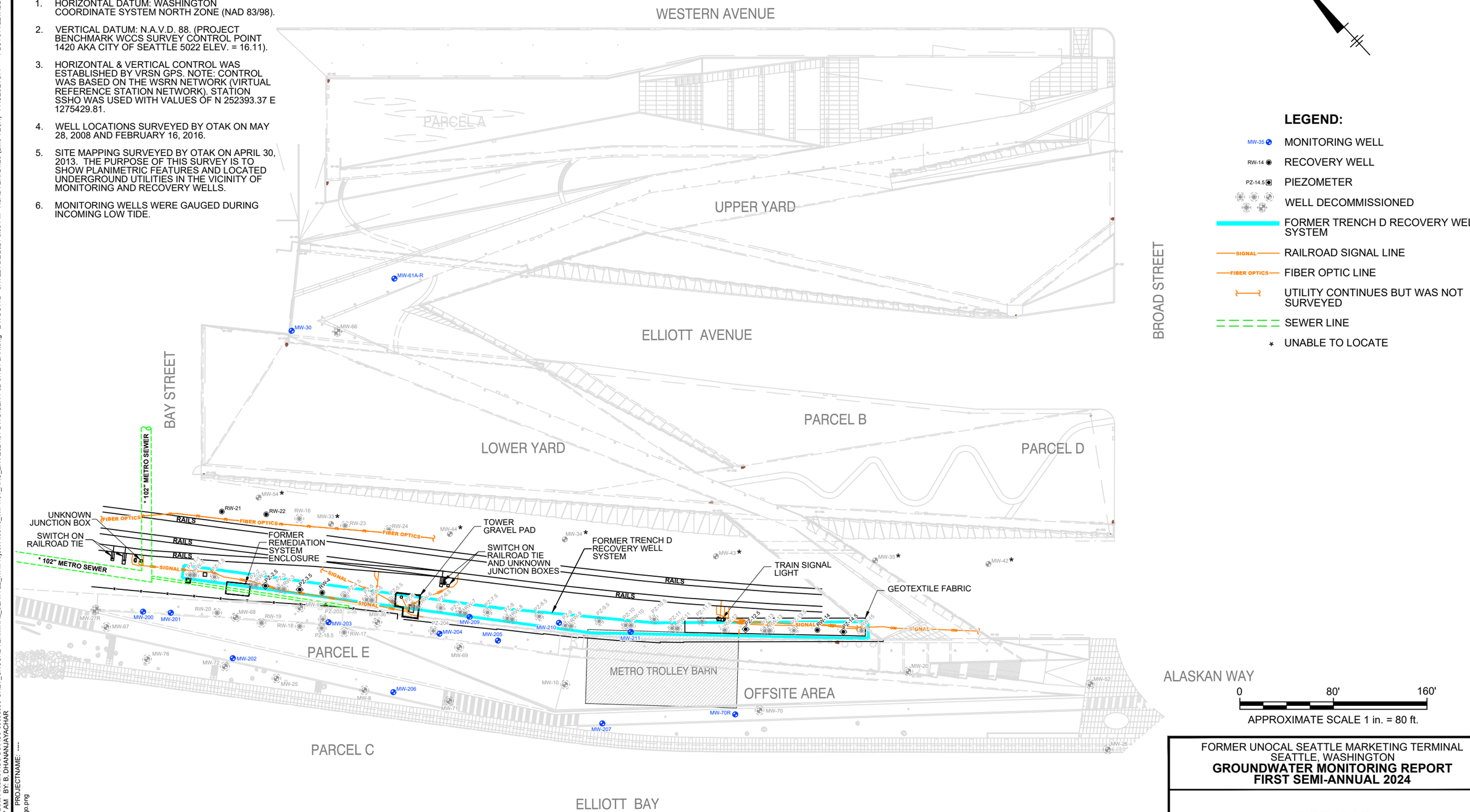
SITE LOCATION MAP

ARCADIS

FIGURE
1

NOTES:

1. HORIZONTAL DATUM: WASHINGTON COORDINATE SYSTEM NORTH ZONE (NAD 83/98).
2. VERTICAL DATUM: N.A.V.D. 88. (PROJECT BENCHMARK WCCS SURVEY CONTROL POINT 1420 AKA CITY OF SEATTLE 5022 ELEV. = 16.11).
3. HORIZONTAL & VERTICAL CONTROL WAS ESTABLISHED BY VRSN GPS. NOTE: CONTROL WAS BASED ON THE WSRN NETWORK (VIRTUAL REFERENCE STATION NETWORK). STATION SSHO WAS USED WITH VALUES OF N 252393.37 E 1275429.81.
4. WELL LOCATIONS SURVEYED BY OTAK ON MAY 28, 2008 AND FEBRUARY 16, 2016.
5. SITE MAPPING SURVEYED BY OTAK ON APRIL 30, 2013. THE PURPOSE OF THIS SURVEY IS TO SHOW PLANIMETRIC FEATURES AND LOCATED UNDERGROUND UTILITIES IN THE VICINITY OF MONITORING AND RECOVERY WELLS.
6. MONITORING WELLS WERE GAUGED DURING INCOMING LOW TIDE.



LEGEND:

- MW-35 — MONITORING WELL
- RW-14 — RECOVERY WELL
- PZ-14.5 — PIEZOMETER
- WELL DECOMMISSIONED
- FORMER TRENCH D RECOVERY WELL SYSTEM
- SIGNAL — RAILROAD SIGNAL LINE
- FIBER OPTICS — FIBER OPTIC LINE
- UTILITY CONTINUES BUT WAS NOT SURVEYED
- SEWER LINE
- * UNABLE TO LOCATE

0 80' 160'

APPROXIMATE SCALE 1 in. = 80 ft.

FORMER UNOCAL SEATTLE MARKETING TERMINAL
SEATTLE, WASHINGTON
GROUNDWATER MONITORING REPORT
FIRST SEMI-ANNUAL 2024

SITE MAP

ARCADIS

FIGURE **2**

NOTES:

1. HORIZONTAL DATUM: WASHINGTON COORDINATE SYSTEM NORTH ZONE (NAD 83/98).
2. VERTICAL DATUM: N.A.V.D. 88. (PROJECT BENCHMARK WCCS SURVEY CONTROL POINT 1420 AKA CITY OF SEATTLE 5022 ELEV. = 16.11).
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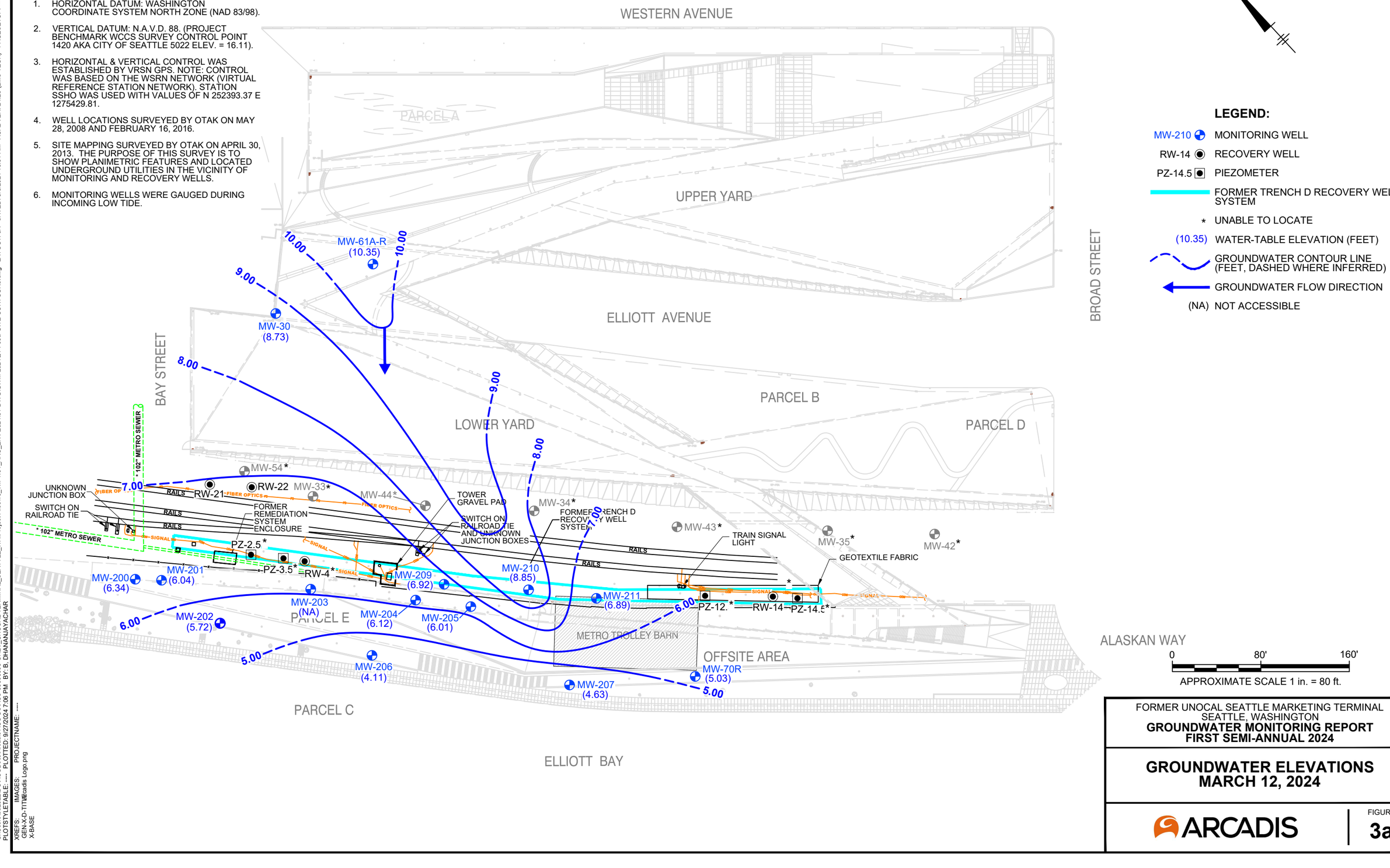
6. MONITORING WELLS WERE GAUGED DURING INCOMING LOW TIDE.



LEGEND:

- MW-210 — MONITORING WELL
- RW-14 — RECOVERY WELL
- PZ-14.5 — PIEZOMETER
- FORMER TRENCH D RECOVERY WELL SYSTEM
- * — UNABLE TO LOCATE
- (10.35) — WATER-TABLE ELEVATION (FEET)
- GROUNDWATER CONTOUR LINE (FEET, DASHED WHERE INFERRED)
- GROUNDWATER FLOW DIRECTION
- (NA) — NOT ACCESSIBLE

FORMER UNOCAL SEATTLE MARKETING TERMINAL
SEATTLE, WASHINGTON
GROUNDWATER MONITORING REPORT
FIRST SEMI-ANNUAL 2024

GROUNDWATER ELEVATIONS MARCH 12, 2024

ARCADIS

FIGURE **3a**

NOTES:

1. HORIZONTAL DATUM: WASHINGTON COORDINATE SYSTEM NORTH ZONE (NAD 83/98).
2. VERTICAL DATUM: N.A.V.D. 88. (PROJECT BENCHMARK WCCS SURVEY CONTROL POINT 1420 AKA CITY OF SEATTLE 5022 ELEV. = 16.11).
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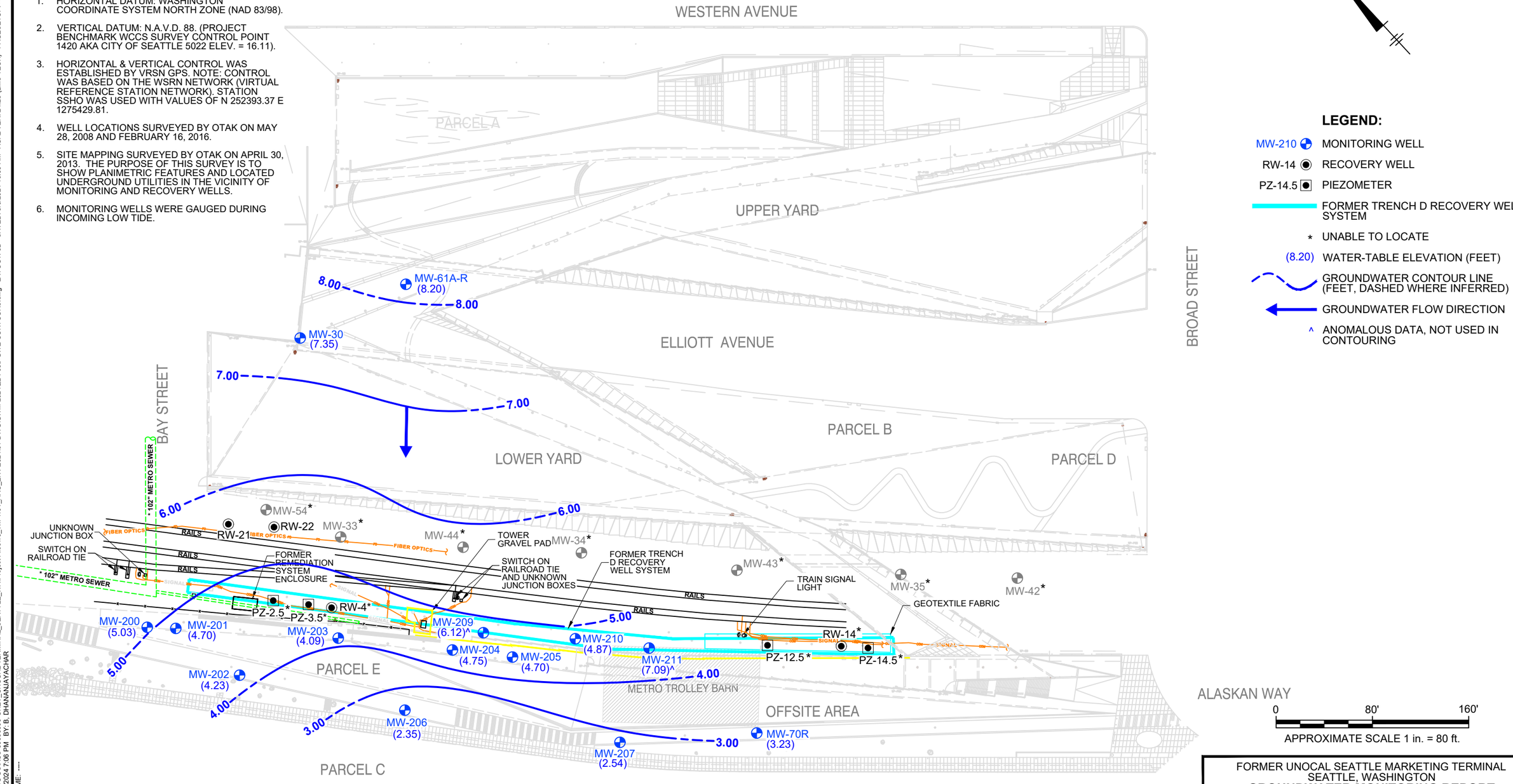
4. WELL LOCATIONS SURVEYED BY OTAK ON MAY 28, 2008 AND FEBRUARY 16, 2016.
5. SITE MAPPING SURVEYED BY OTAK ON APRIL 30, 2013. THE PURPOSE OF THIS SURVEY IS TO SHOW PLANIMETRIC FEATURES AND LOCATED UNDERGROUND UTILITIES IN THE VICINITY OF MONITORING AND RECOVERY WELLS.
6. MONITORING WELLS WERE GAUGED DURING INCOMING LOW TIDE.



LEGEND:

- MW-210 — MONITORING WELL
- RW-14 — RECOVERY WELL
- PZ-14.5 — PIEZOMETER
- FORMER TRENCH D RECOVERY WELL SYSTEM
- * UNABLE TO LOCATE
- (8.20) WATER-TABLE ELEVATION (FEET)
- GROUNDWATER CONTOUR LINE (FEET, DASHED WHERE INFERRED)
- GROUNDWATER FLOW DIRECTION
- ^ ANOMALOUS DATA, NOT USED IN CONTOURING

0 80' 160'

APPROXIMATE SCALE 1 in. = 80 ft.

FORMER UNOCAL SEATTLE MARKETING TERMINAL
SEATTLE, WASHINGTON
GROUNDWATER MONITORING REPORT
FIRST SEMI-ANNUAL 2024

GROUNDWATER ELEVATIONS JUNE 10, 2024

ARCADIS

FIGURE **3b**

NOTES:

1. HORIZONTAL DATUM: WASHINGTON COORDINATE SYSTEM NORTH ZONE (NAD 83/98).
2. VERTICAL DATUM: N.A.V.D. 88. (PROJECT BENCHMARK WCCS SURVEY CONTROL POINT 1420 AKA CITY OF SEATTLE 5022 ELEV. = 16.11).
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5. SITE MAPPING SURVEYED BY OTAK ON APRIL 30, 2013. THE PURPOSE OF THIS SURVEY IS TO SHOW PLANIMETRIC FEATURES AND LOCATED UNDERGROUND UTILITIES IN THE VICINITY OF MONITORING AND RECOVERY WELLS.

MW-30	
Date	6/12/2024
B	<0.30
T	<0.30
E	<0.40
X	<0.40
TPH-G	<0.043
TPH-D	<0.046 cn
TPH-O	<0.100 cn

MW-61 A-R	
Date	6/12/2024
B	<0.30 [<0.30]
T	<0.30 [<0.30]
E	<0.40 [<0.40]
X	<0.40 [<0.40]
TPH-G	0.350 [0.280]
TPH-D	0.140 [0.140]
TPH-O	<0.110 [<0.110]

MW-204	
Date	6/11/2024
B	<0.30
T	<0.30
E	<0.40
X	<0.40
TPH-G	0.500
TPH-D	0.140
TPH-O	<0.100

MW-209		
Date	3/12/2024	6/10/2024
B	<0.30	<0.30
T	0.30 J	<0.30
E	<0.40	<0.40
X	<0.40	<0.40
TPH-G	0.770 J B cn	0.230 J
TPH-D	0.089 J	<0.051
TPH-O	<0.110	<0.110

MW-205	
Date	6/11/2024
B	<0.30 [<0.30]
T	<0.30 [<0.30]
E	<0.40 [<0.40]
X	<0.40 [<0.40]
TPH-G	0.050 J [0.048 J]
TPH-D	<0.051 [<0.049]
TPH-O	<0.110 [<0.110]

MW-210		
Date	3/12/2024	6/10/2024
B	<0.30	<0.30 cn
T	<0.30	<0.30
E	<0.40	<0.40
X	<0.40	<0.40
TPH-G	<0.043	<0.043
TPH-D	<0.049	<0.046
TPH-O	<0.110	<0.100

MW-211		
Date	3/12/2024	6/10/2024
B	<0.30	<0.30
T	<0.30	<0.30
E	<0.40	<0.40
X	<0.40	<0.40
TPH-G	0.078 J B	<0.043
TPH-D	<0.048	0.061 J cn
TPH-O	<0.110	0.430 cn

MW-70R		
Date	3/12/2024	6/10/2024
B	<0.30 [<0.30]	<0.30 cn
T	<0.30 [<0.30]	<0.30
E	<0.40 [<0.40]	<0.40
X	<0.40 [<0.40]	<0.40
TPH-G	<0.043 F1 [<0.043]	<0.043
TPH-D	<0.051 [<0.050]	<0.046
TPH-O	<0.110 [<0.110]	<0.100

MW-201	
Date	6/11/2024
B	<0.30
T	<0.30
E	<0.40
X	<0.40
TPH-G	0.220 J cn
TPH-D	0.057 J cn
TPH-O	0.290 cn

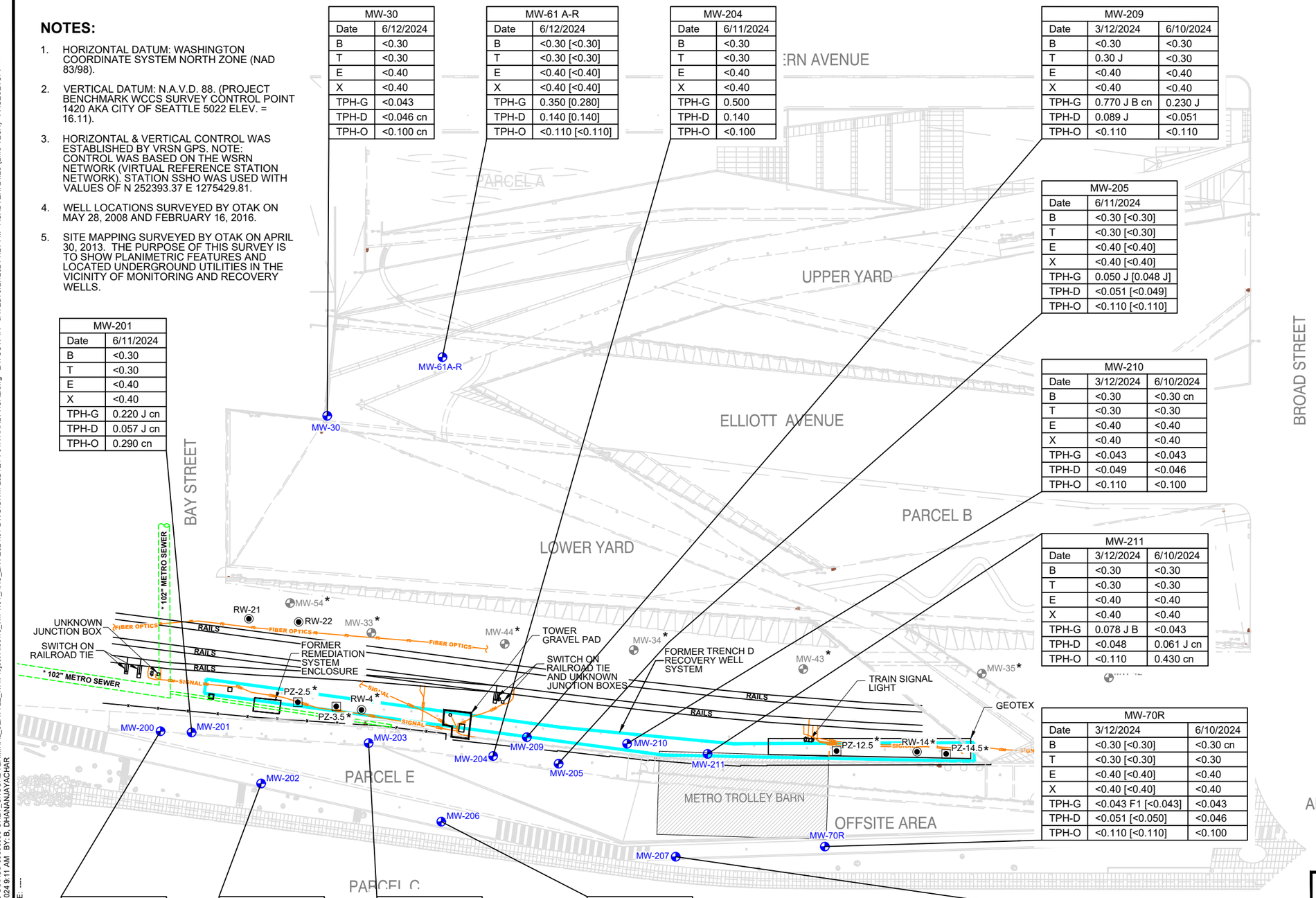
MW-200	
Date	6/11/2024
B	<0.30
T	<0.30
E	<0.40
X	<0.40
TPH-G	0.065 J
TPH-D	<0.053
TPH-O	<0.120

MW-202	
Date	6/11/2024
B	<0.30
T	<0.30
E	<0.40
X	<0.40
TPH-G	<0.043
TPH-D	<0.049
TPH-O	<0.110

MW-203	
Date	6/11/2024
B	<0.30
T	<0.30
E	<0.40
X	<0.40
TPH-G	<0.043
TPH-D	<0.045
TPH-O	<0.100

MW-206	
Date	6/11/2024
B	<0.30
T	<0.30
E	<0.40
X	<0.40
TPH-G	<0.043
TPH-D	<0.050
TPH-O	<0.110

MW-207	
Date	6/11/2024
B	<0.30
T	<0.30
E	<0.40
X	<0.40
TPH-G	<0.043
TPH-D	<0.047
TPH-O	<0.100



LEGEND:

- MW-210 — MONITORING WELL
- RW-14 — RECOVERY WELL
- PZ-14.5 — PIEZOMETER
- FORMER TRENCH D RECOVERY WELL SYSTEM
- * UNABLE TO LOCATE

SAMPLE LOCATION	
DATE	SAMPLE DATE
B	BENZENE
T	TOLUENE
E	ETHYLBENZENE
X	TOTAL XYLENES
TPH-G	TPH GASOLINE
TPH-D	TPH DIESEL
TPH-O	TPH HEAVY OIL

BTEX RESULTS REPORTED IN MICROGRAMS PER LITER (µg/L). TPH-G, TPH-D, AND TPH-O RESULTS REPORTED IN MILLIGRAMS PER LITER (mg/L).

TPH = TOTAL PETROLEUM HYDROCARBON

<0.30 = NOT DETECTED AT OR ABOVE THE MDL

F1 = MS AND/OR MSD RECOVERY EXCEEDS CONTROL LIMITS.

J = RESULT IS LESS THAN THE REPORTING LIMIT (RL) BUT GREATER THAN OR EQUAL TO THE METHOD DETECTION LIMIT (MDL) AND THE CONCENTRATION IS AN APPROXIMATE VALUE

cn = THE SURROGATE RECOVERY IN THE BLANKS (METHOD BLANK AND LABORATORY CONTROL SAMPLE) IS BELOW LOWER CONTROL LIMITS. SINCE THE RECOVERY FOR TARGET ANALYTES IN THE LABORATORY CONTROL SAMPLE IS WITHIN METHOD CONTROL LIMITS, THE DATA IS REPORTED.

B = COMPOUND WAS FOUND IN THE BLANK AND SAMPLE.

[ ] = DUPLICATE SAMPLE

0 80' 160'

APPROXIMATE SCALE 1 in. = 80 ft.

FORMER UNOCAL SEATTLE MARKETING TERMINAL
SEATTLE, WASHINGTON

GROUNDWATER MONITORING REPORT
FIRST SEMI-ANNUAL 2024

GROUNDWATER ANALYTICAL SUMMARY MAP MARCH AND JUNE, 2024

ARCADIS

FIGURE **4a**

NOTES:

1. HORIZONTAL DATUM: WASHINGTON COORDINATE SYSTEM NORTH ZONE (NAD 83/98).
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MW-30	
Date	6/12/2024
B(a)A	<0.010
B(a)P	<0.010
B(b)F	<0.010
B(k)F	<0.010
Chr	<0.010
D(a,h)A	<0.021
I(123cd)P	<0.021

MW-61 A-R	
Date	6/12/2024
B(a)A	<0.011 [<0.011]
B(a)P	<0.011 [<0.011]
B(b)F	<0.011 [<0.011]
B(k)F	<0.011 [<0.011]
Chr	<0.011 [<0.011]
D(a,h)A	<0.022 [<0.021]
I(123cd)P	<0.022 [<0.021]

MW-204	
Date	6/11/2024
B(a)A	<0.010
B(a)P	<0.010
B(b)F	<0.010
B(k)F	<0.010
Chr	<0.010
D(a,h)A	<0.020
I(123cd)P	<0.020

MW-209		
Date	3/12/2024	6/10/2024
B(a)A	<0.011	<0.011
B(a)P	<0.011	<0.011
B(b)F	<0.011	<0.011
B(k)F	<0.011	<0.011
Chr	<0.011	<0.011
D(a,h)A	<0.021	<0.022
I(123cd)P	<0.021	<0.022

MW-205	
Date	6/11/2024
B(a)A	<0.011 [<0.011]
B(a)P	<0.011 [<0.011]
B(b)F	<0.011 [<0.011]
B(k)F	<0.011 [<0.011]
Chr	<0.011 [<0.011]
D(a,h)A	<0.022 [<0.022]
I(123cd)P	<0.022 [<0.022]

MW-210		
Date	3/12/2024	6/10/2024
B(a)A	<0.011	<0.010
B(a)P	<0.011	<0.010
B(b)F	<0.011	<0.010
B(k)F	<0.011	<0.010
Chr	<0.011	<0.010
D(a,h)A	<0.022	<0.021
I(123cd)P	<0.022	<0.021

MW-211		
Date	3/12/2024	6/10/2024
B(a)A	<0.011	<0.011
B(a)P	<0.011	<0.011
B(b)F	<0.011	<0.011
B(k)F	<0.011	<0.011
Chr	<0.011	<0.011
D(a,h)A	<0.023	<0.022
I(123cd)P	<0.023	<0.022

MW-200	
Date	6/11/2024
B(a)A	<0.011 cn
B(a)P	<0.011 cn
B(b)F	<0.011 cn
B(k)F	<0.011 cn
Chr	<0.011 cn
D(a,h)A	<0.021 cn
I(123cd)P	<0.021 cn

MW-201	
Date	6/11/2024
B(a)A	<0.011
B(a)P	<0.011
B(b)F	<0.011
B(k)F	<0.011
Chr	<0.011
D(a,h)A	<0.022
I(123cd)P	<0.022

MW-202	
Date	6/11/2024
B(a)A	0.011 J
B(a)P	<0.011
B(b)F	<0.011
B(k)F	<0.011
Chr	<0.011
D(a,h)A	<0.022
I(123cd)P	<0.022

MW-203	
Date	6/11/2024
B(a)A	<0.010
B(a)P	<0.010
B(b)F	<0.010
B(k)F	<0.010
Chr	<0.010
D(a,h)A	<0.020
I(123cd)P	<0.020

MW-206	
Date	6/11/2024
B(a)A	<0.011
B(a)P	<0.011
B(b)F	<0.011
B(k)F	<0.011
Chr	<0.011
D(a,h)A	<0.021
I(123cd)P	<0.021

MW-207	
Date	6/11/2024
B(a)A	0.015 J
B(a)P	<0.011
B(b)F	<0.011
B(k)F	<0.011
Chr	<0.011
D(a,h)A	<0.022
I(123cd)P	<0.022

MW-70R		
Date	3/12/2024	6/10/2024
B(a)A	<0.012 [<0.011]	<0.010
B(a)P	<0.012 [<0.011]	<0.010
B(b)F	<0.012 [<0.011]	<0.010
B(k)F	<0.012 [<0.011]	<0.010
Chr	<0.012 [<0.011]	<0.010
D(a,h)A	<0.023 [<0.022]	<0.021
I(123cd)P	<0.023 [<0.022]	<0.021

LEGEND:

- MW-210 — MONITORING WELL
- RW-14 — RECOVERY WELL
- PZ-14.5 — PIEZOMETER
- FORMER TRENCH D RECOVERY WELL SYSTEM
- * UNABLE TO LOCATE

SAMPLE LOCATION	
DATE	SAMPLE DATE
B(a)A	Benzo(a)anthracene
B(a)P	Benzo(a)pyrene
B(b)F	Benzo(b)fluoranthene
B(k)F	Benzo(k)fluoranthene
Chr	Chrysene
D(a,h)A	Dibenzo(a,h)anthracene
I(123cd)P	Indeno(1,2,3-cd)pyrene

RESULTS REPORTED IN MICROGRAMS PER LITER (µg/L)

cPAH = CARCINOGENIC POLYNUCLEAR AROMATIC HYDROCARBONS

<0.021 = NOT DETECTED AT OR ABOVE THE METHOD DETECTION LIMIT (MDL)

J = RESULT IS LESS THAN THE REPORTING LIMIT (RL) BUT GREATER THAN OR EQUAL TO THE METHOD DETECTION LIMIT (MDL) AND THE CONCENTRATION IS AN APPROXIMATE VALUE

cn = THE SURROGATE RECOVERY IN THE BLANKS (METHOD BLANK AND LABORATORY CONTROL SAMPLE) IS BELOW LOWER CONTROL LIMITS. SINCE THE RECOVERY FOR TARGET ANALYTES IN THE LABORATORY CONTROL SAMPLE IS WITHIN METHOD CONTROL LIMITS, THE DATA IS REPORTED.

[ ] = DUPLICATE SAMPLE

0 80' 160'

APPROXIMATE SCALE 1 in. = 80 ft.

FORMER UNOCAL SEATTLE MARKETING TERMINAL
SEATTLE, WASHINGTON
GROUNDWATER MONITORING REPORT
FIRST SEMI-ANNUAL 2024

GROUNDWATER cPAH DATA MARCH AND JUNE, 2024

ARCADIS

FIGURE **4b**

Appendix A

Site History

SITE HISTORY

The site was operated by the Union Oil Company of California (Unocal) as a bulk fuel distribution facility from the early 1900s to approximately 1975. Leaded and unleaded gasoline, diesel, lube oil, motor oils and petroleum-based solvents (non-chlorinated) were stored at the site. In the 1980s, the above-ground site structures were demolished.

Chevron, on behalf of Unocal, is conducting cleanup of the site as required by Order on Consent DE88-N223 and Amendments 1 through 5. The initial Order on Consent was signed by Unocal and the Washington State Department of Ecology (Ecology) in December 1988. In July 1995, Amendment No. 4 was signed and contains cleanup targets and remedial action levels (RALs) for groundwater in the Upper Yard, Elliott Avenue, Lower Yard, and Offsite Area. Cleanup activities conducted by Unocal at the site included: an excavation with onsite treatment and offsite disposal of approximately 50,000 tons of soil from the Upper Yard; light non-aqueous phase liquid (LNAPL) recovery; and groundwater remediation (pump and treat) and excavation and disposal of approximately 45,000 tons of soil from Elliott Avenue and the Offsite Area.

In addition, Unocal excavated approximately 60,000 tons of soil exceeding the total petroleum hydrocarbon (TPH) RAL and removed and treated petroleum-containing groundwater (GeoEngineers, 1998). Petroleum-containing soils were typically excavated to depths of 15 to 20 feet below ground surface. The Lower Yard excavation was backfilled with clean fill material and moderately impacted petroleum-containing soils from the Upper and Lower Yards. The upper 95 percent confidence level of the mean for TPH concentrations remaining in these impacted Lower Yard soils used for backfill was below the RAL of 7,500 milligrams per kilogram (mg/kg) (GeoEngineers, 1998). Several feet of imported rock were placed at the base of the excavation. According to Unocal, the average TPH concentration in these backfill soils was approximately 1,000 mg/kg (SAM, 1999).

The Upper Yard and Lower Yard properties of the site were sold by Unocal to the Trust for Public Land for the Seattle Art Museum (SAM) in 1999. In 2004, SAM began construction for redevelopment of the property, including the Offsite Area (which is owned by the City of Seattle Parks and Recreation), as the Olympic Sculpture Park (OSP). SAM entered a Pre-Purchaser Agreement with Ecology prior to their purchase of the property. As part of the agreement, SAM submitted remediation design reports to Ecology for the OSP. As provided in a January 17, 2008, letter, Ecology indicated that the terms of the Pre-Purchaser Agreement were satisfied. A Stipulation and Order of Dismissal (No. 99-2-50226-4SEA) was issued on October 31, 2008.

In conjunction with the OSP construction in the Offsite Area, Unocal conducted a “hot spot” excavation from July to October of 2005. The goal of this remedial action was to remove a source area of petroleum hydrocarbons and LNAPL in soil. Approximately 4,435 tons of petroleum-impacted soils were removed during the “hot spot” excavation (GeoEngineers, January 2006). Following the soil removal, the excavation was backfilled and the surface was restored with asphalt pavement.

On October 4, 2009, Arcadis submitted the *Work Plan for LNAPL Mobility Assessment, Natural Attenuation Monitoring and Surfactant Application Pilot Testing* to Ecology (October 2009 Work Plan). The October 2009 Work Plan was prepared in response to a letter from Ecology to Chevron dated June 8, 2009, requesting that Chevron assess the monitoring well network, address options for active remediation in the Offsite Area, conduct several short-term multiphase extraction (MPE) events on monitoring well MW-204

and on wells where LNAPL is observed in the Elliott Avenue Area and the Offsite Area and to further evaluate unfiltered/filtered samples of carcinogenic polycyclic aromatic hydrocarbons (cPAHs). This October 2009 Work Plan outlined proposed activities to evaluate the monitoring well network, evaluate remedial alternatives for the site, and discussed the potential risk of cPAHs concentrations remaining in groundwater in the Offsite Area. Specific areas addressed included LNAPL located in the Elliott Avenue Area, LNAPL along the railroad tracks and dissolved-phase concentrations in the Offsite Area.

Ecology approved the October 2009 Work Plan, with specific comments, on November 16, 2009. Following meetings with stakeholders and Ecology, Arcadis submitted the *Revised Work Plan for LNAPL Mobility Assessment, Natural Attenuation Monitoring and Surfactant Application Pilot Testing* (January 2010 Revised Work Plan) to Ecology on January 19, 2010.

On December 8, 2009, Ecology submitted a letter to Chevron approving the cancellation of fourth quarter 2009 groundwater compliance monitoring. In addition, Ecology recommended conducting semi-annual groundwater compliance monitoring for 2010 and quarterly monitoring for visual inspection, measurement and removal (if applicable) at monitoring wells MW-30 and MW-61A-R and recovery wells RW-1 through RW-3 and RW-21. Monitoring well MW-61A-R is a replacement for well MW-61A, which was originally an Upper Yard monitoring well. However, MW-61A-R is located in the Elliott Avenue right-of-way (ROW) and is currently referred to as an Elliott Avenue Area monitoring well.

On March 19, 2010, Ecology approved the January 2010 Revised Work Plan with additional specific comments. Following additional meetings, Arcadis submitted the *Addendum to the Revised Work Plan for LNAPL Mobility Assessment, Natural Attenuation Monitoring and Surfactant Application Pilot Testing* (May 2010 Addendum to the Revised Work Plan) on May 3, 2010, to address the additional stakeholder and Ecology comments on the January 2010 Revised Work Plan. On May 18, 2010, Ecology approved the May 2010 Addendum to the Revised Work Plan via electronic mail. Field work to implement the May 2010 Addendum to the Revised Work Plan began in the summer of 2010.

Arcadis submitted the *2010 Summary Report and Risk Evaluation* on February 1, 2011 with the following recommendations and responses from Ecology:

- Continue quarterly gauging and semi-annual groundwater monitoring of wells MW-30, MW-61A-R, RW-3 and RW-21. Ecology concurred; both gauging and groundwater monitoring are ongoing for monitoring wells MW-30 and MW-61A-R. Recovery wells RW-3 and RW-21 were decommissioned with Ecology approval in June 2014 (discussed below).
- Continue semi-annual groundwater monitoring of wells MW-200 through MW-207. Ecology concurred: semi-annual groundwater monitoring is ongoing.
- Remove dissolved lead from the list of site constituents of concern. Dissolved lead has not been detected at the site since November 2007 and monitoring wells in the Offsite Area have at least 12 consecutive monitoring events without a dissolved-lead concentration exceedance. The few concentrations that were detected remained more than two orders of magnitude below the site RAL. Ecology concurred: effective second semi-annual 2011 monitoring event, lead is no longer a constituent of concern.
- Abandon piezometers PZ-61A-R, PZ-203, and PZ-204 in place. Ecology recommended maintaining and gauging piezometers through quarterly gauging during next two semi-annual monitoring events,

then to re-evaluate. Piezometers PZ-61A-R, PZ-203, and PZ-204 were decommissioned in June 2014 with the approval of Ecology (discussed below).

- Abandon Trench D extraction wells RW-1, RW-2, RW-5 through RW-13 and RW-15 in place. Ecology recommended maintaining and quarterly gauging of Trench D extraction wells through the next two semi-annual monitoring events, then to re-evaluate. Quarterly gauging of extraction wells RW-1, RW-2, RW-5 through RW-13 and RW-15 for two additional semi-annual monitoring events was fulfilled. The Trench D extraction wells were decommissioned in June 2014, as discussed below.
- The LNAPL occasionally observed in wells RW-3, RW-21 or MW-30 is not mobile. Arcadis does not recommend further remedial operations on these wells unless quarterly gauging activities indicates a change in the volume or type of LNAPL present in the wells compared to historical observations. Ecology concurred and recommended continuing quarterly gauging through two semi-annual monitoring events and then to re-evaluate. Quarterly gauging of RW-3, RW-21 and MW-30 for two semi-annual monitoring events was fulfilled. Recovery wells RW-3 and RW-21 were decommissioned in June 2014 with the approval of Ecology (discussed below).
- Add monitoring well MW-205 to the quarterly gauging program. Ecology concurred: MW-205 was gauged quarterly as part of the quarterly gauging program ending in 2014.
- If LNAPL is observed and is recoverable, submit a sample for chemical testing and possible mobility parameter analysis. Ecology concurred. Recoverable thicknesses of LNAPL were observed in Trench D wells PZ-4.5, PZ-6, PZ-10.5, PZ-11.5, and PZ-13 in February 2014. Samples of the LNAPL were submitted for chemical analysis and in some cases, mobility parameter analysis. The results of these analyses were submitted in the Trench D Recovery System Decommissioning Summary and Recommendation for Replacement Well Installation" (Arcadis July, 2014).

In December 2012, Chevron submitted a revised Draft Amendment to the Order to Ecology. The proposed Amendment, which was prepared with the input of the City of Seattle and the SAM, recommended abandonment of the Trench D recovery wells and piezometers, installation of up to five replacement wells along the Trench D area, and additional groundwater monitoring. At the request of Ecology, Arcadis submitted the "Work Plan for Decommissioning Trench D Recovery System and Three Piezometers Installed in 2010" (Arcadis, May 2013). This work plan describes a scope of work to decommission remaining wells and equipment associated with Trench D, as well as the piezometers installed as part of the 2010 site assessment activities. This work plan was approved by Ecology in email correspondence dated July 29, 2013.

The decommissioning work was conducted in two phases. Phase I was conducted from February 21 to 25, 2014 and included the following activities:

- Prepared the site to allow access for equipment and vehicles.
- Removed the remediation system compound and equipment.
- Attempted to locate missing piezometers and recovery wells.
- Gauged recovery wells and piezometers.
- Received variance approval for well abandonment.

Separate LNAPL sampling events were completed between the two phases of decommissioning work on February 26 and May 5, 2014.

Phase II was conducted from June 9 to 13, 2014 and included the following activities:

- Gauged recovery wells and piezometers.
- Vacuum extraction of fluids from each recovery well and piezometer located along Trench D.
- Decommissioned recovery wells, piezometers, 2-inch lateral remediation system piping, and a 6-foot long by 4-foot wide recovery vault where the piping entered the former remediation system.
- Decommissioned of piezometers installed in 2010 (PZ-61A-R, PZ-203, and PZ-204).
- Disposed of waste materials generated by the above activities.

A report of the Trench D decommissioning activities, LNAPL summary and work plan for the installation of the replacement monitoring wells was submitted under separate cover “Trench D Recovery System Decommissioning Summary and Recommendation for Replacement Well Installation” (Arcadis July, 2014).

At the request of Ecology, Arcadis submitted a work plan for the installation of up to six additional monitoring wells in the Offsite Area. The work plan was approved by Ecology in correspondence dated May 29, 2015. The work plan was implemented in January 2016. A report documenting installation activities was submitted to Ecology on April 29, 2016.

REMEDIAL ACTIVITIES

Offsite Area Remediation System

A groundwater extraction system was installed in the offsite area in 1989. The system included 24 extraction wells located along the BNSF right-of-way. In November and December 2006, the underground piping was severely damaged during the construction of the OSP, rendering the system inoperable.

From 1989 to November 2006, approximately 29,244,966 gallons of water and 4,809 gallons of LNAPL were recovered and treated by the groundwater extraction system. The extraction system last recovered LNAPL in fourth quarter 2004; no LNAPL was recovered during the last two years of operation. The associated Trench D recovery wells were gauged semi-annually until they were decommissioned in June 2014. The oil water separator was rehabilitated in May 2010 for use in disposal of purge water generated from routine groundwater sampling events and for well redevelopment and hydraulic conductivity testing approved by Ecology. The oil water separator was decommissioned during the June 2014 Trench D decommissioning activities and the King County Major Discharge Authorization Number 529-04 was discontinued.

Throughout the third and fourth quarter of 2011, monitoring well MW-205 was gauged on a bi-weekly (every other week) basis. During these events, no LNAPL or sheen was observed. Gauging was reduced to quarterly as of the first semi-annual 2012 reporting period at this location and continued on a quarterly basis since.

Upper Yard and Elliott Avenue LNAPL Removal

Monitoring well MW-61A-R was re-developed on September 3, 2008 using a disposable bailer and a vacuum truck to remove sediment and LNAPL which may have accumulated in the well and/or sand pack. Approximately ten well volumes of groundwater and residual LNAPL were removed. The re-development water and recovered LNAPL were collected in the vacuum truck and transported to an approved facility for recycling. The amount of LNAPL recovered was not quantified. Mobile multi-phase extraction (MPE) was initiated in August 2009 in monitoring wells MW-30 and MW-61A-R. Observations made during MPE operations indicate that short term MPE does not influence the groundwater table and subsurface vapor flow. MPE was determined to be an ineffective method to address the remaining LNAPL and dissolved-phase impacts at the site due to the minimal remaining hydrocarbon impacts at the site and associated low MPE mass removal rate.

To assess persistent measurable LNAPL observed during groundwater monitoring, a surfactant-enhanced LNAPL recovery pilot test was performed on monitoring well MW-61A-R in July 2010. Approximately 200 gallons of surfactant were injected into MW-61A-R. The surfactant solution was allowed to remain in the formation for approximately 24 hours and then approximately 900 gallons of fluids were extracted. Monitoring was completed weekly for the first month after extraction. After weekly monitoring was completed, monthly monitoring was initiated and quarterly monitoring is ongoing. A complete summary of the surfactant-enhanced LNAPL recovery pilot test was submitted in the *2010 Summary Report and Risk Evaluation* on February 1, 2011.

Lower Yard LNAPL Recovery

LNAPL was observed in recovery well RW-21 during the September 2013 groundwater monitoring event (visually observed on oil/water interface probe, a measurable thickness was not present). This recovery well, as well as the downgradient Trench D recovery wells (RW-1 through RW-3), were included in the quarterly gauging program. Manual LNAPL recovery from RW-21 had been unsuccessful due to the highly-viscous nature of the LNAPL. LNAPL has not been observed in recovery wells RW-1 and RW-2 since the gauging program was implemented and has not been observed in RW-3 since the first semi-annual groundwater monitoring event of 2013. Wells RW-1, RW-2 and RW-21 were decommissioned in 2014 during the Trench D decommissioning activities.

REFERENCES

Arcadis. 2009. Low-Flow Groundwater Purging and Sampling Procedures for Monitoring Wells. March 9.

Arcadis. 2013. Work Plan for Decommissioning Trench D Recovery System and Three Piezometers Installed in 2010. May 31.

Arcadis. 2014. Trench D Recovery System Decommissioning Summary and Recommendation for Replacement Well Installation. July.

Arcadis. 2015. Work Plan for Additional Well Installation in Former Trench D Area and Offsite Area, Former Unocal Seattle Marketing Terminal. May.

GeoEngineers, 1998. Final Cleanup Report – Lower Yard, Unocal Former Seattle Marketing Terminal Property. September 23.

Seattle Art Museum (SAM). 1999. Draft Cleanup Action Plan, Former Unocal Seattle Marketing Property. October 6. Numbered Heading Level 2

Appendix B

Technical Guidance Instructions

TGI – Low-Flow Groundwater Purging and Sampling Procedures for Monitoring Wells

Rev: 3

Rev Date: April 5, 2023

Version Control

Issue	Revision No.	Date Issued	Page No.	Description	Reviewed By
	0	October 12, 2018	All	Updated and re-written as TGI with new branding and content	Marc Killingstad
	1	May 8, 2020	Pages 5, 10-11	Added clarification/details for equipment requirements and procedure steps based on USEPA guidance	Marc Killingstad
	2	April 5, 2022	All	Updated to new branding template and minor edits	Marc Killingstad
	3	April 5, 2023	All	Annual review completed by SME. Document version number and document date updated.	Marc Killingstad

Approval Signatures

Prepared by:	Xuan Xu	4/5/2023
	Xuan Xu (Preparer)	Date
Reviewed by:		4/5/2023
	Marc Killingstad (Subject Matter Expert)	Date

1 Introduction

Groundwater samples are collected from monitoring wells to evaluate groundwater quality. The protocol presented in this Technical Guidance Instruction (TGI) describes the procedures to purge monitoring wells and collect groundwater samples using the low flow purging/sampling methodology. This protocol has been developed in accordance with the United States Environmental Protection Agency (USEPA) Region I *Low Stress (Low Flow) Purging and Sampling Procedures for the Collection of Groundwater Samples from Monitoring Wells* (EQASOP-GW4; September 19, 2017).

2 Intended Use and Responsibilities

This document describes general and/or specific procedures, methods, actions, steps, and considerations to be used and observed by Arcadis staff when performing work, tasks, or actions under the scope and relevancy of this document. This document may describe expectations, requirements, guidance, recommendations, and/or instructions pertinent to the service, work task, or activity it covers.

It is the responsibility of the Arcadis Certified Project Manager (CPM) to provide this document to the persons conducting services that fall under the scope and purpose of this procedure, instruction, and/or guidance. The Arcadis CPM will also ensure that the persons conducting the work falling under this document are appropriately trained and familiar with its content. The persons conducting the work under this document are required to meet the minimum competency requirements outlined herein, and inquire to the CPM regarding any questions, misunderstanding, or discrepancy related to the work under this document.

This document is not considered to be all inclusive nor does it apply to all projects. It is the CPM's responsibility to determine the proper scope and personnel required for each project. There may be project- and/or client- and/or state-specific requirements that may be more or less stringent than what is described herein. The CPM is responsible for informing Arcadis and/or Subcontractor personnel of omissions and/or deviations from this document that may be required for the project. In turn, project staff are required to inform the CPM if or when there is a deviation or omission from work performed as compared to what is described herein.

In following this document to execute the scope of work for a project, it may be necessary for staff to make professional judgment decisions to meet the project's scope of work based upon site conditions, staffing expertise, regulation-specific requirements, health and safety concerns, etc. Staff are required to consult with the CPM when or if a deviation or omission from this document is required that has not already been previously approved by the CPM. Upon approval by the CPM, the staff can perform the deviation or omission as confirmed by the CPM.

3 Scope and Application

Both filtered and unfiltered groundwater samples may be collected using this low-flow sampling method. Filtered samples will be obtained using a 0.45-micron disposable filter. Project teams will evaluate the last time the monitoring wells were developed and determine if additional development might be necessary. Water samples will not be taken immediately following well development. Sufficient time will be allowed for the groundwater flow regime in the vicinity of the monitoring well to stabilize and to approach chemical equilibrium with the well

construction materials. This lag time will depend on site conditions and methods of installation but often exceeds one week.

4 Personnel Qualifications

Arcadis field sampling personnel will have completed or are in the process of completing site-specific training as well as having current health and safety training as required by Arcadis, client, or regulations,such as 40-hour HAZWOPER training and/or OSHA HAZWOPER site supervisor training. Arcadis personnel will also have current training as identified in the site-specific Health and Safety Plan (HASP) which may include first aid, cardiopulmonary resuscitation (CPR), Blood Borne Pathogens (BBP) as needed. The HASP will also identify any access control requirements.

Prior to mobilizing to the field, the groundwater sampling team will review and be thoroughly familiar withrelevant site-specific documents including but not limited to the task-specific work plan or field implementation plan (FIP)/field sampling plan, Quality Assurance Project Plan (QAPP), HASP, historical information, and other relevant site documents.

Arcadis field sampling personnel will be knowledgeable in the relevant processes, procedures, and TGIs and possess the demonstrated required skills and experience necessary to successfully complete the desired field work. Additionally, the groundwater sampling team will review and be thoroughly familiar with documentation provided by equipment manufacturers and become familiar with the operation of (i.e., hands-on experience) all equipment that will be used in the field prior to mobilization.

5 Equipment List

Specific to this activity, the following materials (or equivalent) will be used:

- Site-specific HASP and health and safety documents identified in the HASP
- Field Implementation Plan (FIP) that includes site map, well construction records, sampling plan (sample analyses, sample volume required, and sample holding time), and prior groundwater sampling records (if available)
- Field notebook and/or smart device (phone or tablet)
- Low-flow sampling field forms (**Attachment A**)
- Appropriate personal protective equipment (PPE) (e.g., latex or nitrile gloves, safety glasses, etc.)as specified in the HASP
- Well keys and other tools to remove manhole covers (manual torque wrench with 9/16” socket and flat head screwdriver typical)
- Photoionization detector (PID) or Flame ionization detector (FID) (as appropriate, depending onsite-specific constituents of concern)
- Electronic water-level indicator (e.g., Solinist Model 101) or oil/water interface probe with 0.01- foot accuracy (oil/water as appropriate, note that sampling will not be performed when sheen orlight non-aqueous phase liquid [LNAPL] is present)
- Down-hole multi-parameter water-quality sonde (temperature/pH/specific conductivity/oxidationreduction [ORP]/turbidity/dissolved oxygen) meter coupled with flow-through-cell for measurements, for example:

- YSI 6-Series Multi-Parameter Instrument
- Horiba U-22 Multi-Parameter Instrument.
- Hydrolab Series 3 or Series 4a Multiprobe and Display.

NOTE: *Transparent, small volume flow-through-cells (e.g., 250 milliliters or less) are preferred as they allow for easy detection of air bubbles and sediment buildup in the cell, which can interfere with the monitoring instrument probes. A small volume cell also allows for quick turnover of water in the cell between measurements of the indicator field parameters. It is recommended to use a flow-through-cell and monitoring probes from the same manufacturer and model to avoid incompatibility between the probes and flow-through-cell.*

- Plastic sheeting (e.g., Weatherall Visqueen) to protect all down-hole sampling equipment from contact with potential sources of contamination.
- Decontamination equipment
  - Non-phosphate laboratory soap (Alconox or equivalent), brushes, and clean buckets, and/or clean wash tubs—new buckets or tubs will be purchased if it cannot be determined if the present items are clean
  - Distilled or de-ionized water for equipment decontamination
- Indelible ink pen
- 150-foot measuring tape (or sufficient length for the maximum site depth requirement)
- Sampling pump, which may consist of one or more of the following:
  - Submersible pump (e.g., Grundfos Redi-Flo 2)
  - Peristaltic pump (e.g., ISCO Model 150)
  - Bladder pump (e.g., Marschalk System 1, QED Micropurge, Geotech)
- Appropriate controller and power source for pump:
  - Submersible and peristaltic pumps require electric power from either a generator or a deep cell battery
  - Submersible pumps such as Grundfos require a pump controller to run the pump
  - Bladder pumps require a pump controller and a gas source (e.g., air compressor or compressed N_2 or CO_2 gas cylinders)
- Teflon® tubing or Teflon®-lined polyethylene tubing of an appropriate size for the pump being used
  - For peristaltic pumps, dedicated Tygon® tubing (or other type as specified by the manufacturer) will be used through the pump apparatus
  - Teflon® will not be used when sampling for per- and polyfluoroalkyl substances (PFAS)
- Graduated cylinder and stopwatch or other device to measure time to determine pumping rate
- Appropriate water sample containers (supplied by the laboratory)
- Appropriate blanks (trip blank supplied by the laboratory)
- Sample labels and Chain-of-Custody forms (COC)
- 0.45-micron disposable filters (if field filtering is required)

- A supplemental turbidity meter (e.g., Horiba U-10, Hach 2100P, LaMotte 2020) may be required for specific projects and will be specified in the project FIP/ work plan and the kick-off notes.
    - If used, in-line 'T' and valve allows for collection of water for turbidity measurements before the pump discharge enters the flow-through cell

NOTE: *The maintenance requirements for the above equipment generally involve decontamination or periodic cleaning, battery charging, and proper storage, as specified by the manufacturer. For operational difficulties, the equipment will be serviced by a qualified technician.*

6 Cautions

Different USEPA regions and/or state regulatory agencies may stipulate deviations from this document. Itis the responsibility of the Project Team (Project Manager and Technical Lead) to be fully aware of the requirements from the applicable regulatory framework.

Weather

- If heavy precipitation occurs, and no cover over the sampling area and monitoring well can be erected, sampling may be discontinued until adequate cover is provided. Rainwater could compromise groundwater samples.
- Avoid extreme weather situations. Be aware that thermal currents and vertical mixing of cold and warm water inside the well casing could create a convection cell within the well and compromise data collection (e.g., biological mechanisms).
    - Direct sunlight and hot ambient temperatures may cause the groundwater in the tubing orflow-through-cell to heat up and de-gas. This may result in the loss of volatile organic compounds (VOCs) and dissolved gases. Shade the equipment from direct sunlight, keep the tubing as short as possible and avoid the hottest times of the day.
    - Sampling during freezing conditions may adversely impact the data quality objectives. USEPA recommends low-flow sampling be conducted at air temperatures above 32°F (0°C) or taking special precautions to prevent groundwater from freezing in the equipment.

Cross-Contamination

- To mitigate potential cross-contamination, groundwater samples are to be collected in a pre- determined order from least impacted to impacted based on previous analytical data. If no analytical data are available, collect samples in order of up-gradient, then furthest down-gradient tosource area locations.
- Note that permanent markers could introduce volatile constituents into the samples*; therefore, indelible ink is recommended* to be used for labels on sample containers or sample coolers.
- When using a gasoline generator, this power source will be set-up at least 30 feet downwind from the well to avoid exhaust fumes to contaminate samples.

Pumps

- Preferred methods of extracting groundwater are adjustable rate, submersible pumps - such as centrifugal pumps or bladder pumps – constructed of stainless steel or polytetrafluoroethylene (PTFE, i.e., Teflon®). However, *PTFE will not be used when sampling for per- and polyfluoroalkyl substances (PFAS). PTFE could contain PFAS*.

- When using a bladder pump for collecting VOCs and dissolved gases, “best practice” is to set-up the pump to deliver sufficient water to fill a 40 mL VOC vial.
- The use of peristaltic pumps will be based on the type of data to be collected. *Because the use a peristaltic pump can result in de-gassing of VOC and / or dissolved gases from groundwater, a different type of pump will be considered if these compounds are of concern.*
- *Manual or motor driven inertial pumping devices are not recommended because they cause greater disturbance during purging and pumping than regular pumps and are less easily controlled. This could cause a higher degree of data variability.*

Tubing

- When sampling for VOCs, SVOCs, pesticides, PCBs and inorganics, use of PTFE (Teflon®) or PTFE-lined tubing is preferred. However, PTFE tubing will not be used when sampling for PFAS.
- PVC, polypropylene or polyethelene tubing may be used when sampling for metals or other inorganics.
- Tubing with inside diameters of 1/4 or 3/8 inch is recommended because this will help ensure tubing remains water filled when operating at very low pumping rates.

General Precautions

- Store and/or stage empty and full sample containers and coolers out of direct sunlight.
- It may be necessary to field filter the groundwater for some parameters (e.g., metals) during collection, depending on preservation, analytical method, and project quality objectives. The task-kick-off notes and the FIP/work plan will list the samples that require field filtering.
- Be careful not to overtighten lids with Teflon® liners or septa (e.g., 40 mL vials). Over-tightening can cause the glass to shatter or impair the integrity of the Teflon® seal.

7 Health and Safety Considerations

The HASP will be followed, as appropriate, to ensure the safety of field personnel.

Appropriate personal protective equipment (PPE) will be always worn in line with the task and the site-specific HASP.

Review all site-specific and procedural hazards as they are provided in the HASP, and review Job Safety Analysis (JSA) documents in the field each day prior to beginning work.

Access to wells may expose field personnel to hazardous materials such as contaminated groundwater or non-aqueous phase liquid (NAPL) (e.g., oil). Other potential hazards include pressurized wells, stinging insects that may inhabit well heads, other biologic hazards (e.g. ticks in long grass/weeds around well head), and potentially the use of sharp cutting tools (scissors, knife)—open well caps slowly and keep face and body away to allow to vent any built-up pressure; only use non-toxic peppermint oil spray for stinging insect nests; review client-specific health and safety requirements, which may preclude the use of fixed/folding-blade knives, and use appropriate hand protection.

Generators and cord and plug equipment will employ an overcurrent protection device such as an integrated ground fault circuit interrupter (GFCI) cord. Grundfos pump controllers will not run properly with a GFCI, so the power source will be equipped with other overcurrent protection means.

Overtightening of lids with Teflon® liners can cause the glass to shatter and create a risk for hand injuries.

8 Procedure

Field personnel will set up and perform low-flow sampling in accordance with the following procedures.

1. Review FIP and groundwater sampling records from previous sampling events (if available) prior to mobilization to estimate the optimum pumping rate and anticipated drawdown for each well to perform sampling as efficiently as possible (i.e., reach a stabilized pumping condition).
2. Calibrate field instruments according to manufacturer procedures for calibration and record calibration procedure and results in field log.
3. All equipment will either be new or decontaminated in accordance with appropriate guidance document *(TGI – Groundwater and Soil Sampling Equipment Decontamination)* prior to use.
4. Visually inspect the well to ensure that it is undamaged, properly labeled and secured
   a. Damage or other conditions that may affect the integrity of the well will be recorded in the Field Activity Daily Log and brought to the attention of the designated Field Manager and/or Project Manager
   b. Record well construction and conditions on the Low-Flow Sampling Field Form **(Attachment A)**.
5. Place clean plastic sheeting on the ground near the well to keep monitoring and sampling equipment off the surface unless the equipment is elevated above the ground (e.g., on a table).
6. Open the well cover while standing upwind of the well. Remove the well cap and place it on the plastic sheeting. If appropriate or required for site-specific conditions, insert the photoionization detector (PID) probe approximately 4 to 6 inches into the casing or the well headspace and cover it with a gloved hand. Record the PID reading in the field log. Perform air monitoring in the breathing zone according to the HASP and/or JSA.
7. Measure and record the initial depth to groundwater prior to placing the pumps.
8. Prepare and install the pump in the well.

   NOTE: *Groundwater will be purged from the wells using an appropriate pump. If the depth to water is below the sampling range of a peristaltic pump (approximately 25 feet below ground surface), a submersible or bladder pump will be used, provided that the well is constructed with a casing diameter of at least two (2) inches (the minimum well diameter capable of accommodating such pumps). For smaller diameter wells, where the depth to water is below the sampling range of a peristaltic pump, alternative sampling methods (i.e., bailing or small diameter bladder pumps) will be used to purge and sample the groundwater. Bladder pumps are preferred over peristaltic and submersible pumps to prevent volatilization if sampling of VOCs and/or dissolved gasses is required. Purge water will be collected and containerized according to the direction of the project team.*

   a. For submersible and non-dedicated bladder pumps, decontaminate the pump according to site decontamination procedures. Non-dedicated bladder pumps will require a new bladder and attachment of an air-line, sample discharge line, and safety cable prior to placement in the well. Attach the air-line tubing to the air-port on the top of the bladder pump. Attach the sample discharge tubing to the water port on the top of the bladder pump. Take care not to reverse the air and discharge tubing lines during bladder pump setup, as this could result in bladder failure or rupture. Attach and secure a safety cable to the eyebolt on the top of pump (if present, depending on pump model used). Slowly lower the pump, safety cable, tubing, and electrical lines into the well to a depth corresponding to the approximate center of the saturated screen section of the well. Avoid twisting

and tangling of safety cable, tubing, and electrical lines while lowering the pump into the well; twisted and tangled lines could result in the pump becoming stuck in the well casing. Also, make sure to keep tubing and lines from touching the ground or other surfaces while introducing them into the well, as this could lead to unintended contamination.

b. If using a bladder pump, connect the air-line to the pump controller output port. The pump controller will be connected to a supply line from an air compressor or compressed gas cylinder using an appropriate regulator and air hose. Tighten the regulator connector onto the gas cylinder (if used) to prevent leaks. Teflon® tape may be used on the threads of the cylinder to provide a tighter seal. Once the air compressor or gas cylinder is connected to the pump controller, turn on the compressor or open the valve on the cylinder to begin the gas flow. Turn on the pump controller power (if an on/off switch is present) and verify that all batteries are charged and fully functioning before starting the pump.

c. If a peristaltic pump is being used, slowly lower the sampling tubing into the well to a depth corresponding to the approximate center of the saturated screen section of the well. The pump intake or sampling tube must be kept at least two (2) feet above the bottom of the well to prevent mobilization of any sediment present in the bottom of the well.

d. If using an in-line 'T' and valve, install between pump discharge water line and the bottom inlet port of the flow-through cell. Attach a short piece of tubing to the outlet. This set-up will be used to collect samples for turbidity readings.

9. Connect the pump discharge water line to the bottom inlet port on the flow-through cell connected to the multi-parameter water-quality sonde and make sure to record equipment/instrument identification (manufacturer and model number).

10. Before starting the pump, ensure that the water level inside the well has stabilized (i.e., measure the water level multiple times after deploying the pump in the well).

11. Start pumping the well at 200 to 500 milliliters (mL) per minute (or at lower site-specific rate if specified) and adjust the pumping rate to cause little or no water level drawdown in the well (less than 0.3 feet below the initial static depth to water measurement): the water level should stabilize, however, this is not always possible.

12. If the well diameter is of sufficient size, measure the water level every 3 to 5 minutes (or as appropriate, lower flow rates may require longer time between readings) during pumping.

13. Maintain a steady flow rate to the extent practicable and do not break pump suction or cause entrainment of air in the sample.

14. Record pumping rate adjustments and depths to water.

    If necessary, reduce pumping rates to the minimum capabilities of the pump to avoid pumping the well dry and/or to stabilize indicator parameters; if the recharge rate of the well is very low, use alternative purging techniques, which will vary based on the well construction and screen position.

    For wells screened across the water table, the well may be pumped dry, and sampling can commence as soon as the volume in the well has recovered sufficiently to permit collection of samples.

    For wells screened entirely below the water table, the well can be pumped until a stabilized level (which may be greater than the maximum displacement goal of 0.3 feet) is maintained and monitoring for stabilization of field indicator parameters can commence; if a lower stabilization level cannot be

maintained, the well may be pumped until the drawdown is at a level slightly higher than top of the well screen.

15. After water levels have stabilized and a sufficient volume has been purged (see note below), continue pumping and begin monitoring field indicator parameters using a multi-parameter water-quality sonde coupled with a flow-through-cell.

    NOTE: *The final purge volume must be greater than the stabilized drawdown volume plus the pump's tubing volume. If the drawdown has exceeded 0.3 feet and stabilizes, calculate the volume of water between the initial water level and the stabilized water level. Add the volume of the water which occupies the pump's tubing to this calculation. This combined volume of water needs to be purged from the well after the water level has stabilized before samples are collected.*

16. Use the flow to measure all indicator field parameters, except for turbidity, every 3 to 5 minutes (or after each volume of the flow-through cell has been purged or other appropriate interval); turbidity samples will be collected before the flow-through-cell using the T-valve and a clean container such as a glass beaker.

17. Record field indicator parameters on the groundwater sampling log.

18. The well is considered stabilized and ready for sample collection when three consecutive readings are within the following limits:

    - **Turbidity** within ± 10% for values greater than 5 nephelometric turbidity units [NTUs] or if three turbidity values are less than 5 NTUs, consider the values stabilized
    - **Dissolved Oxygen (DO)** within ± 10% for values greater than 0.5 mg/L or if three DO values are less than 0.5 mg/L, consider the values stabilized
    - **Specific Conductance** within ± 3%
    - **Temperature** within ± 3%
    - **pH** within ± 0.1 unit
    - **Oxidation/Reduction Potential (ORP)** within ±10 millivolts (mV)

    NOTE: *Alternate stabilization goals may exist in different geographic regions, consult the site- specific FIP/work plan for stabilization criteria).*

    NOTE: *While achieving turbidity levels less than 5 NTU and a stable drawdown of less than 0.3 feet is desirable, sample collection may still take place provided the indicator field parameter criteria in this procedure are met.*

19. If the parameters have stabilized but turbidity remains relatively high (e.g., greater than 50 NTUs), the pump flow rate may be decreased to a minimum rate of 100 mL/min to reduce turbidity levels as low as possible. If groundwater turbidity has been minimized (i.e., consecutive readings within ± 10%) and the values for all other parameters have stabilized, the well may be sampled; however, consult specifications in the FIP/work plan and/or the project technical lead prior to sampling.

20. If after one (1) hour of purging indicator field parameters have not stabilized, consult specifications in the FIP/work plan and/or the project technical lead prior to sampling.

    In general, three potential options are available if stabilization criteria are not met:

    a. Continue purging until stabilization is achieved.

    b. Discontinue purging, do not collect any samples, and record in field logbook/on the sampling form that stabilization could not be achieved (documentation must describe attempts to achieve stabilization).

c. Discontinue purging, collect samples, and provide full explanation of attempts to achieve stabilization. There is a risk that the analytical data obtained under these conditions, particularly metals and hydrophobic organic analytes, may reflect a sampling bias and, as a result, the data may not meet the data quality objectives of the sampling event.

NOTE: *DO is extremely susceptible to various external influences (including temperature or the presence of bubbles on the DO meter); therefore, great care will be taken to minimize the agitation or other disturbance of water within the flow-through cell while collecting these measurements. If air bubbles are present on the DO probe or in the discharge tubing, remove them before taking a measurement. If DO values are not within acceptable range for the temperature of groundwater, again check for and remove air bubbles on the probe before re-measuring. The table below may be used as a general guide for DO values under various temperatures; however, understand that the table corresponds to freshwater solubility and groundwater contaminants may affect oxygen solubility. If DO value is 0.00 or less, then the meter will be serviced and re-calibrated. If DO values are above possible results, then the meter will be serviced and re-calibrated.*

NOTE: *During extreme weather conditions, stabilization of field indicator parameters may be difficult to attain. Modifications to the sampling procedures to alleviate these conditions (e.g., measuring the water temperature in the well adjacent to the pump intake) will be documented in the field logbook/on the sampling form.*

NOTE: *If other field conditions are suspected of preventing stabilization of certain parameters, detailed observations will be documented in the field logbook/on the sampling form.*

Oxygen Solubility in Fresh Water

Temperature (degrees C)	Dissolved Oxygen (mg/L)
0	14.6
1	14.19
2	13.81
3	13.44
4	13.09
5	12.75
6	12.43
7	12.12
8	11.83
9	11.55
10	11.27
11	11.01
12	10.76
13	10.52
14	10.29
15	10.07
16	9.85
17	9.65
18	9.45
19	9.26
20	9.07
21	8.9
22	8.72
23	8.56
24	8.4
25	8.24
26	8.09
27	7.95
28	7.81
29	7.67
30	7.54
31	7.41
32	7.28
33	7.16
34	7.05
35	6.93

Reference: Vesilind, P.A., Introduction to Environmental Engineering, PWS Publishing Company, Boston, 468 pages (1996)

21. Complete the sample label(s) and cover the label(s) with clear packing tape to secure the label onto the container.
22. After the indicator parameters have stabilized, collect groundwater samples by diverting flow out of the unfiltered discharge tubing into the appropriate labeled sample container.
    a. If a flow-through analytical cell is being used to measure field parameters, the flow-through cell will be disconnected after stabilization of the field indicator parameters and prior to groundwater sample collection.
    b. Under no circumstances will analytical samples be collected from the discharge of the flow- through cell.
    c. If an in-line ‘T’ and valve are used, the valve needs to be removed as well.

d. Samples will be collected in the following order: VOCs, total organic carbon (TOC), semi- volatile organic compounds (SVOCs), metals and cyanide, and others (or other order as defined in the site-specific FIP/work plan).
e. When the container is full, tightly screw on the cap.

23. If sampling for total and filtered metals and/or polychlorinated biphenyls (PCBs), a filtered and unfiltered sample will be collected.
    a. Install an in-line, disposable 0.45-micron particle filter on the discharge tubing after the appropriate unfiltered groundwater sample has been collected.
    b. Continue to run the pump until an initial volume of "flush" water has been run through the filter in accordance with the manufacturer's directions (generally 100 to 300 mL).
    c. Collect the filtered groundwater sample by diverting flow out of the filter into the appropriately labeled sample container.
    d. When the container is full, tightly screw on the cap.
24. Secure with packing material and store the samples on ice in an insulated transport container provided by the laboratory and include a temperature blank in each container to be shipped.
25. Record on the Low-Flow Sampling Field Form (and bound field logbook) the time at which sampling procedures were completed, any pertinent observations of the sample (e.g., physical appearance and the presence or lack of odors or sheens), and the values of the stabilized field indicator parameters as measured during the final reading during purging **(see Attachment A)**.
26. Turn off the pump and air compressor or close the gas cylinder valve if using a bladder pump setup.
27. Slowly remove the pump, tubing, lines, and safety cable from the well.
    a. If using dedicated tubing, do not allow the tubing or lines to touch the ground or any other surfaces which could contaminate them.
    b. If using dedicated tubing, it will be folded - without pinching it - to a length that will allow the well to be capped and also facilitate retrieval of the tubing during later sampling events.
    c. Use a length of rope or string to tie the tubing to the well cap.
    d. Alternatively, if tubing and safety line are to be saved and reused for sampling the well at a later date, coil the tubing neatly and placed in a clean plastic bag that is clearly labeled with the well ID ensuring the bag is tightly sealed before placing it in storage.
28. Secure the well and properly dispose of personal protective equipment (PPE) and disposable equipment.
29. Complete the procedures for packaging, shipping, and handling with the associated Chain-of- Custody.
30. Complete decontamination for flow-through analytical cell and submersible or bladder pump, as appropriate *(TGI – Groundwater and Soil Sampling Equipment Decontamination).*
31. At the end of each day of the sampling event, perform calibration check of field instruments and record procedure and results in field log.

9 Waste Management

Materials generated during groundwater sampling activities, including disposable equipment and excess purge water, will be stored on site in appropriately labeled containers and disposed of properly. Waste will be managed in accordance with the *TGI – Investigation-Derived Waste Handling and Storage*, the procedures identified in the

FIP or QAPP as well as state-, federal- or client-specific requirements. Be certain that waste containers are properly labeled and documented in the field logbook.

10 Data Recording and Management

Digital data collection is the Arcadis standard using available FieldNow® applications that enable real-time, paperless data collection, entry, and automated reporting. Paper forms should only be used as backup to FieldNow® digital data collection and/or as necessary to collect data not captured by available FieldNow® applications. The Field Now® digital form applications follow a standardized approach, correlate to most TGIs and are available to all projects accessible with a PC or capable mobile device. Once the digital forms are saved within FieldNow®, the data is instantly available for review on a web interface. This facilitates review by project management team members and SMEs enabling error or anomalous data detection for correction while the staff are still in the field. Continual improvements of FieldNow® applications are ongoing, and revisions are made as necessary in response to feedback from users and subject matter experts.

Management of the original documents from the field will be completed in accordance with the site- specific QAPP.

In general, forms (e.g., Low-Flow Sampling Field Forms), logs/notes (including daily field and calibration logs), digital records, and Chain-of-Custody records will be maintained by the field team lead.

Field logs and Chain-of-Custody records will be transmitted to the Arcadis Project Manager and/or Task Manager, as appropriate, at the end of each day unless otherwise directed. Electronic data files will be sent to the project team and uploaded to the electronic project folder daily.

Records generated as a result of this TGI will be controlled and maintained in the project record files in accordance with project requirements.

11 Quality Assurance

Quality assurance procedures shall be conducted in accordance with the Arcadis Quality Management System or the site-specific QAPP.

Unless described otherwise in the project-specific FIP/work plan, QAPP, or Sampling and Analysis Plan, quality assurance/quality control samples will be collected as follows:

- One duplicate for every 10 samples
- One laboratory matrix/matrix spike sample for every 20 samples
- In addition to the quality control samples to be collected in accordance with this TGI, the following quality control procedures will be observed in the field:
- Collect samples from monitoring wells, in order of increasing concentration, to the extent known based on review of historical site information if available
- Equipment blanks will include the pump and tubing (if using disposable tubing) or the pump only (if using tubing dedicated to each well)
- Collect equipment blanks after wells with higher concentrations (if known) have been sampled

- Operate all monitoring instrumentation in accordance with manufacturer's instructions and calibration procedures—calibrate instruments at the beginning of each day, verify the calibration at the end of each day, and record all calibration activities in the field notebook
- Clean all groundwater sampling equipment prior to use in the first well and after each subsequent well following the procedure for equipment decontamination

12 References

USEPA. 1986. *RCRA Groundwater Monitoring Technical Enforcement Guidance Document* (September 1986).

USEPA. 1991. *Handbook Groundwater, Volume II Methodology*, Office of Research and Development, Washington, DC. USEPN62S, /6-90/016b (July 1991).

USEPA Region I. 2017. *Low Stress (Low Flow) Purging and Sampling Procedures for the Collection of Groundwater Samples from Monitoring Wells (*EQASOP-GW4; September 19, 2017).

U.S. Geological Survey (USGS). 1977. *National Handbook of Recommended Methods for Water-Data Acquisition: USGS Office of Water Data Coordination*. Reston, Virginia.

13 Attachments

Attachment A – Low Flow Sampling Field Form

Attachment A

Low-Flow Sampling Field Form

GROUNDWATER SAMPLING FORM

Project No. _____ Well ID _____ Date _____

Project Name/Location _____ Weather _____

Measuring Pt. Description _____ Screen Setting (ft-bmp) _____ Casing Diameter (in.) _____ Well Material ____ PVC ____ SS

Static Water Level (ft-bmp) _____ Total Depth (ft-bmp) _____ Water Column (ft) _____ Gallons in Well _____

MP Elevation _____ Pump Intake (ft-bmp) _____ Purge Method: _____ Sample Method _____

Pump On/Off _____ Centrifugal _____ Submersible _____ Other _____

Sample Time: _____ Volume Purged _____

Purge Start _____ Gallons Purged _____ Sample ID _____ Sampled by _____

Purge End _____ Replicate/Code No. _____

Time	Minutes Elapsed	Rate (gpm)/(mL/min) 200mL/min +	Depth to Water (ft) -0.3	Gallons Purged	pH ± 0.1	Cond. (µMhos)/(mS/cm) ± 3%	Turbidity (NTU) ± 10%	DO (mg/L) ± 10%	Temp. (°C)/(°F) ± 3%	Redox (mV) ± 10mV	Appearance	
											Color	Odor
Stabilization Calculations (±)												
Stabilization Criteria					**± 0.1 s.u.**	**±3%**	**± 10% or within 1 NTU (1)**	**± 10%**	**±3%**	**±10 mV**		

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

Constituents Sampled	Container	Number	Preservative

Comments _____

Well Casing Volumes

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

Well Information

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

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

Well Completion: Flush Mount / Stick Up Key Number To Well: _____

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Appendix C

Field Data Sheets

1st Quarter 2024

Low-Flow Test Report:

Test Date / Time: 3/12/2024 8:55:51 AM
Project: Seattle Terminal 1Q24
Operator Name: ES

Location Name: MW-210 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 15 ft** **Top of Screen: 3 ft** **Total Depth: 18 ft** **Initial Depth to Water: 6.25 ft**	**Pump Type: Geotech Geotech series 2** **Tubing Type: Polyethylene 0.170 x 1/4** **Pump Intake From TOC: 7 ft** **Estimated Total Volume Pumped: 3600 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.55 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 1069473**

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10		
3/12/2024 8:55 AM	00:00	6.56 pH	8.71 °C	196.97 µS/cm	2.64 mg/L	0.00 NTU	165.0 mV	6.25 ft	200.00 ml/min
3/12/2024 8:58 AM	03:00	6.50 pH	9.57 °C	200.89 µS/cm	1.28 mg/L	0.88 NTU	160.7 mV	6.25 ft	200.00 ml/min
3/12/2024 9:01 AM	06:00	6.49 pH	9.55 °C	175.32 µS/cm	1.44 mg/L	0.07 NTU	163.4 mV	6.25 ft	200.00 ml/min
3/12/2024 9:04 AM	09:00	6.49 pH	9.57 °C	169.26 µS/cm	1.44 mg/L	0.00 NTU	160.0 mV	6.25 ft	200.00 ml/min
3/12/2024 9:07 AM	12:00	6.49 pH	9.62 °C	168.95 µS/cm	1.17 mg/L	0.00 NTU	160.4 mV	6.25 ft	200.00 ml/min
3/12/2024 9:10 AM	15:00	6.50 pH	9.60 °C	169.42 µS/cm	1.20 mg/L	0.00 NTU	159.7 mV	6.25 ft	200.00 ml/min
3/12/2024 9:13 AM	18:00	6.50 pH	9.58 °C	168.71 µS/cm	1.29 mg/L	0.00 NTU	158.5 mV	6.25 ft	200.00 ml/min

Samples

Sample ID:	Description:
MW-210-GW-7-031224	Sample time: 0916 Methodology: groundwater samples were collected using low flow purge techniques with dedicated tubing, a peristaltic pump, and an Aquatroll 600 multimeter. The polyethylene tubing was in each well such that the intake depth was within 6 inches of the water level. All wells were sampled within their screened interval. Samples were immediately stored on ice to be sampled for BREX, DTP, HO, and CPAHs.

Low-Flow Test Report:

Test Date / Time: 3/12/2024 9:01:22 AM
Project: Seattle Terminal 1Q24
Operator Name: RP

Location Name: MW-209 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 15 ft** **Top of Screen: 3 ft** **Total Depth: 17.8 ft** **Initial Depth to Water: 8.32 ft**	**Pump Type: Spectra Field Pro III** **Tubing Type: Polyethylene 0.170 x 1/4** **Pump Intake From TOC: 9 ft** **Estimated Total Volume Pumped: 4050 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 150 ml/min** **Final Draw Down: 0.02 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 613960**

Test Notes:
Methodology: Groundwater samples were collected using low flow purges techniques with dedicated tubing, a peristaltic pump, and an Aquatroll 600 multimeter. The polyethylene tubing was in each well such that the intake depth was within 6 inches of he water level. All wells were sampled within their screened interval. Samples were immediately stored on ice to be sampled for BTEX, DTP, HO and cPAHs.

Weather Conditions:
Sunny, scattered clouds.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10	+/- 0.1	
3/12/2024 9:01 AM	00:00	6.87 pH	10.97 °C	468.80 µS/cm	2.56 mg/L	11.50 NTU	-57.4 mV	8.32 ft	150.00 ml/min
3/12/2024 9:04 AM	03:00	7.05 pH	11.68 °C	424.83 µS/cm	0.39 mg/L	4.96 NTU	-107.1 mV	8.32 ft	150.00 ml/min
3/12/2024 9:07 AM	06:00	7.08 pH	11.75 °C	435.48 µS/cm	0.26 mg/L	10.09 NTU	-115.9 mV	8.34 ft	150.00 ml/min
3/12/2024 9:10 AM	09:00	7.09 pH	11.85 °C	423.20 µS/cm	0.19 mg/L	24.36 NTU	-126.7 mV	8.34 ft	150.00 ml/min
3/12/2024 9:13 AM	12:00	7.09 pH	11.95 °C	422.99 µS/cm	0.14 mg/L	10.50 NTU	-129.5 mV	8.34 ft	150.00 ml/min
3/12/2024 9:16 AM	15:00	7.09 pH	12.05 °C	411.52 µS/cm	0.12 mg/L	11.07 NTU	-144.1 mV	8.34 ft	150.00 ml/min
3/12/2024 9:19 AM	18:00	7.08 pH	12.11 °C	410.16 µS/cm	0.09 mg/L	13.79 NTU	-146.4 mV	8.34 ft	150.00 ml/min
3/12/2024 9:22 AM	21:00	7.08 pH	12.08 °C	407.41 µS/cm	0.07 mg/L	10.00 NTU	-154.1 mV	8.34 ft	150.00 ml/min
3/12/2024 9:25 AM	24:00	7.08 pH	12.06 °C	405.61 µS/cm	0.03 mg/L	9.41 NTU	-153.2 mV	8.34 ft	150.00 ml/min
3/12/2024 9:28 AM	27:00	7.08 pH	12.06 °C	402.70 µS/cm	0.02 mg/L	10.21 NTU	-155.3 mV	8.34 ft	150.00 ml/min

Samples

Sample ID:	Description:
MW-209-W-8.8-240312	Sample time: 9:30

Low-Flow Test Report:

Test Date / Time: 3/12/2024 10:05:28 AM
Project: Seattle Terminal 1Q24
Operator Name: ES

Location Name: MW-211 **Latitude: 47.61691928938346** **Longitude: -122.35678340448135** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 15 ft** **Top of Screen: 3 ft** **Total Depth: 18 ft** **Initial Depth to Water: 7.93 ft**	**Pump Type: Geotech Geotech series 2** **Tubing Type: Polyethylene 0.170 x 1/4** **Pump Intake From TOC: 8 ft** **Estimated Total Volume Pumped: 9000 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 1069473**

Test Notes:

Weather Conditions:
Rain

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10		
3/12/2024 10:05 AM	00:00	7.33 pH	10.82 °C	479.40 µS/cm	1.14 mg/L	0.00 NTU	-230.7 mV	7.93 ft	200.00 ml/min
3/12/2024 10:08 AM	03:00	7.34 pH	11.26 °C	475.56 µS/cm	0.46 mg/L	0.00 NTU	-257.2 mV	7.93 ft	200.00 ml/min
3/12/2024 10:11 AM	06:00	7.33 pH	11.40 °C	474.22 µS/cm	0.37 mg/L	0.00 NTU	-260.4 mV	7.93 ft	200.00 ml/min
3/12/2024 10:14 AM	09:00	7.33 pH	11.46 °C	474.42 µS/cm	0.33 mg/L	0.00 NTU	-264.5 mV	7.93 ft	200.00 ml/min
3/12/2024 10:17 AM	12:00	7.34 pH	11.37 °C	474.64 µS/cm	0.29 mg/L	0.00 NTU	-266.3 mV	7.93 ft	200.00 ml/min
3/12/2024 10:20 AM	15:00	7.34 pH	11.23 °C	474.33 µS/cm	0.26 mg/L	0.00 NTU	-268.4 mV	7.93 ft	200.00 ml/min
3/12/2024 10:23 AM	18:00	7.35 pH	11.56 °C	475.83 µS/cm	0.22 mg/L	0.00 NTU	-270.6 mV	7.93 ft	200.00 ml/min
3/12/2024 10:26 AM	21:00	7.36 pH	11.48 °C	477.03 µS/cm	0.21 mg/L	0.00 NTU	-273.4 mV	7.93 ft	200.00 ml/min
3/12/2024 10:29 AM	24:00	7.37 pH	11.48 °C	477.81 µS/cm	0.19 mg/L	0.00 NTU	-274.9 mV	7.93 ft	200.00 ml/min
3/12/2024 10:32 AM	27:00	7.38 pH	11.50 °C	479.32 µS/cm	0.18 mg/L	0.00 NTU	-276.7 mV	7.93 ft	200.00 ml/min
3/12/2024 10:35 AM	30:00	7.37 pH	11.26 °C	477.14 µS/cm	0.16 mg/L	0.00 NTU	-277.4 mV	7.93 ft	200.00 ml/min
3/12/2024 10:38 AM	33:00	7.36 pH	11.36 °C	477.91 µS/cm	0.15 mg/L	0.00 NTU	-279.2 mV	7.93 ft	200.00 ml/min

3/12/2024 10:41 AM	36:00	7.35 pH	11.38 °C	476.67 µS/cm	0.14 mg/L	0.00 NTU	-279.5 mV	7.93 ft	200.00 ml/min
3/12/2024 10:44 AM	39:00	7.35 pH	11.32 °C	476.65 µS/cm	0.12 mg/L	0.00 NTU	-280.3 mV	7.93 ft	200.00 ml/min
3/12/2024 10:47 AM	42:00	7.36 pH	11.43 °C	478.46 µS/cm	0.12 mg/L	0.00 NTU	-282.0 mV	7.93 ft	200.00 ml/min
3/12/2024 10:50 AM	45:00	7.38 pH	11.28 °C	479.47 µS/cm	0.11 mg/L	0.00 NTU	-284.1 mV	7.93 ft	200.00 ml/min

Samples

Sample ID:	Description:
MW-211-GW-9_031224	Sample time: 10:50 Methodology: Groundwater samples were collected using low flow techniques with dedicated tubing, a peristaltic pump, and an Aquatroll 600 multimeter. The polyethylene tubing was in each well such that the intake depth was within 6 inches of the water level. All wells were sampled within their screened interval. Samples were immediately stored on ice to be sampled for BREX DTP, HO, and CPAH.

Low-Flow Test Report:

Test Date / Time: 3/12/2024 11:28:43 AM
Project: Seattle Terminal 1Q24
Operator Name: ES

Location Name: MW-70R **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 16 ft** **Top of Screen: 4 ft** **Total Depth: 16 ft** **Initial Depth to Water: 9.23 ft**	**Pump Type: Geotech Geotech series 2** **Tubing Type: Polyethylene 0.170 x 1/4** **Pump Intake From TOC: 9.5 ft** **Estimated Total Volume Pumped: 7800 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.65 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 1069473**

Test Notes:

Weather Conditions:
Sunny

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10		
3/12/2024 11:28 AM	00:00	7.30 pH	11.17 °C	7,250.2 µS/cm	3.13 mg/L	0.99 NTU	-82.4 mV	9.23 ft	200.00 ml/min
3/12/2024 11:31 AM	03:00	7.30 pH	11.42 °C	7,402.8 µS/cm	1.39 mg/L	0.80 NTU	-81.9 mV	9.23 ft	200.00 ml/min
3/12/2024 11:34 AM	06:00	7.30 pH	11.63 °C	7,473.5 µS/cm	1.02 mg/L	0.69 NTU	-83.8 mV	9.23 ft	200.00 ml/min
3/12/2024 11:37 AM	09:00	7.30 pH	11.72 °C	7,624.1 µS/cm	0.92 mg/L	0.08 NTU	-83.2 mV	9.23 ft	200.00 ml/min
3/12/2024 11:40 AM	12:00	7.30 pH	11.78 °C	7,702.2 µS/cm	0.79 mg/L	0.00 NTU	-84.5 mV	9.23 ft	200.00 ml/min
3/12/2024 11:43 AM	15:00	7.30 pH	11.77 °C	7,774.4 µS/cm	0.49 mg/L	0.00 NTU	-86.1 mV	9.23 ft	200.00 ml/min
3/12/2024 11:46 AM	18:00	7.29 pH	11.76 °C	7,860.5 µS/cm	0.31 mg/L	0.00 NTU	-86.4 mV	9.23 ft	200.00 ml/min
3/12/2024 11:49 AM	21:00	7.29 pH	11.72 °C	8,111.0 µS/cm	0.29 mg/L	0.00 NTU	-85.7 mV	9.23 ft	200.00 ml/min
3/12/2024 11:52 AM	24:00	7.28 pH	11.70 °C	8,233.7 µS/cm	0.36 mg/L	0.00 NTU	-85.8 mV	9.23 ft	200.00 ml/min
3/12/2024 11:55 AM	27:00	7.28 pH	11.77 °C	8,395.7 µS/cm	0.33 mg/L	0.00 NTU	-86.0 mV	9.23 ft	200.00 ml/min
3/12/2024 11:58 AM	30:00	7.28 pH	11.81 °C	8,455.9 µS/cm	0.29 mg/L	0.00 NTU	-86.6 mV	9.23 ft	200.00 ml/min
3/12/2024 12:01 PM	33:00	7.28 pH	11.77 °C	8,543.2 µS/cm	0.38 mg/L	0.00 NTU	-87.3 mV	9.23 ft	200.00 ml/min

3/12/2024 12:04 PM	36:00	7.28 pH	11.73 °C	8,627.5 µS/cm	0.35 mg/L	0.00 NTU	-87.7 mV	9.23 ft	200.00 ml/min
3/12/2024 12:07 PM	39:00	7.28 pH	11.61 °C	8,602.4 µS/cm	0.39 mg/L	0.00 NTU	-87.6 mV	9.23 ft	200.00 ml/min

Samples

Sample ID:	Description:
MW-70R-GW-9.5_031224	Sample time: 12:10 Methodology: Groundwater samples were collected using low flow purge techniques with dedicated tubing, a peristaltic pump, and an Aquatroll 600 multimeter. The polyethylene tubing was in each well such that the intake depth was within 6 inches of the water level. All wells were sampled within their screened interval. Samples were immediately stored on ice to be sampled for BTEX, DTP, HO and CPAHs.

2nd Quarter 2024

Low-Flow Test Report:

Test Date / Time: 6/12/2024 9:43:44 AM
Project: Seattle Terminal 2Q24
Operator Name: CC

Location Name: MW-30 **Well Diameter: 4 in** **Casing Type: PVC** **Screen Length: 25 ft** **Top of Screen: 5 ft** **Total Depth: 30 ft** **Initial Depth to Water: 13.72 ft**	**Pump Type: Geotech Geopump Series 2** **Tubing Type: Polyethylene 0.179 x 1/4** **Pump Intake From TOC: 14 ft** **Estimated Total Volume Pumped: 6750 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 150 ml/min** **Final Draw Down: 0.06 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 808988**

Test Notes:

Weather Conditions:
Partly Cloudy, 57°F, 5 MPH N Winds

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10 %		
6/12/2024 9:43 AM	00:00	7.26 pH	13.11 °C	872.82 µS/cm	0.68 mg/L	5.79 NTU	-106.6 mV	13.72 ft	150.00 ml/min
6/12/2024 9:46 AM	03:00	7.32 pH	12.95 °C	742.15 µS/cm	0.28 mg/L	4.62 NTU	-107.3 mV	13.72 ft	150.00 ml/min
6/12/2024 9:49 AM	06:00	7.31 pH	12.94 °C	742.91 µS/cm	0.36 mg/L	6.62 NTU	-106.5 mV	13.72 ft	150.00 ml/min
6/12/2024 9:52 AM	09:00	7.31 pH	12.90 °C	739.79 µS/cm	0.26 mg/L	3.51 NTU	-105.9 mV	13.72 ft	150.00 ml/min
6/12/2024 9:55 AM	12:00	7.30 pH	12.88 °C	736.06 µS/cm	0.31 mg/L	4.17 NTU	-106.9 mV	13.72 ft	150.00 ml/min
6/12/2024 9:58 AM	15:00	7.30 pH	12.87 °C	733.52 µS/cm	0.22 mg/L	2.41 NTU	-106.6 mV	13.72 ft	150.00 ml/min
6/12/2024 10:01 AM	18:00	7.30 pH	12.86 °C	732.88 µS/cm	0.18 mg/L	0.66 NTU	-106.6 mV	13.72 ft	150.00 ml/min
6/12/2024 10:04 AM	21:00	7.30 pH	12.90 °C	732.28 µS/cm	0.17 mg/L	7.82 NTU	-106.2 mV	13.72 ft	150.00 ml/min
6/12/2024 10:07 AM	24:00	7.30 pH	12.93 °C	731.40 µS/cm	0.16 mg/L	1.13 NTU	-105.6 mV	13.72 ft	150.00 ml/min
6/12/2024 10:10 AM	27:00	7.29 pH	12.93 °C	730.81 µS/cm	0.12 mg/L	3.85 NTU	-105.1 mV	13.72 ft	150.00 ml/min
6/12/2024 10:13 AM	30:00	7.29 pH	12.92 °C	731.45 µS/cm	0.13 mg/L	0.26 NTU	-104.9 mV	13.72 ft	150.00 ml/min
6/12/2024 10:16 AM	33:00	7.29 pH	12.90 °C	727.96 µS/cm	0.11 mg/L	1.18 NTU	-104.5 mV	13.72 ft	150.00 ml/min

6/12/2024 10:19 AM	36:00	7.29 pH	12.90 °C	727.42 µS/cm	0.11 mg/L	0.60 NTU	-104.1 mV	13.72 ft	150.00 ml/min
6/12/2024 10:22 AM	39:00	7.29 pH	12.91 °C	728.64 µS/cm	0.11 mg/L	0.43 NTU	-103.6 mV	13.72 ft	150.00 ml/min
6/12/2024 10:25 AM	42:00	7.29 pH	12.88 °C	726.09 µS/cm	0.09 mg/L	1.22 NTU	-103.6 mV	13.72 ft	150.00 ml/min
6/12/2024 10:28 AM	45:00	7.28 pH	12.89 °C	725.25 µS/cm	0.11 mg/L	0.47 NTU	-103.5 mV	13.72 ft	150.00 ml/min

Samples

Sample ID:	Description:
MW-30-GW-14_240612	Sample Time: 1035 Methodology: Groundwater samples were collected using low flow purge techniques with dedicated tubing, and an Aquatroll 600 multimeter. The polyethylene tubing was in each well such that the intake depth was within 6 inches of the water level. All wells were sampled within their screen interval. Samples were immediately stored on ice to be sampled for BTEX, DTP, HO, and CPAHs.

Low-Flow Test Report:

Test Date / Time: 6/12/2024 9:45:19 AM
Project: Seattle Terminal 2Q24
Operator Name: OI

Location Name: MW-61AR **Latitude: 47.61676110967378** **Longitude: -122.35639942125988** **Well Diameter: 2 in** **Casing Type: PVC** **Initial Depth to Water: 14.25 ft**	**Pump Type: Geotech Geopump Series 2** **Tubing Type: Polyethylene 0.170 x1/4** **Pump Intake From TOC: 14.5 ft** **Estimated Total Volume Pumped: 2700 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 150 ml/min** **Final Draw Down: -0.04 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 870001**

Test Notes:
FDTW: 14.22

Weather Conditions:
Sunny, partly cloudy

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10 %		
6/12/2024 9:45 AM	00:00	7.29 pH	13.55 °C	549.18 µS/cm	0.27 mg/L	4.38 NTU	-13.9 mV	14.25 ft	150.00 ml/min
6/12/2024 9:48 AM	03:00	7.33 pH	13.32 °C	442.71 µS/cm	0.22 mg/L	0.87 NTU	-102.3 mV	14.25 ft	150.00 ml/min
6/12/2024 9:51 AM	06:00	7.37 pH	13.28 °C	441.90 µS/cm	0.22 mg/L	0.00 NTU	-170.3 mV	14.25 ft	150.00 ml/min
6/12/2024 9:54 AM	09:00	7.37 pH	13.24 °C	439.98 µS/cm	0.21 mg/L	0.00 NTU	-201.4 mV	14.25 ft	150.00 ml/min
6/12/2024 9:57 AM	12:00	7.38 pH	13.24 °C	440.72 µS/cm	0.20 mg/L	0.00 NTU	-214.7 mV	14.25 ft	150.00 ml/min
6/12/2024 10:00 AM	15:00	7.39 pH	13.23 °C	441.38 µS/cm	0.19 mg/L	0.00 NTU	-223.1 mV	14.25 ft	150.00 ml/min
6/12/2024 10:03 AM	18:00	7.38 pH	13.21 °C	442.03 µS/cm	0.19 mg/L	0.00 NTU	-235.0 mV	14.25 ft	150.00 ml/min

Samples

Sample ID:	Description:

MW-61A-R	Sample time: 1005 Methodology: Groundwater samples were collected using low flow purge techniques with dedicated tubing, a peristaltic pump, and an Aquatroll 600 multimeter. The polyethylene tubing was in each well such that the intake depth was within 6 inches of the water level. All wells were sampled within their screened interval. Samples were immediately stored on ice to be sampled for BTEX, DTP, HO, and CPAHs.

Low-Flow Test Report:

Test Date / Time: 6/10/2024 9:34:16 AM
Project: Seattle Terminal 2Q24
Operator Name: OI

Location Name: MW-70R **Latitude: 47.615649471731786** **Longitude: -122.35610151485089** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 12 ft** **Top of Screen: 4 ft** **Initial Depth to Water: 9.5 ft**	**Pump Type: Geotech Geopump Series 2** **Tubing Type: Polyethylene 0.170 x1/4** **Pump Intake From TOC: 9.5 ft** **Estimated Total Volume Pumped: 6750 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 150 ml/min** **Final Draw Down: 0.72 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 870001**

Test Notes:

Weather Conditions:
Low clouds

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10 %	+/- 5	
6/10/2024 9:34 AM	00:00	6.95 pH	15.16 °C	15,321 µS/cm	2.64 mg/L	0.72 NTU	48.0 mV	289.56 cm	150.00 ml/min
6/10/2024 9:37 AM	03:00	6.99 pH	14.68 °C	15,584 µS/cm	0.45 mg/L	0.00 NTU	7.2 mV	289.56 cm	150.00 ml/min
6/10/2024 9:40 AM	06:00	7.00 pH	14.58 °C	15,542 µS/cm	0.33 mg/L	0.00 NTU	-6.8 mV	289.56 cm	150.00 ml/min
6/10/2024 9:43 AM	09:00	7.01 pH	14.65 °C	15,478 µS/cm	0.32 mg/L	0.00 NTU	-10.8 mV	289.56 cm	150.00 ml/min
6/10/2024 9:46 AM	12:00	7.02 pH	14.70 °C	15,314 µS/cm	0.32 mg/L	0.00 NTU	-16.0 mV	289.56 cm	150.00 ml/min
6/10/2024 9:49 AM	15:00	7.02 pH	14.68 °C	15,097 µS/cm	0.33 mg/L	0.00 NTU	-16.3 mV	289.56 cm	150.00 ml/min
6/10/2024 9:52 AM	18:00	7.03 pH	14.74 °C	14,900 µS/cm	0.35 mg/L	0.00 NTU	-17.0 mV	289.56 cm	150.00 ml/min
6/10/2024 9:55 AM	21:00	7.04 pH	14.70 °C	14,637 µS/cm	0.33 mg/L	0.00 NTU	-15.4 mV	289.56 cm	150.00 ml/min
6/10/2024 9:58 AM	24:00	7.04 pH	14.72 °C	14,442 µS/cm	0.32 mg/L	0.00 NTU	-14.8 mV	289.56 cm	150.00 ml/min
6/10/2024 10:01 AM	27:00	7.04 pH	14.76 °C	14,236 µS/cm	0.33 mg/L	0.00 NTU	-13.7 mV	289.56 cm	150.00 ml/min
6/10/2024 10:04 AM	30:00	7.05 pH	14.73 °C	14,064 µS/cm	0.33 mg/L	0.00 NTU	-12.5 mV	289.56 cm	150.00 ml/min
6/10/2024 10:07 AM	33:00	7.06 pH	14.75 °C	13,926 µS/cm	0.35 mg/L	0.00 NTU	-11.0 mV	289.56 cm	150.00 ml/min

6/10/2024 10:10 AM	36:00	7.06 pH	14.74 °C	13,771 µS/cm	0.34 mg/L	0.00 NTU	-10.3 mV	289.56 cm	150.00 ml/min
6/10/2024 10:13 AM	39:00	7.07 pH	14.72 °C	13,582 µS/cm	0.30 mg/L	0.00 NTU	-9.6 mV	289.56 cm	150.00 ml/min
6/10/2024 10:16 AM	42:00	7.07 pH	14.74 °C	13,445 µS/cm	0.27 mg/L	0.00 NTU	-8.6 mV	289.56 cm	150.00 ml/min
6/10/2024 10:19 AM	45:00	7.07 pH	14.74 °C	13,328 µS/cm	0.39 mg/L	0.00 NTU	-7.2 mV	289.56 cm	150.00 ml/min

Samples

Sample ID:	Description:
MW-70R-GW-10_240610	Sample time: 10:25 Methodology: Groundwater samples were collected using low flow purge techniques with dedicated tubing, a peristaltic pump, and an Aquatroll 600 multi,enter. The polyethylene tubing was in each well such such that the intake depth was within 6 inches of the water level. All wells were sampled within their screened interval. Samples were immediately stored on ice to be sampled for BTEX, DTP, HO, and CPAHs.

Low-Flow Test Report:

Test Date / Time: 6/11/2024 12:40:28 PM
Project: Seattle Terminal 2Q24
Operator Name: OI

Location Name: MW-200 **Latitude: 47.61678675245836** **Longitude: -122.35749072107457** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 18.9 ft** **Top of Screen: 5 ft** **Initial Depth to Water: 8.73 ft**	**Pump Type: Geotech Geopump Series 2** **Tubing Type: Polyethylene 0.170 x1/4** **Pump Intake From TOC: 9 ft** **Estimated Total Volume Pumped: 6750 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 150 ml/min** **Final Draw Down: 0 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 870001**

Test Notes:
FDTW: 9ft

Weather Conditions:
Clear

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10 %		
6/11/2024 12:40 PM	00:00	7.18 pH	19.17 °C	6,374.7 µS/cm	3.19 mg/L	35.20 NTU	-124.9 mV	8.73 ft	150.00 ml/min
6/11/2024 12:43 PM	03:00	7.09 pH	16.59 °C	6,858.7 µS/cm	0.60 mg/L	3.06 NTU	-142.8 mV	8.73 ft	150.00 ml/min
6/11/2024 12:46 PM	06:00	7.08 pH	16.29 °C	6,978.2 µS/cm	0.37 mg/L	1.64 NTU	-150.9 mV	8.73 ft	150.00 ml/min
6/11/2024 12:49 PM	09:00	7.10 pH	16.15 °C	7,088.9 µS/cm	0.23 mg/L	1.27 NTU	-158.2 mV	8.73 ft	150.00 ml/min
6/11/2024 12:52 PM	12:00	7.10 pH	16.25 °C	7,189.6 µS/cm	0.19 mg/L	0.98 NTU	-165.4 mV	8.73 ft	150.00 ml/min
6/11/2024 12:55 PM	15:00	7.10 pH	16.22 °C	7,311.7 µS/cm	0.16 mg/L	2.30 NTU	-172.4 mV	8.73 ft	150.00 ml/min
6/11/2024 12:58 PM	18:00	7.11 pH	16.33 °C	7,392.8 µS/cm	0.15 mg/L	5.31 NTU	-179.1 mV	8.73 ft	150.00 ml/min
6/11/2024 1:01 PM	21:00	7.12 pH	16.30 °C	7,483.2 µS/cm	0.15 mg/L	4.63 NTU	-185.3 mV	8.73 ft	150.00 ml/min
6/11/2024 1:04 PM	24:00	7.13 pH	16.55 °C	7,606.8 µS/cm	0.14 mg/L	8.30 NTU	-192.7 mV	8.73 ft	150.00 ml/min
6/11/2024 1:07 PM	27:00	7.13 pH	16.39 °C	7,690.9 µS/cm	0.15 mg/L	8.59 NTU	-199.8 mV	8.73 ft	150.00 ml/min
6/11/2024 1:10 PM	30:00	7.14 pH	16.38 °C	7,831.1 µS/cm	0.14 mg/L	3.45 NTU	-208.0 mV	8.73 ft	150.00 ml/min
6/11/2024 1:13 PM	33:00	7.14 pH	16.46 °C	7,973.4 µS/cm	0.14 mg/L	4.35 NTU	-216.5 mV	8.73 ft	150.00 ml/min

6/11/2024 1:16 PM	36:00	7.14 pH	16.41 °C	8,039.2 µS/cm	0.13 mg/L	4.09 NTU	-225.7 mV	8.73 ft	150.00 ml/min
6/11/2024 1:19 PM	39:00	7.15 pH	16.55 °C	8,015.5 µS/cm	0.15 mg/L	10.86 NTU	-232.6 mV	8.73 ft	150.00 ml/min
6/11/2024 1:22 PM	42:00	7.15 pH	16.55 °C	7,975.9 µS/cm	0.15 mg/L	6.28 NTU	-238.5 mV	8.73 ft	150.00 ml/min
6/11/2024 1:25 PM	45:00	7.15 pH	16.63 °C	7,935.8 µS/cm	0.46 mg/L	6.49 NTU	-235.0 mV	8.73 ft	150.00 ml/min

Samples

Sample ID:	Description:
MW-200	Sample time: 1230 Methodology: Groundwater samples were collected using low flow purge techniques with dedicated tubing, a peristaltic pump, and an Aquatroll 600 multimeter. The polyethylene tubing was in each well such that the intake depth was within 6 inches of the water level. All wells were sampled within their screened interval. Samples were immediately stored on ice to be sampled for BTEX, DTP, HO, and CPAHs.

Low-Flow Test Report:

Test Date / Time: 6/11/2024 11:13:48 AM
Project: Seattle Terminal 2Q24
Operator Name: OI

Location Name: MW-201 **Latitude: 47.61667759791959** **Longitude: -122.3574882405751** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 14.8 m** **Total Depth: 19.8 m** **Initial Depth to Water: 9.14 ft**	**Pump Type: Geotech Geopump Series 2** **Tubing Type: Polyethylene 0.170 x1/4** **Pump Intake From TOC: 10 ft** **Estimated Total Volume Pumped: 4950 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 150 ml/min** **Final Draw Down: -0.19 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 870001**

Test Notes:
FDTW: 9.33ft

Weather Conditions:
High winds, cloudy

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10 %		
6/11/2024 11:13 AM	00:00	6.94 pH	18.07 °C	668.91 µS/cm	2.70 mg/L	26.32 NTU	-63.9 mV	9.14 ft	150.00 ml/min
6/11/2024 11:16 AM	03:00	6.93 pH	16.81 °C	664.44 µS/cm	0.90 mg/L	14.38 NTU	-68.9 mV	9.14 ft	150.00 ml/min
6/11/2024 11:19 AM	06:00	6.92 pH	15.73 °C	673.71 µS/cm	0.36 mg/L	7.78 NTU	-71.6 mV	9.14 ft	150.00 ml/min
6/11/2024 11:22 AM	09:00	6.91 pH	15.90 °C	672.04 µS/cm	0.25 mg/L	25.39 NTU	-73.4 mV	9.14 ft	150.00 ml/min
6/11/2024 11:25 AM	12:00	6.92 pH	16.00 °C	672.07 µS/cm	0.21 mg/L	20.53 NTU	-74.8 mV	9.14 ft	150.00 ml/min
6/11/2024 11:28 AM	15:00	6.93 pH	15.89 °C	669.59 µS/cm	0.20 mg/L	31.22 NTU	-76.6 mV	9.14 ft	150.00 ml/min
6/11/2024 11:31 AM	18:00	6.94 pH	16.49 °C	667.95 µS/cm	0.21 mg/L	46.41 NTU	-78.8 mV	9.14 ft	150.00 ml/min
6/11/2024 11:34 AM	21:00	6.95 pH	16.53 °C	669.89 µS/cm	0.20 mg/L	57.34 NTU	-80.5 mV	9.14 ft	150.00 ml/min
6/11/2024 11:37 AM	24:00	6.96 pH	16.57 °C	679.02 µS/cm	0.19 mg/L	71.52 NTU	-80.9 mV	9.14 ft	150.00 ml/min
6/11/2024 11:40 AM	27:00	6.97 pH	16.60 °C	679.82 µS/cm	0.17 mg/L	93.84 NTU	-81.4 mV	9.14 ft	150.00 ml/min
6/11/2024 11:43 AM	30:00	6.96 pH	16.54 °C	692.14 µS/cm	0.17 mg/L	96.76 NTU	-81.9 mV	9.14 ft	150.00 ml/min
6/11/2024 11:46 AM	33:00	6.97 pH	16.51 °C	691.73 µS/cm	0.17 mg/L	99.72 NTU	-82.0 mV	9.14 ft	150.00 ml/min

Samples

Sample ID:	Description:
MW-201	Methodology: Groundwater samples were collected using low flow purge techniques with dedicated tubing, a peristaltic pump, and an Aquatroll 600 multimeter. The polyethylene tubing was in each well such that the intake depth was within 6 inches of the water level. All wells were sampled within their screened interval. Samples were immediately stored on ice to be sampled for BTEX, DTP, HO, and CPAHs. Sample time: 1150

Low-Flow Test Report:

Test Date / Time: 6/11/2024 1:31:35 PM
Project: Seattle Terminal 2Q24
Operator Name: CC

Location Name: ~~MW-207~~ MW-202
Well Diameter: 2 in
Casing Type: PVC
Screen Length: 13.77 ft
Top of Screen: 9.5 ft
Total Depth: 23.27 ft
Initial Depth to Water: 9.76 ft

Pump Type: Geotech Geopump Series 2
Tubing Type: Polyethylene 0.179 x 1/4
Pump Intake From TOC: 10 ft
Estimated Total Volume Pumped: 6750 ml
Flow Cell Volume: 130 ml
Final Flow Rate: 150 ml/min
Final Draw Down: 0 ft

Instrument Used: Aqua TROLL 600
Serial Number: 808988

Test Notes:
RDO did not stabilize

Weather Conditions:
Clear

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10 %		
6/11/2024 1:31 PM	00:00	6.71 pH	19.60 °C	29,188 µS/cm	1.64 mg/L	0.29 NTU	79.6 mV	9.76 ft	150.00 ml/min
6/11/2024 1:34 PM	03:00	6.79 pH	21.79 °C	30,919 µS/cm	2.99 mg/L	0.81 NTU	83.6 mV	9.76 ft	150.00 ml/min
6/11/2024 1:37 PM	06:00	6.90 pH	24.63 °C	30,882 µS/cm	4.06 mg/L	1.91 NTU	72.0 mV	9.76 ft	150.00 ml/min
6/11/2024 1:40 PM	09:00	6.76 pH	18.09 °C	29,435 µS/cm	1.88 mg/L	2.58 NTU	56.3 mV	9.76 ft	150.00 ml/min
6/11/2024 1:43 PM	12:00	6.79 pH	16.18 °C	30,502 µS/cm	1.31 mg/L	2.17 NTU	33.5 mV	9.76 ft	150.00 ml/min
6/11/2024 1:46 PM	15:00	6.87 pH	16.62 °C	30,724 µS/cm	0.93 mg/L	5.30 NTU	-15.3 mV	9.76 ft	150.00 ml/min
6/11/2024 1:49 PM	18:00	6.96 pH	16.18 °C	31,060 µS/cm	0.36 mg/L	0.69 NTU	-36.3 mV	9.76 ft	150.00 ml/min
6/11/2024 1:52 PM	21:00	6.98 pH	16.35 °C	31,155 µS/cm	0.29 mg/L	3.27 NTU	-40.0 mV	9.76 ft	150.00 ml/min
6/11/2024 1:55 PM	24:00	6.97 pH	16.37 °C	30,988 µS/cm	0.24 mg/L	0.27 NTU	-39.6 mV	9.76 ft	150.00 ml/min
6/11/2024 1:58 PM	27:00	6.99 pH	16.27 °C	31,284 µS/cm	0.24 mg/L	1.87 NTU	-42.1 mV	9.76 ft	150.00 ml/min
6/11/2024 2:01 PM	30:00	7.03 pH	18.48 °C	31,634 µS/cm	2.33 mg/L	0.55 NTU	-42.8 mV	9.76 ft	150.00 ml/min
6/11/2024 2:04 PM	33:00	7.06 pH	20.59 °C	31,311 µS/cm	2.15 mg/L	3.02 NTU	-43.5 mV	9.76 ft	150.00 ml/min

6/11/2024 2:07 PM	36:00	7.02 pH	16.46 °C	31,282 µS/cm	0.55 mg/L	0.00 NTU	-46.1 mV	9.76 ft	150.00 ml/min
6/11/2024 2:10 PM	39:00	7.00 pH	16.31 °C	31,278 µS/cm	0.36 mg/L	0.00 NTU	-44.5 mV	9.76 ft	150.00 ml/min
6/11/2024 2:13 PM	42:00	7.01 pH	16.21 °C	31,284 µS/cm	0.25 mg/L	0.00 NTU	-44.4 mV	9.76 ft	150.00 ml/min
6/11/2024 2:16 PM	45:00	7.02 pH	16.22 °C	31,199 µS/cm	0.19 mg/L	0.00 NTU	-45.8 mV	9.76 ft	150.00 ml/min

Samples

Sample ID:	Description:
MW-202-GW-10_240611	Sample time: 14:20 Methodology: Groundwater samples were collected using low flow purge techniques with dedicated tubing, and an Aquatroll 600 multimeter. The polyethylene tubing was in each well such that the intake depth was within 6 inches of the water level. All wells were sampled within their screen interval. Samples were immediately stored on ice to be sampled for BTEX, DTP, HO, and CPAHs.

Location name edited due to user error in field.

Low-Flow Test Report:

Test Date / Time: 6/11/2024 10:46:45 AM
Project: Seattle Terminal 2Q24
Operator Name: CC

Location Name: MW-203 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 15 ft** **Top of Screen: 10.5 ft** **Total Depth: 25.5 ft** **Initial Depth to Water: 11.73 ft**	**Pump Type: Geotech Geopump Series 2** **Tubing Type: Polyethylene 0.179 x 1/4** **Pump Intake From TOC: 12.4 ft** **Estimated Total Volume Pumped: 22880 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 150 ml/min** **Final Draw Down: 0 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 808988**

Test Notes:
Pump off at 48 minutes; record accidentally not closed.

Weather Conditions:
Cloudy, 58°F, 14 MPH SSW Winds

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10 %		
6/11/2024 10:46 AM	00:00	6.96 pH	16.56 °C	12,391 µS/cm	0.83 mg/L	2.32 NTU	50.6 mV	11.73 ft	150.00 ml/min
6/11/2024 10:49 AM	03:00	6.98 pH	16.30 °C	12,172 µS/cm	0.54 mg/L	0.68 NTU	45.4 mV	11.73 ft	150.00 ml/min
6/11/2024 10:52 AM	06:00	6.98 pH	16.25 °C	11,926 µS/cm	0.40 mg/L	1.24 NTU	42.4 mV	11.73 ft	150.00 ml/min
6/11/2024 10:55 AM	09:00	6.99 pH	16.28 °C	11,557 µS/cm	0.29 mg/L	0.55 NTU	41.1 mV	11.73 ft	150.00 ml/min
6/11/2024 10:58 AM	12:00	6.99 pH	16.28 °C	11,318 µS/cm	0.23 mg/L	1.25 NTU	40.0 mV	11.73 ft	150.00 ml/min
6/11/2024 11:01 AM	15:00	6.99 pH	16.33 °C	11,026 µS/cm	0.30 mg/L	0.00 NTU	39.3 mV	11.73 ft	150.00 ml/min
6/11/2024 11:04 AM	18:00	6.99 pH	16.39 °C	10,766 µS/cm	0.31 mg/L	0.00 NTU	38.9 mV	11.73 ft	150.00 ml/min
6/11/2024 11:07 AM	21:00	6.99 pH	16.47 °C	10,533 µS/cm	0.41 mg/L	0.00 NTU	39.1 mV	11.73 ft	150.00 ml/min
6/11/2024 11:10 AM	24:00	7.00 pH	16.55 °C	10,294 µS/cm	0.22 mg/L	0.00 NTU	39.1 mV	11.73 ft	150.00 ml/min
6/11/2024 11:13 AM	27:00	7.00 pH	16.46 °C	10,081 µS/cm	0.25 mg/L	0.00 NTU	39.5 mV	11.73 ft	150.00 ml/min
6/11/2024 11:16 AM	30:00	7.00 pH	16.40 °C	9,908.0 µS/cm	0.15 mg/L	0.00 NTU	39.8 mV	11.73 ft	150.00 ml/min
6/11/2024 11:19 AM	33:00	7.00 pH	16.33 °C	9,731.3 µS/cm	0.24 mg/L	0.00 NTU	40.3 mV	11.73 ft	150.00 ml/min

6/11/2024 11:22 AM	36:00	7.00 pH	16.54 °C	9,537.1 µS/cm	0.23 mg/L	0.00 NTU	40.4 mV	11.73 ft	150.00 ml/min
6/11/2024 11:25 AM	39:00	7.00 pH	16.77 °C	9,375.1 µS/cm	0.20 mg/L	0.00 NTU	41.0 mV	11.73 ft	150.00 ml/min
6/11/2024 11:28 AM	42:00	7.00 pH	16.60 °C	9,175.5 µS/cm	0.44 mg/L	0.00 NTU	41.4 mV	11.73 ft	150.00 ml/min
6/11/2024 11:31 AM	45:00	7.00 pH	16.86 °C	8,982.1 µS/cm	0.29 mg/L	0.00 NTU	41.9 mV	11.73 ft	150.00 ml/min
6/11/2024 11:34 AM	48:00	7.00 pH	16.86 °C	8,836.3 µS/cm	0.30 mg/L	0.00 NTU	42.6 mV	11.73 ft	150.00 ml/min
6/11/2024 11:36 AM	49:46	7.00 pH	16.82 °C	8,775.2 µS/cm	0.30 mg/L	0.00 NTU	43.0 mV	11.73 ft	150.00 ml/min
6/11/2024 1:19 PM	02:32:18	6.35 pH	41.40 °C	0.04 µS/cm	6.37 mg/L	4.22 NTU	16.6 mV	11.73 ft	150.00 ml/min
6/11/2024 1:19 PM	02:32:32	6.36 pH	41.41 °C	0.04 µS/cm	6.32 mg/L	4.34 NTU	13.4 mV	11.73 ft	150.00 ml/min

Samples

Sample ID:	Description:
MW-203	Sample time: Methodology: Methodology: Groundwater samples were collected using low flow purge techniques with dedicated tubing, and an Aquatroll 600 multimeter. The polyethylene tubing was in each well such that the intake depth was within 6 inches of the water level. All wells were sampled within their screen interval. Samples were immediately stored on ice to be sampled for BTEX, DTP, HO, and CPAHs.

Low-Flow Test Report:

Test Date / Time: 6/11/2024 9:10:31 AM
Project: Seattle Terminal 2Q24
Operator Name: CC

Location Name: MW-204 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 13.55 ft** **Top of Screen: 17.35 ft** **Total Depth: 30.9 ft** **Initial Depth to Water: 17.8 ft**	**Pump Type: Geotech Geopump Series 2** **Tubing Type: Polyethylene 0.179 x 1/4** **Pump Intake From TOC: 18.5 ft** **Estimated Total Volume Pumped: 6750 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 150 ml/min** **Final Draw Down: 0.05 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 808988**

Test Notes:
Final DTW: 17.85 ft

Readings for turbidity and RDO concentration did not stabilize by 45 minute time limit

Weather Conditions:
Cloudy, 56°F, 13 MPH SSW Winds

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10 %		
6/11/2024 9:10 AM	00:00	6.86 pH	15.73 °C	493.89 µS/cm	1.47 mg/L	9.50 NTU	-81.7 mV	17.80 ft	150.00 ml/min
6/11/2024 9:13 AM	03:00	6.90 pH	15.11 °C	506.98 µS/cm	0.56 mg/L	7.48 NTU	-101.4 mV	17.80 ft	150.00 ml/min
6/11/2024 9:16 AM	06:00	6.91 pH	14.63 °C	500.69 µS/cm	0.29 mg/L	6.35 NTU	-108.9 mV	17.80 ft	150.00 ml/min
6/11/2024 9:19 AM	09:00	6.92 pH	14.51 °C	495.12 µS/cm	0.22 mg/L	3.96 NTU	-119.8 mV	17.80 ft	150.00 ml/min
6/11/2024 9:22 AM	12:00	6.93 pH	14.48 °C	490.38 µS/cm	0.24 mg/L	4.31 NTU	-114.8 mV	17.80 ft	150.00 ml/min
6/11/2024 9:25 AM	15:00	6.92 pH	14.48 °C	486.62 µS/cm	0.15 mg/L	3.73 NTU	-109.2 mV	17.80 ft	150.00 ml/min
6/11/2024 9:28 AM	18:00	6.93 pH	14.43 °C	485.13 µS/cm	0.13 mg/L	5.28 NTU	-109.3 mV	17.80 ft	150.00 ml/min
6/11/2024 9:31 AM	21:00	6.94 pH	14.37 °C	484.57 µS/cm	0.18 mg/L	3.99 NTU	-106.0 mV	17.80 ft	150.00 ml/min
6/11/2024 9:34 AM	24:00	6.94 pH	14.35 °C	482.97 µS/cm	0.20 mg/L	4.25 NTU	-103.0 mV	17.80 ft	150.00 ml/min
6/11/2024 9:37 AM	27:00	6.94 pH	14.36 °C	480.59 µS/cm	0.11 mg/L	5.52 NTU	-101.0 mV	17.80 ft	150.00 ml/min
6/11/2024 9:40 AM	30:00	6.95 pH	14.34 °C	479.51 µS/cm	0.13 mg/L	7.75 NTU	-100.6 mV	17.80 ft	150.00 ml/min

6/11/2024 9:43 AM	33:00	6.95 pH	14.28 °C	478.01 µS/cm	0.10 mg/L	3.50 NTU	-96.8 mV	17.80 ft	150.00 ml/min
6/11/2024 9:46 AM	36:00	6.95 pH	14.24 °C	477.40 µS/cm	0.08 mg/L	5.15 NTU	-95.7 mV	17.80 ft	150.00 ml/min
6/11/2024 9:49 AM	39:00	6.96 pH	14.18 °C	477.06 µS/cm	0.12 mg/L	7.67 NTU	-93.8 mV	17.80 ft	150.00 ml/min
6/11/2024 9:52 AM	42:00	6.96 pH	14.42 °C	476.96 µS/cm	0.08 mg/L	5.10 NTU	-92.4 mV	17.80 ft	150.00 ml/min
6/11/2024 9:55 AM	45:00	6.96 pH	14.42 °C	476.29 µS/cm	0.07 mg/L	5.88 NTU	-90.4 mV	17.80 ft	150.00 ml/min

Samples

Sample ID:	Description:
MW-204-GW-18_240611	Sample Time: 1003 Methodology: Groundwater samples were collected using low flow purge techniques with dedicated tubing, and an Aquatroll 600 multimeter. The polyethylene tubing was in each well such that the intake depth was within 6 inches of the water level. All wells were sampled within their screen interval. Samples were immediately stored on ice to be sampled for BTEX, DTP, HO, and CPAHs.

Low-Flow Test Report:

Test Date / Time: 6/11/2024 9:15:16 AM
Project: Seattle Terminal 2Q24
Operator Name: OI

Location Name: MW-205 **Latitude: 47.616767769246735** **Longitude: -122.35611563325322** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 20.5 ft** **Total Depth: 38.5 ft** **Initial Depth to Water: 21.74 ft**	**Pump Type: Geotech Geopump Series 2** **Tubing Type: Polyethylene 0.170 x1/4** **Pump Intake From TOC: 22 ft** **Estimated Total Volume Pumped: 7200 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 150 ml/min** **Final Draw Down: -0.23 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 870001**

Test Notes:

Weather Conditions:
High winds, overcast

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10 %		
6/11/2024 9:15 AM	00:00	6.91 pH	14.84 °C	556.61 µS/cm	4.54 mg/L	42.91 NTU	153.5 mV	21.74 ft	150.00 ml/min
6/11/2024 9:18 AM	03:00	6.95 pH	14.06 °C	536.13 µS/cm	0.43 mg/L	7.33 NTU	44.6 mV	21.74 ft	150.00 ml/min
6/11/2024 9:21 AM	06:00	6.97 pH	14.09 °C	533.76 µS/cm	0.30 mg/L	7.36 NTU	14.8 mV	21.74 ft	150.00 ml/min
6/11/2024 9:24 AM	09:00	6.97 pH	14.04 °C	533.13 µS/cm	0.25 mg/L	8.06 NTU	-9.7 mV	21.74 ft	150.00 ml/min
6/11/2024 9:27 AM	12:00	6.98 pH	14.03 °C	534.32 µS/cm	0.23 mg/L	8.06 NTU	-29.2 mV	21.74 ft	150.00 ml/min
6/11/2024 9:30 AM	15:00	6.99 pH	13.99 °C	534.84 µS/cm	0.21 mg/L	7.36 NTU	-43.2 mV	21.74 ft	150.00 ml/min
6/11/2024 9:33 AM	18:00	7.01 pH	14.00 °C	534.64 µS/cm	0.18 mg/L	11.06 NTU	-50.3 mV	21.74 ft	150.00 ml/min
6/11/2024 9:36 AM	21:00	7.01 pH	13.95 °C	534.90 µS/cm	0.18 mg/L	5.40 NTU	-58.3 mV	21.74 ft	150.00 ml/min
6/11/2024 9:39 AM	24:00	7.02 pH	14.02 °C	535.49 µS/cm	0.16 mg/L	6.06 NTU	-65.4 mV	21.74 ft	150.00 ml/min
6/11/2024 9:42 AM	27:00	7.02 pH	14.03 °C	535.63 µS/cm	0.16 mg/L	4.52 NTU	-71.1 mV	21.74 ft	150.00 ml/min
6/11/2024 9:45 AM	30:00	7.03 pH	13.97 °C	536.35 µS/cm	0.15 mg/L	5.78 NTU	-75.4 mV	21.74 ft	150.00 ml/min
6/11/2024 9:48 AM	33:00	7.04 pH	13.94 °C	535.92 µS/cm	0.15 mg/L	7.09 NTU	-78.5 mV	21.74 ft	150.00 ml/min

6/11/2024 9:51 AM	36:00	7.05 pH	14.03 °C	535.69 µS/cm	0.15 mg/L	4.30 NTU	-80.4 mV	21.74 ft	150.00 ml/min
6/11/2024 9:54 AM	39:00	7.06 pH	14.04 °C	534.48 µS/cm	0.15 mg/L	4.71 NTU	-83.2 mV	21.74 ft	150.00 ml/min
6/11/2024 9:57 AM	42:00	7.06 pH	14.08 °C	532.66 µS/cm	0.14 mg/L	6.12 NTU	-84.8 mV	21.74 ft	150.00 ml/min
6/11/2024 10:00 AM	45:00	7.06 pH	14.20 °C	532.07 µS/cm	0.13 mg/L	7.71 NTU	-86.4 mV	21.74 ft	150.00 ml/min
6/11/2024 10:03 AM	48:00	7.08 pH	14.32 °C	530.21 µS/cm	0.13 mg/L	6.96 NTU	-88.7 mV	21.74 ft	150.00 ml/min

Samples

Sample ID:	Description:
MW-205	Methodology: Groundwater samples were collected using low flow purge techniques with dedicated tubing, a peristaltic pump, and an Aquatroll 600 multimeter. The polyethylene tubing was in each well such that the intake depth was within 6 inches of the water level. All wells were sampled within their screened interval. Samples were immediately stored on ice to be sampled for BTEX, DTP, HO, and CPAHs. Sample time: 1010
Dup 1	Methodology: Groundwater samples were collected using low flow purge techniques with dedicated tubing, a peristaltic pump, and an Aquatroll 600 multimeter. The polyethylene tubing was in each well such that the intake depth was within 6 inches of the water level. All wells were sampled within their screened interval. Samples were immediately stored on ice to be sampled for BTEX, DTP, HO, and CPAHs. Sample time: 1010

Low-Flow Test Report:

Test Date / Time: 6/11/2024 3:07:38 PM
Project: Seattle Terminal 2Q24
Operator Name: OI

Location Name: MW-206 **Latitude: 47.616252026657875** **Longitude: -122.35699598271985** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 14.8 ft** **Total Depth: 25.8 ft** **Initial Depth to Water: 12.78 ft**	**Pump Type: Geotech Geopump Series 2** **Tubing Type: Polyethylene 0.170 x1/4** **Pump Intake From TOC: 13 ft** **Estimated Total Volume Pumped: 6750 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 150 ml/min** **Final Draw Down: -0.22 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 870001**

Test Notes:
FDTW: 13ft

Weather Conditions:
Sunny, high winds

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10 %		
6/11/2024 3:07 PM	00:00	6.93 pH	16.59 °C	36,089 µS/cm	5.45 mg/L	9.21 NTU	4.6 mV	12.78 ft	150.00 ml/min
6/11/2024 3:10 PM	03:00	6.97 pH	15.04 °C	36,952 µS/cm	5.00 mg/L	5.20 NTU	24.9 mV	12.78 ft	150.00 ml/min
6/11/2024 3:13 PM	06:00	6.98 pH	14.74 °C	37,025 µS/cm	4.77 mg/L	1.66 NTU	35.2 mV	12.78 ft	150.00 ml/min
6/11/2024 3:16 PM	09:00	7.00 pH	14.79 °C	37,080 µS/cm	4.56 mg/L	1.31 NTU	42.8 mV	12.78 ft	150.00 ml/min
6/11/2024 3:19 PM	12:00	7.00 pH	14.72 °C	37,104 µS/cm	4.37 mg/L	0.61 NTU	48.6 mV	12.78 ft	150.00 ml/min
6/11/2024 3:22 PM	15:00	7.00 pH	14.67 °C	37,163 µS/cm	4.23 mg/L	0.99 NTU	53.2 mV	12.78 ft	150.00 ml/min
6/11/2024 3:25 PM	18:00	7.00 pH	14.92 °C	37,128 µS/cm	4.07 mg/L	0.66 NTU	56.8 mV	12.78 ft	150.00 ml/min
6/11/2024 3:28 PM	21:00	7.00 pH	14.71 °C	37,175 µS/cm	3.97 mg/L	0.74 NTU	60.0 mV	12.78 ft	150.00 ml/min
6/11/2024 3:31 PM	24:00	7.00 pH	14.53 °C	37,248 µS/cm	3.85 mg/L	1.60 NTU	62.8 mV	12.78 ft	150.00 ml/min
6/11/2024 3:34 PM	27:00	7.00 pH	14.43 °C	37,288 µS/cm	3.60 mg/L	0.33 NTU	65.0 mV	12.78 ft	150.00 ml/min
6/11/2024 3:37 PM	30:00	7.00 pH	14.36 °C	37,331 µS/cm	3.43 mg/L	0.42 NTU	67.1 mV	12.78 ft	150.00 ml/min
6/11/2024 3:40 PM	33:00	7.01 pH	14.29 °C	37,388 µS/cm	3.28 mg/L	0.18 NTU	68.8 mV	12.78 ft	150.00 ml/min

6/11/2024 3:43 PM	36:00	7.00 pH	14.35 °C	37,442 µS/cm	3.12 mg/L	0.12 NTU	70.4 mV	12.78 ft	150.00 ml/min
6/11/2024 3:46 PM	39:00	7.00 pH	14.35 °C	37,458 µS/cm	2.96 mg/L	0.38 NTU	71.8 mV	12.78 ft	150.00 ml/min
6/11/2024 3:49 PM	42:00	7.00 pH	14.13 °C	37,505 µS/cm	2.81 mg/L	0.05 NTU	73.2 mV	12.78 ft	150.00 ml/min
6/11/2024 3:52 PM	45:00	7.00 pH	14.35 °C	37,582 µS/cm	2.61 mg/L	1.02 NTU	74.0 mV	12.78 ft	150.00 ml/min

Samples

Sample ID:	Description:
MW-205	Sample time: 1555 Methodology: Groundwater samples were collected using low flow purge techniques with dedicated tubing, a peristaltic pump, and an Aquatroll 600 multimeter. The polyethylene tubing was in each well such that the intake depth was within 6 inches of the water level. All wells were sampled within their screened interval. Samples were immediately stored on ice to be sampled for BTEX, DTP, HO, and CPAHs.

Low-Flow Test Report:

Test Date / Time: 6/11/2024 3:07:10 PM
Project: Seattle Terminal 2Q24
Operator Name: CC

Location Name: MW-207 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 13.77 ft** **Top of Screen: 9.5 ft** **Total Depth: 23.27 ft** **Initial Depth to Water: 12.75 ft**	**Pump Type: Geotech Geopump Series 2** **Tubing Type: Polyethylene 0.179 x 1/4** **Pump Intake From TOC: 13 ft** **Estimated Total Volume Pumped: 6750 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 150 ml/min** **Final Draw Down: 0.05 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 808988**

Test Notes:

Weather Conditions:
Partly Cloudy, 68°F, 14 MPH SW Winds

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10 %		
6/11/2024 3:07 PM	00:00	6.89 pH	16.93 °C	24,629 µS/cm	1.90 mg/L	3.57 NTU	-56.0 mV	12.75 ft	150.00 ml/min
6/11/2024 3:10 PM	03:00	6.90 pH	15.06 °C	24,458 µS/cm	1.24 mg/L	1.08 NTU	-71.5 mV	12.75 ft	150.00 ml/min
6/11/2024 3:13 PM	06:00	6.91 pH	14.68 °C	24,165 µS/cm	0.93 mg/L	2.34 NTU	-82.2 mV	12.75 ft	150.00 ml/min
6/11/2024 3:16 PM	09:00	6.93 pH	14.73 °C	23,717 µS/cm	0.68 mg/L	2.32 NTU	-91.3 mV	12.75 ft	150.00 ml/min
6/11/2024 3:19 PM	12:00	6.94 pH	14.59 °C	23,234 µS/cm	0.53 mg/L	1.29 NTU	-98.8 mV	12.75 ft	150.00 ml/min
6/11/2024 3:22 PM	15:00	6.95 pH	14.57 °C	22,727 µS/cm	0.40 mg/L	0.36 NTU	-105.6 mV	12.75 ft	150.00 ml/min
6/11/2024 3:25 PM	18:00	6.96 pH	14.60 °C	22,197 µS/cm	0.33 mg/L	1.07 NTU	-111.7 mV	12.75 ft	150.00 ml/min
6/11/2024 3:28 PM	21:00	6.96 pH	14.94 °C	21,745 µS/cm	0.32 mg/L	0.00 NTU	-117.9 mV	12.75 ft	150.00 ml/min
6/11/2024 3:31 PM	24:00	6.97 pH	14.83 °C	21,330 µS/cm	0.29 mg/L	0.00 NTU	-122.5 mV	12.75 ft	150.00 ml/min
6/11/2024 3:34 PM	27:00	6.98 pH	14.89 °C	20,909 µS/cm	0.27 mg/L	0.00 NTU	-128.1 mV	12.75 ft	150.00 ml/min
6/11/2024 3:37 PM	30:00	6.99 pH	14.75 °C	20,531 µS/cm	0.25 mg/L	0.00 NTU	-134.6 mV	12.75 ft	150.00 ml/min
6/11/2024 3:40 PM	33:00	6.99 pH	14.92 °C	20,065 µS/cm	0.22 mg/L	0.03 NTU	-141.1 mV	12.75 ft	150.00 ml/min

6/11/2024 3:43 PM	36:00	7.00 pH	14.74 °C	19,623 µS/cm	0.20 mg/L	0.00 NTU	-148.6 mV	12.75 ft	150.00 ml/min
6/11/2024 3:46 PM	39:00	7.02 pH	14.80 °C	19,263 µS/cm	0.17 mg/L	0.00 NTU	-157.6 mV	12.75 ft	150.00 ml/min
6/11/2024 3:49 PM	42:00	7.02 pH	14.69 °C	18,783 µS/cm	0.15 mg/L	0.00 NTU	-169.4 mV	12.75 ft	150.00 ml/min
6/11/2024 3:52 PM	45:00	7.03 pH	14.78 °C	18,448 µS/cm	0.13 mg/L	0.00 NTU	-186.9 mV	12.75 ft	150.00 ml/min

Samples

Sample ID:	Description:
MW-207-GW-13_240611	Sample Time: 1600 Methodology: Groundwater samples were collected using low flow purge techniques with dedicated tubing, and an Aquatroll 600 multimeter. The polyethylene tubing was in each well such that the intake depth was within 6 inches of the water level. All wells were sampled within their screen interval. Samples were immediately stored on ice to be sampled for BTEX, DTP, HO, and CPAHs.

Low-Flow Test Report:

Test Date / Time: 6/10/2024 12:43:18 PM
Project: Seattle Terminal 2Q24
Operator Name: OI

Location Name: MW-20 **Latitude: 47.61623522909203** **Longitude: -122.3566250609363** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 15 ft** **Top of Screen: 3 ft** **Initial Depth to Water: 9.41 ft**	**Pump Type: Geotech Geopump Series 2** **Tubing Type: Polyethylene 0.170 x1/4** **Pump Intake From TOC: 9.9 ft** **Estimated Total Volume Pumped: 2700 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 150 ml/min** **Final Draw Down: -13 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 870001**

Test Notes:

Weather Conditions:
Overcast

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10 %	+/- 5	
6/10/2024 12:43 PM	00:00	7.02 pH	17.23 °C	484.92 µS/cm	2.30 mg/L	0.31 NTU	-83.7 mV	286.82 cm	150.00 ml/min
6/10/2024 12:46 PM	03:00	6.95 pH	16.05 °C	488.00 µS/cm	0.39 mg/L	0.00 NTU	-88.6 mV	286.82 cm	150.00 ml/min
6/10/2024 12:49 PM	06:00	6.90 pH	15.53 °C	481.30 µS/cm	0.24 mg/L	0.00 NTU	-86.6 mV	286.82 cm	150.00 ml/min
6/10/2024 12:52 PM	09:00	6.84 pH	15.53 °C	477.53 µS/cm	0.21 mg/L	0.00 NTU	-84.7 mV	286.82 cm	150.00 ml/min
6/10/2024 12:55 PM	12:00	6.84 pH	15.48 °C	476.80 µS/cm	0.19 mg/L	0.00 NTU	-84.9 mV	286.82 cm	150.00 ml/min
6/10/2024 12:58 PM	15:00	6.84 pH	15.42 °C	469.82 µS/cm	0.18 mg/L	0.00 NTU	-83.5 mV	286.82 cm	150.00 ml/min
6/10/2024 1:01 PM	18:00	6.83 pH	15.35 °C	464.48 µS/cm	0.18 mg/L	0.00 NTU	-83.1 mV	286.82 cm	150.00 ml/min

Samples

Sample ID:	Description:

MW-209-GW-10_240610	Sample time: 13:06 Methodology: Groundwater samples were collected using low flow purge techniques with dedicated tubing, a peristaltic pump, and an Aquatroll 600 multimeter. The polyethylene tubing was in each well such that the intake depth was within 6 inches of the water level. All wells were sampled within their screened interval. Samples were immediately stored on ice to be sampled for BTEX, DTP, HO, and CPAHs.

Low-Flow Test Report:

Test Date / Time: 6/10/2024 11:47:08 AM
Project: ~~Edmonds Terminal 2Q24~~ Seattle Terminal 2Q24
Operator Name: CC

Location Name: MW-210 **Well Diameter: 2 ft** **Casing Type: PVC** **Screen Length: 15 m** **Top of Screen: 3 m** **Total Depth: 18 m** **Initial Depth to Water: 8.71 ft**	**Pump Type: Geotech Geopump Series 2** **Tubing Type: Polyethylene 0.179 x 1/4** **Pump Intake From TOC: 9 m** **Estimated Total Volume Pumped: 6750 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 150 ml/min** **Final Draw Down: -2.68 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 808988**

Test Notes:
Final Depth: 11.39 ft

Temperature, RDO Concentration, Specific Conductivity, Turbidity, and ORP did not stabilize by the 45 minute time limit

Weather Conditions:
Cloudy, 59°F, 3 MPH SSW Winds

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10 %		
6/10/2024 11:47 AM	00:00	6.25 pH	15.37 °C	298.85 µS/cm	0.96 mg/L	7.51 NTU	72.9 mV	8.71 ft	150.00 ml/min
6/10/2024 11:50 AM	03:00	6.35 pH	16.30 °C	307.76 µS/cm	1.28 mg/L	4.25 NTU	45.6 mV	8.71 ft	150.00 ml/min
6/10/2024 11:53 AM	06:00	6.36 pH	15.23 °C	319.20 µS/cm	0.31 mg/L	13.69 NTU	14.9 mV	8.71 ft	150.00 ml/min
6/10/2024 11:56 AM	09:00	6.36 pH	15.17 °C	327.14 µS/cm	0.27 mg/L	11.81 NTU	4.2 mV	8.71 ft	150.00 ml/min
6/10/2024 11:59 AM	12:00	6.41 pH	15.00 °C	342.22 µS/cm	0.17 mg/L	6.94 NTU	-4.6 mV	8.71 ft	150.00 ml/min
6/10/2024 12:02 PM	15:00	6.45 pH	14.91 °C	353.96 µS/cm	0.13 mg/L	1.93 NTU	-12.3 mV	8.71 ft	150.00 ml/min
6/10/2024 12:05 PM	18:00	6.45 pH	15.30 °C	360.62 µS/cm	0.55 mg/L	7.69 NTU	-17.5 mV	8.71 ft	150.00 ml/min
6/10/2024 12:08 PM	21:00	6.43 pH	16.65 °C	355.54 µS/cm	2.72 mg/L	6.04 NTU	-13.0 mV	8.71 ft	150.00 ml/min
6/10/2024 12:11 PM	24:00	6.43 pH	16.38 °C	329.70 µS/cm	1.75 mg/L	3.92 NTU	-3.5 mV	8.71 ft	150.00 ml/min
6/10/2024 12:14 PM	27:00	6.45 pH	14.87 °C	345.22 µS/cm	0.18 mg/L	5.53 NTU	-9.3 mV	8.71 ft	150.00 ml/min
6/10/2024 12:17 PM	30:00	6.47 pH	14.83 °C	346.74 µS/cm	0.13 mg/L	8.05 NTU	-11.4 mV	8.71 ft	150.00 ml/min

6/10/2024 12:20 PM	33:00	6.45 pH	14.76 °C	334.81 µS/cm	0.11 mg/L	3.06 NTU	-7.9 mV	8.71 ft	150.00 ml/min
6/10/2024 12:23 PM	36:00	6.43 pH	16.32 °C	339.16 µS/cm	2.04 mg/L	2.71 NTU	-3.6 mV	8.71 ft	150.00 ml/min
6/10/2024 12:26 PM	39:00	6.42 pH	17.13 °C	321.90 µS/cm	0.76 mg/L	6.15 NTU	6.1 mV	8.71 ft	150.00 ml/min
6/10/2024 12:29 PM	42:00	6.43 pH	15.62 °C	331.40 µS/cm	0.35 mg/L	11.68 NTU	5.2 mV	8.71 ft	150.00 ml/min
6/10/2024 12:32 PM	45:00	6.45 pH	15.58 °C	342.18 µS/cm	0.28 mg/L	9.01 NTU	0.1 mV	8.71 ft	150.00 ml/min

Samples

Sample ID:	Description:
MW-210-GW-9_240610	Sample Time: 1245 Methodology: Groundwater samples were collected using low flow purge techniques with dedicated tubing, and an Aquatroll 600 multimeter. The polyethylene tubing was in each well such that the intake depth was within 6 inches of the water level. All wells were sampled within their screen interval. Samples were immediately stored on ice to be sampled for BTEX, DTP, HO, and CPAHs.

Project name was edited due to user error.

Appendix D

Laboratory Report and Chain of Custody Forms

1st Quarter 2024

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Samuel Miles
Arcadis U.S., Inc.
1100 Olive Way
Suite 800
Seattle, Washington 98101

Generated 3/22/2024 2:38:24 AM

JOB DESCRIPTION

Seattle Terminal

JOB NUMBER

410-163962-1

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster PA 17601

See page two for job notes and contact information.

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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.

Authorization

Generated
3/22/2024 2:38:24 AM

Authorized for release by
Amek Carter, Project Manager
Loran.Carter@et.eurofinsus.com
(717)556-7252

Compliance Statement

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.
· QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
· 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 is performed, unless otherwise specified in the method.
· Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.
Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

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

Test 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. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. The foregoing express warranty is exclusive and is given in lieu of all other warranties, expressed or implied, except as otherwise agreed. We disclaim any other warranties, expressed or implied, including a warranty of fitness for particular purpose and warranty of merchantability. In no event shall Eurofins Lancaster Laboratories Environmental, LLC be liable for indirect, special, consequential, or incidental damages including, but not limited to, damages for loss of profit or goodwill regardless of (A) the negligence (either sole or concurrent) of Eurofins Lancaster Laboratories Environmental and (B) whether Eurofins Lancaster Laboratories Environmental has been informed of the possibility of such damages. We accept no legal responsibility for the purposes for which the client uses the test results. Except as otherwise agreed, no purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Table of Contents

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
cn	Refer to Case Narrative for further detail
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 410-163962-1 — Eurofins Lancaster Laboratories Environment

Job Narrative
410-163962-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- 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 may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 3/14/2024 9:40 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 2.9°C and 5.3°C.

Receipt Exceptions
1 40mL HCL vial for the following sample was received broken. MW-70R-W-9.5-240312 (410-163962-4[MS]) and MW-70R-W-9.5-240312 (410-163962-4[MSD]).

GC/MS VOA
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC/MS Semi VOA
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC VOA
Method NWTPH_Gx: The following volatiles sample was diluted due to foaming at the time of purging during the original sample analysis: MW-209-W-8.8-240312 (410-163962-1). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC Semi VOA
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Detection Summary

Client: Arcadis U.S., Inc.
Project/Site: Seattle Terminal

Job ID: 410-163962-1

Client Sample ID: MW-209-W-8.8-240312 — Lab Sample ID: 410-163962-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Toluene	0.30	J	1.0	0.30	ug/L	1		8260D/UST	Total/NA
C7-C12 (1C)	770	J B cn	1300	220	ug/L	5		NWTPH-Gx	Total/NA
C12-C24	89	J	110	50	ug/L	1		NWTPH-Dx	Total/NA

Client Sample ID: MW-210-W-7-240312 — Lab Sample ID: 410-163962-2

No Detections.

Client Sample ID: MW-211-W-9-240312 — Lab Sample ID: 410-163962-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C7-C12 (1C)	78	J B	250	43	ug/L	1		NWTPH-Gx	Total/NA

Client Sample ID: MW-70R-W-9.5-240312 — Lab Sample ID: 410-163962-4

No Detections.

Client Sample ID: DUP-1-WD-240312 — Lab Sample ID: 410-163962-5

No Detections.

Client Sample ID: QA-T-240312 — Lab Sample ID: 410-163962-6

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-209-W-8.8-240312

Lab Sample ID: 410-163962-1

Date Collected: 03/12/24 09:30

Matrix: Water

Date Received: 03/14/24 09:40

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			03/20/24 16:58	1
Ethylbenzene	ND		1.0	0.40	ug/L			03/20/24 16:58	1
Toluene	**0.30**	**J**	1.0	0.30	ug/L			03/20/24 16:58	1
Xylenes, Total	ND		6.0	0.40	ug/L			03/20/24 16:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*84*		*80 - 120*		*03/20/24 16:58*	*1*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*		*03/20/24 16:58*	*1*
Dibromofluoromethane (Surr)	*89*		*80 - 120*		*03/20/24 16:58*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*03/20/24 16:58*	*1*

Method: SW846 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		0.053	0.011	ug/L		03/18/24 15:06	03/19/24 12:15	1
Benzo[a]pyrene	ND		0.053	0.011	ug/L		03/18/24 15:06	03/19/24 12:15	1
Benzo[b]fluoranthene	ND		0.053	0.011	ug/L		03/18/24 15:06	03/19/24 12:15	1
Benzo[k]fluoranthene	ND		0.053	0.011	ug/L		03/18/24 15:06	03/19/24 12:15	1
Chrysene	ND		0.053	0.011	ug/L		03/18/24 15:06	03/19/24 12:15	1
Dibenz(a,h)anthracene	ND		0.053	0.021	ug/L		03/18/24 15:06	03/19/24 12:15	1
Indeno[1,2,3-cd]pyrene	ND		0.053	0.021	ug/L		03/18/24 15:06	03/19/24 12:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Benzo(a)pyrene-d12 (Surr)	*48*		*10 - 136*	*03/18/24 15:06*	*03/19/24 12:15*	*1*
1-Methylnaphthalene-d10 (Surr)	*99*		*20 - 144*	*03/18/24 15:06*	*03/19/24 12:15*	*1*
Fluoranthene-d10 (Surr)	*97*		*29 - 153*	*03/18/24 15:06*	*03/19/24 12:15*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	**770**	**J B cn**	1300	220	ug/L			03/15/24 21:14	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid) (1C)	*93*	*cn*	*50 - 150*		*03/15/24 21:14*	*5*

Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	**89**	**J**	110	50	ug/L		03/18/24 08:05	03/20/24 15:39	1
C24-C40	ND		280	110	ug/L		03/18/24 08:05	03/20/24 15:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o- terphenyl (Surr)	*69*		*50 - 150*	*03/18/24 08:05*	*03/20/24 15:39*	*1*

Client Sample ID: MW-210-W-7-240312

Lab Sample ID: 410-163962-2

Date Collected: 03/12/24 09:16

Matrix: Water

Date Received: 03/14/24 09:40

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			03/20/24 17:22	1
Ethylbenzene	ND		1.0	0.40	ug/L			03/20/24 17:22	1
Toluene	ND		1.0	0.30	ug/L			03/20/24 17:22	1
Xylenes, Total	ND		6.0	0.40	ug/L			03/20/24 17:22	1

Client Sample ID: MW-210-W-7-240312

Lab Sample ID: 410-163962-2

Date Collected: 03/12/24 09:16

Matrix: Water

Date Received: 03/14/24 09:40

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*86*		*80 - 120*		*03/20/24 17:22*	*1*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*		*03/20/24 17:22*	*1*
Dibromofluoromethane (Surr)	*93*		*80 - 120*		*03/20/24 17:22*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*03/20/24 17:22*	*1*

Method: SW846 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		0.054	0.011	ug/L		03/18/24 15:06	03/19/24 12:38	1
Benzo[a]pyrene	ND		0.054	0.011	ug/L		03/18/24 15:06	03/19/24 12:38	1
Benzo[b]fluoranthene	ND		0.054	0.011	ug/L		03/18/24 15:06	03/19/24 12:38	1
Benzo[k]fluoranthene	ND		0.054	0.011	ug/L		03/18/24 15:06	03/19/24 12:38	1
Chrysene	ND		0.054	0.011	ug/L		03/18/24 15:06	03/19/24 12:38	1
Dibenz(a,h)anthracene	ND		0.054	0.022	ug/L		03/18/24 15:06	03/19/24 12:38	1
Indeno[1,2,3-cd]pyrene	ND		0.054	0.022	ug/L		03/18/24 15:06	03/19/24 12:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Benzo(a)pyrene-d12 (Surr)	*55*		*10 - 136*	*03/18/24 15:06*	*03/19/24 12:38*	*1*
1-Methylnaphthalene-d10 (Surr)	*78*		*20 - 144*	*03/18/24 15:06*	*03/19/24 12:38*	*1*
Fluoranthene-d10 (Surr)	*73*		*29 - 153*	*03/18/24 15:06*	*03/19/24 12:38*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND		250	43	ug/L			03/15/24 16:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	*100*		*50 - 150*		*03/15/24 16:12*	*1*

Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	ND		110	49	ug/L		03/18/24 08:05	03/20/24 16:02	1
C24-C40	ND		270	110	ug/L		03/18/24 08:05	03/20/24 16:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o- terphenyl (Surr)	*55*		*50 - 150*	*03/18/24 08:05*	*03/20/24 16:02*	*1*

Client Sample ID: MW-211-W-9-240312

Lab Sample ID: 410-163962-3

Date Collected: 03/12/24 10:50

Matrix: Water

Date Received: 03/14/24 09:40

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			03/21/24 17:24	1
Ethylbenzene	ND		1.0	0.40	ug/L			03/21/24 17:24	1
Toluene	ND		1.0	0.30	ug/L			03/21/24 17:24	1
Xylenes, Total	ND		6.0	0.40	ug/L			03/21/24 17:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*86*		*80 - 120*		*03/21/24 17:24*	*1*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*		*03/21/24 17:24*	*1*
Dibromofluoromethane (Surr)	*93*		*80 - 120*		*03/21/24 17:24*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*03/21/24 17:24*	*1*

Client Sample ID: MW-211-W-9-240312

Lab Sample ID: 410-163962-3

Date Collected: 03/12/24 10:50

Matrix: Water

Date Received: 03/14/24 09:40

Method: SW846 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		0.056	0.011	ug/L		03/18/24 15:06	03/19/24 13:01	1
Benzo[a]pyrene	ND		0.056	0.011	ug/L		03/18/24 15:06	03/19/24 13:01	1
Benzo[b]fluoranthene	ND		0.056	0.011	ug/L		03/18/24 15:06	03/19/24 13:01	1
Benzo[k]fluoranthene	ND		0.056	0.011	ug/L		03/18/24 15:06	03/19/24 13:01	1
Chrysene	ND		0.056	0.011	ug/L		03/18/24 15:06	03/19/24 13:01	1
Dibenz(a,h)anthracene	ND		0.056	0.023	ug/L		03/18/24 15:06	03/19/24 13:01	1
Indeno[1,2,3-cd]pyrene	ND		0.056	0.023	ug/L		03/18/24 15:06	03/19/24 13:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Benzo(a)pyrene-d12 (Surr)	*38*		*10 - 136*	*03/18/24 15:06*	*03/19/24 13:01*	*1*
1-Methylnaphthalene-d10 (Surr)	*90*		*20 - 144*	*03/18/24 15:06*	*03/19/24 13:01*	*1*
Fluoranthene-d10 (Surr)	*79*		*29 - 153*	*03/18/24 15:06*	*03/19/24 13:01*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	78	J B	250	43	ug/L			03/15/24 16:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid) (1C)	*98*		*50 - 150*		*03/15/24 16:37*	*1*

Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	ND		110	48	ug/L		03/18/24 08:05	03/20/24 16:25	1
C24-C40	ND		260	110	ug/L		03/18/24 08:05	03/20/24 16:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o- terphenyl (Surr)	*52*		*50 - 150*	*03/18/24 08:05*	*03/20/24 16:25*	*1*

Client Sample ID: MW-70R-W-9.5-240312

Lab Sample ID: 410-163962-4

Date Collected: 03/12/24 12:10

Matrix: Water

Date Received: 03/14/24 09:40

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			03/21/24 17:48	1
Ethylbenzene	ND		1.0	0.40	ug/L			03/21/24 17:48	1
Toluene	ND		1.0	0.30	ug/L			03/21/24 17:48	1
Xylenes, Total	ND		6.0	0.40	ug/L			03/21/24 17:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*85*		*80 - 120*		*03/21/24 17:48*	*1*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*03/21/24 17:48*	*1*
Dibromofluoromethane (Surr)	*93*		*80 - 120*		*03/21/24 17:48*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*03/21/24 17:48*	*1*

Method: SW846 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		0.058	0.012	ug/L		03/18/24 15:06	03/19/24 11:07	1
Benzo[a]pyrene	ND		0.058	0.012	ug/L		03/18/24 15:06	03/19/24 11:07	1
Benzo[b]fluoranthene	ND		0.058	0.012	ug/L		03/18/24 15:06	03/19/24 11:07	1
Benzo[k]fluoranthene	ND		0.058	0.012	ug/L		03/18/24 15:06	03/19/24 11:07	1
Chrysene	ND		0.058	0.012	ug/L		03/18/24 15:06	03/19/24 11:07	1

Client Sample ID: MW-70R-W-9.5-240312

Lab Sample ID: 410-163962-4

Date Collected: 03/12/24 12:10

Matrix: Water

Date Received: 03/14/24 09:40

Method: SW846 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenz(a,h)anthracene	ND		0.058	0.023	ug/L		03/18/24 15:06	03/19/24 11:07	1
Indeno[1,2,3-cd]pyrene	ND		0.058	0.023	ug/L		03/18/24 15:06	03/19/24 11:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Benzo(a)pyrene-d12 (Surr)	*57*		*10 - 136*	*03/18/24 15:06*	*03/19/24 11:07*	*1*
1-Methylnaphthalene-d10 (Surr)	*94*		*20 - 144*	*03/18/24 15:06*	*03/19/24 11:07*	*1*
Fluoranthene-d10 (Surr)	*84*		*29 - 153*	*03/18/24 15:06*	*03/19/24 11:07*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND	F1	250	43	ug/L			03/15/24 17:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid) (1C)	*98*		*50 - 150*		*03/15/24 17:02*	*1*

Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	ND		110	51	ug/L		03/18/24 08:05	03/20/24 14:31	1
C24-C40	ND		280	110	ug/L		03/18/24 08:05	03/20/24 14:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o- terphenyl (Surr)	*73*		*50 - 150*	*03/18/24 08:05*	*03/20/24 14:31*	*1*

Client Sample ID: DUP-1-WD-240312

Lab Sample ID: 410-163962-5

Date Collected: 03/12/24 00:00

Matrix: Water

Date Received: 03/14/24 09:40

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			03/21/24 17:12	1
Ethylbenzene	ND		1.0	0.40	ug/L			03/21/24 17:12	1
Toluene	ND		1.0	0.30	ug/L			03/21/24 17:12	1
Xylenes, Total	ND		6.0	0.40	ug/L			03/21/24 17:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*86*		*80 - 120*		*03/21/24 17:12*	*1*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*		*03/21/24 17:12*	*1*
Dibromofluoromethane (Surr)	*90*		*80 - 120*		*03/21/24 17:12*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*03/21/24 17:12*	*1*

Method: SW846 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		0.056	0.011	ug/L		03/18/24 15:06	03/19/24 13:23	1
Benzo[a]pyrene	ND		0.056	0.011	ug/L		03/18/24 15:06	03/19/24 13:23	1
Benzo[b]fluoranthene	ND		0.056	0.011	ug/L		03/18/24 15:06	03/19/24 13:23	1
Benzo[k]fluoranthene	ND		0.056	0.011	ug/L		03/18/24 15:06	03/19/24 13:23	1
Chrysene	ND		0.056	0.011	ug/L		03/18/24 15:06	03/19/24 13:23	1
Dibenz(a,h)anthracene	ND		0.056	0.022	ug/L		03/18/24 15:06	03/19/24 13:23	1
Indeno[1,2,3-cd]pyrene	ND		0.056	0.022	ug/L		03/18/24 15:06	03/19/24 13:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Benzo(a)pyrene-d12 (Surr)	*58*		*10 - 136*	*03/18/24 15:06*	*03/19/24 13:23*	*1*

Client Sample ID: DUP-1-WD-240312

Lab Sample ID: 410-163962-5

Date Collected: 03/12/24 00:00

Matrix: Water

Date Received: 03/14/24 09:40

Method: SW846 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Methylnaphthalene-d10 (Surr)	*89*		*20 - 144*	*03/18/24 15:06*	*03/19/24 13:23*	*1*
Fluoranthene-d10 (Surr)	*77*		*29 - 153*	*03/18/24 15:06*	*03/19/24 13:23*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND		250	43	ug/L			03/15/24 18:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid) (1C)	*99*		*50 - 150*		*03/15/24 18:18*	*1*

Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	ND		110	50	ug/L		03/18/24 08:05	03/20/24 16:48	1
C24-C40	ND		280	110	ug/L		03/18/24 08:05	03/20/24 16:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o- terphenyl (Surr)	*72*		*50 - 150*	*03/18/24 08:05*	*03/20/24 16:48*	*1*

Client Sample ID: QA-T-240312

Lab Sample ID: 410-163962-6

Date Collected: 03/12/24 00:00

Matrix: Water

Date Received: 03/14/24 09:40

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			03/21/24 16:48	1
Ethylbenzene	ND		1.0	0.40	ug/L			03/21/24 16:48	1
Toluene	ND		1.0	0.30	ug/L			03/21/24 16:48	1
Xylenes, Total	ND		6.0	0.40	ug/L			03/21/24 16:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*86*		*80 - 120*		*03/21/24 16:48*	*1*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*03/21/24 16:48*	*1*
Dibromofluoromethane (Surr)	*91*		*80 - 120*		*03/21/24 16:48*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*03/21/24 16:48*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND		250	43	ug/L			03/15/24 15:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid) (1C)	*99*		*50 - 150*		*03/15/24 15:22*	*1*

Surrogate Summary

Client: Arcadis U.S., Inc.
Project/Site: Seattle Terminal

Job ID: 410-163962-1

Method: 8260D/UST - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(80-120)	(80-120)	(80-120)	(80-120)
410-163962-1	MW-209-W-8.8-240312	84	106	89	100
410-163962-2	MW-210-W-7-240312	86	102	93	101
410-163962-3	MW-211-W-9-240312	86	99	93	98
410-163962-4	MW-70R-W-9.5-240312	85	100	93	97
410-163962-4 MS	MW-70R-W-9.5-240312	87	101	92	98
410-163962-4 MSD	MW-70R-W-9.5-240312	87	102	93	99
410-163962-5	DUP-1-WD-240312	86	102	90	98
410-163962-6	QA-T-240312	86	100	91	100
LCS 410-485265/4	Lab Control Sample	87	102	90	100
LCS 410-485817/4	Lab Control Sample	87	102	93	101
LCS 410-485820/4	Lab Control Sample	88	104	92	99
LCSD 410-485265/5	Lab Control Sample Dup	88	100	90	101
LCSD 410-485817/5	Lab Control Sample Dup	87	102	92	100
LCSD 410-485820/5	Lab Control Sample Dup	88	104	92	101
MB 410-485265/6	Method Blank	86	99	91	100
MB 410-485817/6	Method Blank	86	105	93	98
MB 410-485820/6	Method Blank	86	101	91	97

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
		BAPd12	MNPd10	FLN10
Lab Sample ID	Client Sample ID	(10-136)	(20-144)	(29-153)
410-163962-1	MW-209-W-8.8-240312	48	99	97
410-163962-2	MW-210-W-7-240312	55	78	73
410-163962-3	MW-211-W-9-240312	38	90	79
410-163962-4	MW-70R-W-9.5-240312	57	94	84
410-163962-4 MS	MW-70R-W-9.5-240312	71	80	83
410-163962-4 MSD	MW-70R-W-9.5-240312	63	74	77
410-163962-5	DUP-1-WD-240312	58	89	77
LCS 410-484426/2-A	Lab Control Sample	78	73	74
MB 410-484426/1-A	Method Blank	68	98	86

Surrogate Legend

BAPd12 = Benzo(a)pyrene-d12 (Surr)
MNPd10 = 1-Methylnaphthalene-d10 (Surr)
FLN10 = Fluoranthene-d10 (Surr)

Surrogate Summary

Client: Arcadis U.S., Inc.
Job ID: 410-163962-1
Project/Site: Seattle Terminal

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Matrix: Water
Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)								
		TFT-F1								
Lab Sample ID	Client Sample ID	(50-150)								
410-163962-1	MW-209-W-8.8-240312	93 cn								
410-163962-2	MW-210-W-7-240312	100								
410-163962-3	MW-211-W-9-240312	98								
410-163962-4	MW-70R-W-9.5-240312	98								
410-163962-4 MS	MW-70R-W-9.5-240312	87								
410-163962-4 MSD	MW-70R-W-9.5-240312	92								
410-163962-5	DUP-1-WD-240312	99								
410-163962-6	QA-T-240312	99								
LCS 410-483894/6	Lab Control Sample	90								
LCS 410-484206/6	Lab Control Sample	91								
LCSD 410-483894/7	Lab Control Sample Dup	90								
LCSD 410-484206/7	Lab Control Sample Dup	90								
MB 410-483894/5	Method Blank	100								
MB 410-484206/5	Method Blank	99								

Surrogate Legend

TFT-F = a,a,a-Trifluorotoluene (fid)

Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH

Matrix: Water
Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)								
		OTP								
Lab Sample ID	Client Sample ID	(50-150)								
410-163962-1	MW-209-W-8.8-240312	69								
410-163962-2	MW-210-W-7-240312	55								
410-163962-3	MW-211-W-9-240312	52								
410-163962-4	MW-70R-W-9.5-240312	73								
410-163962-4 MS	MW-70R-W-9.5-240312	67								
410-163962-4 MSD	MW-70R-W-9.5-240312	57								
410-163962-5	DUP-1-WD-240312	72								
LCS 410-484182/2-B	Lab Control Sample	65								
MB 410-484182/1-B	Method Blank	59								

Surrogate Legend

OTP = o- terphenyl (Surr)

Method: 8260D/UST - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 410-485265/6
Matrix: Water
Analysis Batch: 485265

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			03/20/24 15:17	1
Ethylbenzene	ND		1.0	0.40	ug/L			03/20/24 15:17	1
Toluene	ND		1.0	0.30	ug/L			03/20/24 15:17	1
Xylenes, Total	ND		6.0	0.40	ug/L			03/20/24 15:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*86*		*80 - 120*		*03/20/24 15:17*	*1*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*		*03/20/24 15:17*	*1*
Dibromofluoromethane (Surr)	*91*		*80 - 120*		*03/20/24 15:17*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*03/20/24 15:17*	*1*

Lab Sample ID: LCS 410-485265/4
Matrix: Water
Analysis Batch: 485265

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			20.0	17.6		ug/L		88	80 - 120		
Ethylbenzene			20.0	17.8		ug/L		89	80 - 120		
Toluene			20.0	18.1		ug/L		91	80 - 120		
Xylenes, Total			60.0	52.3		ug/L		87	80 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*87*		*80 - 120*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*
Dibromofluoromethane (Surr)	*90*		*80 - 120*
Toluene-d8 (Surr)	*100*		*80 - 120*

Lab Sample ID: LCSD 410-485265/5
Matrix: Water
Analysis Batch: 485265

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			20.0	19.3		ug/L		97	80 - 120	9	30
Ethylbenzene			20.0	19.0		ug/L		95	80 - 120	6	30
Toluene			20.0	19.4		ug/L		97	80 - 120	7	30
Xylenes, Total			60.0	56.1		ug/L		94	80 - 120	7	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*88*		*80 - 120*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*
Dibromofluoromethane (Surr)	*90*		*80 - 120*
Toluene-d8 (Surr)	*101*		*80 - 120*

Method: 8260D/UST - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 410-485817/6
Matrix: Water
Analysis Batch: 485817

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			03/21/24 15:48	1
Ethylbenzene	ND		1.0	0.40	ug/L			03/21/24 15:48	1
Toluene	ND		1.0	0.30	ug/L			03/21/24 15:48	1
Xylenes, Total	ND		6.0	0.40	ug/L			03/21/24 15:48	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*86*		*80 - 120*		*03/21/24 15:48*	*1*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*		*03/21/24 15:48*	*1*
Dibromofluoromethane (Surr)	*93*		*80 - 120*		*03/21/24 15:48*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*03/21/24 15:48*	*1*

Lab Sample ID: LCS 410-485817/4
Matrix: Water
Analysis Batch: 485817

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			20.0	16.9		ug/L		84	80 - 120		
Ethylbenzene			20.0	16.5		ug/L		82	80 - 120		
Toluene			20.0	17.0		ug/L		85	80 - 120		
Xylenes, Total			60.0	48.7		ug/L		81	80 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*87*		*80 - 120*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*
Dibromofluoromethane (Surr)	*93*		*80 - 120*
Toluene-d8 (Surr)	*101*		*80 - 120*

Lab Sample ID: LCSD 410-485817/5
Matrix: Water
Analysis Batch: 485817

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			20.0	18.3		ug/L		92	80 - 120	8	30
Ethylbenzene			20.0	17.7		ug/L		88	80 - 120	7	30
Toluene			20.0	17.9		ug/L		90	80 - 120	6	30
Xylenes, Total			60.0	51.8		ug/L		86	80 - 120	6	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*87*		*80 - 120*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*
Dibromofluoromethane (Surr)	*92*		*80 - 120*
Toluene-d8 (Surr)	*100*		*80 - 120*

Method: 8260D/UST - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 410-163962-4 MS
Matrix: Water
Analysis Batch: 485817

Client Sample ID: MW-70R-W-9.5-240312
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	ND		20.0	19.3		ug/L		97	80 - 120
Ethylbenzene	ND		20.0	18.2		ug/L		91	80 - 120
Toluene	ND		20.0	18.7		ug/L		93	80 - 120
Xylenes, Total	ND		60.0	53.1		ug/L		89	80 - 120

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*87*		*80 - 120*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*
Dibromofluoromethane (Surr)	*92*		*80 - 120*
Toluene-d8 (Surr)	*98*		*80 - 120*

Lab Sample ID: 410-163962-4 MSD
Matrix: Water
Analysis Batch: 485817

Client Sample ID: MW-70R-W-9.5-240312
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	ND		20.0	18.9		ug/L		94	80 - 120	2	30
Ethylbenzene	ND		20.0	18.1		ug/L		90	80 - 120	1	30
Toluene	ND		20.0	18.4		ug/L		92	80 - 120	1	30
Xylenes, Total	ND		60.0	52.2		ug/L		87	80 - 120	2	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*87*		*80 - 120*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*
Dibromofluoromethane (Surr)	*93*		*80 - 120*
Toluene-d8 (Surr)	*99*		*80 - 120*

Lab Sample ID: MB 410-485820/6
Matrix: Water
Analysis Batch: 485820

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			03/21/24 16:00	1
Ethylbenzene	ND		1.0	0.40	ug/L			03/21/24 16:00	1
Toluene	ND		1.0	0.30	ug/L			03/21/24 16:00	1
Xylenes, Total	ND		6.0	0.40	ug/L			03/21/24 16:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*86*		*80 - 120*		*03/21/24 16:00*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*03/21/24 16:00*	*1*
Dibromofluoromethane (Surr)	*91*		*80 - 120*		*03/21/24 16:00*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*03/21/24 16:00*	*1*

Method: 8260D/UST - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 410-485820/4
Matrix: Water
Analysis Batch: 485820

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			20.0	18.3		ug/L		91	80 - 120		
Ethylbenzene			20.0	17.6		ug/L		88	80 - 120		
Toluene			20.0	17.9		ug/L		90	80 - 120		
Xylenes, Total			60.0	52.3		ug/L		87	80 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*88*		*80 - 120*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*
Dibromofluoromethane (Surr)	*92*		*80 - 120*
Toluene-d8 (Surr)	*99*		*80 - 120*

Lab Sample ID: LCSD 410-485820/5
Matrix: Water
Analysis Batch: 485820

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			20.0	18.3		ug/L		91	80 - 120	0	30
Ethylbenzene			20.0	18.2		ug/L		91	80 - 120	3	30
Toluene			20.0	18.4		ug/L		92	80 - 120	2	30
Xylenes, Total			60.0	53.4		ug/L		89	80 - 120	2	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*88*		*80 - 120*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*
Dibromofluoromethane (Surr)	*92*		*80 - 120*
Toluene-d8 (Surr)	*101*		*80 - 120*

Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 410-484426/1-A
Matrix: Water
Analysis Batch: 484600

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 484426

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		0.050	0.010	ug/L		03/18/24 15:06	03/19/24 05:05	1
Benzo[a]pyrene	ND		0.050	0.010	ug/L		03/18/24 15:06	03/19/24 05:05	1
Benzo[b]fluoranthene	ND		0.050	0.010	ug/L		03/18/24 15:06	03/19/24 05:05	1
Benzo[k]fluoranthene	ND		0.050	0.010	ug/L		03/18/24 15:06	03/19/24 05:05	1
Chrysene	ND		0.050	0.010	ug/L		03/18/24 15:06	03/19/24 05:05	1
Dibenz(a,h)anthracene	ND		0.050	0.020	ug/L		03/18/24 15:06	03/19/24 05:05	1
Indeno[1,2,3-cd]pyrene	ND		0.050	0.020	ug/L		03/18/24 15:06	03/19/24 05:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Benzo(a)pyrene-d12 (Surr)	*68*		*10 - 136*	*03/18/24 15:06*	*03/19/24 05:05*	*1*
1-Methylnaphthalene-d10 (Surr)	*98*		*20 - 144*	*03/18/24 15:06*	*03/19/24 05:05*	*1*
Fluoranthene-d10 (Surr)	*86*		*29 - 153*	*03/18/24 15:06*	*03/19/24 05:05*	*1*

Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: LCS 410-484426/2-A
Matrix: Water
Analysis Batch: 484600

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 484426

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzo[a]anthracene			1.00	0.628		ug/L		63	47 - 138		
Benzo[a]pyrene			1.00	0.770		ug/L		77	51 - 147		
Benzo[b]fluoranthene			1.00	0.703		ug/L		70	44 - 144		
Benzo[k]fluoranthene			1.00	0.945		ug/L		95	46 - 158		
Chrysene			1.00	0.896		ug/L		90	41 - 144		
Dibenz(a,h)anthracene			1.00	0.971		ug/L		97	38 - 145		
Indeno[1,2,3-cd]pyrene			1.00	0.894		ug/L		89	37 - 153		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Benzo(a)pyrene-d12 (Surr)	*78*		*10 - 136*
1-Methylnaphthalene-d10 (Surr)	*73*		*20 - 144*
Fluoranthene-d10 (Surr)	*74*		*29 - 153*

Lab Sample ID: 410-163962-4 MS
Matrix: Water
Analysis Batch: 484600

Client Sample ID: MW-70R-W-9.5-240312
Prep Type: Total/NA
Prep Batch: 484426

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzo[a]anthracene	ND		1.12	0.726		ug/L		65	50 - 129		
Benzo[a]pyrene	ND		1.12	0.793		ug/L		71	49 - 120		
Benzo[b]fluoranthene	ND		1.12	0.768		ug/L		69	47 - 131		
Benzo[k]fluoranthene	ND		1.12	0.976		ug/L		87	50 - 128		
Chrysene	ND		1.12	1.05		ug/L		94	47 - 121		
Dibenz(a,h)anthracene	ND		1.12	0.916		ug/L		82	38 - 136		
Indeno[1,2,3-cd]pyrene	ND		1.12	0.838		ug/L		75	35 - 144		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Benzo(a)pyrene-d12 (Surr)	*71*		*10 - 136*
1-Methylnaphthalene-d10 (Surr)	*80*		*20 - 144*
Fluoranthene-d10 (Surr)	*83*		*29 - 153*

Lab Sample ID: 410-163962-4 MSD
Matrix: Water
Analysis Batch: 484600

Client Sample ID: MW-70R-W-9.5-240312
Prep Type: Total/NA
Prep Batch: 484426

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzo[a]anthracene	ND		1.13	0.679		ug/L		60	50 - 129	7	30
Benzo[a]pyrene	ND		1.13	0.743		ug/L		66	49 - 120	6	30
Benzo[b]fluoranthene	ND		1.13	0.730		ug/L		65	47 - 131	5	30
Benzo[k]fluoranthene	ND		1.13	0.921		ug/L		81	50 - 128	6	30
Chrysene	ND		1.13	1.07		ug/L		95	47 - 121	2	30
Dibenz(a,h)anthracene	ND		1.13	0.927		ug/L		82	38 - 136	1	30
Indeno[1,2,3-cd]pyrene	ND		1.13	0.678		ug/L		60	35 - 144	21	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Benzo(a)pyrene-d12 (Surr)	*63*		*10 - 136*
1-Methylnaphthalene-d10 (Surr)	*74*		*20 - 144*

Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: 410-163962-4 MSD
Matrix: Water
Analysis Batch: 484600

Client Sample ID: MW-70R-W-9.5-240312
Prep Type: Total/NA
Prep Batch: 484426

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Fluoranthene-d10 (Surr)	77		29 - 153

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Lab Sample ID: MB 410-483894/5
Matrix: Water
Analysis Batch: 483894

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND		250	43	ug/L			03/15/24 11:00	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	100		50 - 150		03/15/24 11:00	1

Lab Sample ID: LCS 410-483894/6
Matrix: Water
Analysis Batch: 483894

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
C7-C12 (1C)			1100	1000		ug/L		91	64 - 131		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
a,a,a-Trifluorotoluene (fid) (1C)	90		50 - 150

Lab Sample ID: LCSD 410-483894/7
Matrix: Water
Analysis Batch: 483894

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C7-C12 (1C)			1100	1020		ug/L		92	64 - 131	1	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
a,a,a-Trifluorotoluene (fid) (1C)	90		50 - 150

Lab Sample ID: 410-163962-4 MS
Matrix: Water
Analysis Batch: 483894

Client Sample ID: MW-70R-W-9.5-240312
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
C7-C12 (1C)	ND	F1	1120	921		ug/L		83	80 - 120		

Surrogate	MS %Recovery	MS Qualifier	Limits
a,a,a-Trifluorotoluene (fid) (1C)	87		50 - 150

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: MB 410-484206/5
Matrix: Water
Analysis Batch: 484206

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND		250	43	ug/L			03/18/24 11:31	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid) (1C)	*99*		*50 - 150*		*03/18/24 11:31*	*1*

Lab Sample ID: LCS 410-484206/6
Matrix: Water
Analysis Batch: 484206

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
C7-C12 (1C)			1100	1010		ug/L		91	64 - 131		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (fid) (1C)	*91*		*50 - 150*

Lab Sample ID: LCSD 410-484206/7
Matrix: Water
Analysis Batch: 484206

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C7-C12 (1C)			1100	1020		ug/L		92	64 - 131	1	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
a,a,a-Trifluorotoluene (fid) (1C)	*90*		*50 - 150*

Lab Sample ID: 410-163962-4 MSD
Matrix: Water
Analysis Batch: 484206

Client Sample ID: MW-70R-W-9.5-240312
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C7-C12 (1C)	ND	F1	1000	1050		ug/L		105	80 - 120	13	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
a,a,a-Trifluorotoluene (fid) (1C)	*92*		*50 - 150*

Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH

Lab Sample ID: MB 410-484182/1-B
Matrix: Water
Analysis Batch: 485218

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 484182

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	ND		100	45	ug/L		03/18/24 08:05	03/20/24 13:45	1
C24-C40	ND		250	100	ug/L		03/18/24 08:05	03/20/24 13:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o- terphenyl (Surr)	*59*		*50 - 150*	*03/18/24 08:05*	*03/20/24 13:45*	*1*

Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH (Continued)

Lab Sample ID: LCS 410-484182/2-B
Matrix: Water
Analysis Batch: 485218

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 484182

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
C12-C24			601	228		ug/L		38	14 - 115		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o- terphenyl (Surr)	*65*		*50 - 150*

Lab Sample ID: 410-163962-4 MS
Matrix: Water
Analysis Batch: 485218

Client Sample ID: MW-70R-W-9.5-240312
Prep Type: Total/NA
Prep Batch: 484182

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
C12-C24	ND		661	227		ug/L		34	30 - 115		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
o- terphenyl (Surr)	*67*		*50 - 150*

Lab Sample ID: 410-163962-4 MSD
Matrix: Water
Analysis Batch: 485218

Client Sample ID: MW-70R-W-9.5-240312
Prep Type: Total/NA
Prep Batch: 484182

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C12-C24	ND		682	210		ug/L		31	30 - 115	8	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
o- terphenyl (Surr)	*57*		*50 - 150*

GC/MS VOA

Analysis Batch: 485265

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-163962-1	MW-209-W-8.8-240312	Total/NA	Water	8260D/UST	
410-163962-2	MW-210-W-7-240312	Total/NA	Water	8260D/UST	
MB 410-485265/6	Method Blank	Total/NA	Water	8260D/UST	
LCS 410-485265/4	Lab Control Sample	Total/NA	Water	8260D/UST	
LCSD 410-485265/5	Lab Control Sample Dup	Total/NA	Water	8260D/UST	

Analysis Batch: 485817

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-163962-3	MW-211-W-9-240312	Total/NA	Water	8260D/UST	
410-163962-4	MW-70R-W-9.5-240312	Total/NA	Water	8260D/UST	
MB 410-485817/6	Method Blank	Total/NA	Water	8260D/UST	
LCS 410-485817/4	Lab Control Sample	Total/NA	Water	8260D/UST	
LCSD 410-485817/5	Lab Control Sample Dup	Total/NA	Water	8260D/UST	
410-163962-4 MS	MW-70R-W-9.5-240312	Total/NA	Water	8260D/UST	
410-163962-4 MSD	MW-70R-W-9.5-240312	Total/NA	Water	8260D/UST	

Analysis Batch: 485820

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-163962-5	DUP-1-WD-240312	Total/NA	Water	8260D/UST	
410-163962-6	QA-T-240312	Total/NA	Water	8260D/UST	
MB 410-485820/6	Method Blank	Total/NA	Water	8260D/UST	
LCS 410-485820/4	Lab Control Sample	Total/NA	Water	8260D/UST	
LCSD 410-485820/5	Lab Control Sample Dup	Total/NA	Water	8260D/UST	

GC/MS Semi VOA

Prep Batch: 484426

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-163962-1	MW-209-W-8.8-240312	Total/NA	Water	3510C	
410-163962-2	MW-210-W-7-240312	Total/NA	Water	3510C	
410-163962-3	MW-211-W-9-240312	Total/NA	Water	3510C	
410-163962-4	MW-70R-W-9.5-240312	Total/NA	Water	3510C	
410-163962-5	DUP-1-WD-240312	Total/NA	Water	3510C	
MB 410-484426/1-A	Method Blank	Total/NA	Water	3510C	
LCS 410-484426/2-A	Lab Control Sample	Total/NA	Water	3510C	
410-163962-4 MS	MW-70R-W-9.5-240312	Total/NA	Water	3510C	
410-163962-4 MSD	MW-70R-W-9.5-240312	Total/NA	Water	3510C	

Analysis Batch: 484600

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-163962-1	MW-209-W-8.8-240312	Total/NA	Water	8270E SIM	484426
410-163962-2	MW-210-W-7-240312	Total/NA	Water	8270E SIM	484426
410-163962-3	MW-211-W-9-240312	Total/NA	Water	8270E SIM	484426
410-163962-4	MW-70R-W-9.5-240312	Total/NA	Water	8270E SIM	484426
410-163962-5	DUP-1-WD-240312	Total/NA	Water	8270E SIM	484426
MB 410-484426/1-A	Method Blank	Total/NA	Water	8270E SIM	484426
LCS 410-484426/2-A	Lab Control Sample	Total/NA	Water	8270E SIM	484426
410-163962-4 MS	MW-70R-W-9.5-240312	Total/NA	Water	8270E SIM	484426
410-163962-4 MSD	MW-70R-W-9.5-240312	Total/NA	Water	8270E SIM	484426

GC VOA

Analysis Batch: 483894

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-163962-1	MW-209-W-8.8-240312	Total/NA	Water	NWTPH-Gx	
410-163962-2	MW-210-W-7-240312	Total/NA	Water	NWTPH-Gx	
410-163962-3	MW-211-W-9-240312	Total/NA	Water	NWTPH-Gx	
410-163962-4	MW-70R-W-9.5-240312	Total/NA	Water	NWTPH-Gx	
410-163962-5	DUP-1-WD-240312	Total/NA	Water	NWTPH-Gx	
410-163962-6	QA-T-240312	Total/NA	Water	NWTPH-Gx	
MB 410-483894/5	Method Blank	Total/NA	Water	NWTPH-Gx	
LCS 410-483894/6	Lab Control Sample	Total/NA	Water	NWTPH-Gx	
LCSD 410-483894/7	Lab Control Sample Dup	Total/NA	Water	NWTPH-Gx	
410-163962-4 MS	MW-70R-W-9.5-240312	Total/NA	Water	NWTPH-Gx	

Analysis Batch: 484206

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 410-484206/5	Method Blank	Total/NA	Water	NWTPH-Gx	
LCS 410-484206/6	Lab Control Sample	Total/NA	Water	NWTPH-Gx	
LCSD 410-484206/7	Lab Control Sample Dup	Total/NA	Water	NWTPH-Gx	
410-163962-4 MSD	MW-70R-W-9.5-240312	Total/NA	Water	NWTPH-Gx	

GC Semi VOA

Prep Batch: 484182

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-163962-1	MW-209-W-8.8-240312	Total/NA	Water	3510C	
410-163962-2	MW-210-W-7-240312	Total/NA	Water	3510C	
410-163962-3	MW-211-W-9-240312	Total/NA	Water	3510C	
410-163962-4	MW-70R-W-9.5-240312	Total/NA	Water	3510C	
410-163962-5	DUP-1-WD-240312	Total/NA	Water	3510C	
MB 410-484182/1-B	Method Blank	Total/NA	Water	3510C	
LCS 410-484182/2-B	Lab Control Sample	Total/NA	Water	3510C	
410-163962-4 MS	MW-70R-W-9.5-240312	Total/NA	Water	3510C	
410-163962-4 MSD	MW-70R-W-9.5-240312	Total/NA	Water	3510C	

Cleanup Batch: 485044

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-163962-1	MW-209-W-8.8-240312	Total/NA	Water	3630C	484182
410-163962-2	MW-210-W-7-240312	Total/NA	Water	3630C	484182
410-163962-3	MW-211-W-9-240312	Total/NA	Water	3630C	484182
410-163962-4	MW-70R-W-9.5-240312	Total/NA	Water	3630C	484182
410-163962-5	DUP-1-WD-240312	Total/NA	Water	3630C	484182
MB 410-484182/1-B	Method Blank	Total/NA	Water	3630C	484182
LCS 410-484182/2-B	Lab Control Sample	Total/NA	Water	3630C	484182
410-163962-4 MS	MW-70R-W-9.5-240312	Total/NA	Water	3630C	484182
410-163962-4 MSD	MW-70R-W-9.5-240312	Total/NA	Water	3630C	484182

Analysis Batch: 485218

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-163962-1	MW-209-W-8.8-240312	Total/NA	Water	NWTPH-Dx	485044
410-163962-2	MW-210-W-7-240312	Total/NA	Water	NWTPH-Dx	485044
410-163962-3	MW-211-W-9-240312	Total/NA	Water	NWTPH-Dx	485044
410-163962-4	MW-70R-W-9.5-240312	Total/NA	Water	NWTPH-Dx	485044
410-163962-5	DUP-1-WD-240312	Total/NA	Water	NWTPH-Dx	485044

GC Semi VOA (Continued)

Analysis Batch: 485218 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 410-484182/1-B	Method Blank	Total/NA	Water	NWTPH-Dx	485044
LCS 410-484182/2-B	Lab Control Sample	Total/NA	Water	NWTPH-Dx	485044
410-163962-4 MS	MW-70R-W-9.5-240312	Total/NA	Water	NWTPH-Dx	485044
410-163962-4 MSD	MW-70R-W-9.5-240312	Total/NA	Water	NWTPH-Dx	485044

Lab Chronicle

Client: Arcadis U.S., Inc.
Project/Site: Seattle Terminal

Job ID: 410-163962-1

Client Sample ID: MW-209-W-8.8-240312

Lab Sample ID: 410-163962-1

Date Collected: 03/12/24 09:30

Matrix: Water

Date Received: 03/14/24 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	485265	PV7W	ELLE	03/20/24 16:58
Total/NA	Prep	3510C			484426	T9CY	ELLE	03/18/24 15:06
Total/NA	Analysis	8270E SIM		1	484600	UJM0	ELLE	03/19/24 12:15
Total/NA	Analysis	NWTPH-Gx		5	483894	WJ7F	ELLE	03/15/24 21:14
Total/NA	Prep	3510C			484182	QKX3	ELLE	03/18/24 08:05
Total/NA	Cleanup	3630C			485044	USL7	ELLE	03/20/24 04:40
Total/NA	Analysis	NWTPH-Dx		1	485218	IUSB	ELLE	03/20/24 15:39

Client Sample ID: MW-210-W-7-240312

Lab Sample ID: 410-163962-2

Date Collected: 03/12/24 09:16

Matrix: Water

Date Received: 03/14/24 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	485265	PV7W	ELLE	03/20/24 17:22
Total/NA	Prep	3510C			484426	T9CY	ELLE	03/18/24 15:06
Total/NA	Analysis	8270E SIM		1	484600	UJM0	ELLE	03/19/24 12:38
Total/NA	Analysis	NWTPH-Gx		1	483894	WJ7F	ELLE	03/15/24 16:12
Total/NA	Prep	3510C			484182	QKX3	ELLE	03/18/24 08:05
Total/NA	Cleanup	3630C			485044	USL7	ELLE	03/20/24 04:40
Total/NA	Analysis	NWTPH-Dx		1	485218	IUSB	ELLE	03/20/24 16:02

Client Sample ID: MW-211-W-9-240312

Lab Sample ID: 410-163962-3

Date Collected: 03/12/24 10:50

Matrix: Water

Date Received: 03/14/24 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	485817	PV7W	ELLE	03/21/24 17:24
Total/NA	Prep	3510C			484426	T9CY	ELLE	03/18/24 15:06
Total/NA	Analysis	8270E SIM		1	484600	UJM0	ELLE	03/19/24 13:01
Total/NA	Analysis	NWTPH-Gx		1	483894	WJ7F	ELLE	03/15/24 16:37
Total/NA	Prep	3510C			484182	QKX3	ELLE	03/18/24 08:05
Total/NA	Cleanup	3630C			485044	USL7	ELLE	03/20/24 04:40
Total/NA	Analysis	NWTPH-Dx		1	485218	IUSB	ELLE	03/20/24 16:25

Client Sample ID: MW-70R-W-9.5-240312

Lab Sample ID: 410-163962-4

Date Collected: 03/12/24 12:10

Matrix: Water

Date Received: 03/14/24 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	485817	PV7W	ELLE	03/21/24 17:48
Total/NA	Prep	3510C			484426	T9CY	ELLE	03/18/24 15:06
Total/NA	Analysis	8270E SIM		1	484600	UJM0	ELLE	03/19/24 11:07
Total/NA	Analysis	NWTPH-Gx		1	483894	WJ7F	ELLE	03/15/24 17:02

Lab Chronicle

Client: Arcadis U.S., Inc.
Project/Site: Seattle Terminal

Job ID: 410-163962-1

Client Sample ID: MW-70R-W-9.5-240312

Lab Sample ID: 410-163962-4

Date Collected: 03/12/24 12:10

Matrix: Water

Date Received: 03/14/24 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			484182	QKX3	ELLE	03/18/24 08:05
Total/NA	Cleanup	3630C			485044	USL7	ELLE	03/20/24 04:40
Total/NA	Analysis	NWTPH-Dx		1	485218	IUSB	ELLE	03/20/24 14:31

Client Sample ID: DUP-1-WD-240312

Lab Sample ID: 410-163962-5

Date Collected: 03/12/24 00:00

Matrix: Water

Date Received: 03/14/24 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	485820	PV7W	ELLE	03/21/24 17:12
Total/NA	Prep	3510C			484426	T9CY	ELLE	03/18/24 15:06
Total/NA	Analysis	8270E SIM		1	484600	UJM0	ELLE	03/19/24 13:23
Total/NA	Analysis	NWTPH-Gx		1	483894	WJ7F	ELLE	03/15/24 18:18
Total/NA	Prep	3510C			484182	QKX3	ELLE	03/18/24 08:05
Total/NA	Cleanup	3630C			485044	USL7	ELLE	03/20/24 04:40
Total/NA	Analysis	NWTPH-Dx		1	485218	IUSB	ELLE	03/20/24 16:48

Client Sample ID: QA-T-240312

Lab Sample ID: 410-163962-6

Date Collected: 03/12/24 00:00

Matrix: Water

Date Received: 03/14/24 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	485820	PV7W	ELLE	03/21/24 16:48
Total/NA	Analysis	NWTPH-Gx		1	483894	WJ7F	ELLE	03/15/24 15:22

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Accreditation/Certification Summary

Client: Arcadis U.S., Inc.
Project/Site: Seattle Terminal

Job ID: 410-163962-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Washington	State	C457	04-11-24

Method Summary

Client: Arcadis U.S., Inc.
Project/Site: Seattle Terminal

Job ID: 410-163962-1

Method	Method Description	Protocol	Laboratory
8260D/UST	Volatile Organic Compounds by GC/MS	SW846	ELLE
8270E SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	ELLE
NWTPH-Gx	Northwest - Volatile Petroleum Products (GC)	NWTPH	ELLE
NWTPH-Dx	Semi-Volatile Petroleum Products by NWTPH	NWTPH	ELLE
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	ELLE
3630C	Silica Gel Cleanup	SW846	ELLE
5030C	Purge and Trap	SW846	ELLE

Protocol References:

NWTPH = Northwest Total Petroleum Hydrocarbon

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Sample Summary

Client: Arcadis U.S., Inc.
Project/Site: Seattle Terminal

Job ID: 410-163962-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-163962-1	MW-209-W-8.8-240312	Water	03/12/24 09:30	03/14/24 09:40
410-163962-2	MW-210-W-7-240312	Water	03/12/24 09:16	03/14/24 09:40
410-163962-3	MW-211-W-9-240312	Water	03/12/24 10:50	03/14/24 09:40
410-163962-4	MW-70R-W-9.5-240312	Water	03/12/24 12:10	03/14/24 09:40
410-163962-5	DUP-1-WD-240312	Water	03/12/24 00:00	03/14/24 09:40
410-163962-6	QA-T-240312	Water	03/12/24 00:00	03/14/24 09:40

410-163962 Chain of Custody

n Northwest Region Analysis Request/Chain of Custody

ies

For Eurofins Lancaster Laboratories Environmental use only

Acct. # _____ Group # _____ Sample # _____

Instructions on reverse side correspond with circled numbers.

SCR #: _____

1 Client Information

Facility # SEATTLE TERMINAL WBS

Site Address 3001 ELLIOT AVE, SEATTLE, WA 98121

Chevron PM KIM JOLITZ Lead Consultant ARCADIS

Consultant/Office 1420 5TH AVE, STE 2400, SEATTLE, WA 98101

Consultant Project Mgr. SAM MILES

Consultant Phone #

Sampler ROBERTO PIEMONTESE / ELIZABETH SCHELLER

4 Matrix

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

5 Analyses Requested

2 Sample Identification	Collected Date	Collected Time	3 Grab	Composite	Total Number of Containers	BTEX + MTBE 8021 ☐ 8260 ☐ Naphth	8260 full scan	Oxygenates	NWTPH-Gx	NWTPH-Dx with Silica Gel Cleanup ☑	NWTPH-Dx without Silica Gel Cleanup ☐	WA VPH ☐ WA EPH ☐	Lead Total ☐ Diss. ☐ Method	BTEX 8260	8270 SIM cPAHs
MW-209-GW-8.8-240312	3/12/24	9:30	X		10				X	X				X	X
MW-210-GW-7-240312	3/12/24	9:16	X		10				X	X				X	X
MW-211-GW-9-240312	3/12/24	10:50	X		10				X	X				X	X
MW-70R-GW-9.5-240312	3/12/24	12:10	X		30				X	X				X	X
DUP-1-GW-240312 MB	3/12/24	—	X		10				X	X				X	X
TRIP BLANK	3/12/24	—	X		4				X					X	

6 Remarks

MW-70R → MS/MSD

COOLER TR 1/2

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

7 Turnaround Time Requested (TAT) (please circle)

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

8 Data Package (circle if required)

Type I - Full

Type VI (Raw Data)

EDD (circle if required)

CVX-RTBU-FI_05 (default)

Other: _____

9

Relinquished by	Date	Time	Received by	Date	Time
ROBERTO PIEMONTESE	3/13/24	12:30			

Relinquished by Commercial Carrier: UPS _____ FedEx X Other _____

Temperature Upon Receipt RAW °C

Received by [signature] Date 3/14/24 Time 0940

Custody Seals Intact? Yes No

Login Sample Receipt Checklist

Client: Arcadis U.S., Inc.

Job Number: 410-163962-1

Login Number: 163962

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 1

Creator: Reiff, Nicole L

Question	Answer	Comment
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature acceptable,where thermal pres is required(</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV:Container Temp acceptable,where thermal pres is required (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	False	Containers received broken. No volume could be salvaged for analysis.
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	True	
Sample custody seals are intact.	True	
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	True	

2nd Quarter 2024

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Samuel Miles
Arcadis U.S., Inc.
1100 Olive Way
Suite 800
Seattle, Washington 98101

Generated 7/18/2024 9:38:26 PM Revision 1

JOB DESCRIPTION

Seattle Terminal

JOB NUMBER

410-175743-1

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster PA 17601

See page two for job notes and contact information.

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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.

Authorization

Generated
7/18/2024 9:38:26 PM
Revision 1

Authorized for release by
Amek Carter, Project Manager
Loran.Carter@et.eurofinsus.com
(717)556-7252

Compliance Statement

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.
· QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
· 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 is performed, unless otherwise specified in the method.
· Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.
Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

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

Test 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. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. The foregoing express warranty is exclusive and is given in lieu of all other warranties, expressed or implied, except as otherwise agreed. We disclaim any other warranties, expressed or implied, including a warranty of fitness for particular purpose and warranty of merchantability. In no event shall Eurofins Lancaster Laboratories Environmental, LLC be liable for indirect, special, consequential, or incidental damages including, but not limited to, damages for loss of profit or goodwill regardless of (A) the negligence (either sole or concurrent) of Eurofins Lancaster Laboratories Environmental and (B) whether Eurofins Lancaster Laboratories Environmental has been informed of the possibility of such damages. We accept no legal responsibility for the purposes for which the client uses the test results. Except as otherwise agreed, no purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Table of Contents

Definitions/Glossary

Client: Arcadis U.S., Inc.
Project/Site: Seattle Terminal

Job ID: 410-175743-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
cn	Refer to Case Narrative for further detail

GC/MS Semi VOA

Qualifier	Qualifier Description
cn	Refer to Case Narrative for further detail
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1-	Surrogate recovery exceeds control limits, low biased.

GC VOA

Qualifier	Qualifier Description
cn	Refer to Case Narrative for further detail
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
cn	Refer to Case Narrative for further detail
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1-	Surrogate recovery exceeds control limits, low biased.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 410-175743-1 — Eurofins Lancaster Laboratories Environment

Job Narrative
410-175743-1

REVISION

The report being provided is a revision of the original report sent on 7/2/2024. The report (revision 1) is being revised due to correct sample ID for MW-204.

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 6/13/2024 9:50 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 4.8°C, 5.0°C and 5.0°C.

Receipt Exceptions
The container count for the following sample did not match what was listed on the Chain-of-Custody (COC): DUP-1-WD-240611 (410-175743-15).
The laboratory received 9 total containers, while the COC lists 10 total containers.

The container count for the following sample did not match what was listed on the Chain-of-Custody (COC): MW-205-W-22-240611 (410-175743-4).
The laboratory received 11 total containers, while the COC lists 10 total containers.

1 40mL HCl VOA vial for the following sample was received broken. MW-202-W-10-240611 (410-175743-11).

The 8270D-SIM analysis is crossed out on the COC but the laboratory received bottles it.

MW-61A-R-W-14-240612 (410-175743-1) and MW-30-W-14-240612 (410-175743-2)

GC/MS VOA
Method 8260D_UST: The continuing calibration verification (CCV) associated with batch 410-519135 recovered above the upper control limit for Benzene. Non-detections of the affected analytes are reported. Any detections are considered estimated.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC/MS Semi VOA
Method 8270E_SIM: Surrogate recovery for the following sample was outside control limits: MW-200-W-9-240611 (410-175743-10). Re-extraction and/or re-analysis was performed outside of holding time with acceptable results.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC VOA
Method NWTPH_Gx: The method requirement for no headspace was not met. The following volatile sample was analyzed with headspace in the sample container(s): MW-201-W-10-240611 (410-175743-6). The sample container was received with headspace.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Hydrocarbons

Job ID: 410-175743-1 (Continued) Eurofins Lancaster Laboratories Environment

Method NWTPH_Dx: Surrogate recovery for the following sample was outside control limits: MW-30-W-14-240612 (410-175743-2). Re-extraction and/or re-analysis was performed outside of holding time with acceptable results. Since holding time expired prior to re-analysis, data is reported from the first trial.

Method NWTPH_Dx: Laboratory contribution is suspected in the following samples: MW-201-W-10-240611 (410-175743-6) and MW-211-W-9-240610 (410-175743-9). The sample(s) were re-extracted and re-analyzed outside method holding time to confirm results. Since holding time expired prior to re-analysis, data is reported from the first trial.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Detection Summary

Client: Arcadis U.S., Inc.
Project/Site: Seattle Terminal

Job ID: 410-175743-1

Client Sample ID: MW-61A-R-W-14-240612 — Lab Sample ID: 410-175743-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C7-C12 (1C)	350		250	43	ug/L	1		NWTPH-Gx	Total/NA
C12-C24	140		110	48	ug/L	1		NWTPH-Dx	Total/NA

Client Sample ID: MW-30-W-14-240612 — Lab Sample ID: 410-175743-2

No Detections.

Client Sample ID: MW-206-W-13-240611 — Lab Sample ID: 410-175743-3

No Detections.

Client Sample ID: MW-205-W-22-240611 — Lab Sample ID: 410-175743-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C7-C12 (1C)	50	J	250	43	ug/L	1		NWTPH-Gx	Total/NA

Client Sample ID: MW-210-W-9-240610 — Lab Sample ID: 410-175743-5

No Detections.

Client Sample ID: MW-201-W-10-240611 — Lab Sample ID: 410-175743-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C7-C12 (1C)	220	J cn	250	43	ug/L	1		NWTPH-Gx	Total/NA
C12-C24	57	J cn	110	49	ug/L	1		NWTPH-Dx	Total/NA
C24-C40	290	cn	270	110	ug/L	1		NWTPH-Dx	Total/NA

Client Sample ID: MW-70R-W-18-240610 — Lab Sample ID: 410-175743-7

No Detections.

Client Sample ID: MW-209-W-10-240610 — Lab Sample ID: 410-175743-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C7-C12 (1C)	230	J	250	43	ug/L	1		NWTPH-Gx	Total/NA

Client Sample ID: MW-211-W-9-240610 — Lab Sample ID: 410-175743-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C12-C24	61	J cn	110	50	ug/L	1		NWTPH-Dx	Total/NA
C24-C40	430	cn	280	110	ug/L	1		NWTPH-Dx	Total/NA

Client Sample ID: MW-200-W-9-240611 — Lab Sample ID: 410-175743-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C7-C12 (1C)	65	J	250	43	ug/L	1		NWTPH-Gx	Total/NA

Client Sample ID: MW-202-W-10-240611 — Lab Sample ID: 410-175743-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	0.011	J	0.055	0.011	ug/L	1		8270E SIM	Total/NA

Client Sample ID: MW-203-W-12.5-240611 — Lab Sample ID: 410-175743-12

No Detections.

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Arcadis U.S., Inc.
Project/Site: Seattle Terminal

Job ID: 410-175743-1

Client Sample ID: MW-204-W-13-240611 — Lab Sample ID: 410-175743-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C7-C12 (1C)	500		250	43	ug/L	1		NWTPH-Gx	Total/NA
C12-C24	140		100	46	ug/L	1		NWTPH-Dx	Total/NA

Client Sample ID: MW-207-W-13-240611 — Lab Sample ID: 410-175743-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	0.015	J	0.054	0.011	ug/L	1		8270E SIM	Total/NA

Client Sample ID: DUP-1-WD-240611 — Lab Sample ID: 410-175743-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C7-C12 (1C)	48	J	250	43	ug/L	1		NWTPH-Gx	Total/NA

Client Sample ID: DUP-2-WD-240612 — Lab Sample ID: 410-175743-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C7-C12 (1C)	280		250	43	ug/L	1		NWTPH-Gx	Total/NA
C12-C24	140		110	50	ug/L	1		NWTPH-Dx	Total/NA

Client Sample ID: QA-T-240612 — Lab Sample ID: 410-175743-17

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-61A-R-W-14-240612

Lab Sample ID: 410-175743-1

Date Collected: 06/12/24 10:05

Matrix: Water

Date Received: 06/13/24 09:50

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			06/19/24 21:03	1
Ethylbenzene	ND		1.0	0.40	ug/L			06/19/24 21:03	1
Toluene	ND		1.0	0.30	ug/L			06/19/24 21:03	1
Xylenes, Total	ND		6.0	0.40	ug/L			06/19/24 21:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*80 - 120*		*06/19/24 21:03*	*1*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*		*06/19/24 21:03*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*		*06/19/24 21:03*	*1*
Toluene-d8 (Surr)	*90*		*80 - 120*		*06/19/24 21:03*	*1*

Method: SW846 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		0.054	0.011	ug/L		06/16/24 01:05	06/20/24 21:07	1
Benzo[a]pyrene	ND		0.054	0.011	ug/L		06/16/24 01:05	06/20/24 21:07	1
Benzo[b]fluoranthene	ND		0.054	0.011	ug/L		06/16/24 01:05	06/20/24 21:07	1
Benzo[k]fluoranthene	ND		0.054	0.011	ug/L		06/16/24 01:05	06/20/24 21:07	1
Chrysene	ND		0.054	0.011	ug/L		06/16/24 01:05	06/20/24 21:07	1
Dibenz(a,h)anthracene	ND		0.054	0.022	ug/L		06/16/24 01:05	06/20/24 21:07	1
Indeno[1,2,3-cd]pyrene	ND		0.054	0.022	ug/L		06/16/24 01:05	06/20/24 21:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Benzo(a)pyrene-d12 (Surr)	*70*		*10 - 136*	*06/16/24 01:05*	*06/20/24 21:07*	*1*
1-Methylnaphthalene-d10 (Surr)	*87*		*20 - 144*	*06/16/24 01:05*	*06/20/24 21:07*	*1*
Fluoranthene-d10 (Surr)	*88*		*29 - 153*	*06/16/24 01:05*	*06/20/24 21:07*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	**350**		250	43	ug/L			06/19/24 13:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid) (1C)	*109*		*50 - 150*		*06/19/24 13:20*	*1*

Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	**140**		110	48	ug/L		06/20/24 08:00	06/28/24 02:41	1
C24-C40	ND		270	110	ug/L		06/20/24 08:00	06/28/24 02:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o- terphenyl (Surr)	*55*		*50 - 150*	*06/20/24 08:00*	*06/28/24 02:41*	*1*

Client Sample ID: MW-30-W-14-240612

Lab Sample ID: 410-175743-2

Date Collected: 06/12/24 10:35

Matrix: Water

Date Received: 06/13/24 09:50

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			06/19/24 21:27	1
Ethylbenzene	ND		1.0	0.40	ug/L			06/19/24 21:27	1
Toluene	ND		1.0	0.30	ug/L			06/19/24 21:27	1
Xylenes, Total	ND		6.0	0.40	ug/L			06/19/24 21:27	1

Client Sample ID: MW-30-W-14-240612

Lab Sample ID: 410-175743-2

Date Collected: 06/12/24 10:35

Matrix: Water

Date Received: 06/13/24 09:50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*80 - 120*		*06/19/24 21:27*	*1*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*06/19/24 21:27*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*		*06/19/24 21:27*	*1*
Toluene-d8 (Surr)	*92*		*80 - 120*		*06/19/24 21:27*	*1*

Method: SW846 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		0.052	0.010	ug/L		06/16/24 01:05	06/24/24 16:24	1
Benzo[a]pyrene	ND		0.052	0.010	ug/L		06/16/24 01:05	06/24/24 16:24	1
Benzo[b]fluoranthene	ND		0.052	0.010	ug/L		06/16/24 01:05	06/24/24 16:24	1
Benzo[k]fluoranthene	ND		0.052	0.010	ug/L		06/16/24 01:05	06/24/24 16:24	1
Chrysene	ND		0.052	0.010	ug/L		06/16/24 01:05	06/24/24 16:24	1
Dibenz(a,h)anthracene	ND		0.052	0.021	ug/L		06/16/24 01:05	06/24/24 16:24	1
Indeno[1,2,3-cd]pyrene	ND		0.052	0.021	ug/L		06/16/24 01:05	06/24/24 16:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Benzo(a)pyrene-d12 (Surr)	*52*		*10 - 136*	*06/16/24 01:05*	*06/24/24 16:24*	*1*
1-Methylnaphthalene-d10 (Surr)	*65*		*20 - 144*	*06/16/24 01:05*	*06/24/24 16:24*	*1*
Fluoranthene-d10 (Surr)	*69*		*29 - 153*	*06/16/24 01:05*	*06/24/24 16:24*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND		250	43	ug/L			06/19/24 13:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid) (1C)	*110*		*50 - 150*		*06/19/24 13:45*	*1*

Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	ND	cn	100	46	ug/L		06/20/24 08:00	06/28/24 03:04	1
C24-C40	ND	cn	260	100	ug/L		06/20/24 08:00	06/28/24 03:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o- terphenyl (Surr)	*45*	*S1- cn*	*50 - 150*	*06/20/24 08:00*	*06/28/24 03:04*	*1*

Client Sample ID: MW-206-W-13-240611

Lab Sample ID: 410-175743-3

Date Collected: 06/11/24 15:55

Matrix: Water

Date Received: 06/13/24 09:50

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			06/19/24 21:51	1
Ethylbenzene	ND		1.0	0.40	ug/L			06/19/24 21:51	1
Toluene	ND		1.0	0.30	ug/L			06/19/24 21:51	1
Xylenes, Total	ND		6.0	0.40	ug/L			06/19/24 21:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*91*		*80 - 120*		*06/19/24 21:51*	*1*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*		*06/19/24 21:51*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*		*06/19/24 21:51*	*1*
Toluene-d8 (Surr)	*92*		*80 - 120*		*06/19/24 21:51*	*1*

Client Sample ID: MW-206-W-13-240611

Lab Sample ID: 410-175743-3

Date Collected: 06/11/24 15:55

Matrix: Water

Date Received: 06/13/24 09:50

Method: SW846 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		0.053	0.011	ug/L		06/16/24 01:01	06/25/24 07:33	1
Benzo[a]pyrene	ND		0.053	0.011	ug/L		06/16/24 01:01	06/25/24 07:33	1
Benzo[b]fluoranthene	ND		0.053	0.011	ug/L		06/16/24 01:01	06/25/24 07:33	1
Benzo[k]fluoranthene	ND		0.053	0.011	ug/L		06/16/24 01:01	06/25/24 07:33	1
Chrysene	ND		0.053	0.011	ug/L		06/16/24 01:01	06/25/24 07:33	1
Dibenz(a,h)anthracene	ND		0.053	0.021	ug/L		06/16/24 01:01	06/25/24 07:33	1
Indeno[1,2,3-cd]pyrene	ND		0.053	0.021	ug/L		06/16/24 01:01	06/25/24 07:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Benzo(a)pyrene-d12 (Surr)	*55*		*10 - 136*	*06/16/24 01:01*	*06/25/24 07:33*	*1*
1-Methylnaphthalene-d10 (Surr)	*67*		*20 - 144*	*06/16/24 01:01*	*06/25/24 07:33*	*1*
Fluoranthene-d10 (Surr)	*72*		*29 - 153*	*06/16/24 01:01*	*06/25/24 07:33*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND		250	43	ug/L			06/18/24 16:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid) (1C)	*111*		*50 - 150*		*06/18/24 16:10*	*1*

Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	ND		110	50	ug/L		06/20/24 08:00	06/28/24 03:27	1
C24-C40	ND		280	110	ug/L		06/20/24 08:00	06/28/24 03:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o- terphenyl (Surr)	*71*		*50 - 150*	*06/20/24 08:00*	*06/28/24 03:27*	*1*

Client Sample ID: MW-205-W-22-240611

Lab Sample ID: 410-175743-4

Date Collected: 06/11/24 10:10

Matrix: Water

Date Received: 06/13/24 09:50

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			06/19/24 22:15	1
Ethylbenzene	ND		1.0	0.40	ug/L			06/19/24 22:15	1
Toluene	ND		1.0	0.30	ug/L			06/19/24 22:15	1
Xylenes, Total	ND		6.0	0.40	ug/L			06/19/24 22:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*80 - 120*		*06/19/24 22:15*	*1*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*06/19/24 22:15*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*		*06/19/24 22:15*	*1*
Toluene-d8 (Surr)	*92*		*80 - 120*		*06/19/24 22:15*	*1*

Method: SW846 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		0.055	0.011	ug/L		06/16/24 01:01	06/25/24 07:55	1
Benzo[a]pyrene	ND		0.055	0.011	ug/L		06/16/24 01:01	06/25/24 07:55	1
Benzo[b]fluoranthene	ND		0.055	0.011	ug/L		06/16/24 01:01	06/25/24 07:55	1
Benzo[k]fluoranthene	ND		0.055	0.011	ug/L		06/16/24 01:01	06/25/24 07:55	1
Chrysene	ND		0.055	0.011	ug/L		06/16/24 01:01	06/25/24 07:55	1

Client Sample ID: MW-205-W-22-240611

Lab Sample ID: 410-175743-4

Date Collected: 06/11/24 10:10

Matrix: Water

Date Received: 06/13/24 09:50

Method: SW846 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenz(a,h)anthracene	ND		0.055	0.022	ug/L		06/16/24 01:01	06/25/24 07:55	1
Indeno[1,2,3-cd]pyrene	ND		0.055	0.022	ug/L		06/16/24 01:01	06/25/24 07:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Benzo(a)pyrene-d12 (Surr)	*52*		*10 - 136*	*06/16/24 01:01*	*06/25/24 07:55*	*1*
1-Methylnaphthalene-d10 (Surr)	*69*		*20 - 144*	*06/16/24 01:01*	*06/25/24 07:55*	*1*
Fluoranthene-d10 (Surr)	*70*		*29 - 153*	*06/16/24 01:01*	*06/25/24 07:55*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	**50**	**J**	250	43	ug/L			06/18/24 17:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid) (1C)	*108*		*50 - 150*		*06/18/24 17:25*	*1*

Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	ND		110	51	ug/L		06/20/24 08:00	06/28/24 03:50	1
C24-C40	ND		280	110	ug/L		06/20/24 08:00	06/28/24 03:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o- terphenyl (Surr)	*66*		*50 - 150*	*06/20/24 08:00*	*06/28/24 03:50*	*1*

Client Sample ID: MW-210-W-9-240610

Lab Sample ID: 410-175743-5

Date Collected: 06/10/24 12:45

Matrix: Water

Date Received: 06/13/24 09:50

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND	cn	1.0	0.30	ug/L			06/19/24 20:04	1
Ethylbenzene	ND		1.0	0.40	ug/L			06/19/24 20:04	1
Toluene	ND		1.0	0.30	ug/L			06/19/24 20:04	1
Xylenes, Total	ND		6.0	0.40	ug/L			06/19/24 20:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*80 - 120*		*06/19/24 20:04*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*06/19/24 20:04*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*		*06/19/24 20:04*	*1*
Toluene-d8 (Surr)	*92*		*80 - 120*		*06/19/24 20:04*	*1*

Method: SW846 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		0.052	0.010	ug/L		06/16/24 01:01	06/25/24 08:18	1
Benzo[a]pyrene	ND		0.052	0.010	ug/L		06/16/24 01:01	06/25/24 08:18	1
Benzo[b]fluoranthene	ND		0.052	0.010	ug/L		06/16/24 01:01	06/25/24 08:18	1
Benzo[k]fluoranthene	ND		0.052	0.010	ug/L		06/16/24 01:01	06/25/24 08:18	1
Chrysene	ND		0.052	0.010	ug/L		06/16/24 01:01	06/25/24 08:18	1
Dibenz(a,h)anthracene	ND		0.052	0.021	ug/L		06/16/24 01:01	06/25/24 08:18	1
Indeno[1,2,3-cd]pyrene	ND		0.052	0.021	ug/L		06/16/24 01:01	06/25/24 08:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Benzo(a)pyrene-d12 (Surr)	*58*		*10 - 136*	*06/16/24 01:01*	*06/25/24 08:18*	*1*

Client Sample ID: MW-210-W-9-240610

Lab Sample ID: 410-175743-5

Date Collected: 06/10/24 12:45

Matrix: Water

Date Received: 06/13/24 09:50

Method: SW846 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Methylnaphthalene-d10 (Surr)	*72*		*20 - 144*	*06/16/24 01:01*	*06/25/24 08:18*	*1*
Fluoranthene-d10 (Surr)	*72*		*29 - 153*	*06/16/24 01:01*	*06/25/24 08:18*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND		250	43	ug/L			06/17/24 16:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid) (1C)	*111*		*50 - 150*		*06/17/24 16:30*	*1*

Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	ND		100	46	ug/L		06/20/24 08:00	06/28/24 04:13	1
C24-C40	ND		260	100	ug/L		06/20/24 08:00	06/28/24 04:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o- terphenyl (Surr)	*68*		*50 - 150*	*06/20/24 08:00*	*06/28/24 04:13*	*1*

Client Sample ID: MW-201-W-10-240611

Lab Sample ID: 410-175743-6

Date Collected: 06/11/24 11:50

Matrix: Water

Date Received: 06/13/24 09:50

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			06/19/24 22:39	1
Ethylbenzene	ND		1.0	0.40	ug/L			06/19/24 22:39	1
Toluene	ND		1.0	0.30	ug/L			06/19/24 22:39	1
Xylenes, Total	ND		6.0	0.40	ug/L			06/19/24 22:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*91*		*80 - 120*		*06/19/24 22:39*	*1*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*06/19/24 22:39*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*		*06/19/24 22:39*	*1*
Toluene-d8 (Surr)	*92*		*80 - 120*		*06/19/24 22:39*	*1*

Method: SW846 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		0.054	0.011	ug/L		06/16/24 01:01	06/25/24 08:41	1
Benzo[a]pyrene	ND		0.054	0.011	ug/L		06/16/24 01:01	06/25/24 08:41	1
Benzo[b]fluoranthene	ND		0.054	0.011	ug/L		06/16/24 01:01	06/25/24 08:41	1
Benzo[k]fluoranthene	ND		0.054	0.011	ug/L		06/16/24 01:01	06/25/24 08:41	1
Chrysene	ND		0.054	0.011	ug/L		06/16/24 01:01	06/25/24 08:41	1
Dibenz(a,h)anthracene	ND		0.054	0.022	ug/L		06/16/24 01:01	06/25/24 08:41	1
Indeno[1,2,3-cd]pyrene	ND		0.054	0.022	ug/L		06/16/24 01:01	06/25/24 08:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Benzo(a)pyrene-d12 (Surr)	*55*		*10 - 136*	*06/16/24 01:01*	*06/25/24 08:41*	*1*
1-Methylnaphthalene-d10 (Surr)	*58*		*20 - 144*	*06/16/24 01:01*	*06/25/24 08:41*	*1*
Fluoranthene-d10 (Surr)	*67*		*29 - 153*	*06/16/24 01:01*	*06/25/24 08:41*	*1*

Client Sample ID: MW-201-W-10-240611

Lab Sample ID: 410-175743-6

Date Collected: 06/11/24 11:50

Matrix: Water

Date Received: 06/13/24 09:50

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	220	J cn	250	43	ug/L			06/18/24 17:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid) (1C)	*111*	*cn*	*50 - 150*		*06/18/24 17:50*	*1*

Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	57	J cn	110	49	ug/L		06/20/24 08:00	06/28/24 04:59	1
C24-C40	290	cn	270	110	ug/L		06/20/24 08:00	06/28/24 04:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o- terphenyl (Surr)	*77*	*cn*	*50 - 150*	*06/20/24 08:00*	*06/28/24 04:59*	*1*

Client Sample ID: MW-70R-W-18-240610

Lab Sample ID: 410-175743-7

Date Collected: 06/10/24 10:25

Matrix: Water

Date Received: 06/13/24 09:50

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND	cn	1.0	0.30	ug/L			06/19/24 20:28	1
Ethylbenzene	ND		1.0	0.40	ug/L			06/19/24 20:28	1
Toluene	ND		1.0	0.30	ug/L			06/19/24 20:28	1
Xylenes, Total	ND		6.0	0.40	ug/L			06/19/24 20:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*80 - 120*		*06/19/24 20:28*	*1*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*06/19/24 20:28*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*		*06/19/24 20:28*	*1*
Toluene-d8 (Surr)	*91*		*80 - 120*		*06/19/24 20:28*	*1*

Method: SW846 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		0.052	0.010	ug/L		06/16/24 01:01	06/25/24 09:04	1
Benzo[a]pyrene	ND		0.052	0.010	ug/L		06/16/24 01:01	06/25/24 09:04	1
Benzo[b]fluoranthene	ND		0.052	0.010	ug/L		06/16/24 01:01	06/25/24 09:04	1
Benzo[k]fluoranthene	ND		0.052	0.010	ug/L		06/16/24 01:01	06/25/24 09:04	1
Chrysene	ND		0.052	0.010	ug/L		06/16/24 01:01	06/25/24 09:04	1
Dibenz(a,h)anthracene	ND		0.052	0.021	ug/L		06/16/24 01:01	06/25/24 09:04	1
Indeno[1,2,3-cd]pyrene	ND		0.052	0.021	ug/L		06/16/24 01:01	06/25/24 09:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Benzo(a)pyrene-d12 (Surr)	*61*		*10 - 136*	*06/16/24 01:01*	*06/25/24 09:04*	*1*
1-Methylnaphthalene-d10 (Surr)	*68*		*20 - 144*	*06/16/24 01:01*	*06/25/24 09:04*	*1*
Fluoranthene-d10 (Surr)	*74*		*29 - 153*	*06/16/24 01:01*	*06/25/24 09:04*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND		250	43	ug/L			06/17/24 17:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid) (1C)	*111*		*50 - 150*		*06/17/24 17:45*	*1*

Client Sample ID: MW-70R-W-18-240610

Lab Sample ID: 410-175743-7

Date Collected: 06/10/24 10:25

Matrix: Water

Date Received: 06/13/24 09:50

Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	ND		100	46	ug/L		06/20/24 08:00	06/28/24 05:44	1
C24-C40	ND		260	100	ug/L		06/20/24 08:00	06/28/24 05:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o- terphenyl (Surr)	*77*		*50 - 150*	*06/20/24 08:00*	*06/28/24 05:44*	*1*

Client Sample ID: MW-209-W-10-240610

Lab Sample ID: 410-175743-8

Date Collected: 06/10/24 13:06

Matrix: Water

Date Received: 06/13/24 09:50

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			06/19/24 23:03	1
Ethylbenzene	ND		1.0	0.40	ug/L			06/19/24 23:03	1
Toluene	ND		1.0	0.30	ug/L			06/19/24 23:03	1
Xylenes, Total	ND		6.0	0.40	ug/L			06/19/24 23:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*91*		*80 - 120*		*06/19/24 23:03*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*06/19/24 23:03*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 120*		*06/19/24 23:03*	*1*
Toluene-d8 (Surr)	*92*		*80 - 120*		*06/19/24 23:03*	*1*

Method: SW846 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		0.056	0.011	ug/L		06/16/24 01:01	06/25/24 09:26	1
Benzo[a]pyrene	ND		0.056	0.011	ug/L		06/16/24 01:01	06/25/24 09:26	1
Benzo[b]fluoranthene	ND		0.056	0.011	ug/L		06/16/24 01:01	06/25/24 09:26	1
Benzo[k]fluoranthene	ND		0.056	0.011	ug/L		06/16/24 01:01	06/25/24 09:26	1
Chrysene	ND		0.056	0.011	ug/L		06/16/24 01:01	06/25/24 09:26	1
Dibenz(a,h)anthracene	ND		0.056	0.022	ug/L		06/16/24 01:01	06/25/24 09:26	1
Indeno[1,2,3-cd]pyrene	ND		0.056	0.022	ug/L		06/16/24 01:01	06/25/24 09:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Benzo(a)pyrene-d12 (Surr)	*46*		*10 - 136*	*06/16/24 01:01*	*06/25/24 09:26*	*1*
1-Methylnaphthalene-d10 (Surr)	*45*		*20 - 144*	*06/16/24 01:01*	*06/25/24 09:26*	*1*
Fluoranthene-d10 (Surr)	*74*		*29 - 153*	*06/16/24 01:01*	*06/25/24 09:26*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	**230**	**J**	250	43	ug/L			06/17/24 18:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid) (1C)	*106*		*50 - 150*		*06/17/24 18:10*	*1*

Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	ND		110	51	ug/L		06/20/24 08:00	06/28/24 06:07	1
C24-C40	ND		280	110	ug/L		06/20/24 08:00	06/28/24 06:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o- terphenyl (Surr)	*64*		*50 - 150*	*06/20/24 08:00*	*06/28/24 06:07*	*1*

Client Sample ID: MW-211-W-9-240610

Lab Sample ID: 410-175743-9

Date Collected: 06/10/24 12:10

Matrix: Water

Date Received: 06/13/24 09:50

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			06/19/24 23:27	1
Ethylbenzene	ND		1.0	0.40	ug/L			06/19/24 23:27	1
Toluene	ND		1.0	0.30	ug/L			06/19/24 23:27	1
Xylenes, Total	ND		6.0	0.40	ug/L			06/19/24 23:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*80 - 120*		*06/19/24 23:27*	*1*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*06/19/24 23:27*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*		*06/19/24 23:27*	*1*
Toluene-d8 (Surr)	*91*		*80 - 120*		*06/19/24 23:27*	*1*

Method: SW846 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		0.054	0.011	ug/L		06/16/24 01:01	06/25/24 09:49	1
Benzo[a]pyrene	ND		0.054	0.011	ug/L		06/16/24 01:01	06/25/24 09:49	1
Benzo[b]fluoranthene	ND		0.054	0.011	ug/L		06/16/24 01:01	06/25/24 09:49	1
Benzo[k]fluoranthene	ND		0.054	0.011	ug/L		06/16/24 01:01	06/25/24 09:49	1
Chrysene	ND		0.054	0.011	ug/L		06/16/24 01:01	06/25/24 09:49	1
Dibenz(a,h)anthracene	ND		0.054	0.022	ug/L		06/16/24 01:01	06/25/24 09:49	1
Indeno[1,2,3-cd]pyrene	ND		0.054	0.022	ug/L		06/16/24 01:01	06/25/24 09:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Benzo(a)pyrene-d12 (Surr)	*49*		*10 - 136*	*06/16/24 01:01*	*06/25/24 09:49*	*1*
1-Methylnaphthalene-d10 (Surr)	*65*		*20 - 144*	*06/16/24 01:01*	*06/25/24 09:49*	*1*
Fluoranthene-d10 (Surr)	*69*		*29 - 153*	*06/16/24 01:01*	*06/25/24 09:49*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND		250	43	ug/L			06/17/24 18:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid) (1C)	*112*		*50 - 150*		*06/17/24 18:35*	*1*

Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	**61**	**J cn**	110	50	ug/L		06/20/24 08:00	06/28/24 06:30	1
C24-C40	**430**	**cn**	280	110	ug/L		06/20/24 08:00	06/28/24 06:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o- terphenyl (Surr)	*76*	*cn*	*50 - 150*	*06/20/24 08:00*	*06/28/24 06:30*	*1*

Client Sample ID: MW-200-W-9-240611

Lab Sample ID: 410-175743-10

Date Collected: 06/11/24 13:30

Matrix: Water

Date Received: 06/13/24 09:50

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			06/19/24 23:51	1
Ethylbenzene	ND		1.0	0.40	ug/L			06/19/24 23:51	1
Toluene	ND		1.0	0.30	ug/L			06/19/24 23:51	1
Xylenes, Total	ND		6.0	0.40	ug/L			06/19/24 23:51	1

Client Sample ID: MW-200-W-9-240611

Lab Sample ID: 410-175743-10

Date Collected: 06/11/24 13:30

Matrix: Water

Date Received: 06/13/24 09:50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*80 - 120*		*06/19/24 23:51*	*1*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*06/19/24 23:51*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*		*06/19/24 23:51*	*1*
Toluene-d8 (Surr)	*92*		*80 - 120*		*06/19/24 23:51*	*1*

Method: SW846 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND	cn	0.053	0.011	ug/L		06/16/24 01:01	06/25/24 10:12	1
Benzo[a]pyrene	ND	cn	0.053	0.011	ug/L		06/16/24 01:01	06/25/24 10:12	1
Benzo[b]fluoranthene	ND	cn	0.053	0.011	ug/L		06/16/24 01:01	06/25/24 10:12	1
Benzo[k]fluoranthene	ND	cn	0.053	0.011	ug/L		06/16/24 01:01	06/25/24 10:12	1
Chrysene	ND	cn	0.053	0.011	ug/L		06/16/24 01:01	06/25/24 10:12	1
Dibenz(a,h)anthracene	ND	cn	0.053	0.021	ug/L		06/16/24 01:01	06/25/24 10:12	1
Indeno[1,2,3-cd]pyrene	ND	cn	0.053	0.021	ug/L		06/16/24 01:01	06/25/24 10:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Benzo(a)pyrene-d12 (Surr)	*27*	*cn*	*10 - 136*	*06/16/24 01:01*	*06/25/24 10:12*	*1*
1-Methylnaphthalene-d10 (Surr)	*68*	*cn*	*20 - 144*	*06/16/24 01:01*	*06/25/24 10:12*	*1*
Fluoranthene-d10 (Surr)	*3*	*S1- cn*	*29 - 153*	*06/16/24 01:01*	*06/25/24 10:12*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	**65**	**J**	250	43	ug/L			06/18/24 18:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid) (1C)	*109*		*50 - 150*		*06/18/24 18:15*	*1*

Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	ND		120	53	ug/L		06/20/24 08:00	06/28/24 06:52	1
C24-C40	ND		290	120	ug/L		06/20/24 08:00	06/28/24 06:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o- terphenyl (Surr)	*71*		*50 - 150*	*06/20/24 08:00*	*06/28/24 06:52*	*1*

Client Sample ID: MW-202-W-10-240611

Lab Sample ID: 410-175743-11

Date Collected: 06/11/24 14:20

Matrix: Water

Date Received: 06/13/24 09:50

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			06/20/24 00:15	1
Ethylbenzene	ND		1.0	0.40	ug/L			06/20/24 00:15	1
Toluene	ND		1.0	0.30	ug/L			06/20/24 00:15	1
Xylenes, Total	ND		6.0	0.40	ug/L			06/20/24 00:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*80 - 120*		*06/20/24 00:15*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*06/20/24 00:15*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*		*06/20/24 00:15*	*1*
Toluene-d8 (Surr)	*90*		*80 - 120*		*06/20/24 00:15*	*1*

Client Sample ID: MW-202-W-10-240611

Lab Sample ID: 410-175743-11
Matrix: Water
Date Collected: 06/11/24 14:20
Date Received: 06/13/24 09:50

Method: SW846 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	**0.011**	**J**	0.055	0.011	ug/L		06/16/24 01:01	06/25/24 10:35	1
Benzo[a]pyrene	ND		0.055	0.011	ug/L		06/16/24 01:01	06/25/24 10:35	1
Benzo[b]fluoranthene	ND		0.055	0.011	ug/L		06/16/24 01:01	06/25/24 10:35	1
Benzo[k]fluoranthene	ND		0.055	0.011	ug/L		06/16/24 01:01	06/25/24 10:35	1
Chrysene	ND		0.055	0.011	ug/L		06/16/24 01:01	06/25/24 10:35	1
Dibenz(a,h)anthracene	ND		0.055	0.022	ug/L		06/16/24 01:01	06/25/24 10:35	1
Indeno[1,2,3-cd]pyrene	ND		0.055	0.022	ug/L		06/16/24 01:01	06/25/24 10:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Benzo(a)pyrene-d12 (Surr)	*41*		*10 - 136*	*06/16/24 01:01*	*06/25/24 10:35*	*1*
1-Methylnaphthalene-d10 (Surr)	*64*		*20 - 144*	*06/16/24 01:01*	*06/25/24 10:35*	*1*
Fluoranthene-d10 (Surr)	*67*		*29 - 153*	*06/16/24 01:01*	*06/25/24 10:35*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND		250	43	ug/L			06/18/24 18:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid) (1C)	*109*		*50 - 150*		*06/18/24 18:40*	*1*

Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	ND		110	49	ug/L		06/20/24 08:00	06/28/24 07:15	1
C24-C40	ND		270	110	ug/L		06/20/24 08:00	06/28/24 07:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o- terphenyl (Surr)	*78*		*50 - 150*	*06/20/24 08:00*	*06/28/24 07:15*	*1*

Client Sample ID: MW-203-W-12.5-240611

Lab Sample ID: 410-175743-12
Matrix: Water
Date Collected: 06/11/24 11:45
Date Received: 06/13/24 09:50

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			06/20/24 00:38	1
Ethylbenzene	ND		1.0	0.40	ug/L			06/20/24 00:38	1
Toluene	ND		1.0	0.30	ug/L			06/20/24 00:38	1
Xylenes, Total	ND		6.0	0.40	ug/L			06/20/24 00:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*80 - 120*		*06/20/24 00:38*	*1*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*06/20/24 00:38*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*		*06/20/24 00:38*	*1*
Toluene-d8 (Surr)	*92*		*80 - 120*		*06/20/24 00:38*	*1*

Method: SW846 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		0.051	0.010	ug/L		06/16/24 01:01	06/25/24 10:57	1
Benzo[a]pyrene	ND		0.051	0.010	ug/L		06/16/24 01:01	06/25/24 10:57	1
Benzo[b]fluoranthene	ND		0.051	0.010	ug/L		06/16/24 01:01	06/25/24 10:57	1
Benzo[k]fluoranthene	ND		0.051	0.010	ug/L		06/16/24 01:01	06/25/24 10:57	1
Chrysene	ND		0.051	0.010	ug/L		06/16/24 01:01	06/25/24 10:57	1

Client Sample ID: MW-203-W-12.5-240611

Lab Sample ID: 410-175743-12

Date Collected: 06/11/24 11:45

Matrix: Water

Date Received: 06/13/24 09:50

Method: SW846 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenz(a,h)anthracene	ND		0.051	0.020	ug/L		06/16/24 01:01	06/25/24 10:57	1
Indeno[1,2,3-cd]pyrene	ND		0.051	0.020	ug/L		06/16/24 01:01	06/25/24 10:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Benzo(a)pyrene-d12 (Surr)	*63*		*10 - 136*	*06/16/24 01:01*	*06/25/24 10:57*	*1*
1-Methylnaphthalene-d10 (Surr)	*68*		*20 - 144*	*06/16/24 01:01*	*06/25/24 10:57*	*1*
Fluoranthene-d10 (Surr)	*88*		*29 - 153*	*06/16/24 01:01*	*06/25/24 10:57*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND		250	43	ug/L			06/18/24 12:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid) (1C)	*109*		*50 - 150*		*06/18/24 12:50*	*1*

Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	ND		100	45	ug/L		06/20/24 08:00	06/28/24 01:32	1
C24-C40	ND		250	100	ug/L		06/20/24 08:00	06/28/24 01:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o- terphenyl (Surr)	*77*		*50 - 150*	*06/20/24 08:00*	*06/28/24 01:32*	*1*

Client Sample ID: MW-204-W-13-240611

Lab Sample ID: 410-175743-13

Date Collected: 06/11/24 10:03

Matrix: Water

Date Received: 06/13/24 09:50

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			06/20/24 01:51	1
Ethylbenzene	ND		1.0	0.40	ug/L			06/20/24 01:51	1
Toluene	ND		1.0	0.30	ug/L			06/20/24 01:51	1
Xylenes, Total	ND		6.0	0.40	ug/L			06/20/24 01:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*80 - 120*		*06/20/24 01:51*	*1*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*		*06/20/24 01:51*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*		*06/20/24 01:51*	*1*
Toluene-d8 (Surr)	*91*		*80 - 120*		*06/20/24 01:51*	*1*

Method: SW846 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		0.051	0.010	ug/L		06/16/24 01:01	06/25/24 12:06	1
Benzo[a]pyrene	ND		0.051	0.010	ug/L		06/16/24 01:01	06/25/24 12:06	1
Benzo[b]fluoranthene	ND		0.051	0.010	ug/L		06/16/24 01:01	06/25/24 12:06	1
Benzo[k]fluoranthene	ND		0.051	0.010	ug/L		06/16/24 01:01	06/25/24 12:06	1
Chrysene	ND		0.051	0.010	ug/L		06/16/24 01:01	06/25/24 12:06	1
Dibenz(a,h)anthracene	ND		0.051	0.020	ug/L		06/16/24 01:01	06/25/24 12:06	1
Indeno[1,2,3-cd]pyrene	ND		0.051	0.020	ug/L		06/16/24 01:01	06/25/24 12:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Benzo(a)pyrene-d12 (Surr)	*53*		*10 - 136*	*06/16/24 01:01*	*06/25/24 12:06*	*1*

Client Sample ID: MW-204-W-13-240611

Lab Sample ID: 410-175743-13

Date Collected: 06/11/24 10:03

Matrix: Water

Date Received: 06/13/24 09:50

Method: SW846 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Methylnaphthalene-d10 (Surr)	*72*		*20 - 144*	*06/16/24 01:01*	*06/25/24 12:06*	*1*
Fluoranthene-d10 (Surr)	*90*		*29 - 153*	*06/16/24 01:01*	*06/25/24 12:06*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	**500**		250	43	ug/L			06/18/24 19:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid) (1C)	*107*		*50 - 150*		*06/18/24 19:05*	*1*

Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	**140**		100	46	ug/L		06/20/24 08:00	06/28/24 07:37	1
C24-C40	ND		250	100	ug/L		06/20/24 08:00	06/28/24 07:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o- terphenyl (Surr)	*58*		*50 - 150*	*06/20/24 08:00*	*06/28/24 07:37*	*1*

Client Sample ID: MW-207-W-13-240611

Lab Sample ID: 410-175743-14

Date Collected: 06/11/24 16:00

Matrix: Water

Date Received: 06/13/24 09:50

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			06/20/24 02:15	1
Ethylbenzene	ND		1.0	0.40	ug/L			06/20/24 02:15	1
Toluene	ND		1.0	0.30	ug/L			06/20/24 02:15	1
Xylenes, Total	ND		6.0	0.40	ug/L			06/20/24 02:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*80 - 120*		*06/20/24 02:15*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*06/20/24 02:15*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*		*06/20/24 02:15*	*1*
Toluene-d8 (Surr)	*92*		*80 - 120*		*06/20/24 02:15*	*1*

Method: SW846 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	**0.015**	**J**	0.054	0.011	ug/L		06/16/24 01:01	06/25/24 12:29	1
Benzo[a]pyrene	ND		0.054	0.011	ug/L		06/16/24 01:01	06/25/24 12:29	1
Benzo[b]fluoranthene	ND		0.054	0.011	ug/L		06/16/24 01:01	06/25/24 12:29	1
Benzo[k]fluoranthene	ND		0.054	0.011	ug/L		06/16/24 01:01	06/25/24 12:29	1
Chrysene	ND		0.054	0.011	ug/L		06/16/24 01:01	06/25/24 12:29	1
Dibenz(a,h)anthracene	ND		0.054	0.022	ug/L		06/16/24 01:01	06/25/24 12:29	1
Indeno[1,2,3-cd]pyrene	ND		0.054	0.022	ug/L		06/16/24 01:01	06/25/24 12:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Benzo(a)pyrene-d12 (Surr)	*64*		*10 - 136*	*06/16/24 01:01*	*06/25/24 12:29*	*1*
1-Methylnaphthalene-d10 (Surr)	*63*		*20 - 144*	*06/16/24 01:01*	*06/25/24 12:29*	*1*
Fluoranthene-d10 (Surr)	*81*		*29 - 153*	*06/16/24 01:01*	*06/25/24 12:29*	*1*

Client Sample ID: MW-207-W-13-240611

Lab Sample ID: 410-175743-14

Date Collected: 06/11/24 16:00

Matrix: Water

Date Received: 06/13/24 09:50

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND		250	43	ug/L			06/18/24 19:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid) (1C)	*111*		*50 - 150*		*06/18/24 19:30*	*1*

Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	ND		100	47	ug/L		06/20/24 08:00	06/28/24 08:00	1
C24-C40	ND		260	100	ug/L		06/20/24 08:00	06/28/24 08:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o- terphenyl (Surr)	*69*		*50 - 150*	*06/20/24 08:00*	*06/28/24 08:00*	*1*

Client Sample ID: DUP-1-WD-240611

Lab Sample ID: 410-175743-15

Date Collected: 06/11/24 00:00

Matrix: Water

Date Received: 06/13/24 09:50

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			06/20/24 02:39	1
Ethylbenzene	ND		1.0	0.40	ug/L			06/20/24 02:39	1
Toluene	ND		1.0	0.30	ug/L			06/20/24 02:39	1
Xylenes, Total	ND		6.0	0.40	ug/L			06/20/24 02:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*80 - 120*		*06/20/24 02:39*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*06/20/24 02:39*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*		*06/20/24 02:39*	*1*
Toluene-d8 (Surr)	*92*		*80 - 120*		*06/20/24 02:39*	*1*

Method: SW846 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		0.055	0.011	ug/L		06/16/24 01:01	06/25/24 12:52	1
Benzo[a]pyrene	ND		0.055	0.011	ug/L		06/16/24 01:01	06/25/24 12:52	1
Benzo[b]fluoranthene	ND		0.055	0.011	ug/L		06/16/24 01:01	06/25/24 12:52	1
Benzo[k]fluoranthene	ND		0.055	0.011	ug/L		06/16/24 01:01	06/25/24 12:52	1
Chrysene	ND		0.055	0.011	ug/L		06/16/24 01:01	06/25/24 12:52	1
Dibenz(a,h)anthracene	ND		0.055	0.022	ug/L		06/16/24 01:01	06/25/24 12:52	1
Indeno[1,2,3-cd]pyrene	ND		0.055	0.022	ug/L		06/16/24 01:01	06/25/24 12:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Benzo(a)pyrene-d12 (Surr)	*41*		*10 - 136*	*06/16/24 01:01*	*06/25/24 12:52*	*1*
1-Methylnaphthalene-d10 (Surr)	*66*		*20 - 144*	*06/16/24 01:01*	*06/25/24 12:52*	*1*
Fluoranthene-d10 (Surr)	*80*		*29 - 153*	*06/16/24 01:01*	*06/25/24 12:52*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	**48**	**J**	250	43	ug/L			06/18/24 19:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid) (1C)	*108*		*50 - 150*		*06/18/24 19:55*	*1*

Client Sample ID: DUP-1-WD-240611

Lab Sample ID: 410-175743-15

Date Collected: 06/11/24 00:00

Matrix: Water

Date Received: 06/13/24 09:50

Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	ND		110	49	ug/L		06/20/24 08:00	06/28/24 08:23	1
C24-C40	ND		270	110	ug/L		06/20/24 08:00	06/28/24 08:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o- terphenyl (Surr)	*53*		*50 - 150*	*06/20/24 08:00*	*06/28/24 08:23*	*1*

Client Sample ID: DUP-2-WD-240612

Lab Sample ID: 410-175743-16

Date Collected: 06/12/24 00:00

Matrix: Water

Date Received: 06/13/24 09:50

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			06/20/24 03:03	1
Ethylbenzene	ND		1.0	0.40	ug/L			06/20/24 03:03	1
Toluene	ND		1.0	0.30	ug/L			06/20/24 03:03	1
Xylenes, Total	ND		6.0	0.40	ug/L			06/20/24 03:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*80 - 120*		*06/20/24 03:03*	*1*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*		*06/20/24 03:03*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*		*06/20/24 03:03*	*1*
Toluene-d8 (Surr)	*90*		*80 - 120*		*06/20/24 03:03*	*1*

Method: SW846 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		0.053	0.011	ug/L		06/16/24 01:05	06/24/24 16:47	1
Benzo[a]pyrene	ND		0.053	0.011	ug/L		06/16/24 01:05	06/24/24 16:47	1
Benzo[b]fluoranthene	ND		0.053	0.011	ug/L		06/16/24 01:05	06/24/24 16:47	1
Benzo[k]fluoranthene	ND		0.053	0.011	ug/L		06/16/24 01:05	06/24/24 16:47	1
Chrysene	ND		0.053	0.011	ug/L		06/16/24 01:05	06/24/24 16:47	1
Dibenz(a,h)anthracene	ND		0.053	0.021	ug/L		06/16/24 01:05	06/24/24 16:47	1
Indeno[1,2,3-cd]pyrene	ND		0.053	0.021	ug/L		06/16/24 01:05	06/24/24 16:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Benzo(a)pyrene-d12 (Surr)	*56*		*10 - 136*	*06/16/24 01:05*	*06/24/24 16:47*	*1*
1-Methylnaphthalene-d10 (Surr)	*72*		*20 - 144*	*06/16/24 01:05*	*06/24/24 16:47*	*1*
Fluoranthene-d10 (Surr)	*73*		*29 - 153*	*06/16/24 01:05*	*06/24/24 16:47*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	**280**		250	43	ug/L			06/19/24 14:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid) (1C)	*109*		*50 - 150*		*06/19/24 14:10*	*1*

Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	**140**		110	50	ug/L		06/20/24 08:00	06/28/24 08:45	1
C24-C40	ND		280	110	ug/L		06/20/24 08:00	06/28/24 08:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o- terphenyl (Surr)	*60*		*50 - 150*	*06/20/24 08:00*	*06/28/24 08:45*	*1*

Client: Arcadis U.S., Inc.
Project/Site: Seattle Terminal

Job ID: 410-175743-1

Client Sample ID: QA-T-240612

Date Collected: 06/12/24 00:00
Date Received: 06/13/24 09:50

Lab Sample ID: 410-175743-17

Matrix: Water

Method: SW846 8260D/UST - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			06/19/24 18:39	1
Ethylbenzene	ND		1.0	0.40	ug/L			06/19/24 18:39	1
Toluene	ND		1.0	0.30	ug/L			06/19/24 18:39	1
Xylenes, Total	ND		6.0	0.40	ug/L			06/19/24 18:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*91*		*80 - 120*		*06/19/24 18:39*	*1*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*		*06/19/24 18:39*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*		*06/19/24 18:39*	*1*
Toluene-d8 (Surr)	*93*		*80 - 120*		*06/19/24 18:39*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND		250	43	ug/L			06/19/24 12:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid) (1C)	*109*		*50 - 150*		*06/19/24 12:55*	*1*

Surrogate Summary

Client: Arcadis U.S., Inc.
Project/Site: Seattle Terminal

Job ID: 410-175743-1

Method: 8260D/UST - Volatile Organic Compounds by GC/MS

Matrix: Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(80-120)	(80-120)	(80-120)	(80-120)
410-175743-1	MW-61A-R-W-14-240612	93	102	103	90
410-175743-2	MW-30-W-14-240612	93	100	103	92
410-175743-3	MW-206-W-13-240611	91	98	103	92
410-175743-4	MW-205-W-22-240611	92	100	101	92
410-175743-5	MW-210-W-9-240610	92	101	101	92
410-175743-6	MW-201-W-10-240611	91	100	103	92
410-175743-7	MW-70R-W-18-240610	93	100	103	91
410-175743-8	MW-209-W-10-240610	91	101	100	92
410-175743-9	MW-211-W-9-240610	92	100	103	91
410-175743-10	MW-200-W-9-240611	92	100	102	92
410-175743-11	MW-202-W-10-240611	92	101	101	90
410-175743-12	MW-203-W-12.5-240611	92	100	103	92
410-175743-12 MS	MW-203-W-12.5-240611	94	103	102	92
410-175743-12 MSD	MW-203-W-12.5-240611	93	101	100	92
410-175743-13	MW-204-W-13-240611	92	105	103	91
410-175743-14	MW-207-W-13-240611	93	101	103	92
410-175743-15	DUP-1-WD-240611	92	101	104	92
410-175743-16	DUP-2-WD-240612	93	104	104	90
410-175743-17	QA-T-240612	91	102	101	93
LCS 410-519135/4	Lab Control Sample	93	101	101	93
LCS 410-519137/4	Lab Control Sample	93	101	102	93
LCSD 410-519135/5	Lab Control Sample Dup	95	101	100	92
LCSD 410-519137/5	Lab Control Sample Dup	93	100	101	93
MB 410-519135/6	Method Blank	92	99	102	92
MB 410-519137/6	Method Blank	93	101	102	92

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Matrix: Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		BAPd12	MNPd10	FLN10
Lab Sample ID	Client Sample ID	(10-136)	(20-144)	(29-153)
410-175743-1	MW-61A-R-W-14-240612	70	87	88
410-175743-2	MW-30-W-14-240612	52	65	69
410-175743-3	MW-206-W-13-240611	55	67	72
410-175743-4	MW-205-W-22-240611	52	69	70
410-175743-5	MW-210-W-9-240610	58	72	72
410-175743-6	MW-201-W-10-240611	55	58	67
410-175743-7	MW-70R-W-18-240610	61	68	74
410-175743-8	MW-209-W-10-240610	46	45	74
410-175743-9	MW-211-W-9-240610	49	65	69
410-175743-10	MW-200-W-9-240611	27 cn	68 cn	3 S1- cn
410-175743-11	MW-202-W-10-240611	41	64	67
410-175743-12	MW-203-W-12.5-240611	63	68	88

Surrogate Summary

Client: Arcadis U.S., Inc.
Project/Site: Seattle Terminal

Job ID: 410-175743-1

Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
Lab Sample ID	Client Sample ID	BAPd12 (10-136)	MNPd10 (20-144)	FLN10 (29-153)
410-175743-12 MS	MW-203-W-12.5-240611	70	64	71
410-175743-12 MSD	MW-203-W-12.5-240611	71	66	90
410-175743-13	MW-204-W-13-240611	53	72	90
410-175743-14	MW-207-W-13-240611	64	63	81
410-175743-15	DUP-1-WD-240611	41	66	80
410-175743-16	DUP-2-WD-240612	56	72	73
LCS 410-517758/2-A	Lab Control Sample	71	63	72
LCS 410-517759/2-A	Lab Control Sample	86	85	84
MB 410-517758/1-A	Method Blank	61	60	61
MB 410-517759/1-A	Method Blank	75	82	75

Surrogate Legend

BAPd12 = Benzo(a)pyrene-d12 (Surr)
MNPd10 = 1-Methylnaphthalene-d10 (Surr)
FLN10 = Fluoranthene-d10 (Surr)

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	TFT-F1 (50-150)
410-175743-1	MW-61A-R-W-14-240612	109
410-175743-2	MW-30-W-14-240612	110
410-175743-3	MW-206-W-13-240611	111
410-175743-4	MW-205-W-22-240611	108
410-175743-5	MW-210-W-9-240610	111
410-175743-6	MW-201-W-10-240611	111 cn
410-175743-7	MW-70R-W-18-240610	111
410-175743-8	MW-209-W-10-240610	106
410-175743-9	MW-211-W-9-240610	112
410-175743-10	MW-200-W-9-240611	109
410-175743-11	MW-202-W-10-240611	109
410-175743-12	MW-203-W-12.5-240611	109
410-175743-12 MS	MW-203-W-12.5-240611	100
410-175743-12 MSD	MW-203-W-12.5-240611	99
410-175743-13	MW-204-W-13-240611	107
410-175743-14	MW-207-W-13-240611	111
410-175743-15	DUP-1-WD-240611	108
410-175743-16	DUP-2-WD-240612	109
410-175743-17	QA-T-240612	109
LCS 410-517916/6	Lab Control Sample	101
LCS 410-518345/6	Lab Control Sample	101
LCS 410-518869/6	Lab Control Sample	101
LCSD 410-517916/7	Lab Control Sample Dup	102
LCSD 410-518345/7	Lab Control Sample Dup	100
LCSD 410-518869/7	Lab Control Sample Dup	100
MB 410-517916/5	Method Blank	111
MB 410-518345/5	Method Blank	109
MB 410-518869/5	Method Blank	110

Surrogate Summary

Client: Arcadis U.S., Inc.
Project/Site: Seattle Terminal

Job ID: 410-175743-1

Surrogate Legend

TFT-F = a,a,a-Trifluorotoluene (fid)

Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	OTP (50-150)
410-175743-1	MW-61A-R-W-14-240612	55
410-175743-2	MW-30-W-14-240612	45 S1- cn
410-175743-3	MW-206-W-13-240611	71
410-175743-4	MW-205-W-22-240611	66
410-175743-5	MW-210-W-9-240610	68
410-175743-5 DU	MW-210-W-9-240610	62
410-175743-6	MW-201-W-10-240611	77 cn
410-175743-7	MW-70R-W-18-240610	77
410-175743-8	MW-209-W-10-240610	64
410-175743-9	MW-211-W-9-240610	76 cn
410-175743-10	MW-200-W-9-240611	71
410-175743-11	MW-202-W-10-240611	78
410-175743-12	MW-203-W-12.5-240611	77
410-175743-12 MS	MW-203-W-12.5-240611	56
410-175743-12 MSD	MW-203-W-12.5-240611	67
410-175743-13	MW-204-W-13-240611	58
410-175743-14	MW-207-W-13-240611	69
410-175743-15	DUP-1-WD-240611	53
410-175743-16	DUP-2-WD-240612	60
LCS 410-519434/2-B	Lab Control Sample	63
MB 410-519434/1-B	Method Blank	71

Surrogate Legend

OTP = o- terphenyl (Surr)

Method: 8260D/UST - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 410-519135/6
Matrix: Water
Analysis Batch: 519135

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			06/19/24 17:16	1
Ethylbenzene	ND		1.0	0.40	ug/L			06/19/24 17:16	1
Toluene	ND		1.0	0.30	ug/L			06/19/24 17:16	1
Xylenes, Total	ND		6.0	0.40	ug/L			06/19/24 17:16	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*80 - 120*		*06/19/24 17:16*	*1*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*		*06/19/24 17:16*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*		*06/19/24 17:16*	*1*
Toluene-d8 (Surr)	*92*		*80 - 120*		*06/19/24 17:16*	*1*

Lab Sample ID: LCS 410-519135/4
Matrix: Water
Analysis Batch: 519135

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			20.0	22.7		ug/L		114	80 - 120		
Ethylbenzene			20.0	20.6		ug/L		103	80 - 120		
Toluene			20.0	20.5		ug/L		102	80 - 120		
Xylenes, Total			60.0	62.5		ug/L		104	80 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*93*		*80 - 120*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*
Dibromofluoromethane (Surr)	*101*		*80 - 120*
Toluene-d8 (Surr)	*93*		*80 - 120*

Lab Sample ID: LCSD 410-519135/5
Matrix: Water
Analysis Batch: 519135

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			20.0	23.6		ug/L		118	80 - 120	4	30
Ethylbenzene			20.0	21.1		ug/L		105	80 - 120	2	30
Toluene			20.0	21.0		ug/L		105	80 - 120	3	30
Xylenes, Total			60.0	63.6		ug/L		106	80 - 120	2	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*95*		*80 - 120*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*
Dibromofluoromethane (Surr)	*100*		*80 - 120*
Toluene-d8 (Surr)	*92*		*80 - 120*

Method: 8260D/UST - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 410-519137/6
Matrix: Water
Analysis Batch: 519137

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.30	ug/L			06/19/24 17:28	1
Ethylbenzene	ND		1.0	0.40	ug/L			06/19/24 17:28	1
Toluene	ND		1.0	0.30	ug/L			06/19/24 17:28	1
Xylenes, Total	ND		6.0	0.40	ug/L			06/19/24 17:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*80 - 120*		*06/19/24 17:28*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*06/19/24 17:28*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*		*06/19/24 17:28*	*1*
Toluene-d8 (Surr)	*92*		*80 - 120*		*06/19/24 17:28*	*1*

Lab Sample ID: LCS 410-519137/4
Matrix: Water
Analysis Batch: 519137

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			20.0	21.1		ug/L		106	80 - 120		
Ethylbenzene			20.0	17.7		ug/L		88	80 - 120		
Toluene			20.0	17.8		ug/L		89	80 - 120		
Xylenes, Total			60.0	53.1		ug/L		89	80 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*93*		*80 - 120*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*
Dibromofluoromethane (Surr)	*102*		*80 - 120*
Toluene-d8 (Surr)	*93*		*80 - 120*

Lab Sample ID: LCSD 410-519137/5
Matrix: Water
Analysis Batch: 519137

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			20.0	20.9		ug/L		104	80 - 120	1	30
Ethylbenzene			20.0	17.5		ug/L		87	80 - 120	1	30
Toluene			20.0	18.0		ug/L		90	80 - 120	1	30
Xylenes, Total			60.0	52.6		ug/L		88	80 - 120	1	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*93*		*80 - 120*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*
Dibromofluoromethane (Surr)	*101*		*80 - 120*
Toluene-d8 (Surr)	*93*		*80 - 120*

Method: 8260D/UST - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 410-175743-12 MS
Matrix: Water
Analysis Batch: 519137

Client Sample ID: MW-203-W-12.5-240611
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	ND		20.0	20.7		ug/L		104	80 - 120
Ethylbenzene	ND		20.0	17.6		ug/L		88	80 - 120
Toluene	ND		20.0	18.1		ug/L		90	80 - 120
Xylenes, Total	ND		60.0	52.6		ug/L		88	80 - 120

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*94*		*80 - 120*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*
Dibromofluoromethane (Surr)	*102*		*80 - 120*
Toluene-d8 (Surr)	*92*		*80 - 120*

Lab Sample ID: 410-175743-12 MSD
Matrix: Water
Analysis Batch: 519137

Client Sample ID: MW-203-W-12.5-240611
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	ND		20.0	20.9		ug/L		104	80 - 120	1	30
Ethylbenzene	ND		20.0	17.2		ug/L		86	80 - 120	2	30
Toluene	ND		20.0	17.8		ug/L		89	80 - 120	1	30
Xylenes, Total	ND		60.0	51.5		ug/L		86	80 - 120	2	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*93*		*80 - 120*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*
Dibromofluoromethane (Surr)	*100*		*80 - 120*
Toluene-d8 (Surr)	*92*		*80 - 120*

Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 410-517758/1-A
Matrix: Water
Analysis Batch: 520940

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 517758

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		0.050	0.010	ug/L		06/16/24 01:01	06/25/24 05:16	1
Benzo[a]pyrene	ND		0.050	0.010	ug/L		06/16/24 01:01	06/25/24 05:16	1
Benzo[b]fluoranthene	ND		0.050	0.010	ug/L		06/16/24 01:01	06/25/24 05:16	1
Benzo[k]fluoranthene	ND		0.050	0.010	ug/L		06/16/24 01:01	06/25/24 05:16	1
Chrysene	ND		0.050	0.010	ug/L		06/16/24 01:01	06/25/24 05:16	1
Dibenz(a,h)anthracene	ND		0.050	0.020	ug/L		06/16/24 01:01	06/25/24 05:16	1
Indeno[1,2,3-cd]pyrene	ND		0.050	0.020	ug/L		06/16/24 01:01	06/25/24 05:16	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Benzo(a)pyrene-d12 (Surr)	*61*		*10 - 136*	*06/16/24 01:01*	*06/25/24 05:16*	*1*
1-Methylnaphthalene-d10 (Surr)	*60*		*20 - 144*	*06/16/24 01:01*	*06/25/24 05:16*	*1*
Fluoranthene-d10 (Surr)	*61*		*29 - 153*	*06/16/24 01:01*	*06/25/24 05:16*	*1*

Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: LCS 410-517758/2-A
Matrix: Water
Analysis Batch: 520940

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 517758

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzo[a]anthracene			1.00	0.681		ug/L		68	47 - 138		
Benzo[a]pyrene			1.00	0.695		ug/L		69	51 - 147		
Benzo[b]fluoranthene			1.00	0.707		ug/L		71	44 - 144		
Benzo[k]fluoranthene			1.00	0.731		ug/L		73	46 - 158		
Chrysene			1.00	0.663		ug/L		66	41 - 144		
Dibenz(a,h)anthracene			1.00	0.561		ug/L		56	38 - 145		
Indeno[1,2,3-cd]pyrene			1.00	0.615		ug/L		61	37 - 153		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Benzo(a)pyrene-d12 (Surr)	*71*		*10 - 136*
1-Methylnaphthalene-d10 (Surr)	*63*		*20 - 144*
Fluoranthene-d10 (Surr)	*72*		*29 - 153*

Lab Sample ID: 410-175743-12 MS
Matrix: Water
Analysis Batch: 520940

Client Sample ID: MW-203-W-12.5-240611
Prep Type: Total/NA
Prep Batch: 517758

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzo[a]anthracene	ND		1.02	0.744		ug/L		73	50 - 129		
Benzo[a]pyrene	ND		1.02	0.694		ug/L		68	49 - 120		
Benzo[b]fluoranthene	ND		1.02	0.732		ug/L		72	47 - 131		
Benzo[k]fluoranthene	ND		1.02	0.706		ug/L		69	50 - 128		
Chrysene	ND		1.02	0.706		ug/L		69	47 - 121		
Dibenz(a,h)anthracene	ND		1.02	0.561		ug/L		55	38 - 136		
Indeno[1,2,3-cd]pyrene	ND		1.02	0.621		ug/L		61	35 - 144		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Benzo(a)pyrene-d12 (Surr)	*70*		*10 - 136*
1-Methylnaphthalene-d10 (Surr)	*64*		*20 - 144*
Fluoranthene-d10 (Surr)	*71*		*29 - 153*

Lab Sample ID: 410-175743-12 MSD
Matrix: Water
Analysis Batch: 520940

Client Sample ID: MW-203-W-12.5-240611
Prep Type: Total/NA
Prep Batch: 517758

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzo[a]anthracene	ND		1.01	0.741		ug/L		73	50 - 129	0	30
Benzo[a]pyrene	ND		1.01	0.701		ug/L		69	49 - 120	1	30
Benzo[b]fluoranthene	ND		1.01	0.730		ug/L		72	47 - 131	0	30
Benzo[k]fluoranthene	ND		1.01	0.720		ug/L		71	50 - 128	2	30
Chrysene	ND		1.01	0.700		ug/L		69	47 - 121	1	30
Dibenz(a,h)anthracene	ND		1.01	0.538		ug/L		53	38 - 136	4	30
Indeno[1,2,3-cd]pyrene	ND		1.01	0.588		ug/L		58	35 - 144	6	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Benzo(a)pyrene-d12 (Surr)	*71*		*10 - 136*
1-Methylnaphthalene-d10 (Surr)	*66*		*20 - 144*

Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: 410-175743-12 MSD
Matrix: Water
Analysis Batch: 520940

Client Sample ID: MW-203-W-12.5-240611
Prep Type: Total/NA
Prep Batch: 517758

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Fluoranthene-d10 (Surr)	*90*		*29 - 153*

Lab Sample ID: MB 410-517759/1-A
Matrix: Water
Analysis Batch: 519481

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 517759

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		0.050	0.010	ug/L		06/16/24 01:05	06/20/24 10:29	1
Benzo[a]pyrene	ND		0.050	0.010	ug/L		06/16/24 01:05	06/20/24 10:29	1
Benzo[b]fluoranthene	ND		0.050	0.010	ug/L		06/16/24 01:05	06/20/24 10:29	1
Benzo[k]fluoranthene	ND		0.050	0.010	ug/L		06/16/24 01:05	06/20/24 10:29	1
Chrysene	ND		0.050	0.010	ug/L		06/16/24 01:05	06/20/24 10:29	1
Dibenz(a,h)anthracene	ND		0.050	0.020	ug/L		06/16/24 01:05	06/20/24 10:29	1
Indeno[1,2,3-cd]pyrene	ND		0.050	0.020	ug/L		06/16/24 01:05	06/20/24 10:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Benzo(a)pyrene-d12 (Surr)	*75*		*10 - 136*	*06/16/24 01:05*	*06/20/24 10:29*	*1*
1-Methylnaphthalene-d10 (Surr)	*82*		*20 - 144*	*06/16/24 01:05*	*06/20/24 10:29*	*1*
Fluoranthene-d10 (Surr)	*75*		*29 - 153*	*06/16/24 01:05*	*06/20/24 10:29*	*1*

Lab Sample ID: LCS 410-517759/2-A
Matrix: Water
Analysis Batch: 519481

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 517759

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzo[a]anthracene	1.00	0.878		ug/L		88	47 - 138
Benzo[a]pyrene	1.00	0.904		ug/L		90	51 - 147
Benzo[b]fluoranthene	1.00	0.901		ug/L		90	44 - 144
Benzo[k]fluoranthene	1.00	0.988		ug/L		99	46 - 158
Chrysene	1.00	0.877		ug/L		88	41 - 144
Dibenz(a,h)anthracene	1.00	0.897		ug/L		90	38 - 145
Indeno[1,2,3-cd]pyrene	1.00	0.967		ug/L		97	37 - 153

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Benzo(a)pyrene-d12 (Surr)	*86*		*10 - 136*
1-Methylnaphthalene-d10 (Surr)	*85*		*20 - 144*
Fluoranthene-d10 (Surr)	*84*		*29 - 153*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Lab Sample ID: MB 410-517916/5
Matrix: Water
Analysis Batch: 517916

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND		250	43	ug/L			06/17/24 11:04	1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: MB 410-517916/5
Matrix: Water
Analysis Batch: 517916

Client Sample ID: Method Blank
Prep Type: Total/NA

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	111		50 - 150		06/17/24 11:04	1

Lab Sample ID: LCS 410-517916/6
Matrix: Water
Analysis Batch: 517916

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline (Unleaded) (1C)			1100	969		ug/L		88	64 - 131		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
a,a,a-Trifluorotoluene (fid) (1C)	101		50 - 150

Lab Sample ID: LCSD 410-517916/7
Matrix: Water
Analysis Batch: 517916

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline (Unleaded) (1C)			1100	958		ug/L		87	64 - 131	1	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
a,a,a-Trifluorotoluene (fid) (1C)	102		50 - 150

Lab Sample ID: MB 410-518345/5
Matrix: Water
Analysis Batch: 518345

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND		250	43	ug/L			06/18/24 10:44	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid) (1C)	109		50 - 150		06/18/24 10:44	1

Lab Sample ID: LCS 410-518345/6
Matrix: Water
Analysis Batch: 518345

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline (Unleaded) (1C)			1100	951		ug/L		86	64 - 131		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
a,a,a-Trifluorotoluene (fid) (1C)	101		50 - 150

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCSD 410-518345/7
Matrix: Water
Analysis Batch: 518345

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline (Unleaded) (1C)			1100	966		ug/L		88	64 - 131	2	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
a,a,a-Trifluorotoluene (fid) (1C)	*100*		*50 - 150*

Lab Sample ID: 410-175743-12 MS
Matrix: Water
Analysis Batch: 518345

Client Sample ID: MW-203-W-12.5-240611
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline (Unleaded) (1C)	ND		1140	1130		ug/L		99	80 - 120

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (fid) (1C)	*100*		*50 - 150*

Lab Sample ID: 410-175743-12 MSD
Matrix: Water
Analysis Batch: 518345

Client Sample ID: MW-203-W-12.5-240611
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline (Unleaded) (1C)	ND		1140	1120		ug/L		98	80 - 120	1	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
a,a,a-Trifluorotoluene (fid) (1C)	*99*		*50 - 150*

Lab Sample ID: MB 410-518869/5
Matrix: Water
Analysis Batch: 518869

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C7-C12 (1C)	ND		250	43	ug/L			06/19/24 10:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid) (1C)	*110*		*50 - 150*		*06/19/24 10:50*	*1*

Lab Sample ID: LCS 410-518869/6
Matrix: Water
Analysis Batch: 518869

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline (Unleaded) (1C)			1100	933		ug/L		85	64 - 131

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (fid) (1C)	*101*		*50 - 150*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCSD 410-518869/7
Matrix: Water
Analysis Batch: 518869

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline (Unleaded) (1C)			1100	933		ug/L		85	64 - 131	0	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
a,a,a-Trifluorotoluene (fid) (1C)	*100*		*50 - 150*

Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH

Lab Sample ID: MB 410-519434/1-B
Matrix: Water
Analysis Batch: 522504

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 519434

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C12-C24	ND		100	45	ug/L		06/20/24 08:00	06/28/24 00:46	1
C24-C40	ND		250	100	ug/L		06/20/24 08:00	06/28/24 00:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o- terphenyl (Surr)	*71*		*50 - 150*	*06/20/24 08:00*	*06/28/24 00:46*	*1*

Lab Sample ID: LCS 410-519434/2-B
Matrix: Water
Analysis Batch: 522504

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 519434

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
C12-C24			603	253		ug/L		42	14 - 115		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o- terphenyl (Surr)	*63*		*50 - 150*

Lab Sample ID: 410-175743-12 MS
Matrix: Water
Analysis Batch: 522504

Client Sample ID: MW-203-W-12.5-240611
Prep Type: Total/NA
Prep Batch: 519434

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
C12-C24	ND		614	189		ug/L		31	30 - 115		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
o- terphenyl (Surr)	*56*		*50 - 150*

Lab Sample ID: 410-175743-12 MSD
Matrix: Water
Analysis Batch: 522504

Client Sample ID: MW-203-W-12.5-240611
Prep Type: Total/NA
Prep Batch: 519434

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C12-C24	ND		615	202		ug/L		33	30 - 115	6	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
o- terphenyl (Surr)	*67*		*50 - 150*

Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH (Continued)

Lab Sample ID: 410-175743-5 DU
Matrix: Water
Analysis Batch: 522504

Client Sample ID: MW-210-W-9-240610
Prep Type: Total/NA
Prep Batch: 519434

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
C12-C24	ND			ND		ug/L				NC	20
C24-C40	ND			ND		ug/L				NC	20

Surrogate	*DU %Recovery*	*DU Qualifier*	*Limits*
o- terphenyl (Surr)	*62*		*50 - 150*

GC/MS VOA

Analysis Batch: 519135

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-175743-5	MW-210-W-9-240610	Total/NA	Water	8260D/UST	
410-175743-7	MW-70R-W-18-240610	Total/NA	Water	8260D/UST	
MB 410-519135/6	Method Blank	Total/NA	Water	8260D/UST	
LCS 410-519135/4	Lab Control Sample	Total/NA	Water	8260D/UST	
LCSD 410-519135/5	Lab Control Sample Dup	Total/NA	Water	8260D/UST	

Analysis Batch: 519137

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-175743-1	MW-61A-R-W-14-240612	Total/NA	Water	8260D/UST	
410-175743-2	MW-30-W-14-240612	Total/NA	Water	8260D/UST	
410-175743-3	MW-206-W-13-240611	Total/NA	Water	8260D/UST	
410-175743-4	MW-205-W-22-240611	Total/NA	Water	8260D/UST	
410-175743-6	MW-201-W-10-240611	Total/NA	Water	8260D/UST	
410-175743-8	MW-209-W-10-240610	Total/NA	Water	8260D/UST	
410-175743-9	MW-211-W-9-240610	Total/NA	Water	8260D/UST	
410-175743-10	MW-200-W-9-240611	Total/NA	Water	8260D/UST	
410-175743-11	MW-202-W-10-240611	Total/NA	Water	8260D/UST	
410-175743-12	MW-203-W-12.5-240611	Total/NA	Water	8260D/UST	
410-175743-13	MW-204-W-13-240611	Total/NA	Water	8260D/UST	
410-175743-14	MW-207-W-13-240611	Total/NA	Water	8260D/UST	
410-175743-15	DUP-1-WD-240611	Total/NA	Water	8260D/UST	
410-175743-16	DUP-2-WD-240612	Total/NA	Water	8260D/UST	
410-175743-17	QA-T-240612	Total/NA	Water	8260D/UST	
MB 410-519137/6	Method Blank	Total/NA	Water	8260D/UST	
LCS 410-519137/4	Lab Control Sample	Total/NA	Water	8260D/UST	
LCSD 410-519137/5	Lab Control Sample Dup	Total/NA	Water	8260D/UST	
410-175743-12 MS	MW-203-W-12.5-240611	Total/NA	Water	8260D/UST	
410-175743-12 MSD	MW-203-W-12.5-240611	Total/NA	Water	8260D/UST	

GC/MS Semi VOA

Prep Batch: 517758

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-175743-3	MW-206-W-13-240611	Total/NA	Water	3510C	
410-175743-4	MW-205-W-22-240611	Total/NA	Water	3510C	
410-175743-5	MW-210-W-9-240610	Total/NA	Water	3510C	
410-175743-6	MW-201-W-10-240611	Total/NA	Water	3510C	
410-175743-7	MW-70R-W-18-240610	Total/NA	Water	3510C	
410-175743-8	MW-209-W-10-240610	Total/NA	Water	3510C	
410-175743-9	MW-211-W-9-240610	Total/NA	Water	3510C	
410-175743-10	MW-200-W-9-240611	Total/NA	Water	3510C	
410-175743-11	MW-202-W-10-240611	Total/NA	Water	3510C	
410-175743-12	MW-203-W-12.5-240611	Total/NA	Water	3510C	
410-175743-13	MW-204-W-13-240611	Total/NA	Water	3510C	
410-175743-14	MW-207-W-13-240611	Total/NA	Water	3510C	
410-175743-15	DUP-1-WD-240611	Total/NA	Water	3510C	
MB 410-517758/1-A	Method Blank	Total/NA	Water	3510C	
LCS 410-517758/2-A	Lab Control Sample	Total/NA	Water	3510C	
410-175743-12 MS	MW-203-W-12.5-240611	Total/NA	Water	3510C	
410-175743-12 MSD	MW-203-W-12.5-240611	Total/NA	Water	3510C	

GC/MS Semi VOA

Prep Batch: 517759

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-175743-1	MW-61A-R-W-14-240612	Total/NA	Water	3510C	
410-175743-2	MW-30-W-14-240612	Total/NA	Water	3510C	
410-175743-16	DUP-2-WD-240612	Total/NA	Water	3510C	
MB 410-517759/1-A	Method Blank	Total/NA	Water	3510C	
LCS 410-517759/2-A	Lab Control Sample	Total/NA	Water	3510C	

Analysis Batch: 519481

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-175743-1	MW-61A-R-W-14-240612	Total/NA	Water	8270E SIM	517759
MB 410-517759/1-A	Method Blank	Total/NA	Water	8270E SIM	517759
LCS 410-517759/2-A	Lab Control Sample	Total/NA	Water	8270E SIM	517759

Analysis Batch: 520509

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-175743-2	MW-30-W-14-240612	Total/NA	Water	8270E SIM	517759
410-175743-16	DUP-2-WD-240612	Total/NA	Water	8270E SIM	517759

Analysis Batch: 520940

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-175743-3	MW-206-W-13-240611	Total/NA	Water	8270E SIM	517758
410-175743-4	MW-205-W-22-240611	Total/NA	Water	8270E SIM	517758
410-175743-5	MW-210-W-9-240610	Total/NA	Water	8270E SIM	517758
410-175743-6	MW-201-W-10-240611	Total/NA	Water	8270E SIM	517758
410-175743-7	MW-70R-W-18-240610	Total/NA	Water	8270E SIM	517758
410-175743-8	MW-209-W-10-240610	Total/NA	Water	8270E SIM	517758
410-175743-9	MW-211-W-9-240610	Total/NA	Water	8270E SIM	517758
410-175743-10	MW-200-W-9-240611	Total/NA	Water	8270E SIM	517758
410-175743-11	MW-202-W-10-240611	Total/NA	Water	8270E SIM	517758
410-175743-12	MW-203-W-12.5-240611	Total/NA	Water	8270E SIM	517758
410-175743-13	MW-204-W-13-240611	Total/NA	Water	8270E SIM	517758
410-175743-14	MW-207-W-13-240611	Total/NA	Water	8270E SIM	517758
410-175743-15	DUP-1-WD-240611	Total/NA	Water	8270E SIM	517758
MB 410-517758/1-A	Method Blank	Total/NA	Water	8270E SIM	517758
LCS 410-517758/2-A	Lab Control Sample	Total/NA	Water	8270E SIM	517758
410-175743-12 MS	MW-203-W-12.5-240611	Total/NA	Water	8270E SIM	517758
410-175743-12 MSD	MW-203-W-12.5-240611	Total/NA	Water	8270E SIM	517758

GC VOA

Analysis Batch: 517916

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-175743-5	MW-210-W-9-240610	Total/NA	Water	NWTPH-Gx	
410-175743-7	MW-70R-W-18-240610	Total/NA	Water	NWTPH-Gx	
410-175743-8	MW-209-W-10-240610	Total/NA	Water	NWTPH-Gx	
410-175743-9	MW-211-W-9-240610	Total/NA	Water	NWTPH-Gx	
MB 410-517916/5	Method Blank	Total/NA	Water	NWTPH-Gx	
LCS 410-517916/6	Lab Control Sample	Total/NA	Water	NWTPH-Gx	
LCSD 410-517916/7	Lab Control Sample Dup	Total/NA	Water	NWTPH-Gx	

GC VOA

Analysis Batch: 518345

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-175743-3	MW-206-W-13-240611	Total/NA	Water	NWTPH-Gx	
410-175743-4	MW-205-W-22-240611	Total/NA	Water	NWTPH-Gx	
410-175743-6	MW-201-W-10-240611	Total/NA	Water	NWTPH-Gx	
410-175743-10	MW-200-W-9-240611	Total/NA	Water	NWTPH-Gx	
410-175743-11	MW-202-W-10-240611	Total/NA	Water	NWTPH-Gx	
410-175743-12	MW-203-W-12.5-240611	Total/NA	Water	NWTPH-Gx	
410-175743-13	MW-204-W-13-240611	Total/NA	Water	NWTPH-Gx	
410-175743-14	MW-207-W-13-240611	Total/NA	Water	NWTPH-Gx	
410-175743-15	DUP-1-WD-240611	Total/NA	Water	NWTPH-Gx	
MB 410-518345/5	Method Blank	Total/NA	Water	NWTPH-Gx	
LCS 410-518345/6	Lab Control Sample	Total/NA	Water	NWTPH-Gx	
LCSD 410-518345/7	Lab Control Sample Dup	Total/NA	Water	NWTPH-Gx	
410-175743-12 MS	MW-203-W-12.5-240611	Total/NA	Water	NWTPH-Gx	
410-175743-12 MSD	MW-203-W-12.5-240611	Total/NA	Water	NWTPH-Gx	

Analysis Batch: 518869

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-175743-1	MW-61A-R-W-14-240612	Total/NA	Water	NWTPH-Gx	
410-175743-2	MW-30-W-14-240612	Total/NA	Water	NWTPH-Gx	
410-175743-16	DUP-2-WD-240612	Total/NA	Water	NWTPH-Gx	
410-175743-17	QA-T-240612	Total/NA	Water	NWTPH-Gx	
MB 410-518869/5	Method Blank	Total/NA	Water	NWTPH-Gx	
LCS 410-518869/6	Lab Control Sample	Total/NA	Water	NWTPH-Gx	
LCSD 410-518869/7	Lab Control Sample Dup	Total/NA	Water	NWTPH-Gx	

GC Semi VOA

Prep Batch: 519434

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-175743-1	MW-61A-R-W-14-240612	Total/NA	Water	3510C	
410-175743-2	MW-30-W-14-240612	Total/NA	Water	3510C	
410-175743-3	MW-206-W-13-240611	Total/NA	Water	3510C	
410-175743-4	MW-205-W-22-240611	Total/NA	Water	3510C	
410-175743-5	MW-210-W-9-240610	Total/NA	Water	3510C	
410-175743-6	MW-201-W-10-240611	Total/NA	Water	3510C	
410-175743-7	MW-70R-W-18-240610	Total/NA	Water	3510C	
410-175743-8	MW-209-W-10-240610	Total/NA	Water	3510C	
410-175743-9	MW-211-W-9-240610	Total/NA	Water	3510C	
410-175743-10	MW-200-W-9-240611	Total/NA	Water	3510C	
410-175743-11	MW-202-W-10-240611	Total/NA	Water	3510C	
410-175743-12	MW-203-W-12.5-240611	Total/NA	Water	3510C	
410-175743-13	MW-204-W-13-240611	Total/NA	Water	3510C	
410-175743-14	MW-207-W-13-240611	Total/NA	Water	3510C	
410-175743-15	DUP-1-WD-240611	Total/NA	Water	3510C	
410-175743-16	DUP-2-WD-240612	Total/NA	Water	3510C	
MB 410-519434/1-B	Method Blank	Total/NA	Water	3510C	
LCS 410-519434/2-B	Lab Control Sample	Total/NA	Water	3510C	
410-175743-12 MS	MW-203-W-12.5-240611	Total/NA	Water	3510C	
410-175743-12 MSD	MW-203-W-12.5-240611	Total/NA	Water	3510C	
410-175743-5 DU	MW-210-W-9-240610	Total/NA	Water	3510C	

GC Semi VOA

Cleanup Batch: 522043

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-175743-1	MW-61A-R-W-14-240612	Total/NA	Water	3630C	519434
410-175743-2	MW-30-W-14-240612	Total/NA	Water	3630C	519434
410-175743-3	MW-206-W-13-240611	Total/NA	Water	3630C	519434
410-175743-4	MW-205-W-22-240611	Total/NA	Water	3630C	519434
410-175743-5	MW-210-W-9-240610	Total/NA	Water	3630C	519434
410-175743-6	MW-201-W-10-240611	Total/NA	Water	3630C	519434
410-175743-7	MW-70R-W-18-240610	Total/NA	Water	3630C	519434
410-175743-8	MW-209-W-10-240610	Total/NA	Water	3630C	519434
410-175743-9	MW-211-W-9-240610	Total/NA	Water	3630C	519434
410-175743-10	MW-200-W-9-240611	Total/NA	Water	3630C	519434
410-175743-11	MW-202-W-10-240611	Total/NA	Water	3630C	519434
410-175743-12	MW-203-W-12.5-240611	Total/NA	Water	3630C	519434
410-175743-13	MW-204-W-13-240611	Total/NA	Water	3630C	519434
410-175743-14	MW-207-W-13-240611	Total/NA	Water	3630C	519434
410-175743-15	DUP-1-WD-240611	Total/NA	Water	3630C	519434
410-175743-16	DUP-2-WD-240612	Total/NA	Water	3630C	519434
MB 410-519434/1-B	Method Blank	Total/NA	Water	3630C	519434
LCS 410-519434/2-B	Lab Control Sample	Total/NA	Water	3630C	519434
410-175743-12 MS	MW-203-W-12.5-240611	Total/NA	Water	3630C	519434
410-175743-12 MSD	MW-203-W-12.5-240611	Total/NA	Water	3630C	519434
410-175743-5 DU	MW-210-W-9-240610	Total/NA	Water	3630C	519434

Analysis Batch: 522504

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-175743-1	MW-61A-R-W-14-240612	Total/NA	Water	NWTPH-Dx	522043
410-175743-2	MW-30-W-14-240612	Total/NA	Water	NWTPH-Dx	522043
410-175743-3	MW-206-W-13-240611	Total/NA	Water	NWTPH-Dx	522043
410-175743-4	MW-205-W-22-240611	Total/NA	Water	NWTPH-Dx	522043
410-175743-5	MW-210-W-9-240610	Total/NA	Water	NWTPH-Dx	522043
410-175743-6	MW-201-W-10-240611	Total/NA	Water	NWTPH-Dx	522043
410-175743-7	MW-70R-W-18-240610	Total/NA	Water	NWTPH-Dx	522043
410-175743-8	MW-209-W-10-240610	Total/NA	Water	NWTPH-Dx	522043
410-175743-9	MW-211-W-9-240610	Total/NA	Water	NWTPH-Dx	522043
410-175743-10	MW-200-W-9-240611	Total/NA	Water	NWTPH-Dx	522043
410-175743-11	MW-202-W-10-240611	Total/NA	Water	NWTPH-Dx	522043
410-175743-12	MW-203-W-12.5-240611	Total/NA	Water	NWTPH-Dx	522043
410-175743-13	MW-204-W-13-240611	Total/NA	Water	NWTPH-Dx	522043
410-175743-14	MW-207-W-13-240611	Total/NA	Water	NWTPH-Dx	522043
410-175743-15	DUP-1-WD-240611	Total/NA	Water	NWTPH-Dx	522043
410-175743-16	DUP-2-WD-240612	Total/NA	Water	NWTPH-Dx	522043
MB 410-519434/1-B	Method Blank	Total/NA	Water	NWTPH-Dx	522043
LCS 410-519434/2-B	Lab Control Sample	Total/NA	Water	NWTPH-Dx	522043
410-175743-12 MS	MW-203-W-12.5-240611	Total/NA	Water	NWTPH-Dx	522043
410-175743-12 MSD	MW-203-W-12.5-240611	Total/NA	Water	NWTPH-Dx	522043
410-175743-5 DU	MW-210-W-9-240610	Total/NA	Water	NWTPH-Dx	522043

Lab Chronicle

Client: Arcadis U.S., Inc.
Project/Site: Seattle Terminal

Job ID: 410-175743-1

Client Sample ID: MW-61A-R-W-14-240612

Lab Sample ID: 410-175743-1

Date Collected: 06/12/24 10:05

Matrix: Water

Date Received: 06/13/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	519137	UKAD	ELLE	06/19/24 21:03
Total/NA	Prep	3510C			517759	T9CY	ELLE	06/16/24 01:05
Total/NA	Analysis	8270E SIM		1	519481	SJ89	ELLE	06/20/24 21:07
Total/NA	Analysis	NWTPH-Gx		1	518869	P5AM	ELLE	06/19/24 13:20
Total/NA	Prep	3510C			519434	QKX3	ELLE	06/20/24 08:00
Total/NA	Cleanup	3630C			522043	USL7	ELLE	06/27/24 03:10
Total/NA	Analysis	NWTPH-Dx		1	522504	KP5X	ELLE	06/28/24 02:41

Client Sample ID: MW-30-W-14-240612

Lab Sample ID: 410-175743-2

Date Collected: 06/12/24 10:35

Matrix: Water

Date Received: 06/13/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	519137	UKAD	ELLE	06/19/24 21:27
Total/NA	Prep	3510C			517759	T9CY	ELLE	06/16/24 01:05
Total/NA	Analysis	8270E SIM		1	520509	SJ89	ELLE	06/24/24 16:24
Total/NA	Analysis	NWTPH-Gx		1	518869	P5AM	ELLE	06/19/24 13:45
Total/NA	Prep	3510C			519434	QKX3	ELLE	06/20/24 08:00
Total/NA	Cleanup	3630C			522043	USL7	ELLE	06/27/24 03:10
Total/NA	Analysis	NWTPH-Dx		1	522504	KP5X	ELLE	06/28/24 03:04

Client Sample ID: MW-206-W-13-240611

Lab Sample ID: 410-175743-3

Date Collected: 06/11/24 15:55

Matrix: Water

Date Received: 06/13/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	519137	UKAD	ELLE	06/19/24 21:51
Total/NA	Prep	3510C			517758	T9CY	ELLE	06/16/24 01:01
Total/NA	Analysis	8270E SIM		1	520940	SJ89	ELLE	06/25/24 07:33
Total/NA	Analysis	NWTPH-Gx		1	518345	P5AM	ELLE	06/18/24 16:10
Total/NA	Prep	3510C			519434	QKX3	ELLE	06/20/24 08:00
Total/NA	Cleanup	3630C			522043	USL7	ELLE	06/27/24 03:10
Total/NA	Analysis	NWTPH-Dx		1	522504	KP5X	ELLE	06/28/24 03:27

Client Sample ID: MW-205-W-22-240611

Lab Sample ID: 410-175743-4

Date Collected: 06/11/24 10:10

Matrix: Water

Date Received: 06/13/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	519137	UKAD	ELLE	06/19/24 22:15
Total/NA	Prep	3510C			517758	T9CY	ELLE	06/16/24 01:01
Total/NA	Analysis	8270E SIM		1	520940	SJ89	ELLE	06/25/24 07:55
Total/NA	Analysis	NWTPH-Gx		1	518345	P5AM	ELLE	06/18/24 17:25

Lab Chronicle

Client: Arcadis U.S., Inc.
Project/Site: Seattle Terminal

Job ID: 410-175743-1

Client Sample ID: MW-205-W-22-240611

Lab Sample ID: 410-175743-4
Matrix: Water
Date Collected: 06/11/24 10:10
Date Received: 06/13/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			519434	QKX3	ELLE	06/20/24 08:00
Total/NA	Cleanup	3630C			522043	USL7	ELLE	06/27/24 03:10
Total/NA	Analysis	NWTPH-Dx		1	522504	KP5X	ELLE	06/28/24 03:50

Client Sample ID: MW-210-W-9-240610

Lab Sample ID: 410-175743-5
Matrix: Water
Date Collected: 06/10/24 12:45
Date Received: 06/13/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	519135	UKAD	ELLE	06/19/24 20:04
Total/NA	Prep	3510C			517758	T9CY	ELLE	06/16/24 01:01
Total/NA	Analysis	8270E SIM		1	520940	SJ89	ELLE	06/25/24 08:18
Total/NA	Analysis	NWTPH-Gx		1	517916	P5AM	ELLE	06/17/24 16:30
Total/NA	Prep	3510C			519434	QKX3	ELLE	06/20/24 08:00
Total/NA	Cleanup	3630C			522043	USL7	ELLE	06/27/24 03:10
Total/NA	Analysis	NWTPH-Dx		1	522504	KP5X	ELLE	06/28/24 04:13

Client Sample ID: MW-201-W-10-240611

Lab Sample ID: 410-175743-6
Matrix: Water
Date Collected: 06/11/24 11:50
Date Received: 06/13/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	519137	UKAD	ELLE	06/19/24 22:39
Total/NA	Prep	3510C			517758	T9CY	ELLE	06/16/24 01:01
Total/NA	Analysis	8270E SIM		1	520940	SJ89	ELLE	06/25/24 08:41
Total/NA	Analysis	NWTPH-Gx		1	518345	P5AM	ELLE	06/18/24 17:50
Total/NA	Prep	3510C			519434	QKX3	ELLE	06/20/24 08:00
Total/NA	Cleanup	3630C			522043	USL7	ELLE	06/27/24 03:10
Total/NA	Analysis	NWTPH-Dx		1	522504	KP5X	ELLE	06/28/24 04:59

Client Sample ID: MW-70R-W-18-240610

Lab Sample ID: 410-175743-7
Matrix: Water
Date Collected: 06/10/24 10:25
Date Received: 06/13/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	519135	UKAD	ELLE	06/19/24 20:28
Total/NA	Prep	3510C			517758	T9CY	ELLE	06/16/24 01:01
Total/NA	Analysis	8270E SIM		1	520940	SJ89	ELLE	06/25/24 09:04
Total/NA	Analysis	NWTPH-Gx		1	517916	P5AM	ELLE	06/17/24 17:45
Total/NA	Prep	3510C			519434	QKX3	ELLE	06/20/24 08:00
Total/NA	Cleanup	3630C			522043	USL7	ELLE	06/27/24 03:10
Total/NA	Analysis	NWTPH-Dx		1	522504	KP5X	ELLE	06/28/24 05:44

Lab Chronicle

Client: Arcadis U.S., Inc.
Project/Site: Seattle Terminal

Job ID: 410-175743-1

Client Sample ID: MW-209-W-10-240610

Lab Sample ID: 410-175743-8

Date Collected: 06/10/24 13:06

Matrix: Water

Date Received: 06/13/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	519137	UKAD	ELLE	06/19/24 23:03
Total/NA	Prep	3510C			517758	T9CY	ELLE	06/16/24 01:01
Total/NA	Analysis	8270E SIM		1	520940	SJ89	ELLE	06/25/24 09:26
Total/NA	Analysis	NWTPH-Gx		1	517916	P5AM	ELLE	06/17/24 18:10
Total/NA	Prep	3510C			519434	QKX3	ELLE	06/20/24 08:00
Total/NA	Cleanup	3630C			522043	USL7	ELLE	06/27/24 03:10
Total/NA	Analysis	NWTPH-Dx		1	522504	KP5X	ELLE	06/28/24 06:07

Client Sample ID: MW-211-W-9-240610

Lab Sample ID: 410-175743-9

Date Collected: 06/10/24 12:10

Matrix: Water

Date Received: 06/13/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	519137	UKAD	ELLE	06/19/24 23:27
Total/NA	Prep	3510C			517758	T9CY	ELLE	06/16/24 01:01
Total/NA	Analysis	8270E SIM		1	520940	SJ89	ELLE	06/25/24 09:49
Total/NA	Analysis	NWTPH-Gx		1	517916	P5AM	ELLE	06/17/24 18:35
Total/NA	Prep	3510C			519434	QKX3	ELLE	06/20/24 08:00
Total/NA	Cleanup	3630C			522043	USL7	ELLE	06/27/24 03:10
Total/NA	Analysis	NWTPH-Dx		1	522504	KP5X	ELLE	06/28/24 06:30

Client Sample ID: MW-200-W-9-240611

Lab Sample ID: 410-175743-10

Date Collected: 06/11/24 13:30

Matrix: Water

Date Received: 06/13/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	519137	UKAD	ELLE	06/19/24 23:51
Total/NA	Prep	3510C			517758	T9CY	ELLE	06/16/24 01:01
Total/NA	Analysis	8270E SIM		1	520940	SJ89	ELLE	06/25/24 10:12
Total/NA	Analysis	NWTPH-Gx		1	518345	P5AM	ELLE	06/18/24 18:15
Total/NA	Prep	3510C			519434	QKX3	ELLE	06/20/24 08:00
Total/NA	Cleanup	3630C			522043	USL7	ELLE	06/27/24 03:10
Total/NA	Analysis	NWTPH-Dx		1	522504	KP5X	ELLE	06/28/24 06:52

Client Sample ID: MW-202-W-10-240611

Lab Sample ID: 410-175743-11

Date Collected: 06/11/24 14:20

Matrix: Water

Date Received: 06/13/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	519137	UKAD	ELLE	06/20/24 00:15
Total/NA	Prep	3510C			517758	T9CY	ELLE	06/16/24 01:01
Total/NA	Analysis	8270E SIM		1	520940	SJ89	ELLE	06/25/24 10:35
Total/NA	Analysis	NWTPH-Gx		1	518345	P5AM	ELLE	06/18/24 18:40

Lab Chronicle

Client: Arcadis U.S., Inc.
Project/Site: Seattle Terminal

Job ID: 410-175743-1

Client Sample ID: MW-202-W-10-240611

Lab Sample ID: 410-175743-11
Matrix: Water
Date Collected: 06/11/24 14:20
Date Received: 06/13/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			519434	QKX3	ELLE	06/20/24 08:00
Total/NA	Cleanup	3630C			522043	USL7	ELLE	06/27/24 03:10
Total/NA	Analysis	NWTPH-Dx		1	522504	KP5X	ELLE	06/28/24 07:15

Client Sample ID: MW-203-W-12.5-240611

Lab Sample ID: 410-175743-12
Matrix: Water
Date Collected: 06/11/24 11:45
Date Received: 06/13/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	519137	UKAD	ELLE	06/20/24 00:38
Total/NA	Prep	3510C			517758	T9CY	ELLE	06/16/24 01:01
Total/NA	Analysis	8270E SIM		1	520940	SJ89	ELLE	06/25/24 10:57
Total/NA	Analysis	NWTPH-Gx		1	518345	P5AM	ELLE	06/18/24 12:50
Total/NA	Prep	3510C			519434	QKX3	ELLE	06/20/24 08:00
Total/NA	Cleanup	3630C			522043	USL7	ELLE	06/27/24 03:10
Total/NA	Analysis	NWTPH-Dx		1	522504	KP5X	ELLE	06/28/24 01:32

Client Sample ID: MW-204-W-13-240611

Lab Sample ID: 410-175743-13
Matrix: Water
Date Collected: 06/11/24 10:03
Date Received: 06/13/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	519137	UKAD	ELLE	06/20/24 01:51
Total/NA	Prep	3510C			517758	T9CY	ELLE	06/16/24 01:01
Total/NA	Analysis	8270E SIM		1	520940	SJ89	ELLE	06/25/24 12:06
Total/NA	Analysis	NWTPH-Gx		1	518345	P5AM	ELLE	06/18/24 19:05
Total/NA	Prep	3510C			519434	QKX3	ELLE	06/20/24 08:00
Total/NA	Cleanup	3630C			522043	USL7	ELLE	06/27/24 03:10
Total/NA	Analysis	NWTPH-Dx		1	522504	KP5X	ELLE	06/28/24 07:37

Client Sample ID: MW-207-W-13-240611

Lab Sample ID: 410-175743-14
Matrix: Water
Date Collected: 06/11/24 16:00
Date Received: 06/13/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	519137	UKAD	ELLE	06/20/24 02:15
Total/NA	Prep	3510C			517758	T9CY	ELLE	06/16/24 01:01
Total/NA	Analysis	8270E SIM		1	520940	SJ89	ELLE	06/25/24 12:29
Total/NA	Analysis	NWTPH-Gx		1	518345	P5AM	ELLE	06/18/24 19:30
Total/NA	Prep	3510C			519434	QKX3	ELLE	06/20/24 08:00
Total/NA	Cleanup	3630C			522043	USL7	ELLE	06/27/24 03:10
Total/NA	Analysis	NWTPH-Dx		1	522504	KP5X	ELLE	06/28/24 08:00

Lab Chronicle

Client: Arcadis U.S., Inc.
Project/Site: Seattle Terminal

Job ID: 410-175743-1

Client Sample ID: DUP-1-WD-240611

Lab Sample ID: 410-175743-15

Date Collected: 06/11/24 00:00

Matrix: Water

Date Received: 06/13/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	519137	UKAD	ELLE	06/20/24 02:39
Total/NA	Prep	3510C			517758	T9CY	ELLE	06/16/24 01:01
Total/NA	Analysis	8270E SIM		1	520940	SJ89	ELLE	06/25/24 12:52
Total/NA	Analysis	NWTPH-Gx		1	518345	P5AM	ELLE	06/18/24 19:55
Total/NA	Prep	3510C			519434	QKX3	ELLE	06/20/24 08:00
Total/NA	Cleanup	3630C			522043	USL7	ELLE	06/27/24 03:10
Total/NA	Analysis	NWTPH-Dx		1	522504	KP5X	ELLE	06/28/24 08:23

Client Sample ID: DUP-2-WD-240612

Lab Sample ID: 410-175743-16

Date Collected: 06/12/24 00:00

Matrix: Water

Date Received: 06/13/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	519137	UKAD	ELLE	06/20/24 03:03
Total/NA	Prep	3510C			517759	T9CY	ELLE	06/16/24 01:05
Total/NA	Analysis	8270E SIM		1	520509	SJ89	ELLE	06/24/24 16:47
Total/NA	Analysis	NWTPH-Gx		1	518869	P5AM	ELLE	06/19/24 14:10
Total/NA	Prep	3510C			519434	QKX3	ELLE	06/20/24 08:00
Total/NA	Cleanup	3630C			522043	USL7	ELLE	06/27/24 03:10
Total/NA	Analysis	NWTPH-Dx		1	522504	KP5X	ELLE	06/28/24 08:45

Client Sample ID: QA-T-240612

Lab Sample ID: 410-175743-17

Date Collected: 06/12/24 00:00

Matrix: Water

Date Received: 06/13/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D/UST		1	519137	UKAD	ELLE	06/19/24 18:39
Total/NA	Analysis	NWTPH-Gx		1	518869	P5AM	ELLE	06/19/24 12:55

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Accreditation/Certification Summary

Client: Arcadis U.S., Inc.
Project/Site: Seattle Terminal

Job ID: 410-175743-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Washington	State	C457	04-11-24 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: Arcadis U.S., Inc.
Project/Site: Seattle Terminal

Job ID: 410-175743-1

Method	Method Description	Protocol	Laboratory
8260D/UST	Volatile Organic Compounds by GC/MS	SW846	ELLE
8270E SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	ELLE
NWTPH-Gx	Northwest - Volatile Petroleum Products (GC)	NWTPH	ELLE
NWTPH-Dx	Semi-Volatile Petroleum Products by NWTPH	NWTPH	ELLE
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	ELLE
3630C	Silica Gel Cleanup	SW846	ELLE
5030C	Purge and Trap	SW846	ELLE

Protocol References:

NWTPH = Northwest Total Petroleum Hydrocarbon

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Sample Summary

Client: Arcadis U.S., Inc.
Project/Site: Seattle Terminal

Job ID: 410-175743-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-175743-1	MW-61A-R-W-14-240612	Water	06/12/24 10:05	06/13/24 09:50
410-175743-2	MW-30-W-14-240612	Water	06/12/24 10:35	06/13/24 09:50
410-175743-3	MW-206-W-13-240611	Water	06/11/24 15:55	06/13/24 09:50
410-175743-4	MW-205-W-22-240611	Water	06/11/24 10:10	06/13/24 09:50
410-175743-5	MW-210-W-9-240610	Water	06/10/24 12:45	06/13/24 09:50
410-175743-6	MW-201-W-10-240611	Water	06/11/24 11:50	06/13/24 09:50
410-175743-7	MW-70R-W-18-240610	Water	06/10/24 10:25	06/13/24 09:50
410-175743-8	MW-209-W-10-240610	Water	06/10/24 13:06	06/13/24 09:50
410-175743-9	MW-211-W-9-240610	Water	06/10/24 12:10	06/13/24 09:50
410-175743-10	MW-200-W-9-240611	Water	06/11/24 13:30	06/13/24 09:50
410-175743-11	MW-202-W-10-240611	Water	06/11/24 14:20	06/13/24 09:50
410-175743-12	MW-203-W-12.5-240611	Water	06/11/24 11:45	06/13/24 09:50
410-175743-13	MW-204-W-13-240611	Water	06/11/24 10:03	06/13/24 09:50
410-175743-14	MW-207-W-13-240611	Water	06/11/24 16:00	06/13/24 09:50
410-175743-15	DUP-1-WD-240611	Water	06/11/24 00:00	06/13/24 09:50
410-175743-16	DUP-2-WD-240612	Water	06/12/24 00:00	06/13/24 09:50
410-175743-17	QA-T-240612	Water	06/12/24 00:00	06/13/24 09:50

410-175743 Chain of Custody

Northwest Region Analysis Request/Chain of Custody

For Eurofins Lancaster Laboratories Environmental use only

Acct. # ______ Group # ______ Sample # ______

Instructions on reverse side correspond with circled numbers.

SCR #: ______

1 Client Information

Facility #: SEATTLE TERMINAL

WBS:

Site Address: 3001 ELLIOTT AVE, SEATTLE, WA

Chevron PM: JAMES K

Lead Consultant: ARCADIS

Consultant/Office: SEATTLE

Consultant Project Mgr: SAM MILES

Consultant Phone #: ______

Sampler: ES, OI, CC

4 Matrix

Sediment ☐ Ground ☒ Surface ☐

Soil ☐ Potable ☐ NPDES ☐ Water; Oil ☐ Air ☐

5 Analyses Requested

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; 8270D-SIM-cPAH by SIM

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

2 Sample Identification

Sample Identification	Collected Date	Collected Time	3 Grab	Composite	Soil	Water	Oil	Total Number of Containers	BTEX 8260	8260 full scan	Oxygenates	NWTPH-Gx	NWTPH-Dx with Silica Gel Cleanup	NWTPH-Dx without Silica Gel Cleanup	WA VPH/EPH	Lead	8270D-SIM-cPAH by SIM	6 Remarks
MW-61A-R-GW-14_240612	6 12 24	1005	✓			✓		10	✓			✓	✓				[illegible]	
MW-30-GW-14_240612	6 12 24	1035	✓			✓		10	✓			✓	✓				[illegible]	
MW-206-GW-13-061124	6.11.24	1555	✓			✓		10	✓			✓	✓				✓	
MW 205-GW-22-061124	6.11 24	1010	✓			✓		10	✓			✓	✓				✓	
MW-210-GW-9_240610	6 10 24	1245	✓			✓		10	✓			✓	✓				✓	
MW 201-GW-10-061124	6 11 24	1150	✓			✓		10	✓			✓	✓				✓	
MW-70R-GW-10_240610	6 10 24	1025	✓			✓		10	✓			✓	✓				✓	
MW-209-GW-10_240610	6 10.24	1306	✓			✓		10	✓			✓	✓				✓	
MW-211-GW-9_240610	6.10.24	1210	✓			✓		10	✓			✓	✓				✓	
MW 200-GW-9_240611	6 11 24	1330	✓			✓		10	✓			✓	✓				✓	
MW-202-GW-10_240611	6 11 24	1420	✓			✓		10	✓			✓	✓				✓	
MW-203-GW-12.5_240611	6 11 24	1145	✓			✓		30	✓			✓	✓				✓	MS/MSD
MW-204-GW-13_240611	6.11 24	1003	✓			✓		10	✓			✓	✓				✓	

7 Turnaround Time Requested (TAT) (please circle)

(Standard) 5 day 4 day

72 hour 48 hour 24 hour

8 Data Package (circle if required)

Type I Full

Type VI (Raw Data)

EDD (circle if required)

CVX-RTBU-FI_05 (default)

Other: ______

9

Relinquished by	Date	Time	Received by	Date	Time
[signature]	6-12-24	1400			

Relinquished by Commercial Carrier: UPS ______ FedEx X Other ______

Received by: [signature] Date: 6/13/24 Time: 0950

Temperature Upon Receipt: IRV15.1-5.3 Corr 4.8-5.0 °C

Custody Seals Intact? (Yes) No

Eurofins Lancaster Laboratories Environmental LLC • 2425 New Holland Pike, Lancaster PA 17601 • 717-656-2300

7051 0913

The white copy should accompany samples to Eurofins Lancaster Laboratories Environmental The yellow copy should be given to the SeaTac Courier The pink copy should be retained by the client.

Chevron Northwest Region Analysis Request/Chain of Custody

eurofins Lancaster Laboratories Environmental

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

SCR #: ________

(1) Client Information

- Facility #: SEATTLE TERMINAL
- WBS:
- Site Address: 3001 ELLIOTT AVE, SEATTLE, WA
- Chevron PM: JAMES K
- Lead Consultant: ARCADIS
- Consultant/Office: SEATTLE
- Consultant Project Mgr: SAM MILES
- Consultant Phone #: ——
- Sampler: ES, OI, CC

(4) Matrix: Sediment ☐, Ground ☒, Surface ☐, Potable ☐, NPDES ☐, Soil ☐, Water, Oil ☐, Air ☐

(5) Analyses Requested

(2) Sample Identification	Collected Date	Collected Time	(3) 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	8270 D-SIM-cPAH by SIM			
MW-207-GW 13-240611	6 11 24	1600	✓			✓		10	✓			✓	✓				✓			
DUP-1	6 11 24	—	✓			✓		10	✓			✓	✓				✓			
DUP-2	6 12 24	—	✓			✓		10	✓			✓	✓				✓			
TRIP BLANK	6 12 24	—	—			✓		6	✓			✓	NM				NM			

- ☐ 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

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

(Standard) 5 day 4 day
72 hour 48 hour 24 hour

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

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

(9)

Relinquished by	Date	Time	Received by	Date	Time
[signature]	6-12-24	1400			
Relinquished by ~~———~~	Date	Time	~~Received by~~	~~Date~~	~~Time~~
Relinquished by Commercial Carrier: UPS ____ FedEx X ____ Other ________			Received by [signature]	6/13/24	0950

Temperature Upon Receipt: raw 5.2-5.3 °C corr 4.8-5.0
Custody Seals Intact? (Yes) No

Eurofins Lancaster Laboratories Environmental, LLC • 2425 New Holland Pike, Lancaster PA 17601 • 717-656-2300
7051 0913

The white copy should accompany samples to Eurofins Lancaster Laboratories Environmental The yellow copy should be given to the SeaTac Courier The pink copy should be retained by the client

Login Sample Receipt Checklist

Client: Arcadis U.S., Inc. Job Number: 410-175743-1

Login Number: 175743 **List Source: Eurofins Lancaster Laboratories Environment Testing, LLC**
List Number: 1
Creator: Moeller, Colin

Question	Answer	Comment
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature acceptable,where thermal pres is required(</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV:Container Temp acceptable,where thermal pres is required (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
Sample containers have legible labels.	True	
Containers are not broken or leaking.	False	Containers recd broken. Sufficient sample in remaining containers for analysis.
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	True	
Sample custody seals are intact.	True	
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	True	

Appendix E

Historical Groundwater Analytical Results

Appendix E
Summary of Historical Groundwater Elevation Data
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Well Number	Date	Time (hr:min)	Top of Casing[1]	Depth to Groundwater[2] (feet)	Depth to LNAPL[3] (feet)	LNAPL Thickness[3] (feet)	Groundwater Elevation[4] (feet)	Top of Well Screen Elevation[5] (feet)	Comments
MW-30	12/11/02	14:10	11.29	15.23	NR	NR	-3.94	6.29	
MW-30	03/20/03	13:00	11.29	12.59	NR	NR	-1.30	6.29	
MW-30	07/03/03	11:18	11.29	14.30	NR	NR	-3.01	6.29	
MW-30	09/18/03	10:36	11.29	14.70	NR	NR	-3.41	6.29	
MW-30	12/02/03	11:23	11.29	12.20	NR	NR	-0.91	6.29	
MW-30	03/09/04	10:58	11.29	13.81	NR	NR	-2.52	6.29	
MW-30	06/03/04	11:44	11.29	14.60	NR	NR	-3.31	6.29	
MW-30	09/03/04	13:42	11.29	9.85	NR	NR	1.44	6.29	
MW-30	12/06/04	9:37	11.29	15.27	NR	NR	-3.98	6.29	
MW-30	03/04/05	14:08	11.29	14.33	NR	NR	-3.04	6.29	
MW-30	06/03/05	--	11.29	14.47	NR	NR	-3.18	6.29	
MW-30	09/01/05	10:05	11.29	15.05	NR	NR	-3.76	6.29	
MW-30	12/01/05	11:23	11.29	11.98	NR	NR	-0.69	6.29	
MW-30	03/02/06	11:28	11.29	14.53	NR	NR	-3.24	6.29	
MW-30	06/06/06	8:20	11.29	14.16	NR	NR	-2.87	6.29	
MW-30	09/15/06	--	11.29	14.10	NR	NR	-2.81	6.29	
MW-30	03/07/07	8:55	11.29	13.74	Sheen	--	-2.45	6.29	
MW-30	06/07/07	8:43	11.29	13.87	--	--	-2.58	6.29	
MW-30	07/10/07	9:45	11.29	14.21	--	--	-2.92	6.29	
MW-30	07/25/07	11:35	11.29	13.94	--	--	-2.65	6.29	
MW-30	08/22/07	9:35	11.29	14.15	--	--	-2.86	6.29	
MW-30	09/06/07	9:50	11.29	14.25	--	--	-2.96	6.29	
MW-30	09/26/07	9:30	11.29	14.52	--	--	-3.23	6.29	
MW-30	10/11/07	7:55	11.29	14.22	--	--	-2.93	6.29	
MW-30	11/01/07	9:50	11.29	14.29	--	--	-3.00	6.29	
MW-30	11/16/07	15:25	11.29	13.85	--	--	-2.56	6.29	
MW-30	11/26/07	13:40	11.29	13.90	--	--	-2.61	6.29	
MW-30	12/19/07	9:30	11.29	12.59	--	--	-1.30	6.29	
MW-30	01/03/08	8:30	11.29	12.60	--	--	-1.31	6.29	
MW-30	01/17/08	8:48	11.29	12.53	--	--	-1.24	6.29	
MW-30	01/30/08	9:30	11.29	13.10	Sheen	--	-1.81	6.29	
MW-30	02/12/08	9:28	11.29	13.39	Sheen	--	-2.10	6.29	
MW-30	03/03/08	9:31	11.29	13.80	--	--	-2.51	6.29	
MW-30	03/17/08	9:29	11.29	13.99	--	--	-2.70	6.29	
MW-30	04/01/08	9:13	11.29	13.78	--	--	-2.49	6.29	
MW-30	04/14/08	9:14	11.29	13.97	--	--	-2.68	6.29	
MW-30	04/28/08	9:56	11.29	14.18	--	--	-2.89	6.29	
MW-30	05/13/08	9:24	11.29	14.46	--	--	-3.17	6.29	
MW-30	05/27/08	13:40	20.85	14.33	--	--	6.52	15.85	Top of casing surveyed by OTAK 5/27/08.
MW-30	06/10/08	10:25	20.85	14.08	--	--	6.77	15.85	
MW-30	06/24/08	9:46	20.85	14.35	--	--	6.50	15.85	
MW-30	07/07/08	9:50	20.85	14.13	--	--	6.72	15.85	
MW-30	07/22/08	9:29	20.85	14.19	Sheen	--	6.66	15.85	
MW-30	08/12/08	9:58	20.85	14.05	--	--	6.80	15.85	
MW-30	09/03/08	--	20.85	14.03	--	--	6.82	15.85	
MW-30	09/26/08	--	20.85	14.16	--	--	6.69	15.85	
MW-30	10/17/08	9:15	20.85	14.35	--	--	6.50	15.85	
MW-30	10/29/08	8:43	20.85	14.49	--	--	6.36	15.85	
MW-30	11/12/08	10:46	20.85	13.03	--	--	7.82	15.85	
MW-30	12/03/08	12:46	20.85	13.75	--	--	7.10	15.85	
MW-30	01/06/09	9:36	20.85	12.68	--	--	8.17	15.85	
MW-30	01/20/09	12:46	20.85	12.98	--	--	7.87	15.85	
MW-30	02/03/09	9:39	20.85	13.79	--	--	7.06	15.85	
MW-30	02/17/09	11:15	20.85	13.75	--	--	7.10	15.85	
MW-30	03/12/09	12:09	20.85	13.79	--	--	7.06	15.85	
MW-30	03/25/09	8:46	20.85	13.70	--	--	7.15	15.85	
MW-30	04/08/09	10:16	20.85	13.30	--	--	7.55	15.85	
MW-30	04/30/09	10:09	20.85	12.98	--	--	7.87	15.85	
MW-30	05/12/09	10:10	20.85	12.72	12.70	0.02	8.13	15.85	
MW-30	05/26/09	14:27	20.85	13.20	--	--	7.65	15.85	
MW-30	06/09/09	9:41	20.85	13.91	--	--	6.94	15.85	
MW-30	06/25/09	9:43	20.85	13.49	--	--	7.36	15.85	
MW-30	07/07/09	9:35	20.85	13.75	Sheen	--	7.10	15.85	
MW-30	07/13/09	8:09	20.85	14.23	--	--	6.62	15.85	
MW-30	08/05/09	6:45	20.85	13.96	Sheen	--	6.89	15.85	
MW-30	08/06/09	9:26	20.85	13.99	--	--	6.86	15.85	
MW-30	08/20/09	8:41	20.85	14.18	--	--	6.67	15.85	
MW-30	09/10/09	10:11	20.85	14.15	--	--	6.70	15.85	
MW-30	09/23/09	9:33	20.85	14.07	Sheen	--	6.78	15.85	
MW-30	10/08/09	9:49	20.85	14.21	--	--	6.64	15.85	
MW-30	10/19/09	9:20	20.85	14.13	--	--	6.72	15.85	
MW-30	11/12/09	9:33	20.85	12.43	--	--	8.42	15.85	
MW-30	03/24/10	9:48	20.85	12.98	Sheen	--	7.87	15.85	
MW-30	04/13/10	10:31	20.85	12.98	Sheen	--	7.87	15.85	
MW-30	05/26/10	9:15	20.85	13.36	Sheen	--	7.49	15.85	
MW-30	07/28/10	14:40	20.85	14.11	--	--	6.74	15.85	
MW-30	08/05/10	11:49	20.85	14.10	--	--	6.75	15.85	
MW-30	08/13/10	10:10	20.85	13.90	--	--	6.95	15.85	
MW-30	08/18/10	8:36	20.85	13.92	--	--	6.93	15.85	
MW-30	09/21/10	10:29	20.85	13.30	--	--	7.55	15.85	
MW-30	10/11/10	11:01	20.85	13.40	--	--	7.45	15.85	
MW-30	11/19/10	14:54	20.85	12.41	--	--	8.44	15.85	
MW-30	03/04/11	9:44	20.85	12.54	Sheen	--	8.31	15.85	
MW-30	04/25/11	10:50	20.85	12.80	Sheen	--	8.05	15.85	
MW-30	09/21/11	9:32	20.85	13.55	--	--	7.30	15.85	
MW-30	11/21/11	11:00	20.85	13.74	--	--	7.11	15.85	
MW-30	02/20/12	8:59	20.85	13.16	--	--	7.69	15.85	
MW-30	04/17/12	11:55	20.85	12.90	Sheen	--	7.95	15.85	
MW-30	10/10/12	12:10	20.85	14.41	--	--	6.44	15.85	
MW-30	12/24/12	11:40	20.85	13.00	--	--	7.85	15.85	
MW-30	01/08/13	14:20	20.85	11.88	--	--	8.97	15.85	
MW-30	04/30/13	10:55	20.85	13.34	--	--	7.51	15.85	
MW-30	09/19/13	9:54	20.85	13.74	--	--	7.11	15.85	
MW-30	11/22/13	9:15	20.85	14.61	--	--	6.24	15.85	
MW-30	06/23/14	10:27	20.85	14.04	--	--	6.81	15.85	

Appendix E
Summary of Historical Groundwater Elevation Data
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Well Number	Date	Time (hr:min)	Top of Casing[1]	Depth to Groundwater[2] (feet)	Depth to LNAPL[3] (feet)	LNAPL Thickness[3] (feet)	Groundwater Elevation[4] (feet)	Top of Well Screen Elevation[5] (feet)	Comments
MW-30	09/10/14	9:10	20.85	14.82	--	--	6.03	15.85	
MW-30	12/15/14	13:27	20.85	11.38	--	--	9.47	15.85	
MW-30	06/17/15	11:25	20.85	13.90	--	--	6.95	15.85	
MW-30	12/09/15	10:39	20.85	10.00	--	--	10.85	15.85	
MW-30	02/16/16	9:20	20.85	10.89	--	--	9.96	15.85	
MW-30	06/13/16	8:40	20.85	13.79	LNAPL	--	7.06	15.85	
MW-30	09/22/16	13:13	20.85	14.35	--	--	6.50	15.85	
MW-30	01/12/17	12:44	20.85	--	LNAPL	--	--	15.85	
MW-30	03/27/17	13:13	20.85	10.71	LNAPL	--	10.14	15.85	
MW-30	06/16/17	9:46	20.85	13.39	13.38	0.01	7.46	15.85	
MW-30	11/07/17	13:18	20.85	13.97	--	--	6.88	15.85	
MW-30	03/26/18	8:46	20.85	13.48	--	--	7.37	15.85	
MW-30	06/19/18	16:05	20.85	13.90	LNAPL	--	6.95	15.85	
MW-30	09/27/18	12:49	20.85	14.01	--	--	6.84	15.85	
MW-30	12/12/18	15:28	20.85	12.87	--	--	7.98	15.85	
MW-30	03/25/19	15:40	20.85	13.05	LNAPL	--	7.80	15.85	
MW-30	06/24/19	17:21	20.85	13.50	LNAPL	--	7.35	15.85	
MW-30	09/25/19	9:26	20.85	13.69	--	--	7.16	15.85	
MW-30	12/16/19	13:57	20.85	13.66	--	--	7.19	15.85	
MW-30	03/25/20	14:19	20.85	13.19	--	--	7.66	15.85	
MW-30	06/17/20	9:51	20.85	13.80	13.79	0.01	7.06	15.85	
MW-30	09/11/20	10:02	20.85	14.39	--	--	6.46	15.85	
MW-30	11/17/20	11:21	20.85	13.33	--	--	7.52	15.85	
MW-30	03/15/21	13:15	20.85	--	--	--	--	15.85	Could not be gauged due to the presence of viscous substance, suspected to be LNAPL, interfering with the oil/water interface probe.
MW-30	06/09/21	12:06	20.85	14.00	LNAPL	--	6.85	15.85	
MW-30	09/20/21	12:32	20.85	13.33	--	--	7.52	15.85	Non-measurable sheen/LNAPL observed on bailer tip.
MW-30	12/03/21	10:30	20.85	11.96	--	--	8.89	15.85	Non-measurable sheen/LNAPL observed on bailer tip.
MW-30	03/30/22	13:06	20.85	12.84	Sheen on probe	--	8.01	15.85	Non-measurable sheen/LNAPL observed on the interface probe and side of a bailer.
MW-30	06/03/22	--	--	--	--	--	--	--	Well not accessible because of safety concerns
MW-30	08/11/22	15:20	20.85	13.22	13.22	<0.01	7.63	15.85	
MW-30	10/24/22	12:17	20.85	14.19	14.19	<0.01	6.66	15.85	
MW-30	03/21/23	13:33	20.85	12.81	--	--	8.04	15.85	No measurable LNAPL. Non-measurable sheen/LNAPL observed on the interface probe. Sock showed discoloration and presence of LNAPL. Sock left in well.
MW-30	06/20/23	14:01	20.85	13.76	--	--	7.09	15.85	No measurable LNAPL. Non-measurable sheen/LNAPL observed on the interface probe. Sock showed discoloration and presence of LNAPL. Sock left in well.
MW-30	08/29/23	11:02	20.85	13.93	--	--	6.92	15.85	
MW-30	10/25/23	10:00	20.85	10.77	--	--	10.08	15.85	
MW-30	**03/12/24**	**14:41**	**20.85**	**12.12**	**--**	**--**	**8.73**	**15.85**	**LNAPL observed in probe tip.**
MW-30	**06/10/24**	**15:45**	**20.85**	**13.50**	**--**	**--**	**7.35**	**15.85**	**No evidence of sheen/LNAPL was encountered.**
MW-61A-R	03/02/06	--	13.35	15.15	NR	NR	-1.80	--	Top of casing surveyed using an arbitrary datum point.
MW-61A-R	06/06/06	8:00	13.35	14.96	NR	NR	-1.61	--	
MW-61A-R	09/15/06	--	13.35	14.26	NR	NR	-0.91	--	
MW-61A-R	03/07/07	8:44	13.35	14.04	--	NR	-0.69	--	
MW-61A-R	06/07/07	9:15	13.35	14.36	--	NR	-1.01	--	
MW-61A-R	07/10/07	9:50	13.35	14.84	--	NR	-1.49	--	
MW-61A-R	07/25/07	11:40	13.35	14.55	--	NR	-1.20	--	
MW-61A-R	08/22/07	9:40	13.35	14.72	--	NR	-1.37	--	
MW-61A-R	09/06/07	9:55	13.35	14.90	--	NR	-1.55	--	
MW-61A-R	09/26/07	9:16	13.35	15.09	--	NR	-1.74	--	
MW-61A-R	10/11/07	8:00	13.35	14.82	--	NR	-1.47	--	
MW-61A-R	11/01/07	9:55	13.35	14.81	--	NR	-1.46	--	
MW-61A-R	11/16/07	15:30	13.35	14.59	--	NR	-1.24	--	
MW-61A-R	11/26/07	13:48	13.35	14.40	--	NR	-1.05	--	
MW-61A-R	12/19/07	9:35	13.35	13.83	--	NR	-0.48	--	
MW-61A-R	01/03/08	8:41	13.35	12.93	--	NR	0.42	--	
MW-61A-R	01/17/08	9:00	13.35	12.76	--	NR	0.59	--	
MW-61A-R	02/12/08	9:24	13.35	13.65	--	NR	-0.30	--	
MW-61A-R	03/03/08	9:24	13.35	14.14	--	NR	-0.79	--	
MW-61A-R	03/17/08	9:23	13.35	14.49	--	NR	-1.14	--	
MW-61A-R	04/01/08	9:10	13.35	14.22	14.21	0.01	-0.86	--	
MW-61A-R	04/14/08	9:06	13.35	14.41	14.39	0.02	-1.04	--	
MW-61A-R	04/28/08	9:36	13.35	14.70	14.64	0.06	-1.30	--	
MW-61A-R	05/13/08	9:29	13.35	14.88	--	--	-1.53	--	
MW-61A-R	05/27/08	13:53	22.44	14.93	Sheen	--	7.51	--	Top of casing surveyed by OTAK 5/27/08.
MW-61A-R	06/10/08	10:20	22.44	14.73	--	--	7.71	--	
MW-61A-R	06/24/08	9:41	22.44	14.92	--	--	7.52	--	
MW-61A-R	07/07/08	9:56	22.44	14.70	--	--	7.74	--	
MW-61A-R	07/22/08	9:34	22.44	14.72	14.70	0.02	7.74	--	
MW-61A-R	08/12/08	9:50	22.44	14.75	14.68	0.07	7.75	--	
MW-61A-R	09/03/08	--	22.44	15.58	15.56	0.02	6.88	--	
MW-61A-R	09/26/08	--	22.44	14.89	14.79	0.10	7.63	--	
MW-61A-R	10/17/08	9:03	22.44	15.12	14.92	0.20	7.48	--	
MW-61A-R	10/29/08	8:50	22.44	15.21	15.00	0.21	7.40	--	
MW-61A-R	11/12/08	10:51	22.44	13.95	13.81	0.14	8.60	--	
MW-61A-R	12/03/08	12:52	22.44	14.25	14.19	0.06	8.24	--	
MW-61A-R	01/06/09	9:40	22.44	13.12	12.99	0.13	9.42	--	
MW-61A-R	01/20/09	12:50	22.44	13.06	13.01	0.05	9.42	--	
MW-61A-R	02/03/09	9:43	22.44	14.40	13.88	0.52	8.46	--	
MW-61A-R	02/17/09	11:20	22.44	14.30	13.80	0.50	8.54	--	
MW-61A-R	03/12/09	12:16	22.44	14.20	14.05	0.15	8.36	--	
MW-61A-R	03/25/09	8:50	22.44	14.01	13.91	0.10	8.51	--	
MW-61A-R	04/08/09	10:21	22.44	13.81	13.71	0.10	8.71	--	
MW-61A-R	04/30/09	10:12	22.44	14.14	13.95	0.19	8.45	--	
MW-61A-R	05/12/09	10:51	22.44	13.66	13.64	0.02	8.80	--	
MW-61A-R	05/26/09	14:15	22.44	13.74	--	--	8.70	--	
MW-61A-R	06/09/09	9:46	22.44	13.40	--	--	9.04	--	
MW-61A-R	06/25/09	9:47	22.44	14.14	13.94	0.20	8.46	--	
MW-61A-R	07/07/09	9:40	22.44	14.18	14.15	0.03	8.28	--	
MW-61A-R	07/13/09	8:14	22.44	14.88	14.87	0.01	7.57	--	
MW-61A-R	08/05/09	6:45	22.44	14.68	14.39	0.29	7.99	--	
MW-61A-R	08/06/09	9:29	22.44	14.64	14.62	0.02	7.82	--	

Appendix E
Summary of Historical Groundwater Elevation Data
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Well Number	Date	Time (hr:min)	Top of Casing[1]	Depth to Groundwater[2] (feet)	Depth to LNAPL[3] (feet)	LNAPL Thickness[3] (feet)	Groundwater Elevation[4] (feet)	Top of Well Screen Elevation[5] (feet)	Comments
MW-61A-R	08/20/09	8:51	22.44	14.85	14.84	0.01	7.60	--	
MW-61A-R	09/10/09	10:15	22.44	14.84	14.78	0.06	7.65	--	
MW-61A-R	09/23/09	9:37	22.44	14.89	14.81	0.08	7.61	--	
MW-61A-R	10/08/09	9:39	22.44	15.01	14.94	0.07	7.49	--	
MW-61A-R	10/19/09	9:05	22.44	14.98	14.91	0.07	7.52	--	
MW-61A-R	11/12/09	9:36	22.44	12.85	12.80	0.05	9.63	--	
MW-61A-R	03/24/10	9:54	22.44	13.20	12.95	0.25	9.44	--	
MW-61A-R	04/13/10	10:37	22.44	13.06	12.95	0.11	9.47	--	
MW-61A-R	05/26/10	9:06	22.44	13.91	13.76	0.15	8.65	--	
MW-61A-R	07/28/10	14:56	22.44	14.78	--	--	7.66	--	
MW-61A-R	08/05/10	11:28	22.44	14.79	--	--	7.65	--	
MW-61A-R	08/13/10	9:38	22.44	13.62	--	--	8.82	--	
MW-61A-R	08/13/10	10:37	22.44	13.61	--	--	8.83	--	
MW-61A-R	08/13/10	10:42	22.44	13.61	--	--	8.83	--	
MW-61A-R	08/13/10	15:42	22.44	13.64	--	--	8.80	--	
MW-61A-R	08/18/10	8:55	22.44	14.70	--	--	7.74	--	
MW-61A-R	09/21/10	10:42	22.44	15.35	--	--	7.09	--	
MW-61A-R	10/11/10	11:20	22.44	14.35	14.31	0.04	8.12	--	
MW-61A-R	11/19/10	15:25	22.44	13.30	13.19	0.11	9.23	--	
MW-61A-R	03/04/11	10:04	22.44	12.80	12.63	0.17	9.78	--	
MW-61A-R	04/25/11	11:20	22.44	12.70	Sheen	--	9.74	--	LNAPL indicated in field notes, depth to LNPAL measurement not taken
MW-61A-R	09/21/11	9:45	22.44	14.65	14.10	0.55	8.23	--	
MW-61A-R	11/21/11	11:05	22.44	14.82	14.26	0.56	8.07	--	
MW-61A-R	02/20/12	9:15	22.44	13.55	13.15	0.40	9.21	--	
MW-61A-R	04/17/12	12:10	22.44	13.18	12.79	0.39	9.57	--	
MW-61A-R	10/10/12	12:25	22.44	14.80	14.39	0.41	7.97	--	
MW-61A-R	12/24/12	11:28	22.44	12.61	12.20	0.41	10.16	--	
MW-61A-R	01/08/13	14:30	22.44	11.84	11.74	0.10	10.68	--	
MW-61A-R	04/30/13	11:10	22.44	13.59	13.35	0.24	9.04	--	
MW-61A-R	09/19/13	9:48	22.44	14.45	14.40	0.05	8.03	--	
MW-61A-R	11/22/13	9:25	22.44	15.28	15.22	0.06	7.21	--	
MW-61A-R	06/23/14	10:36	22.44	14.60	--	--	7.84	--	
MW-61A-R	06/24/14	--	22.44	14.80	14.61	0.19	7.79	--	
MW-61A-R	09/10/14	9:30	22.44	14.92	--	--	7.52	--	
MW-61A-R	12/15/14	13:35	22.44	11.71	--	--	10.73	--	
MW-61A-R	12/16/14	15:25	22.44	11.90	11.81	0.09	10.61	--	
MW-61A-R	06/17/15	11:15	22.44	14.79	14.78	0.01	7.66	--	
MW-61A-R	12/09/15	10:45	22.44	10.99	10.98	0.01	11.46	--	
MW-61A-R	02/16/16	9:15	22.44	11.08	--	--	11.36	--	
MW-61A-R	06/13/16	8:30	22.44	14.40	--	--	8.04	--	
MW-61A-R	09/22/16	13:21	22.44	15.00	--	--	7.44	--	
MW-61A-R	01/12/17	13:09	22.44	12.26	--	--	10.18	--	
MW-61A-R	03/27/17	13:22	22.44	10.62	--	--	11.82	--	
MW-61A-R	06/16/17	9:41	22.44	14.73	13.84	0.89	8.42	--	
MW-61A-R	11/07/17	13:21	22.44	14.93	14.84	0.09	7.58	--	
MW-61A-R	03/26/18	8:41	22.44	13.68	--	--	8.76	--	
MW-61A-R	06/19/18	15:55	22.44	14.45	--	--	7.99	--	
MW-61A-R	09/27/18	12:36	22.44	15.21	15.10	0.11	7.32	--	
MW-61A-R	12/12/18	15:23	22.44	13.65	--	--	8.79	--	
MW-61A-R	03/25/19	15:33	22.44	13.49	--	--	8.95	--	
MW-61A-R	06/24/19	17:09	22.44	14.42	--	--	8.02	--	
MW-61A-R	09/25/19	9:01	22.44	14.59	--	--	7.85	--	
MW-61A-R	12/16/19	13:50	22.44	14.55	--	--	7.89	--	
MW-61A-R	03/25/20	14:04	22.44	13.59	--	--	8.85	--	
MW-61A-R	06/17/20	21:33	22.44	14.48	14.46	0.02	7.98	--	
MW-61A-R	09/11/20	9:58	22.44	15.13	--	--	7.31	--	
MW-61A-R	11/17/20	11:09	22.44	14.18	--	--	8.26	--	
MW-61A-R	03/15/21	14:32	22.44	12.88	--	--	9.56	--	
MW-61A-R	06/09/21	12:02	22.44	14.70	14.70	--	7.74	--	
MW-61A-R	09/20/21	12:45	22.44	14.95	--	--	7.49	--	
MW-61A-R	12/03/21	10:23	22.44	12.17	--	--	10.27	--	
MW-61A-R	03/30/22	13:32	22.44	12.94	--	--	9.50	--	
MW-61A-R	06/03/22	--	--	--	--	--	--	--	Well not accessible because of safety concerns
MW-61A-R	08/11/22	15:51	22.44	14.32	14.32	<0.01	8.12	--	
MW-61A-R	10/24/22	12:06	22.44	14.96	14.88	0.08	7.54	--	
MW-61A-R	03/21/23	--	22.44	--	--	--	--	--	Inaccessible
MW-61A-R	06/20/23	14:23	22.44	14.39	--	--	8.05	--	PID: 135.8. No measurable LNAPL. No evidence of LNAPL on probe tip. Sock showed discoloration. Sock left in well. Inaccessible for sampling.
MW-61A-R	08/29/23	10:54	22.44	14.66	--	--	7.78	--	
MW-61A-R	**03/12/24**	**14:49**	**22.44**	**12.09**	**--**	**--**	**10.35**	**--**	**PID = 27.4**
MW-61A-R	**06/10/24**	**15:50**	**22.44**	**14.24**	**--**	**--**	**8.20**	**--**	**PID = 115.2**
MW-70R	02/16/16	9:05	15.61	9.14	--	--	6.47	11.61	Top of casing surveyed by OTAK 2/16/16.
MW-70R	06/13/16	8:50	15.61	12.41	--	--	3.20	11.61	
MW-70R	09/22/16	12:30	15.61	9.69	--	--	5.92	11.61	
MW-70R	01/12/17	9:48	15.61	9.25	--	--	6.36	11.61	
MW-70R	03/27/17	13:05	15.61	11.41	--	--	4.20	11.61	
MW-70R	06/16/17	8:59	15.61	10.42	--	--	5.19	11.61	
MW-70R	11/07/17	13:09	15.61	10.32	--	--	5.29	11.61	
MW-70R	03/26/18	7:51	15.61	10.09	--	--	5.52	11.61	
MW-70R	06/19/18	15:45	15.61	12.64	--	--	2.97	11.61	
MW-70R	09/27/18	12:16	15.61	11.66	--	--	3.95	11.61	
MW-70R	12/12/18	15:15	15.61	9.88	--	--	5.73	11.61	
MW-70R	03/25/19	15:15	15.61	11.54	--	--	4.07	11.61	
MW-70R	06/24/19	16:12	15.61	12.63	--	--	2.98	11.61	
MW-70R	09/25/19	8:47	15.61	12.88	--	--	2.73	11.61	
MW-70R	12/16/19	14:26	15.61	9.76	--	--	5.85	11.61	
MW-70R	03/25/20	12:33	15.61	11.58	--	--	4.03	11.61	
MW-70R	06/17/20	8:51	15.61	11.93	--	--	3.68	11.61	
MW-70R	09/11/20	8:07	15.61	13.01	--	--	2.60	11.61	
MW-70R	11/17/20	9:34	15.61	7.82	--	--	7.79	11.61	
MW-70R	03/15/21	13:15	15.61	11.56	--	--	4.05	11.61	
MW-70R	06/09/21	12:49	15.61	12.49	--	--	3.12	11.61	
MW-70R	09/20/21	11:12	15.61	12.50	--	--	3.11	11.61	
MW-70R	12/03/21	9:32	15.61	10.15	--	--	5.46	11.61	

Appendix E
Summary of Historical Groundwater Elevation Data
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Well Number	Date	Time (hr:min)	Top of Casing[1]	Depth to Groundwater[2] (feet)	Depth to LNAPL[3] (feet)	LNAPL Thickness[3] (feet)	Groundwater Elevation[4] (feet)	Top of Well Screen Elevation[5] (feet)	Comments
MW-70R	03/30/22	11:03	15.61	11.20	--	--	4.41	11.61	
MW-70R	06/03/22	14:00	15.61	12.36	--	--	3.25	11.61	
MW-70R	08/11/22	11:04	15.61	12.22	--	--	3.39	11.61	
MW-70R	10/24/22	10:44	15.61	11.46	--	--	4.15	11.61	
MW-70R	03/21/23	11:45	15.61	10.88	--	--	4.73	11.61	
MW-70R	06/20/23	12:41	15.61	12.20	--	--	3.41	11.61	
MW-70R	08/29/23	10:02	15.61	12.25	--	--	3.36	11.61	
MW-70R	10/25/23	8:22	15.61	11.98	--	--	3.63	11.61	
MW-70R	**03/12/24**	**13:07**	**15.61**	**10.58**	**--**	**--**	**5.03**	**11.61**	**No evidence of sheen/LNAPL was encountered.**
MW-70R	**06/10/24**	**14:07**	**15.61**	**12.38**	**--**	**--**	**3.23**	**11.61**	**No evidence of sheen/LNAPL was encountered.**
MW-200	03/07/07	9:45	4.78	8.88	--	--	-4.10	-0.22	Top of casing surveyed using an arbitrary datum point.
MW-200	06/07/07	15:53	4.78	9.26	--	--	-4.48	-0.22	
MW-200	07/06/07	10:00	4.78	9.76	--	--	-4.98	-0.22	
MW-200	09/26/07	8:08	4.78	9.43	--	--	-4.65	-0.22	
MW-200	11/26/07	14:48	4.78	8.54	--	--	-3.76	-0.22	
MW-200	02/13/08	11:15	4.78	8.57	--	--	-3.79	-0.22	
MW-200	05/13/08	10:16	14.36	10.02	--	--	4.34	9.36	Top of casing surveyed by OTAK 5/27/08.
MW-200	09/03/08	--	14.36	9.56	--	--	4.80	9.36	
MW-200	12/03/08	12:10	14.36	9.11	--	--	5.25	9.36	
MW-200	02/17/09	10:43	14.36	8.28	--	--	6.08	9.36	
MW-200	05/12/09	12:02	14.36	8.95	--	--	5.41	9.36	
MW-200	05/26/09	13:54	14.36	9.40	--	--	4.96	9.36	
MW-200	09/10/09	10:39	14.36	9.74	--	--	4.62	9.36	
MW-200	04/13/10	11:21	14.36	9.23	--	--	5.13	9.36	
MW-200	06/16/10	10:05	14.36	9.10	--	--	5.26	9.36	
MW-200	08/12/10	9:45	14.36	8.92	Sheen	--	5.44	9.36	
MW-200	09/14/10	1:48	14.36	9.31	--	--	5.05	9.36	
MW-200	09/14/10	1:53	14.36	9.31	--	--	5.05	9.36	
MW-200	09/15/10	15:03	14.36	9.34	--	--	5.02	9.36	
MW-200	09/15/10	15:05	14.36	9.33	--	--	5.03	9.36	
MW-200	09/15/10	15:10	14.36	9.31	--	--	5.05	9.36	
MW-200	09/15/10	15:15	14.36	9.29	--	--	5.07	9.36	
MW-200	09/15/10	15:20	14.36	9.28	--	--	5.08	9.36	
MW-200	09/15/10	15:25	14.36	9.26	--	--	5.10	9.36	
MW-200	09/15/10	15:35	14.36	9.38	--	--	4.98	9.36	
MW-200	09/15/10	15:39	14.36	9.49	--	--	4.87	9.36	
MW-200	09/15/10	15:45	14.36	9.58	--	--	4.78	9.36	
MW-200	09/15/10	15:50	14.36	9.66	--	--	4.70	9.36	
MW-200	09/15/10	15:55	14.36	9.70	--	--	4.66	9.36	
MW-200	09/15/10	16:00	14.36	9.74	--	--	4.62	9.36	
MW-200	09/15/10	16:05	14.36	9.76	--	--	4.60	9.36	
MW-200	09/15/10	16:10	14.36	9.79	--	--	4.57	9.36	
MW-200	09/15/10	16:16	14.36	9.82	--	--	4.54	9.36	
MW-200	09/15/10	16:28	14.36	9.80	--	--	4.56	9.36	
MW-200	09/15/10		14.36	9.69	--	--	4.67	9.36	
MW-200	09/15/10	16:36	14.36	9.56	--	--	4.80	9.36	
MW-200	09/15/10	16:40	14.36	9.50	--	--	4.86	9.36	
MW-200	09/15/10	16:46	14.36	9.43	--	--	4.93	9.36	
MW-200	09/15/10	16:55	14.36	9.35	--	--	5.01	9.36	
MW-200	09/15/10	17:05	14.36	9.27	--	--	5.09	9.36	
MW-200	09/15/10	17:20	14.36	9.21	--	--	5.15	9.36	
MW-200	09/15/10	17:29	14.36	9.20	--	--	5.16	9.36	
MW-200	09/21/10	11:14	14.36	9.50	--	--	4.86	9.36	
MW-200	09/22/10	11:00	14.36	9.40	--	--	4.96	9.36	
MW-200	04/26/11	10:45	14.36	9.30	--	--	5.06	9.36	
MW-200	09/21/11	10:45	14.36	10.15	--	--	4.21	9.36	
MW-200	11/21/11	--	--	--	--	--	--	--	Unable to gauge due to rain fillup of well
MW-200	02/20/12	--	--	--	--	--	--	--	Unable to locate
MW-200	04/17/12	14:00	14.36	9.78	--	--	4.58	9.36	
MW-200	10/10/12	11:35	14.36	10.35	--	--	4.01	9.36	
MW-200	12/24/12	10:54	14.36	7.94	--	--	6.42	9.36	
MW-200	01/08/13	15:40	14.36	7.83	--	--	6.53	9.36	
MW-200	04/30/13	10:21	14.36	8.62	--	--	5.74	9.36	
MW-200	09/19/13	9:33	14.36	9.40	--	--	4.96	9.36	
MW-200	11/22/13	10:30	14.36	9.82	--	--	4.54	9.36	
MW-200	06/23/14	9:52	14.36	9.61	--	--	4.75	9.36	
MW-200	12/15/14	12:59	14.36	8.00	--	--	6.36	9.36	
MW-200	06/17/15	10:25	14.36	8.51	--	--	5.85	9.36	
MW-200	12/09/15	10:08	14.36	5.89	--	--	8.47	9.36	
MW-200	01/15/16	16:47	14.36	8.16	--	--	6.20	9.36	
MW-200	02/16/16	8:40	14.36	8.25	--	--	6.11	9.36	
MW-200	06/13/16	9:10	14.36	9.75	--	--	4.61	9.36	
MW-200	09/22/16	12:42	14.36	9.20	--	--	5.16	9.36	
MW-200	01/12/17	11:15	14.36	8.06	--	--	6.30	9.36	
MW-200	03/27/17	12:55	14.36	8.58	--	--	5.78	9.36	
MW-200	06/16/17	8:44	14.36	8.90	--	--	5.46	9.36	
MW-200	11/07/17	12:51	14.36	8.69	--	--	5.67	9.36	
MW-200	03/26/18	8:20	14.36	8.68	--	--	5.68	9.36	
MW-200	06/19/18	15:20	14.36	9.42	--	--	4.94	9.36	
MW-200	09/27/18	11:27	14.36	9.41	--	--	4.95	9.36	
MW-200	12/12/18	14:50	14.36	8.15	--	--	6.21	9.36	
MW-200	03/25/19	14:40	14.36	8.84	--	--	5.52	9.36	
MW-200	06/24/19	16:33	14.36	9.92	--	--	4.44	9.36	
MW-200	09/25/19	8:28	14.36	9.58	--	--	4.78	9.36	
MW-200	12/16/19	14:48	14.36	8.32	--	--	6.04	9.36	
MW-200	12/16/19	14:48	14.36	8.32	--	--	6.04	9.36	
MW-200	03/25/20	13:01	14.36	9.22	--	--	5.14	9.36	
MW-200	06/16/20	8:59	14.36	9.31	--	--	5.05	9.36	
MW-200	09/11/20	8:23	14.36	9.84	--	--	4.52	9.36	
MW-200	11/17/20	9:53	14.36	7.82	--	--	6.54	9.36	
MW-200	03/15/21	13:33	14.36	9.06	--	--	5.30	9.36	
MW-200	06/09/21	11:31	14.36	9.40	--	--	4.96	9.36	
MW-200	09/20/21	11:47	14.36	9.51	--	--	4.85	9.36	
MW-200	12/03/21	9:46	14.36	8.49	--	--	5.87	9.36	

Appendix E
Summary of Historical Groundwater Elevation Data
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Well Number	Date	Time (hr:min)	Top of Casing[1]	Depth to Groundwater[2] (feet)	Depth to LNAPL[3] (feet)	LNAPL Thickness[3] (feet)	Groundwater Elevation[4] (feet)	Top of Well Screen Elevation[5] (feet)	Comments
MW-200	03/30/22	11:46	14.36	8.94	--	--	5.42	9.36	
MW-200	06/03/22	14:09	14.36	9.05	--	--	5.31	9.36	
MW-200	08/11/22	11:19	14.36	8.85	--	--	5.51	9.36	
MW-200	10/24/22	11:03	14.36	9.36	--	--	5.00	9.36	
MW-200	03/21/23	12:12	14.36	8.63	--	--	5.73	9.36	
MW-200	06/20/23	13:04	14.36	8.99	--	--	5.37	9.36	
MW-200	08/29/23	10:23	14.36	9.08	--	--	5.28	9.36	
MW-200	10/25/23	8:59	14.36	10.77	--	--	3.59	9.36	
MW-200	**03/12/24**	**13:54**	**14.36**	**8.02**	**--**	**--**	**6.34**	**9.36**	**No evidence of sheen/LNAPL was encountered.**
MW-200	**06/10/24**	**15:31**	**14.36**	**9.33**	**--**	**--**	**5.03**	**9.36**	**No evidence of sheen/LNAPL was encountered.**
MW-201	03/07/07	9:55	5.28	9.41	Sheen	--	-4.13	0.28	Top of casing surveyed using an arbitrary datum point.
MW-201	06/07/07	16:35	5.28	9.79	--	--	-4.51	0.28	
MW-201	07/06/07	11:00	5.28	10.27	--	--	-4.99	0.28	
MW-201	09/26/07	8:20	5.28	9.97	--	--	-4.69	0.28	
MW-201	11/27/07	14:38	5.28	9.04	--	--	-3.76	0.28	
MW-201	02/12/08	10:24	5.28	9.65	--	--	-4.37	0.28	
MW-201	05/13/08	10:24	14.86	10.34	--	--	4.52	9.86	Top of casing surveyed by OTAK 5/27/08.
MW-201	09/03/08	--	14.86	10.08	--	--	4.78	9.86	
MW-201	12/03/08	12:17	14.86	9.66	--	--	5.20	9.86	
MW-201	02/17/09	10:37	14.86	8.82	--	--	6.04	9.86	
MW-201	05/12/09	12:13	14.86	9.52	--	--	5.34	9.86	
MW-201	05/26/09	13:50	14.86	9.90	--	--	4.96	9.86	
MW-201	08/11/09	9:02	14.86	10.31	--	--	4.55	9.86	
MW-201	08/28/09	14:50	14.86	10.21	--	--	4.65	9.86	
MW-201	09/10/09	10:42	14.86	10.29	--	--	4.57	9.86	
MW-201	04/13/10	11:17	14.86	9.75	--	--	5.11	9.86	
MW-201	08/11/10	14:45	14.86	10.68	Sheen	--	4.18	9.86	
MW-201	09/14/10	13:55	14.86	9.89	--	--	4.97	9.86	
MW-201	09/14/10	14:00	14.86	9.89	--	--	4.97	9.86	
MW-201	09/14/10	15:05	14.86	10.04	--	--	4.82	9.86	
MW-201	09/14/10	15:07	14.86	10.02	--	--	4.84	9.86	
MW-201	09/14/10	15:19	14.86	9.92	--	--	4.94	9.86	
MW-201	09/14/10	15:26	14.86	9.89	--	--	4.97	9.86	
MW-201	09/14/10	15:36	14.86	9.86	--	--	5.00	9.86	
MW-201	09/17/10	18:14	14.86	9.59	--	--	5.27	9.86	
MW-201	09/17/10	20:07	14.86	9.36	--	--	5.50	9.86	
MW-201	09/21/10	11:18	14.86	10.06	--	--	4.80	9.86	
MW-201	04/25/11	13:15	14.86	9.22	--	--	5.64	9.86	
MW-201	09/21/11	10:40	14.86	10.81	--	--	4.05	9.86	
MW-201	11/21/11	10:15	14.86	10.17	--	--	4.69	9.86	
MW-201	02/20/12	11:20	14.86	9.68	--	--	5.18	9.86	
MW-201	04/17/12	11:20	14.86	10.11	--	--	4.75	9.86	
MW-201	10/10/12	11:45	14.86	10.91	--	--	3.95	9.86	
MW-201	12/24/12	10:47	14.86	8.35	--	--	6.51	9.86	
MW-201	01/08/13	15:35	14.86	8.35	--	--	6.51	9.86	
MW-201	04/30/13	10:23	14.86	9.14	--	--	5.72	9.86	
MW-201	09/19/13	9:30	14.86	9.90	--	--	4.96	9.86	
MW-201	11/22/13	10:20	14.86	10.27	--	--	4.59	9.86	
MW-201	06/23/14	9:56	14.86	10.14	--	--	4.72	9.86	
MW-201	12/15/14	12:51	14.86	8.60	--	--	6.26	9.86	
MW-201	06/17/15	10:20	14.86	8.99	--	--	5.87	9.86	
MW-201	12/09/15	10:14	14.86	6.59	--	--	8.27	9.86	
MW-201	01/15/16	16:56	14.86	8.85	--	--	6.01	9.86	
MW-201	02/16/16	8:35	14.86	8.91	--	--	5.95	9.86	
MW-201	06/13/16	9:15	14.86	10.39	--	--	4.47	9.86	
MW-201	09/22/16	12:45	14.86	9.86	--	--	5.00	9.86	
MW-201	01/12/17	11:37	14.86	9.72	--	--	5.14	9.86	
MW-201	03/27/17	12:52	14.86	9.25	--	--	5.61	9.86	
MW-201	06/16/17	8:42	14.86	9.55	--	--	5.31	9.86	
MW-201	11/07/17	12:46	14.86	9.32	--	--	5.54	9.86	
MW-201	03/26/18	8:25	14.86	9.29	--	--	5.57	9.86	
MW-201	06/19/18	15:27	14.86	10.06	--	--	4.80	9.86	
MW-201	09/27/18	11:36	14.86	10.00	--	--	4.86	9.86	
MW-201	12/12/18	14:55	14.86	8.77	--	--	6.09	9.86	
MW-201	03/25/19	14:29	14.86	9.39	--	--	5.47	9.86	
MW-201	06/24/19	16:38	14.86	9.73	--	--	5.13	9.86	
MW-201	09/25/19	8:23	14.86	10.22	--	--	4.64	9.86	
MW-201	12/16/19	14:51	14.86	9.00	--	--	5.86	9.86	
MW-201	03/25/20	13:10	14.86	9.94	--	--	4.92	9.86	
MW-201	06/17/20	9:03	14.86	9.94	--	--	4.92	9.86	
MW-201	09/11/20	8:34	14.86	10.62	--	--	4.24	9.86	
MW-201	11/17/20	9:57	14.86	8.41	--	--	6.45	9.86	
MW-201	03/15/21	13:37	14.86	9.81	--	--	5.05	9.86	
MW-201	06/09/21	11:26	14.86	9.05	--	--	5.81	9.86	
MW-201	09/20/21	11:51	14.86	10.30	Sheen on probe	--	4.56	9.86	Non-measurable sheen/LNAPL observed on the probe tip and side of a bailer on 9/23.
MW-201	12/03/21	9:50	14.86	9.28	Sheen on probe	--	5.58	9.86	Non-measurable sheen/LNAPL observed on the probe tip and side of a bailer.
MW-201	03/30/22	11:50	14.86	8.99	Sheen on probe	--	5.87	9.86	Non-measurable sheen/LNAPL observed on the interface probe.
MW-201	06/03/22	14:10	14.86	9.89	--	--	4.97	9.86	
MW-201	08/11/22	11:24	14.86	9.55	--	--	5.31	9.86	No evidence of LNAPL.
MW-201	10/24/22	11:10	14.86	10.20	Sheen on probe	--	4.66	9.86	Non-measurable sheen/LNAPL observed on the interface probe and tip of bailer at MW-201. Sock presented some discoloration. Sock left in place.
MW-201	03/21/23	12:22	14.86	9.55	--	--	5.31	9.86	No measurable LNAPL. Non-measurable sheen/LNAPL observed on the interface probe and the side of the bailer. Sock presented some discoloration. Sock left in well.
MW-201	06/20/23	13:13	14.86	9.79	--	--	5.07	9.86	No measurable LNAPL. No evidence of LNAPL on probe tip or bailer. Sock showed discoloration. Sock left in well.
MW-201	08/29/23	10:25	14.86	9.76	--	--	5.10	9.86	No measurable LNAPL. No evidence of LNAPL on probe tip or bailer.
MW-201	10/25/23	9:12	14.86	10.09	--	--	4.77	9.86	No measurable LNAPL. No evidence of LNAPL on probe tip or bailer.
MW-201	**03/12/24**	**13:44**	**14.86**	**8.82**	**--**	**--**	**6.04**	**9.86**	**No evidence of sheen/LNAPL was encountered.**
MW-201	**06/10/24**	**15:23**	**14.86**	**10.16**	**--**	**--**	**4.70**	**9.86**	**No evidence of sheen/LNAPL was encountered.**
MW-202	03/07/07	9:25	5.01	8.79	--	--	-3.78	-2.79	Top of casing surveyed using an arbitrary datum point.
MW-202	06/07/07	14:53	5.01	9.52	--	--	-4.51	-2.79	
MW-202	07/06/07	10:05	5.01	10.16	--	--	-5.15	-2.79	
MW-202	09/26/07	7:48	5.01	9.59	--	--	-4.58	-2.79	

Appendix E
Summary of Historical Groundwater Elevation Data
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Well Number	Date	Time (hr:min)	Top of Casing[1]	Depth to Groundwater[2] (feet)	Depth to LNAPL[3] (feet)	LNAPL Thickness[3] (feet)	Groundwater Elevation[4] (feet)	Top of Well Screen Elevation[5] (feet)	Comments
MW-202	11/26/07	15:16	5.01	8.43	--	--	-3.42	-2.79	
MW-202	02/12/08	10:26	5.01	8.59	--	--	-3.58	-2.79	
MW-202	05/13/08	10:06	14.58	10.20	--	--	4.38	6.78	Top of casing surveyed by OTAK 5/27/08.
MW-202	09/03/08	--	14.58	9.61	--	--	4.97	6.78	
MW-202	12/03/08	11:55	14.58	8.86	--	--	5.72	6.78	
MW-202	02/17/09	10:32	14.58	8.15	--	--	6.43	6.78	
MW-202	05/12/09	11:58	14.58	9.77	--	--	4.81	6.78	
MW-202	05/26/09	13:56	14.58	10.84	--	--	3.74	6.78	
MW-202	08/11/09	9:25	14.58	9.96	--	--	4.62	6.78	
MW-202	08/28/09	14:29	14.58	9.85	--	--	4.73	6.78	
MW-202	09/10/09	10:58	14.58	9.90	--	--	4.68	6.78	
MW-202	04/13/10	11:23	14.58	10.17	--	--	4.41	6.78	
MW-202	06/16/10	9:58	14.58	8.95	--	--	5.63	6.78	
MW-202	08/11/10	11:45	14.58	10.00	--	--	4.58	6.78	
MW-202	08/16/10	14:40	14.58	8.46	--	--	6.12	6.78	
MW-202	08/16/10	14:43	14.58	8.46	--	--	6.12	6.78	
MW-202	08/16/10	14:45	14.58	9.01	--	--	5.57	6.78	
MW-202	08/16/10	14:57	14.58	9.02	--	--	5.56	6.78	
MW-202	08/16/10	14:48	14.58	9.06	--	--	5.52	6.78	
MW-202	08/16/10	14:49	14.58	9.13	--	--	5.45	6.78	
MW-202	08/16/10	14:50	14.58	9.14	--	--	5.44	6.78	
MW-202	08/16/10	14:51	14.58	9.13	--	--	5.45	6.78	
MW-202	08/16/10	14:56	14.58	9.19	--	--	5.39	6.78	
MW-202	08/16/10	14:56	14.58	8.75	--	--	5.83	6.78	
MW-202	08/16/10	14:57	14.58	8.60	--	--	5.98	6.78	
MW-202	08/16/10	14:57	14.58	8.59	--	--	5.99	6.78	
MW-202	08/16/10	14:58	14.58	8.53	--	--	6.05	6.78	
MW-202	08/18/10	9:12	14.58	11.12	--	--	3.46	6.78	
MW-202	09/17/10	14:32	14.58	18.86	--	--	-4.28	6.78	
MW-202	09/17/10	16:18	14.58	9.18	--	--	5.40	6.78	
MW-202	09/17/10	17:52	14.58	8.83	--	--	5.75	6.78	
MW-202	09/21/10	11:10	14.58	10.55	--	--	4.03	6.78	
MW-202	09/22/10	9:30	14.58	9.66	--	--	4.92	6.78	
MW-202	04/25/11	14:40	14.58	9.32	--	--	5.26	6.78	
MW-202	09/21/11	10:47	14.58	10.90	--	--	3.68	6.78	
MW-202	11/21/11	9:56	14.58	10.03	--	--	4.55	6.78	
MW-202	02/20/12	11:29	14.58	9.61	--	--	4.97	6.78	
MW-202	04/17/12	11:00	14.58	10.30	--	--	4.28	6.78	
MW-202	10/10/12	11:50	14.58	11.00	--	--	3.58	6.78	
MW-202	12/24/12	11:00	14.58	7.85	--	--	6.73	6.78	
MW-202	01/08/13	15:45	14.58	7.59	--	--	6.99	6.78	
MW-202	04/30/13	10:18	14.58	8.75	--	--	5.83	6.78	
MW-202	09/19/13	9:36	14.58	10.12	--	--	4.46	6.78	
MW-202	11/22/13	10:40	14.58	7.00	--	--	7.58	6.78	
MW-202	06/23/14	9:45	14.58	10.65	--	--	3.93	6.78	
MW-202	12/15/14	13:06	14.58	7.41	--	--	7.17	6.78	
MW-202	06/17/15	10:35	14.58	8.84	--	--	5.74	6.78	
MW-202	12/09/15	10:00	14.58	6.61	--	--	7.97	6.78	
MW-202	01/15/16	16:32	14.58	9.06	--	--	5.52	6.78	
MW-202	02/16/16	8:45	14.58	8.37	--	--	6.21	6.78	
MW-202	06/13/16	9:05	14.58	10.65	--	--	3.93	6.78	
MW-202	09/22/16	12:38	14.58	9.21	--	--	5.37	6.78	
MW-202	01/12/17	10:32	14.58	8.32	--	--	6.26	6.78	
MW-202	03/27/17	12:56	14.58	9.44	--	--	5.14	6.78	
MW-202	06/16/17	8:47	14.58	9.43	--	--	5.15	6.78	
MW-202	11/07/17	12:55	14.58	9.00	--	--	5.58	6.78	
MW-202	03/26/18	8:15	14.58	8.95	--	--	5.63	6.78	
MW-202	06/19/18	15:33	14.58	10.55	--	--	4.03	6.78	
MW-202	09/27/18	12:05	14.58	10.00	--	--	4.58	6.78	
MW-202	12/12/18	14:57	14.58	8.54	--	--	6.04	6.78	
MW-202	03/25/19	14:52	14.58	9.42	--	--	5.16	6.78	
MW-202	06/24/19	16:26	14.58	10.85	--	--	3.73	6.78	
MW-202	09/25/19	8:31	14.58	10.63	--	--	3.95	6.78	
MW-202	12/16/19	14:41	14.58	8.68	--	--	5.90	6.78	
MW-202	03/25/20	12:47	14.58	8.89	--	--	5.69	6.78	
MW-202	06/17/20	8:57	14.58	10.37	--	--	4.21	6.78	
MW-202	09/11/20	8:18	14.58	10.98	--	--	3.60	6.78	
MW-202	11/17/20	9:44	14.58	7.53	--	--	7.05	6.78	
MW-202	03/15/21	13:29	14.58	9.81	--	--	4.77	6.78	
MW-202	06/09/21	11:21	14.58	10.41	--	--	4.17	6.78	
MW-202	09/20/21	11:43	14.58	10.54	--	--	4.04	6.78	
MW-202	12/03/21	9:42	14.58	8.99	--	--	5.59	6.78	
MW-202	03/30/22	11:41	14.58	9.69	--	--	4.89	6.78	
MW-202	06/03/22	14:04	14.58	10.21	--	--	4.37	6.78	
MW-202	08/11/22	11:14	14.58	10.03	--	--	4.55	6.78	
MW-202	10/24/22	10:59	14.58	10.03	--	--	4.55	6.78	
MW-202	03/21/23	11:58	14.58	9.37	--	--	5.21	6.78	
MW-202	06/20/23	12:56	14.58	10.10	--	--	4.48	6.78	
MW-202	08/29/23	10:19	14.58	10.11	--	--	4.47	6.78	
MW-202	10/25/23	8:41	14.58	10.16	--	--	4.42	6.78	
MW-202	**03/12/24**	**13:27**	**14.58**	**8.86**	**--**	**--**	**5.72**	**6.78**	**No evidence of sheen/LNAPL was encountered.**
MW-202	**06/10/24**	**14:26**	**14.58**	**10.35**	**--**	**--**	**4.23**	**6.78**	**No evidence of sheen/LNAPL was encountered. PID = 2.3**
MW-203	03/07/07	--	7.98	11.86	--	--	-3.88	-2.52	Top of casing surveyed using an arbitrary datum point.
MW-203	06/07/07	13:54	7.98	12.45	--	--	-4.47	-2.52	
MW-203	07/06/07	11:01	7.98	13.07	--	--	-5.09	-2.52	
MW-203	09/26/07	8:30	7.98	12.69	--	--	-4.71	-2.52	
MW-203	11/26/07	14:33	7.98	11.56	--	--	-3.58	-2.52	
MW-203	02/12/08	10:05	7.98	12.29	--	--	-4.31	-2.52	
MW-203	05/13/08	10:32	17.55	13.56	--	--	3.99	7.05	Top of casing surveyed by OTAK 5/27/08.
MW-203	09/03/08	--	17.55	13.40	--	--	4.15	7.05	
MW-203	12/03/08	12:26	17.55	11.76	--	--	5.79	7.05	
MW-203	02/17/09	10:47	17.55	11.00	--	--	6.55	7.05	
MW-203	05/12/09	12:21	17.55	12.81	--	--	4.74	7.05	
MW-203	05/26/09	13:45	17.55	13.51	--	--	4.04	7.05	

Appendix E
Summary of Historical Groundwater Elevation Data
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Well Number	Date	Time (hr:min)	Top of Casing[1]	Depth to Groundwater[2] (feet)	Depth to LNAPL[3] (feet)	LNAPL Thickness[3] (feet)	Groundwater Elevation[4] (feet)	Top of Well Screen Elevation[5] (feet)	Comments
MW-203	08/28/09	15:14	17.55	12.67	--	--	4.88	7.05	
MW-203	09/10/09	10:45	17.55	12.99	--	--	4.56	7.05	
MW-203	04/13/10	11:12	17.55	12.92	--	--	4.63	7.05	
MW-203	07/21/10	16:30	17.55	12.59	--	--	4.96	7.05	
MW-203	08/11/10	11:12	17.55	11.68	--	--	5.87	7.05	
MW-203	08/11/10	11:28	17.55	11.89	--	--	5.66	7.05	
MW-203	08/11/10	11:29	17.55	11.84	--	--	5.71	7.05	
MW-203	08/13/10	16:15	17.55	13.10	--	--	4.45	7.05	
MW-203	08/16/10	7:12	17.55	13.96	--	--	3.59	7.05	
MW-203	08/16/10	7:13	17.55	13.96	--	--	3.59	7.05	
MW-203	09/02/10	14:45	17.55	12.76	--	--	4.79	7.05	
MW-203	09/02/10	14:55	17.55	12.71	--	--	4.84	7.05	
MW-203	09/02/10	15:10	17.55	12.31	--	--	5.24	7.05	
MW-203	09/02/10	15:33	17.55	12.56	--	--	4.99	7.05	
MW-203	09/15/10	6:47	17.55	14.20	--	--	3.35	7.05	
MW-203	09/16/10	15:55	17.55	12.02	--	--	5.53	7.05	
MW-203	09/16/10	16:00	17.55	12.01	--	--	5.54	7.05	
MW-203	09/16/10	16:11	17.55	11.95	--	--	5.60	7.05	
MW-203	09/16/10	16:20	17.55	11.90	--	--	5.65	7.05	
MW-203	09/21/10	11:28	17.55	13.54	--	--	4.01	7.05	
MW-203	04/25/11	13:45	17.55	12.06	--	--	5.49	7.05	
MW-203	09/21/11	14:26	17.55	12.68	--	--	4.87	7.05	
MW-203	11/21/11	10:21	17.55	11.69	--	--	5.86	7.05	
MW-203	02/20/12	11:14	17.55	12.25	--	--	5.30	7.05	
MW-203	04/17/12	13:45	17.55	13.39	--	--	4.16	7.05	
MW-203	10/10/12	11:20	17.55	14.18	--	--	3.37	7.05	
MW-203	12/24/12	10:35	17.55	9.67	--	--	7.88	7.05	
MW-203	01/08/13	15:30	17.55	10.34	--	--	7.21	7.05	
MW-203	04/30/13	10:28	17.55	11.76	--	--	5.79	7.05	
MW-203	09/19/13	9:39	17.55	12.81	--	--	4.74	7.05	
MW-203	11/22/13	10:05	17.55	12.48	--	--	5.07	7.05	
MW-203	06/23/14	10:04	17.55	13.68	--	--	3.87	7.05	
MW-203	12/15/14	12:46	17.55	10.46	--	--	7.09	7.05	
MW-203	06/17/15	10:15	17.55	11.94	--	--	5.61	7.05	
MW-203	12/09/15	10:19	17.55	9.63	--	--	7.92	7.05	
MW-203	01/15/16	16:16	17.55	11.89	--	--	5.66	7.05	
MW-203	02/16/16	8:30	17.55	11.48	--	--	6.07	7.05	
MW-203	06/13/16	9:20	17.55	13.62	--	--	3.93	7.05	
MW-203	09/22/16	12:50	17.55	12.01	--	--	5.54	7.05	
MW-203	01/12/17	11:50	17.55	11.40	--	--	6.15	7.05	
MW-203	03/27/17	12:50	17.55	12.41	--	--	5.14	7.05	
MW-203	06/16/17	8:38	17.55	12.31	--	--	5.24	7.05	
MW-203	11/07/17	12:40	17.55	11.86	--	--	5.69	7.05	
MW-203	03/26/18	8:30	17.55	11.89	--	--	5.66	7.05	
MW-203	06/19/18	15:10	17.55	13.15	--	--	4.40	7.05	
MW-203	09/27/18	11:43	17.55	12.79	--	--	4.76	7.05	
MW-203	12/12/18	14:39	17.55	11.37	--	--	6.18	7.05	
MW-203	03/25/19	14:22	17.55	12.25	--	--	5.30	7.05	
MW-203	06/24/19	16:51	17.55	13.87	--	--	3.68	7.05	
MW-203	09/25/19	8:19	17.55	13.45	--	--	4.10	7.05	
MW-203	12/16/19	14:57	17.55	11.61	--	--	5.94	7.05	
MW-203	03/25/20	13:15	17.55	12.95			4.60	7.05	
MW-203	06/17/20	9:10	17.55	13.05	--	--	4.50	7.05	
MW-203	09/11/20	8:44	17.55	13.94	--	--	3.61	7.05	
MW-203	11/17/20	10:03	17.55	10.46	--	--	7.09	7.05	
MW-203	03/15/21	13:42	17.55	12.83	--	--	4.72	7.05	
MW-203	06/09/21	11:36	17.55	13.41	--	--	4.14	7.05	
MW-203	09/20/21	11:56	17.55	13.53	--	--	4.02	7.05	
MW-203	12/03/21	9:56	17.55	11.96	--	--	5.59	7.05	
MW-203	03/30/22	11:52	17.55	12.12	--	--	5.43	7.05	
MW-203	06/03/22	14:15	17.55	13.40	--	--	4.15	7.05	
MW-203	08/11/22	11:29	17.55	13.01	--	--	4.54	7.05	
MW-203	10/24/22	11:03	17.55	10.03	--	--	7.52	7.05	Not used in contouring
MW-203	03/21/23	0:45	17.55	12.52	--	--	5.03	7.05	
MW-203	06/20/23	13:24	17.55	13.14	--	--	4.41	7.05	
MW-203	08/29/23	10:27	17.55	13.03	--	--	4.52	7.05	
MW-203	10/25/23	9:16	17.55	13.22	--	--	4.33	7.05	
MW-203	**03/12/24**	**--**	**17.55**	**--**	**--**	**--**	**--**	**7.05**	**Inaccesibe**
MW-203	**06/10/24**	**15:17**	**17.55**	**13.46**	**--**	**--**	**4.09**	**7.05**	**No evidence of sheen/LNAPL was encountered.**
MW-204	03/07/07	10:15	14.38	18.12	--	--	-3.74	-2.97	Top of casing surveyed using an arbitrary datum point.
MW-204	06/07/07	14:50	14.38	18.52	--	--	-4.14	-2.97	
MW-204	07/06/07	11:40	14.38	19.03	--	--	-4.65	-2.97	
MW-204	09/26/07	8:37	14.38	18.85	--	--	-4.47	-2.97	
MW-204	11/26/07	14:29	14.38	17.78	--	--	-3.40	-2.97	
MW-204	02/12/08	10:03	14.38	18.00	--	--	-3.62	-2.97	
MW-204	05/13/08	10:38	23.93	19.43	--	--	4.50	6.58	Top of casing surveyed by OTAK 5/27/08.
MW-204	09/03/08	--	23.93	18.76	--	--	5.17	6.58	
MW-204	10/01/08	10:25	23.93	18.40	--	--	5.53	6.58	
MW-204	10/17/08	9:29	23.93	18.72	--	--	5.21	6.58	
MW-204	12/03/08	12:31	23.93	18.06	--	--	5.87	6.58	
MW-204	02/17/09	10:54	23.93	17.42	--	--	6.51	6.58	
MW-204	05/12/09	12:41	23.93	19.81	--	--	4.12	6.58	
MW-204	05/26/09	13:41	23.93	19.20	--	--	4.73	6.58	
MW-204	07/13/09	8:18	23.93	19.82	--	--	4.11	6.58	
MW-204	08/04/09	--	23.93	18.88	--	--	5.05	6.58	
MW-204	08/06/09	9:36	23.93	18.33	--	--	5.60	6.58	
MW-204	08/20/09	9:02	23.93	18.21	--	--	5.72	6.58	
MW-204	09/10/09	10:47	23.93	19.02	--	--	4.91	6.58	
MW-204	04/13/10	10:59	23.93	18.71	--	--	5.22	6.58	
MW-204	06/16/10	10:15	23.93	18.06	--	--	5.87	6.58	
MW-204	08/11/10	16:16	23.93	18.65	--	--	5.28	6.58	
MW-204	08/12/10	12:31	23.93	18.11	--	--	5.82	6.58	
MW-204	08/12/10	12:34	23.93	18.12	--	--	5.81	6.58	
MW-204	08/12/10	16:13	23.93	18.95	--	--	4.98	6.58	

Appendix E
Summary of Historical Groundwater Elevation Data
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Well Number	Date	Time (hr:min)	Top of Casing[1] (feet)	Depth to Groundwater[2] (feet)	Depth to LNAPL[3] (feet)	LNAPL Thickness[3] (feet)	Groundwater Elevation[4] (feet)	Top of Well Screen Elevation[5] (feet)	Comments
MW-204	08/12/10	16:15	23.93	18.94	--	--	4.99	6.58	
MW-204	08/12/10	16:17	23.93	18.90	--	--	5.03	6.58	
MW-204	08/13/10	16:25	23.93	18.79	--	--	5.14	6.58	
MW-204	08/14/10	7:17	23.93	19.70	--	--	4.23	6.58	
MW-204	08/14/10	7:18	23.93	19.70	--	--	4.23	6.58	
MW-204	09/02/10	14:33	23.93	18.93	--	--	5.00	6.58	
MW-204	09/02/10	14:35	23.93	18.93	--	--	5.00	6.58	
MW-204	09/02/10	14:39	23.93	18.93	--	--	5.00	6.58	
MW-204	09/02/10	15:37	23.93	18.73	--	--	5.20	6.58	
MW-204	09/02/10	17:35	23.93	18.57	--	--	5.36	6.58	
MW-204	09/14/10	11:58	23.93	18.91	--	--	5.02	6.58	
MW-204	09/14/10	12:37	23.93	18.70	--	--	5.23	6.58	
MW-204	09/14/10	12:46	23.93	18.65	--	--	5.28	6.58	
MW-204	09/16/10	7:10	23.93	19.67	--	--	4.26	6.58	
MW-204	09/16/10	7:12	23.93	19.67	--	--	4.26	6.58	
MW-204	09/16/10	7:13	23.93	19.67	--	--	4.26	6.58	
MW-204	09/16/10	7:14	23.93	19.68	--	--	4.25	6.58	
MW-204	09/16/10	7:15	23.93	19.68	--	--	4.25	6.58	
MW-204	09/16/10	7:17	23.93	19.69	--	--	4.24	6.58	
MW-204	09/16/10	7:19	23.93	19.69	--	--	4.24	6.58	
MW-204	09/16/10	7:21	23.93	19.70	--	--	4.23	6.58	
MW-204	09/16/10	7:23	23.93	19.70	--	--	4.23	6.58	
MW-204	09/16/10	7:25	23.93	19.71	--	--	4.22	6.58	
MW-204	09/16/10	7:27	23.93	19.72	--	--	4.21	6.58	
MW-204	09/16/10	7:29	23.93	19.72	--	--	4.21	6.58	
MW-204	09/16/10	7:30	23.93	19.75	--	--	4.18	6.58	
MW-204	09/17/10	14:30	23.93	18.93	--	--	5.00	6.58	
MW-204	09/17/10	16:20	23.93	18.47	--	--	5.46	6.58	
MW-204	09/17/10	19:57	23.93	18.26	--	--	5.67	6.58	
MW-204	09/21/10	11:35	23.93	19.18	--	--	4.75	6.58	
MW-204	04/25/11	14:15	23.93	18.07	--	--	5.86	6.58	
MW-204	09/21/11	10:22	23.93	19.62	--	--	4.31	6.58	
MW-204	11/21/11	10:30	23.93	18.71	--	--	5.22	6.58	
MW-204	02/20/12	10:53	23.93	17.99	--	--	5.94	6.58	
MW-204	04/17/12	13:25	23.93	19.03	--	--	4.90	6.58	
MW-204	10/10/12	11:10	23.93	19.87	--	--	4.06	6.58	
MW-204	12/24/12	10:16	23.93	16.73	--	--	7.20	6.58	
MW-204	01/08/13	15:20	23.93	16.69	--	--	7.24	6.58	
MW-204	04/30/13	10:40	23.93	17.97	--	--	5.96	6.58	
MW-204	09/19/13	9:18	23.93	18.63	--	--	5.30	6.58	
MW-204	11/22/13	9:50	23.93	18.95	--	--	4.98	6.58	
MW-204	06/23/14	10:13	23.93	19.51	--	--	4.42	6.58	
MW-204	12/15/14	12:37	23.93	16.71	--	--	7.22	6.58	
MW-204	06/17/15	10:10	23.93	18.20	--	--	5.73	6.58	
MW-204	12/09/15	10:24	23.93	15.49	--	--	8.44	6.58	
MW-204	01/15/16	15:44	23.93	17.59	--	--	6.34	6.58	
MW-204	02/16/16	8:20	23.93	17.31	--	--	6.62	6.58	
MW-204	06/13/16	9:25	23.93	19.42	--	--	4.51	6.58	
MW-204	09/22/16	12:53	23.93	18.41	--	--	5.52	6.58	
MW-204	01/12/17	12:09	23.93	17.43	--	--	6.50	6.58	
MW-204	03/27/17	12:45	23.93	17.99	--	--	5.94	6.58	
MW-204	06/16/17	8:27	23.93	18.39	--	--	5.54	6.58	
MW-204	11/07/17	12:04	23.93	17.98	--	--	5.95	6.58	
MW-204	03/26/18	8:34	23.93	18.00	--	--	5.93	6.58	
MW-204	06/19/18	15:06	23.93	19.00	--	--	4.93	6.58	
MW-204	09/27/18	11:51	23.93	18.99	--	--	4.94	6.58	
MW-204	12/12/18	14:17	23.93	17.46	--	--	6.47	6.58	
MW-204	03/25/19	14:16	23.93	18.22	--	--	5.71	6.58	
MW-204	06/24/19	16:55	23.93	19.66	--	--	4.27	6.58	
MW-204	09/25/19	8:11	23.93	19.23	--	--	4.70	6.58	
MW-204	12/16/19	15:03	23.93	17.82	--	--	6.11	6.58	
MW-204	03/25/20	13:25	23.93	18.88	--	--	5.05	6.58	
MW-204	06/17/20	9:13	23.93	19.00	--	--	4.93	6.58	
MW-204	09/11/20	8:52	23.93	19.75	--	--	4.18	6.58	
MW-204	11/17/20	10:16	23.93	16.91	--	--	7.02	6.58	
MW-204	03/15/21	13:49	23.93	18.70	--	--	5.23	6.58	
MW-204	06/09/21	11:41	23.93	19.26	--	--	4.67	6.58	
MW-204	09/20/21	12:02	23.93	19.42	--	--	4.51	6.58	
MW-204	12/03/21	10:03	23.93	17.85	--	--	6.08	6.58	
MW-204	03/30/22	11:50	23.93	18.10	--	--	5.83	6.58	
MW-204	06/03/22	14:20	23.93	18.98	--	--	4.95	6.58	
MW-204	08/11/22	11:35	23.93	18.87	--	--	5.06	6.58	
MW-204	10/24/22	11:30	23.93	19.06	--	--	4.87	6.58	
MW-204	03/21/23	12:51	23.93	18.37	--	--	5.56	6.58	PID: 1.7. No measurable LNAPL. Non-measurable sheen/LNAPL observed on the side of the bailer but no evidence of sheen/LNAPL on the side of the probe tip. Sock presented some discoloration. Sock left in well.
MW-204	06/20/23	13:31	23.93	19.03	--	--	4.90	6.58	No measurable LNAPL. No evidence of LNAPL on probe tip or bailer. Sock showed no discoloration. Sock left in well.
MW-204	08/29/23	10:30	23.93	15.96	--	--	7.97	6.58	No measurable LNAPL. No evidence of LNAPL on probe tip or bailer.
MW-204	10/25/23	9:20	23.93	19.05	--	--	4.88	6.58	No measurable LNAPL. No evidence of LNAPL on probe tip or bailer.
MW-204	**03/12/24**	**14:06**	**23.93**	**17.81**	**--**	**--**	**6.12**	**6.58**	**No evidence of sheen/LNAPL was encountered. PID = 0.9**
MW-204	**06/10/24**	**15:05**	**23.93**	**19.18**	**--**	**--**	**4.75**	**6.58**	**No evidence of sheen/LNAPL was encountered.**
MW-205	03/07/07	10:30	18.43	22.20	Sheen	--	-3.77	0.43	Top of casing surveyed using an arbitrary datum point.
MW-205	06/07/07	15:45	18.43	22.45	--	--	-4.02	0.43	
MW-205	07/06/07	11:47	18.43	22.93	--	--	-4.50	0.43	
MW-205	09/26/07	8:46	18.43	22.83	--	--	-4.40	0.43	
MW-205	11/26/07	14:23	18.43	21.76	--	--	-3.33	0.43	
MW-205	02/12/08	10:01	18.43	21.78	--	--	-3.35	0.43	
MW-205	05/13/08	10:43	27.89	23.38	--	--	4.51	9.89	Top of casing surveyed by OTAK 5/27/08.
MW-205	09/03/08	--	27.89	22.68	--	--	5.21	9.89	
MW-205	12/03/08	12:36	27.89	22.01	--	--	5.88	9.89	
MW-205	02/17/09	10:59	27.89	21.40	--	--	6.49	9.89	
MW-205	05/12/09	12:47	27.89	22.73	--	--	5.16	9.89	
MW-205	05/26/09	13:36	27.89	23.06	--	--	4.83	9.89	
MW-205	08/04/09	--	27.89	22.84	--	--	5.05	9.89	

Appendix E
Summary of Historical Groundwater Elevation Data
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Well Number	Date	Time (hr:min)	Top of Casing[1]	Depth to Groundwater[2] (feet)	Depth to LNAPL[3] (feet)	LNAPL Thickness[3] (feet)	Groundwater Elevation[4] (feet)	Top of Well Screen Elevation[5] (feet)	Comments
MW-205	08/28/09	15:34	27.89	22.71	--	--	5.18	9.89	
MW-205	09/10/09	10:46	27.89	23.01	--	--	4.88	9.89	
MW-205	04/13/10	11:07	27.89	22.62	--	--	5.27	9.89	
MW-205	08/13/10	8:45	27.89	22.31	--	--	5.58	9.89	
MW-205	08/16/10	14:18	27.89	21.50	--	--	6.39	9.89	
MW-205	08/16/10	12:22	27.89	21.75	--	--	6.14	9.89	
MW-205	09/14/10	11:59	27.89	22.66	--	--	5.23	9.89	
MW-205	09/16/10	9:24	27.89	24.00	--	--	3.89	9.89	
MW-205	09/16/10	9:25	27.89	24.00	--	--	3.89	9.89	
MW-205	09/16/10	9:28	27.89	24.00	--	--	3.89	9.89	
MW-205	09/16/10	15:05	27.89	22.42	--	--	5.47	9.89	
MW-205	09/17/10	13:43	27.89	23.12	--	--	4.77	9.89	
MW-205	09/17/10	13:48	27.89	23.11	--	--	4.78	9.89	
MW-205	09/17/10	13:55	27.89	23.05	--	--	4.84	9.89	
MW-205	09/17/10	14:00	27.89	23.05	--	--	4.84	9.89	
MW-205	09/17/10	14:04	27.89	23.02	--	--	4.87	9.89	
MW-205	09/17/10	14:09	27.89	23.03	--	--	4.86	9.89	
MW-205	09/17/10	14:19	27.89	22.96	--	--	4.93	9.89	
MW-205	09/17/10	14:26	27.89	22.92	--	--	4.97	9.89	
MW-205	09/21/10	11:40	27.89	23.15	--	--	4.74	9.89	
MW-205	09/28/10	8:15	27.89	23.05	Sheen	--	4.84	9.89	Groundwater elevation recorded prior to pump testing at the site. Sheen observed on extracted groundwater during hydraulic conductivity testing on well MW-205.
MW-205	10/11/10	10:48	27.89	21.89	--	--	6.00	9.89	
MW-205	11/19/10	16:51	27.89	22.81	--	--	5.08	9.89	
MW-205	03/04/11	10:32	27.89	21.98	--	--	5.91	9.89	
MW-205	04/25/11	14:20	27.89	22.04	--	--	5.85	9.89	
MW-205	04/26/11	13:40	27.89	--	LNAPL	--	--	9.89	
MW-205	05/12/11	7:49	27.89	22.68	--	--	5.21	9.89	
MW-205	06/03/11	11:33	27.89	22.70	--	--	5.19	9.89	
MW-205	06/09/11	14:48	27.89	22.66	Sheen	--	5.23	9.89	
MW-205	09/21/11	10:13	27.89	23.60	--	--	4.29	9.89	
MW-205	09/30/11	13:50	27.89	22.26	--	--	5.63	9.89	
MW-205	10/06/11	14:35	27.89	22.31	--	--	5.58	9.89	
MW-205	10/14/11	6:15	27.89	22.61	--	--	5.28	9.89	
MW-205	10/21/11	6:30	27.89	22.40	--	--	5.49	9.89	
MW-205	10/28/11	13:40	27.89	22.53	--	--	5.36	9.89	
MW-205	11/04/11	13:05	27.89	22.42	--	--	5.47	9.89	
MW-205	11/10/11	14:35	27.89	22.18	--	--	5.71	9.89	
MW-205	11/21/11	10:43	27.89	22.76	--	--	5.13	9.89	
MW-205	02/20/12	11:10	27.89	22.32	--	--	5.57	9.89	
MW-205	04/17/12	11:45	27.89	23.03	--	--	4.86	9.89	
MW-205	10/10/12	11:00	27.89	23.80	--	--	4.09	9.89	
MW-205	12/24/12	10:10	27.89	20.73	--	--	7.16	9.89	
MW-205	01/08/13	15:00	27.89	20.73	--	--	7.16	9.89	
MW-205	04/30/13	10:45	27.89	21.91	--	--	5.98	9.89	
MW-205	09/19/13	9:15	27.89	22.33	--	--	5.56	9.89	
MW-205	11/22/13	9:40	27.89	22.69	--	--	5.20	9.89	
MW-205	06/23/14	10:17	27.89	23.50	--	--	4.39	9.89	
MW-205	12/15/14	12:30	27.89	20.78	--	--	7.11	9.89	
MW-205	06/17/15	10:05	27.89	22.22	--	--	5.67	9.89	
MW-205	12/09/15	10:27	27.89	19.51	--	--	8.38	9.89	
MW-205	01/15/16	16:10	27.89	21.56	--	--	6.33	9.89	
MW-205	02/16/16	8:10	27.89	21.28	--	--	6.61	9.89	
MW-205	06/13/16	9:30	27.89	23.37	--	--	4.52	9.89	
MW-205	09/22/16	12:58	27.89	22.31	--	--	5.58	9.89	
MW-205	01/12/17	12:29	27.89	21.34	--	--	6.55	9.89	
MW-205	03/27/17	12:40	27.89	19.89	--	--	8.00	9.89	
MW-205	06/16/17	8:22	27.89	22.33	--	--	5.56	9.89	
MW-205	11/07/17	11:59	27.89	21.89	--	--	6.00	9.89	
MW-205	03/26/18	8:36	27.89	21.91	--	--	5.98	9.89	
MW-205	06/19/18	15:02	27.89	22.80	--	--	5.09	9.89	
MW-205	09/27/18	12:00	27.89	22.88	--	--	5.01	9.89	
MW-205	12/12/18	14:15	27.89	21.38	--	--	6.51	9.89	
MW-205	03/25/19	14:12	27.89	22.11	--	--	5.78	9.89	
MW-205	06/24/19	16:58	27.89	23.66	--	--	4.23	9.89	
MW-205	09/25/19	8:03	27.89	23.12	--	--	4.77	9.89	
MW-205	12/16/19	15:14	27.89	21.75	--	--	6.14	9.89	
MW-205	03/25/20	13:31	27.89	22.84			5.05	9.89	
MW-205	06/17/20	9:17	27.89	22.94	--	--	4.95	9.89	
MW-205	09/11/20	8:59	27.89	23.75	--	--	4.14	9.89	
MW-205	11/17/20	10:20	27.89	20.78	--	--	7.11	9.89	
MW-205	03/15/21	13:57	27.89	22.67	--	--	5.22	9.89	
MW-205	06/09/21	11:49	27.89	23.23	--	--	4.66	9.89	
MW-205	09/20/21	12:11	27.89	23.36	Sheen on probe	--	4.53	9.89	Non-measurable sheen/LNAPL observed on probe tip.
MW-205	12/03/21	10:12	27.89	21.82	Sheen on probe	--	6.07	9.89	Non-measurable sheen/LNAPL observed on the probe tip and side of a bailer.
MW-205	03/30/22	12:05	27.89	22.72	Sheen on probe	--	5.17	9.89	Non-measurable sheen/LNAPL observed on the interface probe.
MW-205	06/03/22	14:24	27.89	23.19	Sheen on probe	--	4.70	9.89	Non-measurable sheen/LNAPL observed on the interface probe.
MW-205	08/11/22	11:42	27.89	23.01	--	--	4.88	9.89	No evidence of LNAPL.
MW-205	10/24/22	11:34	27.89	23.11	--	--	4.78	9.89	
MW-205	03/21/23	13:07	27.89	22.46	--	--	5.43	9.89	No evidence of LNAPL.
MW-205	06/20/23	13:42	27.89	23.11	--	--	4.78	9.89	
MW-205	08/29/23	10:34	27.89	23.01	--	--	4.88	9.89	
MW-205	**03/12/24**	**14:16**	**27.89**	**21.88**	**--**	**--**	**6.01**	**9.89**	**No evidence of sheen/LNAPL was encountered.**
MW-205	**06/10/24**	**14:57**	**27.89**	**23.19**	**--**	**--**	**4.70**	**9.89**	**No evidence of sheen/LNAPL was encountered.**
MW-206	03/07/07	9:15	5.59	9.15	--	--	-3.56	-5.41	Top of casing surveyed using an arbitrary datum point.
MW-206	06/07/07	13:26	5.59	10.24	--	--	-4.65	-5.41	
MW-206	07/06/07	9:22	5.59	10.84	--	--	-5.25	-5.41	
MW-206	09/26/07	7:35	5.59	10.21	--	--	-4.62	-5.41	
MW-206	11/26/07	15:08	5.59	8.47	--	--	-2.88	-5.41	
MW-206	02/12/08	10:28	5.59	8.69	--	--	-3.10	-5.41	
MW-206	05/13/08	9:59	15.15	11.80	--	--	3.35	4.15	Top of casing surveyed by OTAK 5/27/08.
MW-206	09/03/08	--	15.15	9.91	--	--	5.24	4.15	
MW-206	10/01/08	9:30	15.15	9.21	--	--	5.94	4.15	
MW-206	12/03/08	11:51	15.15	8.78	--	--	6.37	4.15	

Appendix E
Summary of Historical Groundwater Elevation Data
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Well Number	Date	Time (hr:min)	Top of Casing[1]	Depth to Groundwater[2] (feet)	Depth to LNAPL[3] (feet)	LNAPL Thickness[3] (feet)	Groundwater Elevation[4] (feet)	Top of Well Screen Elevation[5] (feet)	Comments
MW-206	02/17/09	10:29	15.15	8.28	--	--	6.87	4.15	
MW-206	05/12/09	11:47	15.15	11.83	--	--	3.32	4.15	
MW-206	05/26/09	13:59	15.15	13.30	--	--	1.85	4.15	
MW-206	08/11/09	9:38	15.15	10.02	--	--	5.13	4.15	
MW-206	08/28/09	14:07	15.15	9.78	--	--	5.37	4.15	
MW-206	09/10/09	11:14	15.15	9.81	--	--	5.34	4.15	
MW-206	04/13/10	11:27	15.15	12.60	--	--	2.55	4.15	
MW-206	08/11/10	17:30	15.15	13.10	--	--	2.05	4.15	
MW-206	08/16/10	11:52	15.15	9.70	--	--	5.45	4.15	
MW-206	08/16/10	12:26	15.15	8.60	--	--	6.55	4.15	
MW-206	08/18/10	9:07	15.15	13.10	--	--	2.05	4.15	
MW-206	09/17/10	16:12	15.15	8.69	--	--	6.46	4.15	
MW-206	09/17/10	17:55	15.15	10.03	--	--	5.12	4.15	
MW-206	09/21/10	11:07	15.15	12.65	--	--	2.50	4.15	
MW-206	09/22/10	9:20	15.15	11.09	--	--	4.06	4.15	
MW-206	04/25/11	14:50	15.15	10.84	--	--	4.31	4.15	
MW-206	09/21/11	10:52	15.15	11.00	--	--	4.15	4.15	
MW-206	11/21/11	9:50	15.15	10.20	--	--	4.95	4.15	
MW-206	02/20/12	11:32	15.15	11.31	--	--	3.84	4.15	
MW-206	04/17/12	10:55	15.15	12.45	--	--	2.70	4.15	
MW-206	10/10/12	12:00	15.15	10.65	--	--	4.50	4.15	
MW-206	12/24/12	11:10	15.15	8.45	--	--	6.70	4.15	
MW-206	01/08/13	15:48	15.15	8.47	--	--	6.68	4.15	
MW-206	04/30/13	10:15	15.15	9.64	--	--	5.51	4.15	
MW-206	09/19/13	9:42	15.15	12.46	--	--	2.69	4.15	
MW-206	11/22/13	10:50	15.15	9.22	--	--	5.93	4.15	
MW-206	06/23/14	9:41	15.15	13.04	--	--	2.11	4.15	
MW-206	12/15/14	13:13	15.15	7.09	--	--	8.06	4.15	
MW-206	06/17/15	10:45	15.15	10.67	--	--	4.48	4.15	
MW-206	12/09/15	9:54	15.15	7.86	--	--	7.29	4.15	
MW-206	02/16/16	8:50	15.15	8.51	--	--	6.64	4.15	
MW-206	06/13/16	9:00	15.15	12.46	--	--	2.69	4.15	
MW-206	09/22/16	12:34	15.15	8.90	--	--	6.25	4.15	
MW-206	01/12/17	10:24	15.15	9.45	--	--	5.70	4.15	
MW-206	03/27/17	12:58	15.15	11.59	--	--	3.56	4.15	
MW-206	06/16/17	8:50	15.15	11.59	--	--	3.56	4.15	
MW-206	11/07/17	12:59	15.15	10.18	--	--	4.97	4.15	
MW-206	03/26/18	8:08	15.15	10.00	--	--	5.15	4.15	
MW-206	06/19/18	15:38	15.15	12.92	--	--	2.23	4.15	
MW-206	09/27/18	12:20	15.15	11.99	--	--	3.16	4.15	
MW-206	12/12/18	15:06	15.15	9.79	--	--	5.36	4.15	
MW-206	03/25/19	15:00	15.15	12.00	--	--	3.15	4.15	
MW-206	06/24/19	16:20	15.15	12.80	--	--	2.35	4.15	
MW-206	09/25/19	8:36	15.15	13.07	--	--	2.08	4.15	
MW-206	12/16/19	14:38	15.15	9.65	--	--	5.50	4.15	
MW-206	03/25/20	12:44	15.15	12:10	--	--	14.64	4.15	
MW-206	06/17/20	8:55	15.15	12.39	--	--	2.76	4.15	
MW-206	09/11/20	8:15	15.15	13.06	--	--	2.09	4.15	
MW-206	11/17/20	9:42	15.15	7.13	--	--	8.02	4.15	
MW-206	03/15/21	13:26	15.15	12.06	--	--	3.09	4.15	
MW-206	06/09/21	11:15	15.15	12.94	--	--	2.21	4.15	
MW-206	09/20/21	11:39	15.15	12.97	--	--	2.18	4.15	
MW-206	12/03/21	9:38	15.15	10.05	--	--	5.10	4.15	
MW-206	03/30/22	11:30	15.15	11.59	--	--	3.56	4.15	
MW-206	06/03/22	14:03	15.15	12.80	--	--	2.35	4.15	
MW-206	08/11/22	11:11	15.15	12.76	--	--	2.39	4.15	
MW-206	10/24/22	10:54	15.15	11.72	--	--	3.43	4.15	
MW-206	03/21/23	11:54	15.15	11.41	--	--	3.74	4.15	
MW-206	06/20/23	12:51	15.15	12.73	--	--	2.42	4.15	
MW-206	08/29/23	10:14	15.15	12.74	--	--	2.41	4.15	
MW-206	10/25/23	8:38	15.15	12.41	--	--	2.74	4.15	
MW-206	**03/12/24**	**13:23**	**15.15**	**11.04**	**--**	**--**	**4.11**	**4.15**	**No evidence of sheen/LNAPL was encountered.**
MW-206	**06/10/24**	**14:20**	**15.15**	**12.80**	**--**	**--**	**2.35**	**4.15**	**No evidence of sheen/LNAPL was encountered.**
MW-207	03/07/07	10:40	5.82	10.64	--	--	-4.82	-3.68	Top of casing surveyed using an arbitrary datum point.
MW-207	06/07/07	17:10	5.82	10.53	--	--	-4.71	-3.68	
MW-207	07/06/07	9:10	5.82	11.20	--	--	-5.38	-3.68	
MW-207	09/26/07	7:25	5.82	10.30	--	--	-4.48	-3.68	
MW-207	11/26/07	15:03	5.82	8.84	--	--	-3.02	-3.68	
MW-207	02/12/08	10:31	5.82	8.90	--	--	-3.08	-3.68	
MW-207	05/13/08	9:53	15.40	12.07	--	--	3.33	5.90	Top of casing surveyed by OTAK 5/27/08.
MW-207	09/03/08	--	15.40	10.14	--	--	5.26	5.90	
MW-207	10/01/08	8:10	15.40	9.51	--	--	5.89	5.90	
MW-207	12/03/08	11:46	15.40	9.05	--	--	6.35	5.90	
MW-207	02/17/09	10:25	15.40	8.40	--	--	7.00	5.90	
MW-207	05/12/09	11:43	15.40	11.70	--	--	3.70	5.90	
MW-207	05/26/09	14:03	15.40	13.52	--	--	1.88	5.90	
MW-207	08/11/09	9:46	15.40	10.41	--	--	4.99	5.90	
MW-207	08/28/09	13:45	15.40	10.35	--	--	5.05	5.90	
MW-207	09/10/09	11:25	15.40	10.20	--	--	5.20	5.90	
MW-207	04/13/10	11:30	15.40	12.43	--	--	2.97	5.90	
MW-207	06/16/10	9:54	15.40	9.70	--	--	5.70	5.90	
MW-207	08/13/10	13:30	15.40	12.52	--	--	2.88	5.90	
MW-207	08/16/10	11:22	15.40	10.35	--	--	5.05	5.90	
MW-207	08/16/10	11:25	15.40	10.32	--	--	5.08	5.90	
MW-207	08/16/10	11:28	15.40	10.32	--	--	5.08	5.90	
MW-207	08/16/10	11:31	15.40	10.29	--	--	5.11	5.90	
MW-207	08/16/10	11:33	15.40	10.26	--	--	5.14	5.90	
MW-207	08/16/10	11:37	15.40	10.25	--	--	5.15	5.90	
MW-207	08/16/10	11:50	15.40	9.70	--	--	5.70	5.90	
MW-207	09/21/10	11:02	15.40	12.55	--	--	2.85	5.90	
MW-207	04/25/11	14:55	15.40	10.83	--	--	4.57	5.90	
MW-207	09/21/11	10:55	15.40	11.45	--	--	3.95	5.90	
MW-207	11/21/11	9:45	15.40	10.08	--	--	5.32	5.90	
MW-207	02/20/12	11:36	15.40	11.25	--	--	4.15	5.90	

Appendix E
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Well Number	Date	Time (hr:min)	Top of Casing[1]	Depth to Groundwater[2] (feet)	Depth to LNAPL[3] (feet)	LNAPL Thickness[3] (feet)	Groundwater Elevation[4] (feet)	Top of Well Screen Elevation[5] (feet)	Comments
MW-207	04/17/12	10:45	15.40	12.30	--	--	3.10	5.90	
MW-207	10/10/12	12:05	15.40	11.19	--	--	4.21	5.90	
MW-207	12/24/12	11:15	15.40	8.73	--	--	6.67	5.90	
MW-207	01/08/13	15:52	15.40	8.42	--	--	6.98	5.90	
MW-207	04/30/13	10:10	15.40	9.59	--	--	5.81	5.90	
MW-207	09/19/13	9:45	15.40	12.23	--	--	3.17	5.90	
MW-207	11/22/13	11:00	15.40	8.98	--	--	6.42	5.90	
MW-207	06/23/14	9:01	15.40	12.88	--	--	2.52	5.90	
MW-207	12/15/14	13:18	15.40	7.45	--	--	7.95	5.90	
MW-207	06/17/15	10:55	15.40	10.24	--	--	5.16	5.90	
MW-207	12/09/15	9:45	15.40	7.82	--	--	7.58	5.90	
MW-207	01/15/16	15:38	15.40	10.63	--	--	4.77	5.90	
MW-207	02/16/16	8:55	15.40	8.94	--	--	6.46	5.90	
MW-207	06/13/16	8:55	15.40	12.48	--	--	2.92	5.90	
MW-207	09/22/16	12:27	15.40	9.36	--	--	6.04	5.90	
MW-207	01/12/17	10:11	15.40	9.24	--	--	6.16	5.90	
MW-207	03/27/17	13:00	15.40	11.49	--	--	3.91	5.90	
MW-207	06/16/17	8:53	15.40	10.25	--	--	5.15	5.90	
MW-207	11/07/17	13:04	15.40	10.21	--	--	5.19	5.90	
MW-207	03/26/18	8:00	15.40	10.01	--	--	5.39	5.90	
MW-207	06/19/18	15:42	15.40	13.06	--	--	2.34	5.90	
MW-207	09/27/18	12:13	15.40	11.70	--	--	3.70	5.90	
MW-207	12/12/18	15:08	15.40	9.79	--	--	5.61	5.90	
MW-207	03/25/19	15:09	15.40	11.69	--	--	3.71	5.90	
MW-207	06/24/19	16:16	15.40	12.90	--	--	2.50	5.90	
MW-207	09/25/19	8:43	15.40	13.27	--	--	2.13	5.90	
MW-207	12/16/19	14:31	15.40	9.66	--	--	5.74	5.90	
MW-207	03/25/20	12:38	15.40	11.82			3.58	5.90	
MW-207	06/17/20	8:53	15.40	12.25	--	--	3.15	5.90	
MW-207	09/11/20	8:12	15.40	13.36	--	--	2.04	5.90	
MW-207	11/17/20	9:37	15.40	7.59	--	--	7.81	5.90	
MW-207	03/15/21	13:18	15.40	11.82	--	--	3.58	5.90	
MW-207	06/09/21	11:10	15.40	13.03	--	--	2.37	5.90	
MW-207	09/20/21	11:22	15.40	13.00	--	--	2.40	5.90	
MW-207	12/03/21	9:37	15.40	10.05	--	--	5.35	5.90	
MW-207	03/30/22	11:24	15.40	11.34	--	--	4.06	5.90	
MW-207	06/03/22	14:00	15.40	12.81	--	--	2.59	5.90	
MW-207	08/11/22	11:08	15.40	12.70	--	--	2.70	5.90	
MW-207	10/24/22	10:49	15.40	11.50	--	--	3.90	5.90	
MW-207	03/31/23	11:46	15.40	11.02	--	--	4.38	5.90	
MW-207	06/20/23	12:44	15.40	12.69	--	--	2.71	5.90	
MW-207	08/29/23	10:07	15.40	12.65	--	--	2.75	5.90	
MW-207	10/25/23	8:29	15.40	12.18	--	--	3.22	5.90	
MW-207	**03/12/24**	**13:17**	**15.4**	**10.77**	**--**	**--**	**4.63**	**5.90**	**No evidence of sheen/LNAPL was encountered.**
MW-207	**06/10/24**	**14:16**	**15.4**	**12.86**	**--**	**--**	**2.54**	**5.90**	**No evidence of sheen/LNAPL was encountered.**
MW-209	02/16/16	9:45	15.53	8.26	--	--	7.27	12.53	Top of casing surveyed by OTAK 2/16/16.
MW-209	06/13/16	9:50	15.53	10.31	--	--	5.22	12.53	
MW-209	09/22/16	12:12	15.53	10.21	--	--	5.32	12.53	
MW-209	01/12/17	11:51	15.53	8.01	--	--	7.52	12.53	
MW-209	03/27/17	12:35	15.53	8.46	--	--	7.07	12.53	
MW-209	06/16/17	9:26	15.53	9.59	--	--	5.94	12.53	
MW-209	12/16/19	14:07	15.53	8.84	--	--	6.69	12.53	
MW-209	03/25/20	13:54	15.53	9.80			5.73	12.53	
MW-209	06/17/20	10:20	15.53	10.09	--	--	5.44	12.53	
MW-209	09/11/20	9:28	15.53	10.51	--	--	5.02	12.53	
MW-209	11/17/20	10:50	15.53	8.58	--	--	6.95	12.53	
MW-209	03/15/21	14:20	15.53	9.53	--	--	6.00	12.53	
MW-209	06/09/21	12:43	15.53	10.14	--	--	5.39	12.53	
MW-209	09/20/21	13:08	15.53	10.33	--	--	5.20	12.53	
MW-209	12/03/21	11:05	15.53	8.88	--	--	6.65	12.53	
MW-209	03/30/22	12:33	15.53	9.47	--	--	6.06	12.53	
MW-209	06/03/22	14:44	15.53	9.85	--	--	5.68	12.53	
MW-209	08/11/22	12:06	15.53	9.62	--	--	5.91	12.53	
MW-209	10/24/22	11:58	15.53	10.20	--	--	5.33	12.53	
MW-209	03/21/23	14:00	15.53	9.25	--	--	6.28	12.53	
MW-209	06/20/23	14:01	15.53	9.74	--	--	5.79	12.53	
MW-209	08/29/23	10:48	15.53	9.73	--	--	5.80	12.53	
MW-209	10/25/23	9:53	9.53	9.78	--	--	-0.25	6.53	
MW-209	**03/12/24**	**14:26**	**15.53**	**8.61**	**--**	**--**	**6.92**	**12.53**	**No evidence of sheen/LNAPL was encountered.**
MW-209	**06/10/24**	**12:43**	**15.53**	**9.41**	**--**	**--**	**6.12**	**12.53**	**No evidence of sheen/LNAPL was encountered.**
MW-210	02/16/16	9:50	15.13	7.52	--	--	7.61	12.13	Top of casing surveyed by OTAK 2/16/16.
MW-210	06/13/16	9:45	15.13	9.59	--	--	5.54	12.13	
MW-210	09/22/16	12:08	15.13	9.71	--	--	5.42	12.13	
MW-210	01/12/17	11:56	15.13	8.31	--	--	6.82	12.13	
MW-210	03/27/17	12:30	15.13	8.61	--	--	6.52	12.13	
MW-210	06/16/17	9:24	15.13	8.94	--	--	6.19	12.13	
MW-210	12/16/19	14:12	15.13	9.73	--	--	5.40	12.13	
MW-210	03/25/20	9:23	15.13	9.47	--	--	5.66	12.13	
MW-210	06/17/20	10:18	15.13	9.24	--	--	5.89	12.13	
MW-210	09/11/20	9:24	15.13	9.68	--	--	5.45	12.13	
MW-210	11/17/20	12:31	15.13	8.02	--	--	7.11	12.13	
MW-210	03/15/21	14:16	15.13	8.81	--	--	6.32	12.13	
MW-210	06/09/21	12:49	15.13	9.29	--	--	5.84	12.13	
MW-210	09/20/21	13:04	15.13	9.47	--	--	5.66	12.13	
MW-210	12/03/21	11:02	15.13	6.21	--	--	8.92	12.13	
MW-210	03/30/22	12:29	15.13	9.68	--	--	5.45	12.13	
MW-210	06/03/22	14:39	15.13	9.56	--	--	5.57	12.13	
MW-210	08/11/22	12:01	15.13	8.83	--	--	6.30	12.13	
MW-210	10/24/22	11:54	15.13	9.51	--	--	5.62	12.13	
MW-210	03/21/23	13:55	15.13	6.52	--	--	8.61	12.13	
MW-210	06/20/23	13:56	15.13	9.91	--	--	5.22	12.13	
MW-210	08/29/23	10:45	15.13	8.98	--	--	6.15	12.13	
MW-210	10/25/23	9:49	15.13	7.76	--	--	7.37	12.13	
MW-210	**03/12/24**	**14:29**	**15.13**	**6.28**	**--**	**--**	**8.85**	**12.13**	**No evidence of sheen/LNAPL was encountered.**

Appendix E
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Well Number	Date	Time (hr:min)	Top of Casing[1] (feet)	Depth to Groundwater[2] (feet)	Depth to LNAPL[3] (feet)	LNAPL Thickness[3] (feet)	Groundwater Elevation[4] (feet)	Top of Well Screen Elevation[5] (feet)	Comments
MW-210	**06/10/24**	**14:41**	**15.13**	**10.26**	**--**	**--**	**4.87**	**12.13**	**No evidence of sheen/LNAPL was encountered.**
MW-211	02/16/16	9:55	15.02	7.91	--	--	7.11	12.02	Top of casing surveyed by OTAK 2/16/16.
MW-211	06/13/16	9:40	15.02	9.79	--	--	5.23	12.02	
MW-211	09/22/16	12:05	15.02	9.77	--	--	5.25	12.02	
MW-211	01/12/17	11:59	15.02	8.18	--	--	6.84	12.02	
MW-211	03/27/17	12:25	15.02	8.04	--	--	6.98	12.02	
MW-211	06/16/17	9:20	15.02	9.55	--	--	5.47	12.02	
MW-211	12/16/19	14:18	15.02	9.28	--	--	5.74	12.02	
MW-211	03/25/20	13:46	15.02	9.28	--	--	5.74	12.02	
MW-211	06/17/20	10:16	15.02	9.58	--	--	5.44	12.02	
MW-211	09/11/20	9:20	15.02	10.02	--	--	5.00	12.02	
MW-211	11/17/20	10:44	15.02	8.22	--	--	6.80	12.02	
MW-211	03/15/21	14:14	15.02	9.02	--	--	6.00	12.02	
MW-211	06/09/21	12:54	15.02	9.66	--	--	5.36	12.02	
MW-211	09/20/21	13:00	15.02	9.82	--	--	5.20	12.02	
MW-211	12/03/21	10:59	15.02	8.45	--	--	6.57	12.02	
MW-211	03/30/22	12:24	15.02	8.98	--	--	6.04	12.02	
MW-211	06/03/22	14:35	15.02	9.09	--	--	5.93	12.02	
MW-211	08/11/22	11:58	15.02	9.09	--	--	5.93	12.02	
MW-211	10/24/22	11:50	15.02	9.68	--	--	5.34	12.02	
MW-211	03/21/23	13:51	15.02	8.76	--	--	6.26	12.02	
MW-211	06/20/23	13:51	15.02	9.18	--	--	5.84	12.02	
MW-211	08/29/23	10:43	15.02	10.20	--	--	4.82	12.02	
MW-211	10/25/23	10:33	15.02	11.98	--	--	3.04	12.02	
MW-211	**03/12/24**	**14:31**	**15.02**	**8.13**	**--**	**--**	**6.89**	**12.02**	**No evidence of sheen/LNAPL was encountered.**
MW-211	**06/10/24**	**10:05**	**15.02**	**7.93**	**--**	**--**	**7.09**	**12.02**	**No evidence of sheen/LNAPL was encountered.**
MW-27	12/11/02	13:20	6.18	9.38	NR	NR	-3.20	--	
MW-27	03/20/03	10:31	6.18	11.09	NR	NR	-4.91	--	
MW-27	07/03/03	9:02	6.18	12.10	NR	NR	-5.92	--	
MW-27	09/18/03	11:27	6.18	10.58	NR	NR	-4.40	--	
MW-27	12/02/03	10:56	6.18	9.50	NR	NR	-3.32	--	
MW-27	03/09/04	10:37	6.18	11.83	NR	NR	-5.65	--	
MW-27	06/03/04	10:09	6.18	12.32	NR	NR	-6.14	--	
MW-27	09/03/04	10:35	6.18	10.63	NR	NR	-4.45	--	
MW-27	12/06/04	10:30	6.18	9.41	NR	NR	-3.23	--	
MW-27	03/04/05	10:33	6.18	9.05	NR	NR	-2.87	--	
MW-27	06/03/05	--	6.18	13.05	NR	NR	-6.87	--	
MW-27	09/01/05	8:00	6.18	10.29	NR	NR	-4.11	--	
MW-27	12/01/05	9:45	6.18	9.28	NR	NR	-3.10	--	
MW-27	03/02/06	9:00	6.18	9.29	NR	NR	-3.11	--	
MW-27	06/06/06	--	--	--	--	--	--	--	Well Damaged During Construction Activities
MW-27R	03/07/07	9:35	4.37	8.25	--	--	-3.88	--	Top of casing surveyed using an arbitrary datum point.
MW-27R	09/26/07	7:59	4.37	9.19	--	--	-4.82	--	
MW-27R	11/26/07	14:55	4.37	7.56	--	--	-3.19	--	
MW-27R	12/03/07	--	--	--	--	--	--	--	Well Abandoned
MW-34	12/11/02	13:45	5.33	9.45	NR	NR	-4.12	--	
MW-34	03/20/03	11:43	5.33	6.99	NR	NR	-1.66	--	
MW-34	07/03/03	8:29	5.33	9.02	NR	NR	-3.69	--	
MW-34	09/18/03	9:55	5.33	9.57	NR	NR	-4.24	--	
MW-34	12/02/03	11:45	5.33	7.00	NR	NR	-1.67	--	
MW-34	03/09/04	12:15	5.33	8.42	NR	NR	-3.09	--	
MW-34	06/03/04	11:25	5.33	8.95	NR	NR	-3.62	--	
MW-34	09/03/04	13:53	5.33	8.63	NR	NR	-3.30	--	
MW-34	12/06/04	9:45	5.33	9.48	NR	NR	-4.15	--	
MW-34	03/04/05	13:55	5.33	8.87	NR	NR	-3.54	--	
MW-34	06/03/05	--	5.33	9.08	NR	NR	-3.75	--	
MW-34	09/01/05	9:08	5.33	9.38	NR	NR	-4.05	--	
MW-34	12/01/05	10:49	5.33	6.72	NR	NR	-1.39	--	
MW-34	03/02/06	10:50	5.33	9.25	NR	NR	-3.92	--	
MW-34	06/06/06	9:20	5.33	8.82	NR	NR	-3.49	--	
MW-34	09/15/06	--	5.33	8.66	NR	NR	-3.33	--	
MW-34	03/07/07	--	5.33	--	NR	NR	--	--	
MW-34	02/13/08	--	--	--	--	--	--	--	Well Possibly Removed During Previous Excavation Activities
MW-35	12/11/02	13:35	5.11	9.29	NR	NR	-4.18	--	
MW-35	03/20/03	11:42	5.11	7.65	NR	NR	-2.54	--	
MW-35	07/03/03	--	5.11	--	NR	NR	--	--	
MW-35	09/18/03	--	5.11	--	NR	NR	--	--	
MW-35	12/02/03	--	5.11	--	NR	NR	--	--	
MW-35	03/09/04	--	5.11	--	NR	NR	--	--	
MW-35	06/03/04	--	5.11	--	NR	NR	--	--	
MW-35	09/03/04	--	5.11	--	NR	NR	--	--	
MW-35	12/06/04	--	5.11	--	NR	NR	--	--	
MW-35	03/04/05	--	5.11	--	NR	NR	--	--	
MW-35	06/03/05	--	5.11	--	NR	NR	--	--	
MW-35	09/01/05	--	5.11	--	NR	NR	--	--	
MW-35	12/01/05	--	5.11	--	NR	NR	--	--	
MW-35	03/02/06	--	5.11	--	NR	NR	--	--	
MW-35	06/06/06	--	5.11	--	NR	NR	--	--	
MW-35	09/15/06	--	5.11	--	NR	NR	--	--	
MW-35	03/07/07	--	5.11	--	NR	NR	--	--	
MW-35	02/13/08	--	--	--	--	--	--	--	Well Possibly Removed During Previous Excavation Activities
MW-42	12/11/02	13:30	5.20	9.38	NR	NR	-4.18	--	
MW-42	03/20/03	11:50	5.20	7.86	NR	NR	-2.66	--	
MW-42	07/03/03	8:11	5.20	9.44	NR	NR	-4.24	--	
MW-42	09/18/03	10:21	5.20	10.92	NR	NR	-5.72	--	
MW-42	12/02/03	11:36	5.20	9.14	NR	NR	-3.94	--	
MW-42	03/09/04	10:09	5.20	8.58	NR	NR	-3.38	--	
MW-42	06/03/04	11:10	5.20	9.19	NR	NR	-3.99	--	
MW-42	09/03/04	14:01	5.20	9.02	NR	NR	-3.82	--	
MW-42	12/06/04	9:48	5.20	9.43	NR	NR	-4.23	--	
MW-42	03/04/05	13:56	5.20	8.99	NR	NR	-3.79	--	
MW-42	06/03/05	--	5.20	9.24	NR	NR	-4.04	--	
MW-42	09/01/05	9:00	5.20	9.55	NR	NR	-4.35	--	
MW-42	12/01/05	10:54	5.20	8.91	NR	NR	-3.71	--	
MW-42	03/02/06	10:45	5.20	9.25	NR	NR	-4.05	--	

Appendix E
Summary of Historical Groundwater Elevation Data
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Well Number	Date	Time (hr:min)	Top of Casing[1]	Depth to Groundwater[2] (feet)	Depth to LNAPL[3] (feet)	LNAPL Thickness[3] (feet)	Groundwater Elevation[4] (feet)	Top of Well Screen Elevation[5] (feet)	Comments
MW-42	06/06/06	9:28	5.20	8.93	NR	NR	-3.73	--	
MW-42	09/15/06	--	5.20	8.87	NR	NR	-3.67	--	
MW-42	03/07/07	--	5.20	--	NR	NR	--	--	
MW-42	02/13/08	--	--	--	--	--	--	--	Well Possibly Removed During Previous Excavation Activities
MW-43	12/11/02	13:40	4.94	9.06	NR	NR	-4.12	--	
MW-43	03/20/03	11:30	4.94	7.10	NR	NR	-2.16	--	
MW-43	07/03/03	8:15	4.94	8.86	NR	NR	-3.92	--	
MW-43	09/18/03	--	4.94	--	NR	NR	--	--	
MW-43	12/02/03	--	4.94	--	NR	NR	--	--	
MW-43	03/09/04	--	4.94	--	NR	NR	--	--	
MW-43	06/03/04	--	4.94	--	NR	NR	--	--	
MW-43	09/03/04	--	4.94	--	NR	NR	--	--	
MW-43	12/06/04	--	4.94	--	NR	NR	--	--	
MW-43	03/04/05	--	4.94	--	NR	NR	--	--	
MW-43	06/03/05	--	4.94	--	NR	NR	--	--	
MW-43	09/01/05	--	4.94	--	NR	NR	--	--	
MW-43	12/01/05	--	4.94	--	NR	NR	--	--	
MW-43	03/02/06	--	4.94	--	NR	NR	--	--	
MW-43	06/06/06	--	4.94	--	NR	NR	--	--	
MW-43	09/15/06	--	4.94	--	NR	NR	--	--	
MW-43	03/07/07	--	4.94	--	NR	NR	--	--	
MW-43	02/13/08	--	--	--	--	--	--	--	Well Possibly Removed During Previous Excavation Activities
MW-44	12/11/02	--	5.46	--	NR	NR	--	--	
MW-44	03/20/03	--	5.46	--	NR	NR	--	--	
MW-44	07/03/03	--	5.46	--	NR	NR	--	--	
MW-44	09/18/03	--	5.46	--	NR	NR	--	--	
MW-44	12/02/03	--	5.46	--	NR	NR	--	--	
MW-44	03/09/04	--	5.46	--	NR	NR	--	--	
MW-44	06/03/04	--	5.46	--	NR	NR	--	--	
MW-44	09/03/04	--	5.46	--	NR	NR	--	--	
MW-44	12/06/04	--	5.46	--	NR	NR	--	--	
MW-44	03/04/05	--	5.46	--	NR	NR	--	--	
MW-44	06/03/05	--	5.46	--	NR	NR	--	--	
MW-44	09/01/05	--	5.46	--	NR	NR	--	--	
MW-44	12/01/05	--	5.46	--	NR	NR	--	--	
MW-44	03/02/06	--	5.46	--	NR	NR	--	--	
MW-44	06/06/06	--	5.46	--	NR	NR	--	--	
MW-44	09/15/06	--	5.46	--	NR	NR	--	--	
MW-44	03/07/07	--	5.46	--	NR	NR	--	--	
MW-65	12/11/02	14:03	10.83	14.69	NR	NR	-3.86	--	
MW-65	03/20/03	10:44	10.83	10.09	NR	NR	0.74	--	
MW-65	07/03/03	11:12	10.83	13.85	NR	NR	-3.02	--	
MW-65	09/18/03	10:40	10.83	14.15	NR	NR	-3.32	--	
MW-65	12/02/03	11:14	10.83	12.38	NR	NR	-1.55	--	
MW-65	03/09/04	10:50	10.83	13.63	NR	NR	-2.80	--	
MW-65	06/03/04	11:42	10.83	14.24	NR	NR	-3.41	--	
MW-65	09/03/04	14:08	10.83	13.77	NR	NR	-2.94	--	
MW-65	12/06/04	9:32	10.83	14.59	NR	NR	-3.76	--	
MW-65	03/04/05	14:04	10.83	14.06	NR	NR	-3.23	--	
MW-65	06/03/05	--	10.83	14.14	NR	NR	-3.31	--	
MW-65	09/01/05	9:55	10.83	14.67	NR	NR	-3.84	--	
MW-65	12/01/05	11:19	10.83	12.05	NR	NR	-1.22	--	
MW-65	03/02/06	11:12	10.83	14.28	NR	NR	-3.45	--	
MW-65	06/06/06	8:26	10.83	13.83	NR	NR	-3.00	--	
MW-65	09/15/06	--	10.83	13.90	NR	NR	-3.07	--	
MW-65	03/07/07	8:51	10.83	13.63	--	--	-2.80	--	
MW-65	06/07/07	8:30	10.83	13.69	--	--	-2.86	--	
MW-65	09/26/07	9:27	10.83	14.29	--	--	-3.46	--	
MW-65	11/26/07	10:00	10.83	13.62	--	--	-2.79	--	
MW-65	12/03/07	--	--	--	--	--	--	--	Well Decommissioned
MW-66	12/11/02	14:15	11.62	15.36	NR	NR	-3.74	--	
MW-66	03/20/03	13:04	11.62	12.21	NR	NR	-0.59	--	
MW-66	07/03/03	11:22	11.62	14.73	NR	NR	-3.11	--	
MW-66	09/18/03	10:34	11.62	15.25	NR	NR	-3.63	--	
MW-66	12/02/03	11:27	11.62	11.99	NR	NR	-0.37	--	
MW-66	03/09/04	11:02	11.62	13.67	NR	NR	-2.05	--	
MW-66	06/03/04	11:45	11.62	14.78	NR	NR	-3.16	--	
MW-66	09/03/04	14:12	11.62	14.16	NR	NR	-2.54	--	
MW-66	12/06/04	9:39	11.62	15.22	NR	NR	-3.60	--	
MW-66	03/04/05	14:01	11.62	14.54	NR	NR	-2.92	--	
MW-66	06/03/05	--	11.62	14.69	NR	NR	-3.07	--	
MW-66	09/01/05	10:10	11.62	15.31	NR	NR	-3.69	--	
MW-66	12/01/05	11:26	11.62	11.78	NR	NR	-0.16	--	
MW-66	03/02/06	11:20	11.62	14.77	NR	NR	-3.15	--	
MW-66	06/06/06	8:15	11.62	14.35	NR	NR	-2.73	--	
MW-66	09/15/06	--	11.62	14.39	NR	NR	-2.77	--	
MW-66	03/07/07	9:00	11.62	14.11	--	--	-2.49	--	
MW-66	09/26/07	9:36	11.62	14.97	--	--	-3.35	--	
MW-66	11/26/07	13:42	11.62	14.23	--	--	-2.61	--	
MW-66	12/03/07	--	--	--	--	--	--	--	Well Decommissioned
PZ-7.5	04/30/13	9:45	--	7.18	--	--	--	--	
PZ-7.5	09/15/13	8:46	--	7.19	--	--	--	--	
PZ-7.5	11/22/13	9:27	--	8.03	--	--	--	--	
PZ-7.5	06/11/14	--	--	--	--	--	--	--	Well Decommissioned
PZ-9.5	04/30/13	9:53	--	9.00	--	--	--	--	
PZ-9.5	09/15/13	8:52	--	9.86	--	--	--	--	
PZ-9.5	11/22/13	9:37	--	9.86	--	--	--	--	
PZ-9.5	06/10/14	--	--	--	--	--	--	--	Well Decommissioned
PZ-61A-R	09/21/10	10:36	--	14.05	--	--	--	--	
PZ-61A-R	09/28/09	8:50	--	14.04	--	--	--	--	
PZ-61A-R	10/11/10	11:12	--	14.18	--	--	--	--	
PZ-61A-R	03/04/11	9:55	--	12.46	--	--	--	--	
PZ-61A-R	04/25/11	11:30	--	13.05	12.78	0.27	--	--	
PZ-61A-R	09/21/11	9:40	--	14.18	14.17	0.01	--	--	

Appendix E
Summary of Historical Groundwater Elevation Data
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Well Number	Date	Time (hr:min)	Top of Casing[1]	Depth to Groundwater[2] (feet)	Depth to LNAPL[3] (feet)	LNAPL Thickness[3] (feet)	Groundwater Elevation[4] (feet)	Top of Well Screen Elevation[5] (feet)	Comments
PZ-61A-R	11/21/11	11:10	--	14.34	--	--	--	--	
PZ-61A-R	02/20/12	9:10	--	13.28	13.18	0.10	--	--	
PZ-61A-R	04/17/12	12:05	--	12.84	--	--	--	--	
PZ-61A-R	10/10/12	12:30	--	14.89	--	--	--	--	
PZ-61A-R	12/24/12	11:31	--	12.66	--	--	--	--	
PZ-61A-R	01/08/13	14:31	--	11.73	--	--	--	--	
PZ-61A-R	04/30/13	11:05	--	13.38	--	--	--	--	
PZ-61A-R	09/19/13	9:51	--	14.10	--	--	--	--	
PZ-61A-R	11/22/13	9:30	--	15.01	--	--	--	--	
PZ-61A-R	06/12/14	--	--	--	--	--	--	--	Well Decommissioned
PZ-203	09/21/10	11:24	--	13.29	--	--	--	--	
PZ-203	04/25/11	13:50	--	11.80	--	--	--	--	
PZ-203	09/21/11	10:29	--	13.67	--	--	--	--	
PZ-203	11/21/11	10:24	--	12.60	--	--	--	--	
PZ-203	02/20/12	--	--	--	--	--	--	--	Unable to locate
PZ-203	04/17/12	12:25	--	13.00	--	--	--	--	
PZ-203	10/10/12	--	--	--	--	--	--	--	Unable to locate
PZ-203	12/24/12	10:39	--	14.52	--	--	--	--	
PZ-203	01/08/13	15:25	--	10.13	--	--	--	--	
PZ-203	04/30/13	10:26	--	11.53	--	--	--	--	
PZ-203	09/19/13	9:27	--	12.30	--	--	--	--	
PZ-203	11/22/13	10:10	--	12.03	--	--	--	--	
PZ-203	06/12/14	--	--	--	--	--	--	--	Well Decommissioned
PZ-204	09/21/10	11:32	--	19.02	--	--	--	--	
PZ-204	04/25/11	14:05	--	17.67	--	--	--	--	
PZ-204	09/21/11	10:18	--	19.34	--	--	--	--	
PZ-204	11/21/11	10:30	--	18.71	--	--	--	--	
PZ-204	02/20/12	--	--	--	--	--	--	--	Unable to locate
PZ-204	04/17/12	11:35	--	18.23	--	--	--	--	
PZ-204	10/10/12	--	--	--	--	--	--	--	Unable to locate
PZ-204	12/24/12	10:21	--	16.65	--	--	--	--	
PZ-204	01/08/13	15:15	--	16.82	--	--	--	--	
PZ-204	04/30/13	10:34	--	17.75	--	--	--	--	
PZ-204	09/19/13	9:21	--	18.40	--	--	--	--	
PZ-204	11/22/13	9:55	--	18.80	--	--	--	--	
PZ-204	06/12/14	--	--	--	--	--	--	--	Well Decommissioned
RW-1	09/13/07	--	4.65	9.12	--	--	-4.47	--	
RW-1	11/01/07	10:45	4.65	9.60	--	--	-4.95	--	
RW-1	11/26/07	11:57	4.65	8.43	--	--	-3.78	--	
RW-1	12/07/07	11:55	4.65	7.00	--	--	-2.35	--	
RW-1	12/19/07	9:25	4.65	7.75	--	--	-3.10	--	
RW-1	01/03/08	9:05	4.65	7.78	--	--	-3.13	--	
RW-1	01/30/07	8:34	4.65	8.22	--	--	-3.57	--	
RW-1	02/12/08	9:00	4.65	8.55	--	--	-3.90	--	
RW-1	03/03/08	8:58	4.65	8.88	--	--	-4.23	--	
RW-1	03/17/08	8:52	4.65	8.80	--	--	-4.15	--	
RW-1	04/01/08	8:49	4.65	8.79	--	--	-4.14	--	
RW-1	04/14/08	8:51	4.65	8.85	--	--	-4.20	--	
RW-1	04/28/08	9:01	4.65	8.90	--	--	-4.25	--	
RW-1	05/13/08	9:10	4.65	9.25	--	--	-4.60	--	
RW-1	05/27/08	10:25	14.20	9.05	--	--	5.15	--	Top of casing surveyed by OTAK 5/27/08.
RW-1	06/10/08	10:36	14.20	8.88	--	--	5.32	--	
RW-1	06/24/08	9:15	14.20	8.98	--	--	5.22	--	
RW-1	07/07/08	9:26	14.20	8.65	--	--	5.55	--	
RW-1	07/22/08	9:15	14.20	8.88	--	--	5.32	--	
RW-1	08/12/08	9:23	14.20	8.86	--	--	5.34	--	
RW-1	09/03/08	--	14.20	9.13	--	--	5.07	--	
RW-1	10/17/08	8:29	14.20	6.33	--	--	7.87	--	
RW-1	10/29/08	8:17	14.20	9.23	--	--	4.97	--	
RW-1	11/12/08	9:09	14.20	7.63	--	--	6.57	--	
RW-1	12/03/08	11:25	14.20	9.82	--	--	4.38	--	
RW-1	01/06/09	9:15	14.20	7.86	--	--	6.34	--	
RW-1	01/20/09	12:20	14.20	8.34	--	--	5.86	--	
RW-1	02/03/09	9:08	14.20	8.89	--	--	5.31	--	
RW-1	02/17/09	9:06	14.20	8.41	--	--	5.79	--	
RW-1	03/12/09	11:18	14.20	8.75	--	--	5.45	--	
RW-1	03/25/09	9:05	14.20	8.62	--	--	5.58	--	
RW-1	04/08/09	9:14	14.20	8.58	--	--	5.62	--	
RW-1	04/30/09	9:20	14.20	8.55	--	--	5.65	--	
RW-1	05/12/09	9:21	14.20	7.98	--	--	6.22	--	
RW-1	05/26/09	13:19	14.20	8.24	--	--	5.96	--	
RW-1	06/09/09	9:09	14.20	8.00	--	--	6.20	--	
RW-1	06/25/09	9:19	14.20	8.08	--	--	6.12	--	
RW-1	07/07/09	9:13	14.20	8.34	--	--	5.86	--	
RW-1	09/10/09	9:52	14.20	8.98	--	--	5.22	--	
RW-1	09/23/09	9:09	14.20	8.98	--	--	5.22	--	
RW-1	10/08/09	9:24	14.20	9.01	--	--	5.19	--	
RW-1	10/19/09	9:36	14.20	8.60	--	--	5.60	--	
RW-1	11/12/09	9:10	14.20	7.75	--	--	6.45	--	
RW-1	03/24/10	9:24	14.20	8.39	--	--	5.81	--	
RW-1	04/13/10	10:15	14.20	8.29	--	--	5.91	--	
RW-1	05/24/10	10:14	14.20	8.38	--	--	5.82	--	
RW-1	09/21/10	9:59	14.20	8.00	--	--	6.20	--	
RW-1	11/19/10	16:25	14.20	7.98	--	--	6.22	--	
RW-1	03/04/11	9:12	14.20	7.96	--	--	6.24	--	
RW-1	04/25/11	9:10	14.20	8.25	--	--	5.95	--	
RW-1	09/21/11	8:30	14.20	8.94	--	--	5.26	--	
RW-1	11/21/11	8:30	14.20	8.67	--	--	5.53	--	
RW-1	02/20/12	9:55	14.20	8.41	--	--	5.79	--	
RW-1	04/17/12	9:22	14.20	8.40	--	--	5.80	--	
RW-1	10/10/12	9:40	14.20	9.41	--	--	4.79	--	
RW-1	12/24/12	--	--	--	--	--	--	--	Unable to access
RW-1	01/08/13	13:40	14.20	7.54	--	--	6.66	--	
RW-1	04/30/13	9:20	14.20	8.31	--	--	5.89	--	

Appendix E
Summary of Historical Groundwater Elevation Data
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Well Number	Date	Time (hr:min)	Top of Casing[1]	Depth to Groundwater[2] (feet)	Depth to LNAPL[3] (feet)	LNAPL Thickness[3] (feet)	Groundwater Elevation[4] (feet)	Top of Well Screen Elevation[5] (feet)	Comments
RW-1	09/15/13	8:25	14.20	6.30	--	--	7.90	--	
RW-1	11/22/13	8:00	14.20	9.04	--	--	5.16	--	
RW-1	02/25/14	12:00	14.20	7.80	--	--	6.40	--	
RW-1	05/05/14	8:45	14.20	7.30	--	--	6.90	--	
RW-1	06/12/14	--	--	--	--	--	--	--	Well Decommissioned
RW-2	04/28/08	9:10	4.47	9.98	--	--	-5.51	--	
RW-2	05/13/08	9:08	4.47	8.29	--	--	-3.82	--	
RW-2	05/27/08	10:23	14.30	9.12	--	--	5.18	--	Top of casing surveyed by OTAK 5/27/08.
RW-2	06/10/08	10:38	14.30	9.00	--	--	5.30	--	
RW-2	06/24/08	9:19	14.30	9.12	--	--	5.18	--	
RW-2	07/07/08	9:30	14.30	8.86	--	--	5.44	--	
RW-2	07/22/08	9:19	14.30	9.03	--	--	5.27	--	
RW-2	08/12/08	9:27	14.30	8.78	--	--	5.52	--	
RW-2	09/03/08	--	14.30	9.23	--	--	5.07	--	
RW-2	10/17/08	8:35	14.30	6.34	--	--	7.96	--	
RW-2	10/29/08	8:21	14.30	9.37	--	--	4.93	--	
RW-2	11/12/08	9:13	14.30	6.32	--	--	7.98	--	
RW-2	12/03/08	11:23	14.30	8.92	--	--	5.38	--	
RW-2	01/06/09	9:18	14.30	6.84	--	--	7.46	--	
RW-2	01/20/09	12:23	14.30	8.40	--	--	5.90	--	
RW-2	02/03/09	9:13	14.30	9.08	--	--	5.22	--	
RW-2	02/17/09	9:09	14.30	8.55	--	--	5.75	--	
RW-2	03/12/09	11:21	14.30	8.91	--	--	5.39	--	
RW-2	03/25/09	9:07	14.30	8.50	--	--	5.80	--	
RW-2	04/08/09	9:18	14.30	8.68	--	--	5.62	--	
RW-2	04/30/09	9:24	14.30	8.70	--	--	5.60	--	
RW-2	05/12/09	9:15	14.30	8.15	--	--	6.15	--	
RW-2	05/26/09	13:17	14.30	8.31	--	--	5.99	--	
RW-2	06/09/09	9:13	14.30	8.21	--	--	6.09	--	
RW-2	06/25/09	9:22	14.30	8.28	--	--	6.02	--	
RW-2	07/07/09	9:17	14.30	8.49	--	--	5.81	--	
RW-2	09/10/09	9:50	14.30	9.11	--	--	5.19	--	
RW-2	09/23/09	9:12	14.30	9.10	--	--	5.20	--	
RW-2	10/08/09	9:27	14.30	9.24	--	--	5.06	--	
RW-2	10/19/09	9:40	14.30	8.72	--	--	5.58	--	
RW-2	11/12/09	9:12	14.30	7.16	--	--	7.14	--	
RW-2	03/24/10	9:28	14.30	8.42	--	--	5.88	--	
RW-2	04/13/10	10:12	14.30	8.35	--	--	5.95	--	
RW-2	05/24/10	10:16	14.30	8.46	--	--	5.84	--	
RW-2	08/16/10	7:40	14.30	7.87	--	--	6.43	--	
RW-2	08/16/10	7:42	14.30	7.87	--	--	6.43	--	
RW-2	09/02/10	10:14	14.30	9.24	--	--	5.06	--	
RW-2	09/02/10	10:42	14.30	9.25	--	--	5.05	--	
RW-2	09/02/10	11:45	14.30	9.32	--	--	4.98	--	
RW-2	09/02/10	11:46	14.30	9.32	--	--	4.98	--	
RW-2	09/02/10	11:47	14.30	9.32	--	--	4.98	--	
RW-2	09/02/10	11:48	14.30	9.32	--	--	4.98	--	
RW-2	09/02/10	11:49	14.30	9.32	--	--	4.98	--	
RW-2	09/02/10	11:55	14.30	9.33	--	--	4.97	--	
RW-2	09/02/10	12:00	14.30	9.33	--	--	4.97	--	
RW-2	09/02/10	12:05	14.30	9.33	--	--	4.97	--	
RW-2	09/02/10	12:10	14.30	9.33	--	--	4.97	--	
RW-2	09/02/10	12:15	14.30	9.34	--	--	4.96	--	
RW-2	09/02/10	12:20	14.30	9.34	--	--	4.96	--	
RW-2	09/02/10	12:25	14.30	9.34	--	--	4.96	--	
RW-2	09/02/10	12:42	14.30	9.35	--	--	4.95	--	
RW-2	09/02/10	13:00	14.30	9.36	--	--	4.94	--	
RW-2	09/02/10	13:32	14.30	9.36	--	--	4.94	--	
RW-2	09/03/10	9:12	14.30	9.52	--	--	4.78	--	
RW-2	09/03/10	10:26	14.30	9.48	--	--	4.82	--	
RW-2	09/03/10	10:54	14.30	9.55	--	--	4.75	--	
RW-2	09/03/10	11:08	14.30	9.54	--	--	4.76	--	
RW-2	09/21/10	9:57	14.30	8.10	--	--	6.20	--	
RW-2	11/19/10	16:24	14.30	7.62	--	--	6.68	--	
RW-2	03/04/11	9:16	14.30	7.80	--	--	6.50	--	
RW-2	04/25/11	9:15	14.30	8.20	--	--	6.10	--	
RW-2	09/21/11	8:33	14.30	8.39	--	--	5.91	--	
RW-2	11/21/11	8:36	14.30	8.82	--	--	5.48	--	
RW-2	02/20/12	9:57	14.30	8.53	--	--	5.77	--	
RW-2	04/17/12	9:25	14.30	8.38	--	--	5.92	--	
RW-2	10/10/12	9:50	14.30	9.26	--	--	5.04	--	
RW-2	12/24/12	--	--	--	--	--	--	--	Unable to access
RW-2	01/08/13	13:42	14.30	7.40	--	--	6.90	--	
RW-2	04/30/13	9:25	14.30	8.35	--	--	5.95	--	
RW-2	09/15/13	8:28	14.30	8.32	--	--	5.98	--	
RW-2	11/22/13	8:05	14.30	9.22	--	--	5.08	--	
RW-2	02/25/14	11:52	14.30	7.54	--	--	6.76	--	
RW-2	05/05/14	08:55	14.30	7.00	--	--	7.30	--	
RW-2	06/12/14	--	--	--	--	--	--	--	Well Decommissioned
RW-3	09/13/07	--	4.70	9.45	--	--	-4.75	--	
RW-3	11/01/07	10:52	4.70	10.00	--	--	-5.30	--	
RW-3	11/26/07	12:00	4.70	8.60	--	--	-3.90	--	
RW-3	12/07/07	11:50	4.70	7.10	--	--	-2.40	--	
RW-3	12/19/07	9:20	4.70	7.63	--	--	-2.93	--	
RW-3	01/03/08	9:07	4.70	7.49	--	--	-2.79	--	
RW-3	01/30/08	8:38	4.70	8.44	--	--	-3.74	--	
RW-3	02/12/08	9:30	4.70	8.84	--	--	-4.14	--	
RW-3	03/03/08	9:02	4.70	9.11	--	--	-4.41	--	
RW-3	03/17/08	8:58	4.70	8.91	--	--	-4.21	--	
RW-3	04/01/08	8:43	4.70	9.01	--	--	-4.31	--	
RW-3	04/14/08	8:44	4.70	9.16	--	--	-4.46	--	
RW-3	04/28/08	9:16	4.70	9.10	--	--	-4.40	--	
RW-3	05/13/08	9:03	4.70	9.53	--	--	-4.83	--	
RW-3	05/27/08	10:20	14.30	9.36	--	--	4.94	--	Top of casing surveyed by OTAK 5/27/08.

Appendix E
Summary of Historical Groundwater Elevation Data
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Well Number	Date	Time (hr:min)	Top of Casing[1]	Depth to Groundwater[2] (feet)	Depth to LNAPL[3] (feet)	LNAPL Thickness[3] (feet)	Groundwater Elevation[4] (feet)	Top of Well Screen Elevation[5] (feet)	Comments
RW-3	06/10/08	10:41	14.30	9.34	Sheen	--	4.96	--	
RW-3	06/24/08	9:23	14.30	9.34	--	--	4.96	--	
RW-3	07/07/08	9:34	14.30	9.04	--	--	5.26	--	
RW-3	07/22/08	9:22	14.30	9.21	--	--	5.09	--	
RW-3	08/12/08	9:30	14.30	9.21	--	--	5.09	--	
RW-3	09/03/08	--	14.30	9.51	--	--	4.79	--	
RW-3	10/17/08	8:39	14.30	9.60	--	--	4.70	--	
RW-3	10/29/08	8:26	14.30	9.53	--	--	4.77	--	
RW-3	11/12/08	9:17	14.30	7.10	--	--	7.20	--	
RW-3	12/03/08	11:19	14.30	8.04	--	--	6.26	--	
RW-3	01/06/09	9:21	14.30	7.69	--	--	6.61	--	
RW-3	01/20/09	12:26	14.30	8.58	--	--	5.72	--	
RW-3	02/03/09	9:17	14.30	9.22	Sheen	--	5.08	--	
RW-3	02/17/09	9:11	14.30	8.69	--	--	5.61	--	
RW-3	03/12/09	11:24	14.30	9.08	--	--	5.22	--	
RW-3	03/25/09	9:09	14.30	8.91	8.90	0.01	5.39	--	
RW-3	04/08/09	9:20	14.30	8.83	8.82	0.01	5.47	--	
RW-3	04/30/09	9:25	14.30	8.90	Sheen	--	5.40	--	
RW-3	05/12/09	9:26	14.30	8.45	Sheen	--	5.85	--	
RW-3	05/26/09	14:38	14.30	9.09	--	--	5.21	--	
RW-3	06/09/09	9:16	14.30	8.40	--	--	5.90	--	
RW-3	06/25/09	9:23	14.30	8.35	--	--	5.95	--	
RW-3	07/07/09	9:21	14.30	8.62	--	--	5.68	--	
RW-3	08/20/09	8:26	14.30	8.60	Sheen	--	5.70	--	
RW-3	08/28/09	16:00	14.30	9.76	--	--	4.54	--	
RW-3	09/10/09	9:47	14.30	9.54	--	--	4.76	--	
RW-3	09/23/09	9:16	14.30	9.41	Sheen	--	4.89	--	
RW-3	10/08/09	9:30	14.30	9.46	--	--	4.84	--	
RW-3	10/19/09	9:45	14.30	9.13	--	--	5.17	--	
RW-3	11/12/09	9:15	14.30	8.36	--	--	5.94	--	
RW-3	03/24/10	9:31	14.30	8.60	Sheen	--	5.70	--	
RW-3	04/13/10	10:09	14.30	8.58	--	--	5.72	--	
RW-3	05/24/10	10:18	14.30	8.82	--	--	5.48	--	
RW-3	08/16/10	7:40	14.30	8.40	--	--	5.90	--	
RW-3	08/16/10	7:50	14.30	8.36	--	--	5.94	--	
RW-3	09/02/10	10:13	14.30	9.81	--	--	4.49	--	
RW-3	09/02/10	10:40	14.30	9.79	--	--	4.51	--	
RW-3	09/21/10	9:55	14.30	8.58	--	--	5.72	--	
RW-3	11/19/10	16:32	14.30	7.73	--	--	6.57	--	
RW-3	03/04/11	9:19	14.30	7.92	--	--	6.38	--	
RW-3	04/25/11	9:30	14.30	8.43	--	--	5.87	--	
RW-3	09/21/11	8:37	14.30	8.39	--	--	5.91	--	
RW-3	11/21/11	8:43	14.30	9.00	--	--	5.30	--	
RW-3	02/20/12	10:00	14.30	8.60	--	--	5.70	--	
RW-3	04/17/12	9:30	14.30	8.58	--	--	5.72	--	
RW-3	10/10/12	9:55	14.30	9.67	--	--	4.63	--	
RW-3	12/24/12	--	--	--	--	--	--	--	Unable to access
RW-3	01/08/13	13:43	14.30	7.46	--	--	6.84	--	
RW-3	04/30/13	9:28	14.30	8.49	LNAPL on probe	--	5.81	--	
RW-3	09/15/13	8:31	14.30	8.65	--	--	5.65	--	
RW-3	11/22/13	8:10	14.30	9.55	--	--	4.75	--	
RW-3	02/25/14	11:15	14.30	7.67	--	--	6.63	--	
RW-3	05/05/14	8:04	14.30	7.50	--	--	6.80	--	
RW-3	06/12/14	--	--	--	--	--	--	--	Well Decommissioned
RW-4	--	--	--	--	--	--	--	--	Unable to locate
RW-5	09/13/07	--	13.90	8.6	--	--	5.30	--	
RW-5	11/01/07	11:00	13.90	9.4	--	--	4.50	--	
RW-5	11/26/07	12:05	13.90	7.89	--	--	6.01	--	
RW-5	12/07/07	11:45	13.90	6.4	--	--	7.50	--	
RW-5	12/19/07	9:15	13.90	2.2	--	--	11.70	--	
RW-5	05/13/08	9:01	13.90	8.72	--	--	5.18	--	Top of casing surveyed by OTAK 5/27/08.
RW-5	09/03/08	--	13.90	8.74	--	--	5.16	--	
RW-5	12/03/08	11:16	13.90	8.45	--	--	5.45	--	
RW-5	02/17/09	9:14	13.90	7.77	Sheen	--	6.13	--	
RW-5	05/12/09	9:12	13.90	7.48	--	--	6.42	--	
RW-5	05/26/09	13:15	13.90	7.94	--	--	5.96	--	
RW-5	09/10/09	9:44	13.90	8.95	--	--	4.95	--	
RW-5	04/13/10	10:07	13.90	7.75	--	--	6.15	--	
RW-5	09/21/10	9:52	13.90	7.82	--	--	6.08	--	
RW-5	04/25/11	--	--	--	--	--	--	--	Unable to locate
RW-5	09/21/11	8:48	13.90	8.52	--	--	5.38	--	
RW-5	11/21/11	8:49	13.90	8.52	--	--	5.38	--	
RW-5	02/20/12	10:02	13.90	7.85	--	--	6.05	--	
RW-5	04/17/12	9:35	13.90	7.82	--	--	6.08	--	
RW-5	10/10/12	10:02	13.90	9.00	--	--	4.90		
RW-5	12/24/12	--	--	--	--	--	--	--	Unable to access
RW-5	01/08/13	13:44	13.90	6.90	--	--	7.00	--	
RW-5	04/30/13	9:35	13.90	7.75	--	--	6.15	--	
RW-5	09/15/13	8:34	13.90	8.00	--	--	5.90	--	
RW-5	11/22/13	8:15	13.90	9.20	--	--	4.70	--	
RW-5	02/25/14	11:35	13.90	7.43	--	--	6.47	--	
RW-5	05/05/14	09:27	13.90	7.23	--	--	6.67	--	
RW-5	06/11/14	--	--	--	--	--	--	--	Well Decommissioned
RW-6	05/13/08	8:58	13.90	8.35	--	--	5.55	--	Depth to water was measured with pump in well. Top of casing surveyed by OTAK 5/27/08.
RW-6	09/03/08	--	13.90	8.14	--	--	5.76	--	
RW-6	12/03/08	11:13	13.90	7.95	--	--	5.95	--	
RW-6	02/17/09	9:17	13.90	7.80	--	--	6.10	--	
RW-6	05/12/09	9:10	13.90	7.57	--	--	6.33	--	
RW-6	05/26/09	13:12	13.90	7.65	--	--	6.25	--	
RW-6	09/10/09	9:43	13.90	7.90	--	--	6.00	--	
RW-6	04/13/10	10:05	13.90	7.42	--	--	6.48	--	
RW-6	09/21/10	9:50	13.90	6.74	--	--	7.16	--	
RW-6	04/25/11	--	--	--	--	--	--	--	Unable to locate
RW-6	09/21/11	--	--	--	--	--	--	--	Unable to locate

Appendix E
Summary of Historical Groundwater Elevation Data
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Well Number	Date	Time (hr:min)	Top of Casing[1]	Depth to Groundwater[2] (feet)	Depth to LNAPL[3] (feet)	LNAPL Thickness[3] (feet)	Groundwater Elevation[4] (feet)	Top of Well Screen Elevation[5] (feet)	Comments
RW-6	11/21/11	--	--	--	--	--	--	--	Unable to locate
RW-6	02/20/12	--	--	--	--	--	--	--	Unable to locate
RW-6	04/17/12	--	--	--	--	--	--	--	Unable to locate
RW-6	10/10/12	--	--	--	--	--	--	--	Unable to locate
RW-6	12/24/12	--	--	--	--	--	--	--	Unable to access
RW-6	01/08/13	13:45	13.90	6.87	--	--	7.03	--	
RW-6	04/30/13	9:40	13.90	7.60	--	--	6.30	--	
RW-6	09/15/13	8:40	13.90	7.73	--	--	6.17	--	
RW-6	11/22/13	8:20	13.90	8.02	--	--	5.88	--	
RW-6	02/25/14	11:25	13.90	6.98	--	--	6.92	--	
RW-6	05/05/14	09:36	13.90	7.02	--	--	6.88	--	
RW-6	06/11/14	--	--	--	--	--	--	--	Well Decommissioned
RW-7	09/13/07	--	14.20	8.75	--	--	5.45	--	
RW-7	11/01/07	11:20	14.20	9.3	--	--	4.90	--	
RW-7	11/26/07	12:07	14.20	8.1	--	--	6.10	--	
RW-7	12/07/07	11:40	14.20	6.45	--	--	7.75	--	
RW-7	12/07/07	9:10	14.20	6.4	--	--	7.80	--	
RW-7	05/13/08	8:43	14.20	8.80	--	--	5.40	--	Top of casing surveyed by OTAK 5/27/08.
RW-7	09/03/08	--	14.20	8.84	--	--	5.36	--	
RW-7	12/03/08	11:11	14.20	8.60	--	--	5.60	--	
RW-7	02/17/09	9:20	14.20	8.95	--	--	5.25	--	
RW-7	05/12/09	9:08	14.20	7.41	--	--	6.79	--	
RW-7	05/26/09	13:10	14.20	7.81	--	--	6.39	--	
RW-7	08/04/09	--	14.20	8.18	--	--	6.02	--	
RW-7	09/10/09	9:40	14.20	8.83	--	--	5.37	--	
RW-7	04/13/10	10:03	14.20	7.78	--	--	6.42	--	
RW-7	09/21/10	9:47	14.20	7.88	--	--	6.32	--	
RW-7	04/25/11	9:40	14.20	7.62	--	--	6.58	--	
RW-7	09/21/11	8:51	14.20	8.49	--	--	5.71	--	
RW-7	11/21/11	8:56	14.20	4.62	--	--	9.58	--	
RW-7	02/20/12	10:04	14.20	7.92	--	--	6.28	--	
RW-7	04/17/12	9:40	14.20	7.87	--	--	6.33	--	
RW-7	10/10/12	10:07	14.20	8.99	--	--	5.21	--	
RW-7	12/24/12	--	--	--	--	--	--	--	Unable to access
RW-7	01/08/13	13:46	14.20	6.24	--	--	7.96	--	
RW-7	04/30/13	9:43	14.20	7.92	--	--	6.28	--	
RW-7	09/15/13	8:40	14.20	8.08	--	--	6.12	--	
RW-7	11/22/13	8:25	14.20	8.95	--	--	5.25	--	
RW-7	02/25/14	11:15	14.20	7.40	--	--	6.80	--	
RW-7	05/05/14	09:46	14.20	7.40	--	--	6.80	--	
RW-7	06/11/14	--	--	--	--	--	--	--	Well Decommissioned
RW-8	09/13/07	--	13.90	8.75	--	--	5.15	--	
RW-8	11/01/07	11:25	13.90	8.9	--	--	5.00	--	
RW-8	11/26/07	12:09	13.90	7.9	--	--	6.00	--	
RW-8	12/07/07	11:35	13.90	6.07	--	--	7.83	--	
RW-8	12/19/07	9:05	13.90	7.18	--	--	6.72	--	
RW-8	05/13/08	8:39	13.90	8.59	--	--	5.31	--	Top of casing surveyed by OTAK 5/27/08.
RW-8	09/03/08	--	13.90	8.53	--	--	5.37	--	
RW-8	12/03/08	11:09	13.90	8.20	--	--	5.70	--	
RW-8	02/17/09	9:24	13.90	7.70	--	--	6.20	--	
RW-8	05/12/09	9:05	13.90	7.41	--	--	6.49	--	
RW-8	05/26/09	13:07	13.90	7.59	--	--	6.31	--	
RW-8	09/10/09	9:38	13.90	8.61	--	--	5.29	--	
RW-8	04/13/10	10:00	13.90	7.39	--	--	6.51	--	
RW-8	09/21/10	9:43	13.90	7.58	--	--	6.32	--	
RW-8	04/25/11	9:45	13.90	7.21	--	--	6.69	--	
RW-8	09/21/11	8:53	13.90	8.15	--	--	5.75	--	
RW-8	11/21/11	9:03	13.90	8.24	--	--	5.66	--	
RW-8	02/20/12	10:05	13.90	7.55	--	--	6.35	--	
RW-8	04/17/12	9:45	13.90	7.56	--	--	6.34	--	
RW-8	10/10/12	10:10	13.90	8.61	--	--	5.29	--	
RW-8	12/24/12	--	--	--	--	--	--	--	Unable to access
RW-8	01/08/13	13:54	13.90	6.65	--	--	7.25	--	
RW-8	04/30/13	9:48	13.90	7.52	--	--	6.38	--	
RW-8	09/15/13	8:43	13.90	7.71	--	--	6.19	--	
RW-8	11/22/13	8:30	13.90	8.55	--	--	5.35	--	
RW-8	02/25/14	11:00	13.90	7.00	--	--	6.90	--	
RW-8	05/05/14	10:04	13.90	7.11	--	--	6.79	--	
RW-8	06/11/14	--	--	--	--	--	--	--	Well Decommissioned
RW-9	09/13/07	--	14.10	8.45	--	--	5.65	--	
RW-9	11/01/07	11:30	14.10	7.4	--	--	6.70	--	
RW-9	11/26/07	12:11	14.10	7.44	--	--	6.66	--	
RW-9	12/07/07	11:32	14.10	5.55	--	--	8.55	--	
RW-9	12/19/07	9:00	14.10	6.15	--	--	7.95	--	
RW-9	05/13/08	8:33	14.10	8.61	--	--	5.49	--	Top of casing surveyed by OTAK 5/27/08.
RW-9	09/03/08	--	14.10	7.38	--	--	6.72	--	
RW-9	12/03/08	11:06	14.10	6.95	--	--	7.15	--	
RW-9	02/17/09	9:27	14.10	6.80	--	--	7.30	--	
RW-9	05/12/09	9:03	14.10	7.22	--	--	6.88	--	
RW-9	05/26/09	13:04	14.10	10.06	--	--	4.04	--	
RW-9	09/10/09	9:34	14.10	7.47	--	--	6.63	--	
RW-9	04/13/10	9:57	14.10	8.28	--	--	5.82	--	
RW-9	09/21/10	9:40	14.10	8.47	--	--	5.63	--	
RW-9	04/25/11	9:50	14.10	7.29	--	--	6.81	--	
RW-9	09/21/11	8:54	14.10	8.20	--	--	5.90	--	
RW-9	11/21/11	9:08	14.10	7.68	--	--	6.42	--	
RW-9	02/20/12	10:07	14.10	7.78	--	--	6.32	--	
RW-9	04/17/12	9:50	14.10	8.02	--	--	6.08	--	
RW-9	10/10/12	10:15	14.10	8.35	--	--	5.75	--	
RW-9	12/24/12	--	--	--	--	--	--	--	Unable to access
RW-9	01/08/13	13:55	14.10	5.55	--	--	8.55	--	
RW-9	04/30/13	9:51	14.10	7.02	--	--	7.08	--	
RW-9	09/15/13	8:49	14.10	8.88	--	--	5.22	--	
RW-9	11/22/13	8:35	14.10	7.06	--	--	7.04	--	

Appendix E
Summary of Historical Groundwater Elevation Data
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Well Number	Date	Time (hr:min)	Top of Casing[1]	Depth to Groundwater[2] (feet)	Depth to LNAPL[3] (feet)	LNAPL Thickness[3] (feet)	Groundwater Elevation[4] (feet)	Top of Well Screen Elevation[5] (feet)	Comments
RW-9	02/25/14	10:50	14.10	6.28	--	--	7.82	--	
RW-9	05/05/14	10:18	14.10	6.70	--	--	7.40	--	
RW-9	06/10/14	--	--	--	--	--	--	--	Well Decommissioned
RW-10	09/13/07	--	14.30	8.9	--	--	5.40	--	
RW-10	11/01/07	11:40	14.30	8.7	--	--	5.60	--	
RW-10	11/26/07	12:12	14.30	7.89	--	--	6.41	--	
RW-10	12/07/07	11:29	14.30	6.26	--	--	8.04	--	
RW-10	12/19/07	8:55	14.30	7.25	--	--	7.05	--	
RW-10	05/13/08	8:31	14.30	8.86	--	--	5.44	--	Top of casing surveyed by OTAK 5/27/08.
RW-10	09/03/08	--	14.30	8.41	--	--	5.89	--	
RW-10	12/03/08	11:03	14.30	7.87	--	--	6.43	--	
RW-10	02/17/09	9:28	14.30	7.90	--	--	6.40	--	
RW-10	05/12/09	9:01	14.30	7.47	--	--	6.83	--	
RW-10	05/26/09	13:02	14.30	8.95	--	--	5.35	--	
RW-10	09/10/09	9:32	14.30	8.58	--	--	5.72	--	
RW-10	04/13/10	9:55	14.30	7.80	--	--	6.50	--	
RW-10	09/21/10	9:38	14.30	8.12	--	--	6.18	--	
RW-10	04/25/11	9:51	14.30	6.70	--	--	7.60	--	
RW-10	09/21/11	8:56	14.30	8.76	--	--	5.54	--	
RW-10	11/21/11	9:14	14.30	8.42	--	--	5.88	--	
RW-10	02/20/12	10:10	14.30	7.75	--	--	6.55	--	
RW-10	04/17/12	9:53	14.30	7.90	--	--	6.40	--	
RW-10	10/10/12	10:18	14.30	9.09	--	--	5.21	--	
RW-10	12/24/12	--	--	--	--	--	--	--	Unable to access
RW-10	01/08/13	13:59	14.30	6.32	--	--	7.98		
RW-10	04/30/13	9:51	14.30	7.46	--	--	6.84	--	
RW-10	09/15/13	8:55	14.30	8.66	--	--	5.64	--	
RW-10	11/22/13	8:40	14.30	8.22	--	--	6.08	--	
RW-10	02/25/14	10:38	14.30	7.07	--	--	7.23	--	
RW-10	05/05/14	10:33	14.30	7.22	--	--	7.08	--	
RW-10	06/10/14	--	--	--	--	--	--	--	Well Decommissioned
RW-11	12/07/07	11:14	14.10	6.5	--	--	7.60	--	
RW-11	12/19/07	8:50	14.10	7.6	--	--	6.50	--	
RW-11	05/13/08	8:28	14.10	8.86	--	--	5.24	--	Top of casing surveyed by OTAK 5/27/08.
RW-11	09/03/08	--	14.10	8.79	--	--	5.31	--	
RW-11	12/03/08	11:01	14.10	8.26	--	--	5.84	--	
RW-11	02/17/09	9:31	14.10	7.80	--	--	6.30	--	
RW-11	05/12/09	8:59	14.10	7.64	--	--	6.46	--	
RW-11	05/26/09	12:59	14.10	8.33	--	--	5.77	--	
RW-11	09/10/09	9:29	14.10	8.61	--	--	5.49	--	
RW-11	04/13/10	9:53	14.10	7.85	--	--	6.25	--	
RW-11	09/21/10	9:35	14.10	7.98	--	--	6.12	--	
RW-11	04/25/11	9:55	14.10	7.46	--	--	6.64	--	
RW-11	09/21/11	8:57	14.10	8.77	--	--	5.33	--	
RW-11	11/21/11	9:20	14.10	8.52	--	--	5.58	--	
RW-11	02/20/12	10:11	14.10	7.92	--	--	6.18	--	
RW-11	04/17/12	10:00	14.10	7.90	--	--	6.20	--	
RW-11	10/10/12	10:21	14.10	9.12	--	--	4.98	--	
RW-11	12/24/12	--	--	--	--	--	--	--	Unable to access
RW-11	01/08/13	14:00	14.10	6.74	--	--	7.36	--	
RW-11	04/30/13	9:54	14.10	7.73	--	--	6.37	--	
RW-11	09/15/13	8:58	14.10	8.50	--	--	5.60	--	
RW-11	11/22/13	8:45	14.10	8.90	--	--	5.20	--	
RW-11	02/25/14	10:30	14.10	7.40	--	--	6.70	--	
RW-11	05/05/14	10:45	14.10	7.51	--	--	6.59	--	
RW-11	06/10/14	--	--	--	--	--	--	--	Well Decommissioned
RW-12	12/07/07	11:08	14.00	6.78	--	--	7.22	--	
RW-12	12/19/07	8:40	14.00	7.88	--	--	6.12	--	
RW-12	05/13/08	8:25	14.00	8.97	--	--	5.03	--	Top of casing surveyed by OTAK 5/27/08.
RW-12	09/03/08	--	14.00	9.02	--	--	4.98	--	
RW-12	12/03/08	10:48	14.00	8.56	--	--	5.44	--	
RW-12	02/17/09	9:33	14.00	7.85	--	--	6.15	--	
RW-12	05/12/09	8:56	14.00	7.76	--	--	6.24	--	
RW-12	05/26/09	12:55	14.00	8.37	--	--	5.63	--	
RW-12	09/10/09	9:27	14.00	9.22	--	--	4.78	--	
RW-12	04/13/10	9:50	14.00	7.93	--	--	6.07	--	
RW-12	09/21/10	--	--	--	--	--	--	--	Unable to locate
RW-12	04/25/11	--	--	--	--	--	--	--	Unable to locate
RW-12	09/21/11	--	--	--	--	--	--	--	Unable to locate
RW-12	11/21/11	--	--	--	--	--	--	--	Unable to locate
RW-12	02/20/12	--	--	--	--	--	--	--	Unable to locate
RW-12	04/17/12	--	--	--	--	--	--	--	Unable to locate
RW-12	10/10/12	--	--	--	--	--	--	--	Unable to locate
RW-12	12/24/12	--	--	--	--	--	--	--	Unable to access
RW-12	01/08/13	--	--	--	--	--	--	--	Unable to locate
RW-12	04/30/13	--	--	--	--	--	--	--	Unable to locate
RW-12	09/15/13	--	--	--	--	--	--	--	Unable to locate
RW-12	11/22/13	--	--	--	--	--	--	--	Unable to locate
RW-12	06/09/14	--	--	--	--	--	--	--	Unable to locate during final decommissioning activities
RW-13	12/07/07	11:05	14.10	6.83	--	--	7.27	--	
RW-13	12/19/07	8:35	14.10	7.5	--	--	6.60	--	
RW-13	05/13/08	8:22	14.10	9.01	--	--	5.09	--	Top of casing surveyed by OTAK 5/27/08.
RW-13	09/03/08	--	14.10	9.05	--	--	5.05	--	
RW-13	12/03/08	10:45	14.10	8.64	--	--	5.46	--	
RW-13	02/17/09	9:36	14.10	8.22	--	--	5.88	--	
RW-13	05/12/09	8:53	14.10	7.85	--	--	6.25	--	
RW-13	05/26/09	12:53	14.10	8.48	--	--	5.62	--	
RW-13	09/10/09	9:22	14.10	8.89	--	--	5.21	--	
RW-13	04/13/10	9:47	14.10	8.01	--	--	6.09	--	
RW-13	09/21/10	9:30	14.10	8.15	--	--	5.95	--	
RW-13	04/25/11	10:00	14.10	7.51	--	--	6.59	--	
RW-13	09/21/11	9:00	14.10	8.99	--	--	5.11	--	
RW-13	11/21/11	9:27	14.10	8.56	--	--	5.54	--	
RW-13	02/20/12	10:13	14.10	8.24	--	--	5.86	--	

Appendix E
Summary of Historical Groundwater Elevation Data
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Well Number	Date	Time (hr:min)	Top of Casing[1]	Depth to Groundwater[2] (feet)	Depth to LNAPL[3] (feet)	LNAPL Thickness[3] (feet)	Groundwater Elevation[4] (feet)	Top of Well Screen Elevation[5] (feet)	Comments
RW-13	04/17/12	10:04	14.10	8.21	--	--	5.89	--	
RW-13	10/10/12	10:25	14.10	9.47	--	--	4.63	--	
RW-13	12/24/12	--	--	--	--	--	--	--	Unable to access
RW-13	01/08/13	14:02	14.10	7.07	--	--	7.03	--	
RW-13	04/30/13	9:56	14.10	7.96	--	--	6.14	--	
RW-13	09/15/13	9:01	14.10	8.68	--	--	5.42	--	
RW-13	11/22/13	8:50	14.10	9.25	--	--	4.85	--	
RW-13	02/25/14	10:00	14.10	8.16	--	--	5.94	--	
RW-13	05/05/14	11:00	14.10	7.65	--	--	6.45	--	
RW-13	06/10/14	--	--	--	--	--	--	--	Well Decommissioned
RW-14	--	--	--	--	--	--	--	--	Unable to locate
RW-15	09/13/07	--	13.90	8.83	--	--	5.07	--	
RW-15	11/01/07	11:50	13.90	9	--	--	4.90	--	
RW-15	11/26/07	12:18	13.90	8.4	--	--	5.50	--	
RW-15	12/07/07	10:56	13.90	6.55	--	--	7.35	--	
RW-15	12/19/07	8:25	13.90	6.31	--	--	7.59	--	
RW-15	05/13/08	8:17	13.90	8.97	--	--	4.93	--	Top of casing surveyed by OTAK 5/27/08.
RW-15	09/03/08	--	13.90	8.52	--	--	5.38	--	
RW-15	12/03/08	10:40	13.90	8.31	--	--	5.59	--	
RW-15	02/17/09	9:44	13.90	8.24	--	--	5.66	--	
RW-15	05/12/09	8:50	13.90	8.19	--	--	5.71	--	
RW-15	05/26/09	12:48	13.90	8.25	--	--	5.65	--	
RW-15	09/10/09	9:20	13.90	5.52	--	--	8.38	--	
RW-15	04/13/10	9:45	13.90	7.88	--	--	6.02	--	
RW-15	09/21/10	--	--	--	--	--	--	--	Unable to locate
RW-15	04/25/11	--	--	--	--	--	--	--	Unable to locate
RW-15	09/21/11	--	--	--	--	--	--	--	Unable to locate
RW-15	11/21/11	--	--	--	--	--	--	--	Unable to locate
RW-15	2/20/2012	--	--	--	--	--	--	--	Unable to locate
RW-15	04/17/12	--	--	--	--	--	--	--	Unable to locate
RW-15	10/10/12	--	--	--	--	--	--	--	Unable to locate
RW-15	12/24/12	--	--	--	--	--	--	--	Unable to locate
RW-15	01/08/13	--	--	--	--	--	--	--	Unable to locate
RW-15	04/30/13	--	--	--	--	--	--	--	Unable to locate
RW-15	09/15/13	--	--	--	--	--	--	--	Unable to locate
RW-15	11/22/13	--	--	--	--	--	--	--	Unable to locate
RW-15	06/09/14	--	--	--	--	--	--	--	Unable to locate during final decommissioning activities
RW-21	09/13/07	--	15.30	9.85	Sheen	--	5.45	--	
RW-21	11/01/07	10:35	15.30	9.90	7.90	2.00	7.00	--	
RW-21	11/26/07	12:23	15.30	--	Sheen	--	--	--	
RW-21	12/07/07	9:40	15.30	6.90	Sheen	--	8.40	--	
RW-21	12/19/07	--	15.30	7.79	--	--	7.51	--	
RW-21	01/03/07	9:25	15.30	7.88	--	--	7.42	--	
RW-21	01/30/07	8:44	15.30	8.67	--	--	6.63	--	
RW-21	02/12/08	9:11	15.30	8.80	--	--	6.50	--	
RW-21	03/03/08	9:10	15.30	9.25	--	--	6.05	--	
RW-21	03/17/08	9:07	15.30	9.21	--	--	6.09	--	
RW-21	04/01/08	9:05	15.30	9.09	--	--	6.21	--	
RW-21	04/14/08	8:55	15.30	9.32	--	--	5.98	--	
RW-21	04/28/08	9:24	15.30	9.33	--	--	5.97	--	
RW-21	05/13/08	--	--	--	--	--	--	--	Unable to access
RW-21	05/27/08	11:20	15.30	9.45	--	--	5.85	--	Top of casing surveyed by OTAK 5/27/08.
RW-21	06/10/08	10:45	15.30	9.21	--	--	6.09	--	
RW-21	06/24/08	9:29	15.30	9.49	--	--	5.81	--	
RW-21	07/07/08	9:39	15.30	9.19	--	--	6.11	--	
RW-21	07/22/08	9:00	15.30	9.38	--	--	5.92	--	
RW-21	08/12/08	9:36	15.30	9.35	--	--	5.95	--	
RW-21	09/03/08	--	15.30	9.36	Sheen	--	5.94	--	
RW-21	10/08/08	8:30	15.30	9.72	Sheen	--	5.58	--	
RW-21	10/17/08	8:41	15.30	9.50	--	--	5.80	--	
RW-21	10/29/08	8:31	15.30	9.58	--	--	5.72	--	
RW-21	11/12/08	9:27	15.30	7.83	--	--	7.47	--	
RW-21	12/03/08	10:10	15.30	9.22	9.20	0.02	6.10	--	
RW-21	01/06/09	9:26	15.30	7.89	Sheen	--	7.41	--	
RW-21	01/20/09	12:29	15.30	8.56	8.55	0.01	6.75	--	
RW-21	02/03/09	9:24	15.30	9.20	Sheen	--	6.10	--	
RW-21	02/17/09	9:50	15.30	9.05	Sheen	--	6.25	--	
RW-21	03/12/09	11:31	15.30	9.16	Sheen	--	6.14	--	
RW-21	03/25/09	9:24	15.30	9.01	Sheen	--	6.29	--	
RW-21	04/08/09	9:57	15.30	8.91	8.90	0.01	6.40	--	
RW-21	04/30/09	9:49	15.30	8.88	Sheen	--	6.42	--	
RW-21	05/12/09	9:43	15.30	8.45	8.44	0.01	6.86	--	
RW-21	05/26/09	14:48	15.30	8.82	--	--	6.48	--	
RW-21	06/09/09	9:26	15.30	8.64	--	--	6.66	--	
RW-21	06/25/09	9:29	15.30	8.68	--	--	6.62	--	
RW-21	07/07/09	9:26	15.30	8.95	Sheen	--	6.35	--	
RW-21	07/13/09	8:05	15.30	9.45	--	--	5.85	--	
RW-21	08/05/09	6:45	15.30	8.96	Sheen	--	6.34	--	
RW-21	08/06/09	9:18	15.30	9.06	--	--	6.24	--	
RW-21	08/20/09	8:34	15.30	9.15	--	--	6.15	--	
RW-21	09/10/09	9:57	15.30	9.28	--	--	6.02	--	
RW-21	09/23/09	9:21	15.30	9.25	Sheen	--	6.05	--	
RW-21	10/08/09	9:16	15.30	9.31	Sheen	--	5.99	--	
RW-21	10/19/09	9:50	15.30	9.23	Sheen	--	6.07	--	
RW-21	11/12/09	9:19	15.30	7.82	Sheen	--	7.48	--	
RW-21	03/24/10	9:37	15.30	8.62	Sheen	--	6.68	--	
RW-21	04/13/10	10:19	15.30	8.61	Sheen	--	6.69	--	
RW-21	05/26/10	9:32	15.30	8.73	Sheen	--	6.57	--	
RW-21	09/21/10	10:05	15.30	8.46	Sheen	--	6.84	--	
RW-21	11/19/10	16:01	15.30	9.21	Sheen	--	6.09	--	
RW-21	03/04/11	9:31	15.30	8.18	Sheen	--	7.12	--	
RW-21	04/25/11	8:50	15.30	8.50	8.49	0.01	6.81	--	
RW-21	09/21/11	9:18	15.30	9.20	LNAPL on probe	--	6.10	--	
RW-21	11/21/11	9:34	15.30	9.03	--	--	6.27	--	

Appendix E
Summary of Historical Groundwater Elevation Data
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Well Number	Date	Time (hr:min)	Top of Casing[1]	Depth to Groundwater[2] (feet)	Depth to LNAPL[3] (feet)	LNAPL Thickness[3] (feet)	Groundwater Elevation[4] (feet)	Top of Well Screen Elevation[5] (feet)	Comments
RW-21	02/20/12	10:23	15.30	8.76	LNAPL on probe	--	6.54	--	
RW-21	04/17/12	10:10	15.30	8.65	--	--	6.65	--	
RW-21	10/10/12	9:20	15.30	9.70	LNAPL on probe	--	5.60	--	
RW-21	12/24/12	--	--	--	--	--	--	--	Unable to access
RW-21	01/08/13	--	--	--	--	--	--	--	Unable to access
RW-21	04/30/13	10:00	15.30	8.74	Tar on probe	--	6.56	--	
RW-21	09/19/13	10:10	15.30	9.43	Tar on probe	--	5.87	--	
RW-21	11/22/13	8:55	15.30	10.23	--	--	5.07	--	
RW-21	06/12/14	--	--	--	--	--	--	--	Well Decommissioned

Notes:
[1]Well casing elevations listed in feet above mean sea level. Approximate monitoring well locations are shown in Figure 2.
[2]Below top of casing.
[3]Light non-aqueous phase liquid. If LNAPL is present, groundwater elevation is corrected per the formula: (Top of casing elevation - Depth to Groundwater) + (0.8 x LNAPL thickness)
[4]Elevation referenced to city of Seattle datum.
[5]Top of well screen elevation data based on well constructions details from historic records.
"--" = not measured or not obtainable
NR = Not reported.
Bolded data are for the current reporting period.
Well in compliance or decommissioned

Appendix E
Historical Summary of Groundwater Analytical Data
Total Petroleum Hydrocarbons
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Monitoring Well[1]	Notes	Date Sampled	LNAPL[2]	BTEX (EPA Method 8020 or 8021B) (µg/L)				TPH (EPA Method 418.1) (mg/L)	NWTPH-Gx (mg/L)	NWTPH-D Extended[3] (mg/L)		Dissolved Lead (EPA 6000/7000 Series Method) (µg/L)
				B	T	E	X		Gasoline C_7 - C_{12}	Diesel C_{12} - C_{24}	Heavy Oil $>C_{24}$	
Upper Yard RALs			***No visible sheen***	***40***	***14,300***	***1,400***	***4,400***	**--**	***1***	***10***	***15***	***50***
Upper Yard												
MW-37		06/01/90	--	<0.5	<0.5	<0.5	<0.5	<1	--	--	--	<5
MW-37		10/16/90	--	<0.5	<0.5	<0.5	<0.5	<1	--	--	--	<5
MW-37		01/17/91	--	<0.5	<0.5	<0.5	<0.5	--	<1	<1	--	<5
MW-37		04/16/91	--	<0.5	<0.5	<0.5	<0.5	--	<1	<1	--	<2
MW-37		09/15/95	ND	<0.50	<0.50	<0.50	<1.0	--	<1.0	<1.0	<0.75	--
MW-37		12/14/95	ND	<0.50	<0.50	<0.50	<1.0	--	<0.05	<0.27	<0.75	--
MW-38		06/01/90	--	<0.5	<0.5	<0.5	<0.5	<1	--	--	--	<5
MW-38		10/16/90	--	<0.5	<0.5	<0.5	<0.5	<1	--	--	--	<5
MW-38		01/17/91	--	<0.5	<0.5	<0.5	<0.5	--	<1	<1	--	<5
MW-38		04/16/91	--	<0.5	<0.5	<0.5	<0.5	--	<1	<1	--	<2
MW-39		01/17/91	--	<0.5	0.5	0.6	2.2	--	<1	<1	--	<5
MW-39		04/16/91	--	<0.5	<0.5	<0.5	<0.5	--	<1	<1	--	--
MW-40		06/01/90	--	<0.5	<0.5	<0.5	<0.5	<1	--	--	--	<5
MW-40		10/16/90	--	<0.5	1.0	0.6	<0.5	<1	--	--	--	<5
MW-40		01/17/91	--	<0.5	<0.5	<0.5	<0.5	--	<1	<1	--	<5
MW-40		04/16/91	--	<0.5	<0.5	<0.5	<0.5	--	<1	<1	--	--
MW-61A		03/13/98	ND	<0.500	<0.500	<0.500	<1.00	--	0.956	2.14	<0.750	--
MW-61A		06/18/98	ND	<2.50	<2.50	<2.50	<5.00	--	1.01	3.49	<0.750	
MW-61A		09/03/98	ND	<0.500	<0.500	<0.500	<0.500	--	0.396	1.85	<0.750	<1.00
MW-61A		12/15/98	Sheen	<2.50	<2.50	2.82	12.8	--	10.2	146/73.0	<30.8/<15.8	--
MW-61A	Duplicate	12/15/98	Sheen	<2.50	<2.50	<2.50	5.81	--	2.93	32.3/14.6	<3.75/<0.750	--
MW-61A		03/23/99	Sheen	<0.500	<0.500	2.56	13.8	--	4.34	39.7/32.7	<8.25/<3.75	--
MW-61A	Duplicate	03/23/99	Sheen	<2.50	<2.50	<2.50	<5.00	--	1.56	52.8/42.1	<8.25/<8.25	--
MW-61A		07/01/99	ND	<0.500	<0.500	<0.900	<3.70	--	1.38[4]	4.43/2.08	<0.750/<0.750	<1.00
MW-61A	Duplicate	07/01/99	ND	<1.00	<1.00	<1.40	<5.60	--	1.30[4]	4.45/3.08	<0.750/<0.750	--
MW-61A		09/29/99	Sheen	<0.500	<5.00	<5.00	<1.00	--	2.16[5]	7.57/4.04	<0.750/<0.750	--
MW-61A	Duplicate	09/29/99	Sheen	<0.500	<0.500	<5.00	<10.0	--	2.80[5]	19.7/21.1	0.758/<1.57	--
MW-61A		12/16/99	Sheen	<0.500	<5.00	<3.50	<17.00	--	7.61	33.4/30.1	<15.8/<8.25	--
MW-61A	Duplicate	01/04/00[6]	Sheen	<0.500	<5.00	<5.00	<4.15	--	1.40	12.1/8.29	<1.34/<1.34	--
MW-61A		03/21/00	ND	<0.500	<0.500	<0.550	<1.85	--	0.831	13.1[7]	<0.750[7]	--
MW-61A	Duplicate	03/21/00	ND	<0.500	<0.500	<0.720	<3.40	--	1.05	6.36[7]	<0.750[7]	--
MW-61A		06/22/00[8]	ND	0.779	<0.500	<0.500	2.32	--	1.00	4.23/3.38	<0.750/<0.750	<1.00
MW-61A	Duplicate	06/22/00	ND	0.880	<0.500	0.591	2.46	--	0.836	5.99/4.13	<0.750/<0.750	--
MW-61A		09/14/00	ND	<0.500	<0.500	<0.704	<3.11	--	1.36	2.49/1.50	<0.750/<0.750	--
MW-61A	Duplicate	09/14/00	ND	<0.500	<0.500	0.986	<3.21	--	1.00	5.00/3.13	<0.750/<0.750	--
MW-61A		12/21/00	ND	<0.500	<1.24	<0.500	<3.87	--	1.18	4.62/2.48	<0.750/<0.750	--
MW-61A	Duplicate	12/21/00[9]	ND	<0.500	<0.500	<0.500	<1.00	--	0.721	5.64/3.81	<0.750/<0.750	--
MW-61A		03/14/01	ND	<0.565	<0.500	<1.38	<4.31	--	0.962	2.55/1.28	<0.750/<0.750	--
MW-61A	Duplicate	03/14/01	ND	<0.500	<0.500	<0.500	<1.12	--	0.498	1.82/0.668	<0.750/<0.750	--
MW-61A		06/21/01	ND	<0.500	0.855	<0.500	1.14	--	0.773	2.45/1.55	<0.750/<0.750	<1.00
MW-61A	Duplicate	06/21/01	ND	<0.500	<0.500	<0.500	2.61	--	0.676	1.80/1.04	<0.750/<0.750	--
MW-61A		09/25/01	Sheen	<0.500	<0.500	<0.500	2.62	--	0.839	14.3/11.3	<8.25/<0.750	--
MW-61A	Duplicate	09/25/01	Sheen	<0.500	0.923	0.592	4.22	--	0.918	5.12/4.47	<0.750/<0.750	--
MW-61A		12/19/01	Sheen	0.825	<2.00	<1.00	<1.50	--	2.54	19.4/14.8[10]	<3.00/<3.00[10]	--
MW-61A		03/26/02	Sheen	<0.500	<0.500	<0.500	1.24	--	0.414	1.38/0.615	<0.750/<0.750	--
MW-61A	Duplicate	03/26/02	Sheen	<0.500	<0.500	<0.500	1.85	--	0.592	1.99/0.847	<0.750/<0.750	--
MW-61A	Duplicate	06/19/03	Sheen	<0.500	<0.500	<0.500	<1.00	--	0.360	1.43	<0.750	--
MW-61A		09/18/03	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.728	<0.750	--
MW-61A		12/03/03	Sheen	<0.500	<0.500	<0.500	1.22	--	0.604	2.46	<0.750	--

Appendix E
Historical Summary of Groundwater Analytical Data
Total Petroleum Hydrocarbons
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Monitoring Well[1]	Notes	Date Sampled	LNAPL[2]	BTEX (EPA Method 8020 or 8021B) (µg/L)				TPH (EPA Method 418.1) (mg/L)	NWTPH-Gx (mg/L)	NWTPH-D Extended[3] (mg/L)		Dissolved Lead (EPA 6000/7000 Series Method) (µg/L)
				B	T	E	X		Gasoline C_7 - C_{12}	Diesel C_{12} - C_{24}	Heavy Oil $>C_{24}$	
Upper Yard RALs			***No visible sheen***	***40***	***14,300***	***1,400***	***4,400***	**--**	***1***	***10***	***15***	***50***
MW-61A	Duplicate	12/03/03	Sheen	<0.500	<0.500	<0.500	1.30	--	0.701	2.35	<0.750	--
MW-61A-R		03/02/06	Sheen/LNAPL	--	--	--	<1.00	--	--	--	--	--
MW-61A-R		06/06/06	Sheen	<2.50	<2.50	7.64	7.48	--	3.92	20.6	<3.75	--
MW-61A-R		09/15/06	Sheen	396	79.7	26.4	243	--	17.2	200	<142	--
MW-61A-R		03/07/07	ND	<0.5	<0.5	0.5	<1.5	--	0.18	0.29	<0.095	--
MW-61A-R		06/08/07	ND	<0.500	<2.0[16]	1.500	1.7	--	0.400	0.600	<0.095	<0.037
MW-61A-R		09/26/07	ND	<0.5	<0.5	1.4	<1.5	--	0.430	0.770	0.120	--
MW-61A-R		11/28/07	ND	<0.5	<0.5	0.9	<1.5	--	0.410	0.340	<0.100	--
MW-61A-R	Duplicate	11/28/07	ND	<0.5	<0.5	0.9	<1.5	--	0.400	0.670	0.370	--
MW-61A-R		02/13/08	ND	<0.500	<0.500	0.980	1.14	--	0.455	0.308	<0.485	--
MW-61A-R		05/14/08	ND	<0.500	<0.500	1.24	1.43	--	0.363	0.406	<0.472	--
MW-61A-R		09/04/08	Sheen	<0.500	1.16	3.58	1.13	--	0.933	0.380	<0.490	--
MW-61A-R		12/03/08	LNAPL	--	--	--	--	--	--	--	--	--
MW-61A-R		02/18/09	Sheen	<0.500	<0.500	<0.500	1.32	--	0.490	0.830	<0.481	--
MW-61A-R		09/10/09	LNAPL	--	--	--	--	--	--	--	--	--
MW-61A-R		04/14/10	LNAPL	--	--	--	--	--	--	--	--	--
MW-61A-R		09/23/10	ND	<0.50	<0.50	0.68	<2.0	--	0.76	1.5	<0.26	--
MW-61A-R		04/25/11	LNAPL	--	--	--	--	--	--	--	--	--
MW-61A-R		09/21/11	LNAPL	--	--	--	--	--	--	--	--	--
MW-61A-R		04/18/12	LNAPL	--	--	--	--	--	--	--	--	--
MW-61A-R		10/10/12	LNAPL	--	--	--	--	--	--	--	--	--
MW-61A-R		04/30/13	LNAPL	--	--	--	--	--	--	--	--	--
MW-61A-R		09/19/13	LNAPL	--	--	--	--	--	--	--	--	--
MW-61A-R		06/24/14	LNAPL	--	--	--	--	--	--	--	--	--
MW-61A-R		12/16/15	LNAPL	--	--	--	--	--	--	--	--	--
MW-61A-R		06/17/15	LNAPL	--	--	--	--	--	--	--	--	--
MW-61A-R		12/09/15	LNAPL	--	--	--	--	--	--	--	--	--
MW-61A-R		06/15/16	ND	<0.5	<0.5	<0.5	<1.5	--	0.220	0.120	<0.067	--
MW-61A-R		01/13/17	ND	<0.5	<0.5	0.5	2	--	1.000	0.490	<0.074	--
MW-61A-R		06/16/17	LNAPL	--	--	--	--	--	--	--	--	--
MW-61A-R		11/08/17	LNAPL	--	--	--	--	--	--	--	--	--
MW-61A-R		06/20/18	LNAPL	--	--	--	--	--	--	--	--	--
MW-61A-R		09/27/18	LNAPL	--	--	--	--	--	--	--	--	--
MW-61A-R		12/14/18	ND	<0.5	0.8	<0.5	<1.5	--	0.680	0.190	<0.100	--
MW-61A-R		06/25/19	ND	<0.2	<0.2	<0.4	<1	--	0.250 J	<0.046	<0.100	--
MW-61A-R		12/17/19	ND	<0.2	<0.2	<0.4	<1	--	0.38	0.16	<0.100	--
MW-61A-R		06/16/20	LNAPL	--	--	--	--	--	--	--	--	--
MW-61A-R		11/19/20	ND	<0.2	<0.2	<0.4	<1	--	0.220 J	<0.046 * *1	<0.100	--
MW-61A-R		06/09/21	LNAPL	--	--	--	--	--	--	--	--	--
MW-61A-R	Not sampled	12/13/21	ND	--	--	--	--	--	--	--	--	--
MW-61A-R	Inaccessible	06/03/22	NG	--	--	--	--	--	--	--	--	--
MW-61A-R		10/24/22	LNAPL	--	--	--	--	--	--	--	--	--
MW-61A-R		**06/12/24**	**ND**	**<0.30**	**<0.40**	**<0.30**	**<0.40**	**--**	**0.35**	**0.14**	**<0.110**	--
MW-61A-R	**Duplicate**	**06/12/24**	**ND**	**<0.30**	**<0.40**	**<0.30**	**<0.40**	**--**	**0.28**	**0.14**	**<0.110**	--
MW-62A		03/13/98	ND	<0.500	<0.500	<0.500	<1.00	--	0.288	<.0250	<.0750	--
MW-62A		06/18/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-62A		09/03/98	ND	<1.00	<0.500	0.901	2.79	--	0.134	<0.250	<0.750	<1.00
MW-62A		12/14/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-62A		03/23/99	ND	10.8	<5.00	<5.00	<10.0	--	<0.500	0.371/<0.250	<0.750/<0.750	--
MW-62A		07/01/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.311/<0.250	<0.750/<0.750	1.09

Appendix E
Historical Summary of Groundwater Analytical Data
Total Petroleum Hydrocarbons
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Monitoring Well[1]	Notes	Date Sampled	LNAPL[2]	BTEX (EPA Method 8020 or 8021B) (µg/L)				TPH (EPA Method 418.1) (mg/L)	NWTPH-Gx (mg/L)	NWTPH-D Extended[3] (mg/L)		Dissolved Lead (EPA 6000/7000 Series Method) (µg/L)
				B	T	E	X		Gasoline C_7 - C_{12}	Diesel C_{12} - C_{24}	Heavy Oil $>C_{24}$	
Upper Yard RALs			***No visible sheen***	***40***	***14,300***	***1,400***	***4,400***	***--***	***1***	***10***	***15***	***50***
MW-62A		09/29/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.709/<0.250	<0.750/<0.750	--
MW-62A		12/16/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-62A		03/21/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-62A		06/22/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	<1.00
MW-62A		09/14/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.376/<0.250	<0.750/<0.750	--
MW-62A		12/21/00[9]	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-62A		03/14/01	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-62A		06/21/01	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	<1.00
MW-62A		09/25/01	ND	<0.500	<0.500	<0.500	1.57	--	<0.0500	0.373/<0.250	<0.750/<0.250	--
MW-62A		12/18/01	ND	<0.500	<2.00	<1.00	<1.50	--	<0.100	<0.250[10]	<0.750[10]	--
MW-62A		03/26/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-62A		06/19/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.320/<0.250	<0.750/<0.750	<1.00
MW-62A		12/13/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.863	<0.750	--
MW-62A		12/03/03	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-63A		03/13/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-63A		06/18/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-63A		09/03/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	<1.00
MW-63A		12/14/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-63A		03/23/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-63A		07/01/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.389/<0.250	<0.750/<0.750	1.82
MW-63A		09/29/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.305/<0.539	<0.750/<1.62	--
MW-63A		12/16/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.380/<0.250	<0.750/<0.750	--
MW-63A		03/21/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-63A		06/22/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.366/<0.462	<0.750/<1.39	<1.00
MW-63A		09/14/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.273/<0.250	<0.750/<0.750	--
MW-63A		12/21/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.575/<0.250	<0.750/<0.750	--
MW-63A		03/14/01	ND	<0.500	0.922	<0.500	1.92	--	<0.0500	<0.250	<0.750	--
MW-63A		06/21/01	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	<1.00
MW-63A		09/25/01	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-63A		12/18/01	ND	<0.500	<2.00	<1.00	<1.50	--	<0.100	0.468/<0.250[10]	<0.750/<0.750[10]	--
MW-63A		03/26/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.379/<0.250	<0.750/<0.750	--
MW-63A		06/19/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.299/<0.250	<0.750/<0.750	<1.00
MW-63A		12/13/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.514	<0.750	--
MW-63A		12/03/03	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-64		06/18/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-64		09/03/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	<1.00
MW-64		12/14/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.325/<0.250	<0.750/<0.750	--
MW-64		03/23/99	ND	<0.500	<0.500	<0.500	2.42	--	<0.0500	0.354/<0.250	<0.750/<0.750	--
MW-64		07/01/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.319/<0.250	<0.750/<0.750	1.09
MW-64		09/29/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.448/<0.564	<0.750/<0.169	--
MW-64		01/04/00[6]	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250/<0.250	<0.750/<0.750	--
MW-64		03/21/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.255[7]	<0.750	--
MW-64		06/22/00[8]	ND	<0.500	1.39	0.654	5.39	--	0.0908	0.315/<0.487	<0.750/<1.46	<1.00
MW-64		07/25/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	<1.00
MW-64		09/14/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-64		12/21/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.298/<0.250	<0.750/<0.750	--
MW-64		03/14/01	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-64		06/21/01	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	<1.00
MW-64		09/25/01	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.263/<0.250[11]	<0.750/<0.750[11]	--
MW-64		12/18/01	ND	<0.500	<2.00	<1.00	<1.50	--	<0.100	0.372/<0.250[10]	<0.750/<0.750[10]	--

Appendix E
Historical Summary of Groundwater Analytical Data
Total Petroleum Hydrocarbons
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Monitoring Well[1]	Notes	Date Sampled	LNAPL[2]	BTEX (EPA Method 8020 or 8021B) (µg/L)				TPH (EPA Method 418.1) (mg/L)	NWTPH-Gx (mg/L)	NWTPH-D Extended[3] (mg/L)		Dissolved Lead (EPA 6000/7000 Series Method) (µg/L)
				B	T	E	X		Gasoline C_7 - C_{12}	Diesel C_{12} - C_{24}	Heavy Oil $>C_{24}$	
Upper Yard RALs			***No visible sheen***	***40***	***14,300***	***1,400***	***4,400***	**--**	***1***	***10***	***15***	***50***
MW-64		03/26/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-64		06/19/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.499/<0.250	<0.750/<0.750	<1.00
MW-64		12/13/02	ND	<0.500	<0.500	<0.500	<1.00	--	0.0563	0.38	<0.750	--
MW-64		12/03/03	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.379	<0.750	--
Elliott Avenue RALs			***No visible sheen***	***40***	***14,300***	***1,400***	***4,400***	**--**	***1***	***10***	***15***	***50***
Elliott Avenue												
MW-30	[12]	01/31/89	--	4.0	0.6	<0.5	<0.5	6	<5	--	--	--
MW-30		04/27/89	--	5.0	<0.5	0.6	<0.5	0.37	<5	--	--	--
MW-30		07/25/89	--	8.0	4.9	17.0	11.1	13	<5	--	--	--
MW-30		10/26/89	LNAPL	--	--	--	--	--	--	--	--	--
MW-30		01/16/90	LNAPL	--	--	--	--	--	--	--	--	--
MW-30		04/16/90	LNAPL	--	--	--	--	--	--	--	--	--
MW-30		07/25/90	LNAPL	--	--	--	--	--	--	--	--	--
MW-30		09/20/90		--	--	--	--	1	--	--	--	--
MW-30		10/16/90	--	<5.0	<5.0	<5.0	<5.0	10	--	--	--	28
MW-30		01/17/91	--	<0.5	<0.5	0.6	3.5	24	2	13	--	<5
MW-30		04/16/91	--	<0.5	<0.5	<0.5	<0.5	--	<1	<1	--	<2
MW-30		09/17/91	LNAPL	--	--	--	--	--	--	--	--	--
MW-30		12/10/91	LNAPL	--	--	--	--	--	--	--	--	--
MW-30		01/29/92	--	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
MW-30		03/13/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.341	<0.750	--
MW-30	Duplicate	03/13/98	ND	<0.500	<0.500	<0.500	<1.00	--	0.0522	<0.250	<0.750	--
MW-30		06/29/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	<1.00
MW-30	Duplicate	06/29/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-30		09/04/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.575	<0.750	--
MW-30	Duplicate	09/04/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.416	<0.750	--
MW-30		12/15/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.900/0.310	<0.750/<0.750	--
MW-30		03/24/99	Sheen	<0.500	<0.500	<0.500	<1.00	--	<0.0500	1.47/0.580	1.38/<0.750	--
MW-30		07/01/99	Sheen	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.526/<0.250	<0.750/<0.750	<1.00
MW-30		09/29/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	1.12/<0.454	1.19/<1.36	--
MW-30		12/15/99	Sheen	<0.500	<0.500	<0.500	<1.00	--	0.0657	2.72/0.679	<1.43/<1.43	--
MW-30		03/22/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	1.68/0.753	1.35/<0.750	--
MW-30		06/21/00	Sheen	<0.500	<0.500	<0.500	<1.00	--	0.0545	0.345/<0.250	<0.750/<0.750	<1.00
MW-30		09/14/00	--	--	--	--	--	--	--	--	--	--
MW-30		12/22/00	ND	<0.500	<0.500	<0.500	<1.00	--	0.0766	1.17/0.353	<0.750/<0.750	--
MW-30		03/15/01	ND	<0.500	<0.500	<0.500	<1.00	--	0.248	4.85/3.27	6.28/3.25	--
MW-30		06/22/01	Sheen	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.448/<0.250	<0.750/<0.750	--
MW-30		09/25/01	Sheen	<0.500	<0.500	<0.500	1.12	--	<0.0500	2.73/1.60	2.20/1.22	--
MW-30		12/18/01	Sheen	<0.500	<2.00	<1.00	<1.50	--	<0.100	1.09/<0.250[10]	<0.750/<0.750[10]	--
MW-30	Duplicate	12/18/01	Sheen	<0.500	<2.00	<1.00	<1.50	--	0.107	1.05/<0.250[10]	<0.750/<0.750[10]	--
MW-30		03/27/02	Sheen	<0.500	<0.500	<0.500	<1.00	--	0.0793	1.62/0.536	0.936/<0.750	--
MW-30		06/20/02	Sheen	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.527/<0.250	<0.750/<0.750	--
MW-30		09/19/02	Sheen	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-30		12/13/02	Sheen	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.419	<0.750	--
MW-30		06/19/03	Sheen	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-30		09/18/03	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-30		12/03/03	Sheen	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-30		03/09/04	Sheen	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-30		06/03/04	Sheen	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.544	<0.750	--
MW-30	Duplicate	06/03/04	Sheen	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.913	0.765	--

Appendix E
Historical Summary of Groundwater Analytical Data
Total Petroleum Hydrocarbons
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Monitoring Well[1]	Notes	Date Sampled	LNAPL[2]	BTEX (EPA Method 8020 or 8021B) (µg/L)				TPH (EPA Method 418.1) (mg/L)	NWTPH-Gx (mg/L)	NWTPH-D Extended[3] (mg/L)		Dissolved Lead (EPA 6000/7000 Series Method) (µg/L)
									Gasoline	Diesel	Heavy Oil	
				B	T	E	X		C_7 - C_{12}	C_{12} - C_{24}	>C_{24}	
Upper Yard RALs			***No visible sheen***	***40***	***14,300***	***1,400***	***4,400***	***--***	***1***	***10***	***15***	***50***
MW-30		09/03/04	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.451	<0.750	--
MW-30	Duplicate	09/03/04	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	1.33	0.765	--
MW-30		12/06/04	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.381	<0.750	--
MW-30	Duplicate	12/06/04	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.268	<0.750	--
MW-30		03/04/05	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.747	0.898	--
MW-30	Duplicate	03/04/05	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.835	0.976	--
MW-30		06/03/05	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.278	<0.750	--
MW-30	Duplicate	06/03/05	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-30		09/01/05	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.416	<0.750	--
MW-30	Duplicate	09/01/05	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.366	<0.750	--
MW-30		12/01/05	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.359	<0.708	--
MW-30	Duplicate	12/01/05	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.438	<0.714	--
MW-30		03/02/06	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.236	<0.708	--
MW-30	Duplicate	03/02/06	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.236	<0.708	--
MW-30		06/06/06	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-30	Duplicate	06/06/06	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-30		09/15/06	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.708	--
MW-30	Duplicate	09/15/06	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.708	--
MW-30		03/07/07	Sheen	<0.5	<0.5	<0.5	<1.5	--	<0.048	1.6	0.53	--
MW-30		06/08/07	ND	<0.500	<0.500	<0.500	<1.50	--	<0.050	0.800	<0.095	<0.037
MW-30		09/26/07	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	0.300	<0.095	--
MW-30		11/28/07	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	0.340	0.120	--
MW-30		02/13/08	ND	<0.500	<0.500	<0.500	<1.00	--	<0.050	<0.278	<0.556	--
MW-30		05/14/08	ND	<0.500	<0.500	<0.500	<1.00	--	<0.050	<0.236	<0.472	--
MW-30		09/04/08	ND	<0.500	<0.500	<0.500	<1.00	--	<0.050	<0.243	<0.485	--
MW-30		12/05/08	ND	<0.500	<0.500	<0.500	<1.00	--	<0.050	<0.245	<0.490	--
MW-30		02/18/09	ND	<0.500	<0.500	<0.500	<1.00	--	<0.050	<0.248	<0.495	--
MW-30		05/12/09	LNAPL	--	--	--	--	--	--	--	--	--
MW-30		09/10/09	Sheen	<0.500	<0.500	<0.500	<1.00	--	<0.050	<0.250	<0.500	--
MW-30		04/14/10	Sheen	<0.50	<0.50	<0.50	<2.0	--	<0.050	<0.13	<0.27	--
MW-30		09/23/10	ND	<0.50	<0.50	<0.50	<2.0	--	<0.050	<0.13	<0.25	--
MW-30		04/27/11	Sheen	<0.50	<0.50	<0.50	<1.0	--	0.052	--	--	--
MW-30		09/22/11	ND	<0.50	<0.50	<0.50	<1.0	--	<0.050	<0.12	<0.24	--
MW-30		09/22/11	ND	<0.50	<0.50	<0.50	<1.0	--	<0.050	0.17 [17]	<0.24	--
MW-30		04/18/12	Sheen	--	--	--	--	--	--	--	--	--
MW-30		10/12/12	ND	<0.50	<0.50	<0.50	<0.50	--	<0.025	0.19	<0.24	--
MW-30		04/26/13	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.029	<0.069	--
MW-30		09/19/13	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.029	<0.067	--
MW-30		06/24/14	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050 UJ	<0.029	<0.067	--
MW-30		12/16/14	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.028	<0.066	--
MW-30		06/18/15	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	0.5	0.640	--
MW-30		12/07/15	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	0.120	0.310	--
MW-30		06/13/16	LNAPL	--	--	--	--	--	--	--	--	--
MW-30		01/12/17	LNAPL	--	--	--	--	--	--	--	--	--
MW-30		03/27/17	LNAPL	--	--	--	--	--	--	--	--	--
MW-30		06/16/17	LNAPL	--	--	--	--	--	--	--	--	--
MW-30		11/08/17	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	0.25	<0.100	--
MW-30		06/20/18	LNAPL	--	--	--	--	--	--	--	--	--
MW-30		12/14/18	ND	<0.5	<0.5	<0.5	<1.5	--	<0.019	<0.045	<0.100	
MW-30		06/24/19	LNAPL	--	--	--	--	--	--	--	--	--

Appendix E
Historical Summary of Groundwater Analytical Data
Total Petroleum Hydrocarbons
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Monitoring Well[1]	Notes	Date Sampled	LNAPL[2]	BTEX (EPA Method 8020 or 8021B) (µg/L)				TPH (EPA Method 418.1) (mg/L)	NWTPH-Gx (mg/L)	NWTPH-D Extended[3] (mg/L)		Dissolved Lead (EPA 6000/7000 Series Method) (µg/L)
				B	T	E	X		Gasoline C_7 - C_{12}	Diesel C_{12} - C_{24}	Heavy Oil $>C_{24}$	
Upper Yard RALs			***No visible sheen***	***40***	***14,300***	***1,400***	***4,400***	**--**	***1***	***10***	***15***	***50***
MW-30		12/17/19	ND	<0.2	<0.2	<0.4	<1	--	<0.019	0.23	0.220 J	
MW-30		06/16/20	LNAPL	--	--	--	--	--	--	--	--	
MW-30		11/19/20	ND	<0.2	<0.2	<0.4	<1	--	<0.019	<0.045 * *1	<0.100	
MW-30		06/09/21	LNAPL	--	--	--	--	--	--	--	--	--
MW-30		12/03/21	LNAPL	--	--	--	--	--	--	--	--	--
MW-30	Inaccessible	06/03/22	NG	--	--	--	--	--	--	--	--	--
MW-30		10/24/22	LNAPL	--	--	--	--	--	--	--	--	--
MW-30		**06/12/24**	**ND**	**<0.30**	**<0.40**	**<0.30**	**<0.40**	**--**	**<0.043**	**<0.046 cn**	**<0.100 cn**	**--**
MW-31		08/10/89	--	<0.5	1.4	2.1	5.9	4.1	--	--	--	<5
MW-31		10/26/89	--	7.1	<0.5	1.0	3.3	5.5	--	--	--	<5
MW-31		01/16/90	--	4.2	<0.5	<0.5	<0.5	2.2	--	--	--	<5
MW-31		04/16/90	--	5.2	1.5	1.9	4.5	<1	--	--	--	<5
MW-31		07/25/90	--	2.0	<0.5	2.2	1.8	6	--	--	--	<5
MW-31		10/16/90	--	0.7	<0.5	<0.5	<0.5	<1	--	--	--	<5
MW-31		01/17/90	--	1.6	0.6	1.6	4.4	--	2	<1	--	<5
MW-31		04/16/91	--	1.8	0.6	1.9	4.5	--	<1	<1	--	<2
MW-31		09/17/91	--	--	--	--	--	--	--	--	--	--
MW-31		12/10/91	--	--	--	--	--	--	--	--	--	--
MW-31		09/14/95	ND	<0.50	<0.50	<0.50	<0.50	--	<0.05	0.54	0.94	--
MW-31		12/15/95	ND	<0.50	<0.50	<0.50	<1.0	--	<0.05	0.36	0.78	--
MW-31		03/14/96	ND	<0.50	<0.50	<0.50	<1.0	--	<0.05	1.2	0.94	--
MW-31		09/11/96	ND	<0.500	<0.500	<0.500	<1.00	--	0.0519	0.864	2.16	--
MW-31		03/18/97	ND	<0.500	<0.500	<0.500	<1.00	--	<0.050	0.546	<0.750	--
MW-31		06/26/97	ND	<0.500	<0.500	<0.500	<1.00	--	<0.050	<0.250	<0.750	--
MW-31		06/29/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	<1.00
MW-31		12/15/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.320/<0.250	<0.750/<0.750	--
MW-31		07/01/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.269/<0.250	<0.750/<0.750	<1.00
MW-31		12/16/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.723/<0.250	<0.750/<0.750	--
MW-31		06/22/00[8]	ND	<0.500	5.05	1.39	15.0	--	0.167	<0.250	<0.750	<1.00
MW-31		12/22/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-31		06/22/01	ND	<0.500	<0.500	<0.500	<1.00	--	0.0576	<0.250	<0.750	<1.00
MW-31		12/18/01	ND	<0.500	<2.00	<1.00	<1.50	--	<0.100	1.08/<0.250[10]	<0.750/<0.750[10]	<1.00
MW-31		06/20/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.568/<0.250	<0.750/<0.750	<1.00
MW-31		12/13/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.436	1.27	--
MW-31		12/03/03	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-32		08/10/89	--	2.7	2.9	0.8	2.3	1.7	--	--	--	<5
MW-32		10/26/89	--	<0.5	1.7	<0.5	0.7	2.1	--	--	--	<5
MW-32		01/16/90	--	<0.5	<0.5	<0.5	<0.5	0.76	--	--	--	<5
MW-32		04/16/90	--	<0.5	1.0	<0.5	<0.5	<1	--	--	--	<5
MW-32		07/25/90	--	<0.5	<0.5	1.1	<0.5	1	--	--	--	<5
MW-32		10/16/90	--	<0.5	<0.5	<0.5	<0.5	<1	--	--	--	<5
MW-32		01/17/91	--	<0.5	<0.5	0.5	1.5	--	<1	<1	--	<5
MW-32		04/16/91	--	<0.5	0.6	0.6	1.6	--	<1	<1	--	<2
MW-32		09/17/91	--	--	--	--	--	--	--	--	--	--
MW-32		12/01/91	--	--	--	--	--	--	--	--	--	--
MW-58		09/15/95	ND	<0.50	<0.50	<0.50	<1.0	--	<1.0	<1.0	<0.75	--
MW-58		12/14/95	ND	<0.50	<0.50	<0.50	<1.0	--	<0.05	<0.25	<0.75	--
MW-58		03/14/96	ND	<0.50	<0.50	<0.50	<1.0	--	<0.05	<0.25	<0.75	--
MW-58		09/11/96	ND	<0.500	<0.500	<0.500	<1.00	--	<0.050	<0.250	0.979	--
MW-58		12/11/96	ND	--	--	--	--	--	--	--	--	--

Appendix E
Historical Summary of Groundwater Analytical Data
Total Petroleum Hydrocarbons
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Monitoring Well[1]	Notes	Date Sampled	LNAPL[2]	BTEX (EPA Method 8020 or 8021B) (µg/L)				TPH (EPA Method 418.1) (mg/L)	NWTPH-Gx (mg/L)	NWTPH-D Extended[3] (mg/L)		Dissolved Lead (EPA 6000/7000 Series Method) (µg/L)
				B	T	E	X		Gasoline C_7 - C_{12}	Diesel C_{12} - C_{24}	Heavy Oil $>C_{24}$	
Upper Yard RALs			***No visible sheen***	***40***	***14,300***	***1,400***	***4,400***	***--***	***1***	***10***	***15***	***50***
MW-58		03/18/97	ND	<0.500	<0.500	<0.500	<1.00	--	<0.050	<0.372	<0.750	--
MW-58		06/25/97	ND	<0.500	<0.500	<0.500	<1.00	--	<0.050	<0.250	<0.750	--
MW-58		06/30/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	<1.00
MW-58		12/14/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-58		06/29/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-58		12/16/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-58		06/22/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-58		12/21/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-58		06/21/01	ND	<0.500	<0.500	<0.500	2.43	--	<0.0500	<0.250	<0.750	<1.00
MW-58		12/18/01	ND	<0.500	<2.00	<1.00	<1.50	--	<0.100	<0.250[10]	<0.750[10]	--
MW-58		06/19/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	<1.00
MW-58		12/13/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-58		12/03/03	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-65		03/13/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-65		06/29/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	<1.00
MW-65		09/04/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-65		12/15/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.482/<0.250	<0.750/<0.750	--
MW-65		03/24/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.975/<0.250	0.991/<0.750	--
MW-65		06/29/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.750/<0.250	<0.750/<0.750	<1.00
MW-65		09/29/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.683/<0.250	<0.750/<0.750	--
MW-65		12/16/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.418/<0.250	<0.750/<0.750	--
MW-65		03/22/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.816/<0.250	<0.750/<0.750	--
MW-65		06/23/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.689/<0.250	<0.750/<0.750	<1.00
MW-65		09/14/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.603/<0.250	<0.750/<0.750	--
MW-65		12/22/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.408/<0.250	<0.750/<0.750	--
MW-65		03/15/01	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.620/<0.250	<0.750/<0.750	--
MW-65		06/22/01	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.262/<0.250	<0.750/<0.750	<1.00
MW-65		09/25/01	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.584/0.225	<0.750/<0.750	<1.00
MW-65		12/18/01	ND	<0.500	<2.00	<1.00	<1.50	--	<0.100	0.675/<0.250[10]	0.779/<0.750[10]	<1.00
MW-65		03/26/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.749/<0.250	<0.750/<0.750	--
MW-65		06/20/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.675/<0.250	<0.750/<0.750	<1.00
MW-65		12/13/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-65		12/03/03	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-65		03/07/07	ND	<0.500	<0.500	<0.500	<1.00	--	<0.048	0.73	0.17	--
MW-65		06/08/07	ND	<0.500	<0.500	<0.500	<1.50	--	<0.050	0.53	0.25	<0.037
MW-65		11/26/07	ND	<0.5	<0.5	0.7	<1.5	--	<0.050	0.47	0.19	--
MW-66		03/13/98	ND	<1.25	<1.25	<1.25	<5.00	--	1.20[5]	3.52	<0.750	--
MW-66		06/29/98	ND	<0.500	<0.500	<0.500	1.06	--	0.424	<0.250	<0.750	<1.00
MW-66		09/04/98	ND	<0.500	<0.500	<0.500	<2.00	--	0.257	1.27	<0.750	--
MW-66		12/15/98	ND	<0.500	<0.500	0.508	2.62	--	0.0387	0.906/<0.250	<0.750/<0.750	--
MW-66		03/24/99	ND	<0.500	<0.500	<0.900	<3.00	--	1.05	8.44/5.11	<0.750/<0.750	--
MW-66		07/01/99	Sheen	<0.500	<0.500	<0.500	<1.70	--	0.310[4]	1.37/0.596	<0.750/<0.750	<1.00
MW-66		09/29/99	ND	<0.500	<0.500	<0.500	<1.00	--	0.216[4]	2.32/1.10	<0.750/<0.750	--
MW-66		12/16/99	ND	<0.500	<0.500	<0.500	<1.00	--	0.332	0.659/<0.250	<0.750/<0.750	--
MW-66		03/22/00	ND	<0.500	<0.500	<0.500	<3.00	--	0.711	4.31/2.31	<0.750/<0.750	--
MW-66		03/15/01	ND	<0.570	<0.922	<0.500	<3.91	--	1.16	7.03/5.43	1.01/<0.750	--
MW-66		09/14/00	ND	<0.500	<0.500	<0.500	<2.16	--	0.416	1.601/1.43	<0.750/<0.750	--
MW-66		12/22/00	ND	<0.500	<0.500	<0.500	<2.35	--	0.475	1.87/0.819	<0.750/<0.750	--
MW-66		03/15/01	ND	<0.570	<0.922	<0.500	<3.91	--	1.16	7.03/5.43	1.01/<0.750	--
MW-66		06/22/01	Sheen	<0.500	<0.500	<0.500	<1.00	--	0.130	0.409/<0.250	<0.750/<0.750	--

Appendix E
Historical Summary of Groundwater Analytical Data
Total Petroleum Hydrocarbons
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Monitoring Well[1]	Notes	Date Sampled	LNAPL[2]	BTEX (EPA Method 8020 or 8021B) (µg/L)				TPH (EPA Method 418.1) (mg/L)	NWTPH-Gx (mg/L)	NWTPH-D Extended[3] (mg/L)		Dissolved Lead (EPA 6000/7000 Series Method) (µg/L)
									Gasoline	Diesel	Heavy Oil	
				B	T	E	X		C_7 - C_{12}	C_{12} - C_{24}	>C_{24}	
Upper Yard RALs			***No visible sheen***	***40***	***14,300***	***1,400***	***4,400***	***--***	***1***	***10***	***15***	***50***
MW-66		09/25/01	Sheen	<0.500	<0.500	<0.500	1.06	--	0.142	4.06/3.14	0.811/<0.750	--
MW-66		12/18/01	Sheen	<0.500	<2.00	<1.00	<1.50	--	0.162	0.696/<0.250[10]	<0.750/<0.750[10]	--
MW-66		03/27/02	Sheen	<0.500	<0.500	<0.500	1.32	--	0.454	4.41/2.58	1.41/<0.750	--
MW-66		06/20/02	ND	<0.500	<0.500	<0.500	<1.00	--	0.052	0.650/<0.250	<0.750/<0.750	--
MW-66		09/19/02	Sheen	<0.500	<0.500	<0.500	<1.00	--	0.128	<0.250[11]	<0.750[11]	--
MW-66		12/13/02	Sheen	<0.500	<0.500	<0.500	<1.00	--	0.0845	0.688	<0.750	--
MW-66		03/21/03	Sheen	<0.500	<0.500	<0.500	<1.00	--	0.114	2.72	<0.750	--
MW-66		06/19/03	Sheen	<0.500	<0.500	<0.500	<1.00	--	0.189[5]	0.707	<0.750	--
MW-66		09/18/03	Sheen	<0.500	<0.500	<0.500	<1.00	--	0.171	3.73	<0.750	--
MW-66		12/03/03	Sheen	<0.500	<0.500	<0.500	<1.00	--	0.0509	1.45	<0.750	--
MW-66		03/09/04	Sheen	<0.500	<0.500	<0.500	<1.00	--	0.131	0.446	<0.750	--
MW-66		06/03/04	ND	<0.500	<0.500	<0.500	<1.00	--	0.121	0.504	<0.750	--
MW-66		09/03/04	ND	<0.500	<0.500	<0.500	1.25	--	0.330	1.03	<0.750	--
MW-66		12/06/04	ND	<0.500	<0.500	<0.500	<1.00	--	0.116	0.380	<0.750	--
MW-66		03/04/05	ND	<0.500	<0.500	<0.500	1.4	--	0.275	0.577	<0.750	--
MW-66		06/03/05	ND	<0.500	<0.500	<0.500	<1.00	--	0.149	0.860	<0.750	--
MW-66		09/01/05	ND	<0.500	<0.500	<0.500	<1.00	--	0.119	0.678	<0.750	--
MW-66		12/01/05	ND	<0.500	<0.500	<0.500	<1.00	--	0.115	0.885	<0.721	--
MW-66		03/02/06	ND	<0.500	<0.500	<0.500	<1.00	--	0.0651	0.381	<0.714	--
MW-66		06/06/06	ND	<0.500	<0.500	<0.500	<1.00	--	0.128	<0.250	<0.750	--
MW-66		09/15/06	ND	<0.500	<0.500	<0.500	<1.00	--	0.0778	0.370	<0.708	--
MW-66		03/07/07	--	--	--	--	--	--	--	--	--	--
Lower Yard RALs			***No visible sheen***	***40***	***14,300***	***1,400***	***4,400***	***--***	***1***	***10***	***15***	***50***
Lower Yard												
MW-81		10/06/98	Sheen	<0.700	<0.500	<0.500	<1.50	--	0.136[4]	27.6/14.8	26.5/10.0	--
MW-81		12/14/98	Sheen	<0.500	<0.500	<0.500	<1.00	--	0.273	3.62/0.563	1.18/<0.750	--
MW-81		03/23/99	Sheen	<0.500	0.646	<0.500	2.28	--	0.0632	3.90/2.17	3.14/1.50	--
MW-81		06/29/99	Sheen	<0.500	<0.500	<0.500	<1.60	--	0.418	5.22/3.12	4.62/2.55	<1.00
MW-81		09/29/99	ND	<0.500	<0.500	<0.500	<1.00	--	0.566[4]	1.69/0.390	<0.750/<0.750	--
MW-81		12/15/99	Sheen	<0.500	<0.500	<0.500	1.15	--	0.0762	2.46/0.366	0.764/<0.750	--
MW-81		03/21/00	ND	<0.500	<0.500	<0.500	<1.00	--	0.0817	2.20/0.800	1.28/<0.750	--
MW-81		06/22/00[8]	ND	0.536	3.35	2.37	16.2	--	0.234	2.36/0.495	1.29/<0.750	--
MW-81		09/14/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	1.20/0.347	<0.750/<0.750	--
MW-81		12/21/00	ND	<0.500	<0.500	<0.500	<1.00	--	0.585	1.5/0.374	<0.750/<0.750	--
MW-81		03/15/01	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	1.16/0.324	<0.750/<0.750	--
MW-81		06/21/01	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	1.60/0.751	1.32/<0.750	--
MW-81		09/25/01	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	1.59/1.11	0.832/<0.750	--
MW-81		12/18/01	ND	<0.500	<2.00	<1.00	<1.50	--	<0.100	1.62/0.323[10]	<0.750/<0.750[10]	--
MW-81		03/27/02	ND	<0.500	<0.500	<0.500	<1.00	--	0.0598	1.31/0.324	<0.750/<0.750	--
MW-81		06/19/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	1.09/<0.250	<0.750/<0.750	--
MW-82		10/06/98	Sheen	<0.500	<0.500	<0.500	<3.50	--	0.311[4]	7.90/5.43	3.93/2.31	--
MW-82		12/14/98	ND	<0.500	<0.500	<0.500	<1.00	--	0.0793	0.787/<0.250	<0.750/<0.750	--
MW-82		03/23/99	Sheen	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.757/0.268	<0.750/<0.750	--
MW-82		06/29/99	ND	<0.500	<0.500	<0.500	<1.00	--	0.2750	3.92/2.51	2.19/1.29	1.25
MW-82		09/29/99	ND	<0.500	<0.500	<0.500	<1.00	--	0.0566	1.48/0.784	<0.750/<0.750	--
MW-82		12/15/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.561/<0.250	<0.750/<0.750	--
MW-82		03/21/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.797/0.349	<0.750/<0.750	--
MW-82		06/22/00[8]	ND	<0.500	1.72	1.48	13.6	--	0.2580	1.01/0.494	<0.750/<0.750	--
MW-82		09/14/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.907/0.522	<0.750/<0.750	--
MW-82		12/21/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.911/0.386	<0.750/<0.750	--

Appendix E
Historical Summary of Groundwater Analytical Data
Total Petroleum Hydrocarbons
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Monitoring Well[1]	Notes	Date Sampled	LNAPL[2]	BTEX (EPA Method 8020 or 8021B) (µg/L)				TPH (EPA Method 418.1) (mg/L)	NWTPH-Gx (mg/L)	NWTPH-D Extended[3] (mg/L)		Dissolved Lead (EPA 6000/7000 Series Method) (µg/L)
				B	T	E	X		Gasoline C_7 - C_{12}	Diesel C_{12} - C_{24}	Heavy Oil $>C_{24}$	
Upper Yard RALs			***No visible sheen***	***40***	***14,300***	***1,400***	***4,400***	***--***	***1***	***10***	***15***	***50***
MW-82		03/15/01	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.839/0.451	<0.750/<0.750	--
MW-82		06/21/01	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	1.03/0.675	0.830/<0.750	--
MW-82		09/25/01	ND	<0.500	<0.500	<0.500	1.14	--	<0.0500	0.742/0.288	<0.750/<0.750	--
MW-82		12/18/01	ND	<0.500	<2.00	<1.00	<1.50	--	<0.100	0.278/<0.250[10]	<0.750/<0.750[10]	--
MW-82		03/27/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.517/<0.250	<0.750/<0.750	--
MW-82		06/19/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.513/<0.250	<0.750/<0.750	--
MW-83		10/06/98	ND	<0.500	<0.500	<0.500	<1.00	--	0.0923[4]	2.19/1.31	2.36/1.11	--
MW-83		12/14/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.634/<0.250	<0.750/<0.750	--
MW-83		03/23/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.413/<0.250	<0.750/<0.750	--
MW-83		06/29/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.729/0.417	0.957/<0.750	<1.00
MW-83		09/29/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.390/<0.250[13]	<0.750/<0.750[13]	--
MW-83		12/15/99	ND	<0.500	<0.500	<0.500	1.07	--	<0.0500	0.271/<0.250	<0.750/<0.750	--
MW-83		03/21/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-83		06/22/00[8]	ND	<0.500	<0.500	<0.500	3.76	--	0.205	0.302/<0.250	<0.750/<0.750	--
MW-83		09/14/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-83		12/21/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.316/<0.250	<0.750/<0.750	--
MW-83		03/15/01	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-83		06/21/01	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.268/<0.250	<0.750/<0.750	--
MW-83		09/25/01	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-83		12/18/01	ND	<0.500	<2.00	<1.00	<1.50	--	<0.100	<0.250[10]	<0.750[10]	--
MW-83		03/27/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-83		06/19/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.299/<0.250	<0.750/<0.750	--
MW-84		10/06/98	ND	<2.00	<1.00	<1.50	<8.00	--	1.09[4]	3.52/1.70	1.03/<0.750	--
MW-84		12/14/98	ND	<0.500	<0.500	<0.500	2.33	--	0.241	1.01/0.351	<0.750/<0.750	--
MW-84		03/23/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	Note 14	Note 14	--
MW-84		04/01/99	ND	--	--	--	--	--	--	0.0259	<0.750	--
MW-84		06/29/99	ND	<0.500	<0.500	<0.500	<1.00	--	0.0833	2.17/1.12	1.61/<0.750	<1.00
MW-84		09/29/99	ND	<0.500	<0.500	<0.500	<1.00	--	0.0517	0.941/0.338	<0.750/<0.750	--
MW-84		12/15/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.692/<0.250	<0.750/<0.750	--
MW-84		03/21/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.859/<0.750	<0.750/<0.750	--
MW-84		06/22/00	ND	<0.500	<0.500	<0.500	1.37	--	0.0551	1.39/0.649	0.808/<0.750	--
MW-84		09/14/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.485/<0.250	<0.750/<0.750	--
MW-84		12/21/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	1.09/0.419	<0.750/<0.750	--
MW-84		03/15/01	ND	0.584	<0.500	<0.500	<1.00	--	<0.0500	0.559/<0.250	<0.750/<0.750	--
MW-84		06/21/01	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.407/<0.250	<0.750/<0.750	--
MW-84		09/25/01	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.324/<0.250	<0.750/<0.750	--
MW-84		12/18/01	ND	<0.500	<2.00	<1.00	<1.50	--	<0.100	0.965/<0.250[10]	0.926/<0.750[10]	--
MW-84		03/27/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.883/<0.250	<0.750/<0.750	--
MW-84		06/19/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.792/<0.250	<0.750/<0.750	--
MW-85		10/06/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.434/<0.250	<0.750/<0.750	--
MW-85		12/14/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.451/<0.250	<0.750/<0.750	--
MW-85		03/23/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.404/<0.250	<0.750/<0.750	--
MW-85		06/29/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.412/<0.250	<0.750/<0.750	<1.00
MW-85		09/29/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.365/<0.250	<0.750/<0.750	--
MW-85		12/16/99	ND	<0.500	0.628	<0.500	<1.00	--	<0.0500	0.350/<0.250	<0.750/<0.750	--
MW-85		03/21/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.350/<0.250	<0.750/<0.750	--
MW-85		06/22/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.376/<0.250	<0.750/<0.750	--
MW-85		09/14/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-85		12/21/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.360/<0.250	<0.750/<0.750	--
MW-85		03/15/01	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--

Appendix E
Historical Summary of Groundwater Analytical Data
Total Petroleum Hydrocarbons
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Monitoring Well[1]	Notes	Date Sampled	LNAPL[2]	BTEX (EPA Method 8020 or 8021B) (µg/L)				TPH (EPA Method 418.1) (mg/L)	NWTPH-Gx (mg/L)	NWTPH-D Extended[3] (mg/L)		Dissolved Lead (EPA 6000/7000 Series Method) (µg/L)
				B	T	E	X		Gasoline C_7 - C_{12}	Diesel C_{12} - C_{24}	Heavy Oil $>C_{24}$	
Upper Yard RALs			***No visible sheen***	***40***	***14,300***	***1,400***	***4,400***	***--***	***1***	***10***	***15***	***50***
MW-85		06/21/01	ND	<0.500	<0.500	<0.500	1.57	--	<0.0500	<0.250	<0.750	--
MW-85		09/25/01	ND	<0.500	<0.500	<0.500	1.57	--	<0.0500	<0.250	<0.750	--
MW-85		12/19/01	ND	<0.500	<2.00	<1.00	<1.50	--	<0.100	0.600/<0.250[10]	<0.750/<0.750[10]	--
MW-85		03/27/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.271/<0.250	<0.750/<0.750	--
MW-85		06/20/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.702/<0.250	<0.750/<0.750	--
MW-86		10/06/98	Sheen	<0.800	<0.500	<0.500	<1.00	--	<0.0500	2.28/2.99	2.57/2.92	--
MW-86		12/15/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	1.65/<0.250	<0.750/<0.750	--
MW-86		03/23/99	Sheen	<0.500	<0.500	<0.500	2.54	--	<0.0500	1.39/<0.250	0.883/<0.750	--
MW-86		07/01/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.926/<0.250	<0.750/<0.750	<1.00
MW-86		09/29/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.481/<0.250	<0.750/<0.750	--
MW-86		12/16/99	ND	<0.500	0.574	<0.500	<1.00	--	<0.0500	1.71/<0.250	<0.750/<0.750	--
MW-86		03/21/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.901[7]	<0.750[7]	--
MW-86		06/22/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.535/<0.250	<0.750/<0.750	--
MW-86		09/14/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.617/<0.250	<0.750/<0.750	--
MW-86		12/21/00[9]	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.374/<0.250	<0.750/<0.750	--
MW-86		03/15/01	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.436/0.250	<0.750/<0.750	--
MW-86		06/21/01	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.606/0.310	<0.750/<0.750	--
MW-86		09/25/01	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-86		12/19/01	ND	<0.500	<2.00	<1.00	<1.50	--	<0.100	1.21/<0.250[10]	<0.750/<0.750[10]	--
MW-86		03/27/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.464/<0.250	<0.750/<0.750	--
MW-86		06/20/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.629/<0.250	<0.750/<0.750	--
Offsite Area RALs			***No visible sheen***	***40***	***14,300***	***1,400***	***4,400***	***--***	***1***	***10***	***15***	***50***
Offsite Area												
MW-8		01/31/89	--	0.6	<0.5	<0.5	<0.5	0.21	--	--	--	<25
MW-8		04/27/89	--	<0.5	<0.5	<0.5	<0.5	1.1	--	--	--	<5
MW-8		07/25/89	--	4.3	2.1	<0.5	<0.5	0.17	--	--	--	18
MW-8		10/26/89	--	<0.5	<0.5	<0.5	<0.5	0.94	--	--	--	<5
MW-8		01/16/90	--	<0.5	<0.5	<0.5	<0.5	0.35	--	--	--	<5
MW-8		04/16/90	--	2.8	<0.5	<0.5	<0.5	<1	--	--	--	<50
MW-8		07/25/90	--	<0.5	<0.5	<0.5	<0.5	<1	--	--	--	<50
MW-8		10/16/90	--	<0.5	<0.5	<0.5	<0.5	2	--	--	--	<100
MW-8		01/17/91	--	<0.5	<0.5	<0.5	<0.5	<1	<1	<1	--	<5
MW-8		04/16/91	--	<0.5	<0.5	<0.5	<0.5	--	<1	<1	--	<20
MW-8		09/17/91	--	<0.5	<0.5	<0.5	<0.5	--	<1	<1	--	6
MW-8		12/10/91	--	<0.5	<0.5	<0.5	<0.5	--	<1	<1	--	<3.0
MW-8		06/25/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	<1.00
MW-8		12/14/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.523/<0.250	<0.750/<0.750	--
MW-8		07/01/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-8		12/16/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.501/<0.403	<1.21/<1.21	--
MW-8		06/22/00	ND	<0.500	<0.500	<0.500	<1.00	--	0.0558	0.273/<0.249	<0.750/<0.737	--
MW-8		12/21/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.441/<0.245	<0.750/<0.750	--
MW-8		06/21/01	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-8		12/19/01	ND	<0.500	<2.00	<1.00	<1.50	--	<0.100	0.464/<0.250[10]	<0.750/<0.750[10]	--
MW-8		06/19/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.271/<0.250	<0.750/<0.750	--
MW-8		12/13/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.439	0.762	--
MW-8		12/02/03	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-10		01/31/89	--	<0.5	<0.5	<0.5	<0.5	0.36	--	--	--	<5
MW-10		04/27/89	--	<0.5	<0.5	<0.5	<0.5	2.2	--	--	--	<5
MW-10		07/25/89	--	<0.5	<0.5	<0.5	<0.5	0.45	--	--	--	<5
MW-10		10/26/89	--	<0.5	<0.5	<0.5	<0.5	3.4	--	--	--	<5

Appendix E
Historical Summary of Groundwater Analytical Data
Total Petroleum Hydrocarbons
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Monitoring Well[1]	Notes	Date Sampled	LNAPL[2]	BTEX (EPA Method 8020 or 8021B) (µg/L)				TPH (EPA Method 418.1) (mg/L)	NWTPH-Gx (mg/L)	NWTPH-D Extended[3] (mg/L)		Dissolved Lead (EPA 6000/7000 Series Method) (µg/L)
									Gasoline	Diesel	Heavy Oil	
				B	T	E	X		C_7 - C_{12}	C_{12} - C_{24}	>C_{24}	
Upper Yard RALs			***No visible sheen***	***40***	***14,300***	***1,400***	***4,400***	***--***	***1***	***10***	***15***	***50***
MW-10		01/16/90	--	<0.5	<0.5	<0.5	<0.5	0.35	--	--	--	<5
MW-10		04/16/90	--	<0.5	<0.5	<0.5	<0.5	<1	--	--	--	<5
MW-10		07/25/90	--	<0.5	<0.5	<0.5	<0.5	6	--	--	--	<5
MW-10		10/16/90	--	<0.5	<0.5	<0.5	<0.5	<1	--	--	--	<5
MW-10		01/17/91	--	<0.5	<0.5	<0.5	<0.5	--	<1	<1	--	<5
MW-10		04/16/91	--	<0.5	<0.5	<0.5	<0.5	--	<1	<1	--	<5
MW-10		09/17/91	--	<0.5	<0.5	<0.5	<0.5	--	<1	<1	--	<2
MW-10		12/10/91	--	<0.5	<0.5	<0.5	<0.5	--	<1	<1	--	<3
MW-10		06/25/98	ND	<0.500	<0.500	<0.500	<1.00	--	0.0593	<0.250	<0.750	1.24
MW-10		12/14/98	ND	<0.500	<0.500	<0.500	1.28	--	0.0715	0.953/<0.250	<0.750/<0.750	--
MW-10		07/01/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.652/<0.250	<0.750/<0.750	--
MW-10		12/16/99	ND	<0.500	<0.500	<0.500	<1.00	--	0.076	0.706/<0.475	<1.43/<1.43	--
MW-10		06/22/00	ND	<0.500	<0.500	<0.500	<1.00	--	0.0846	<0.503[13]	<1.51[13]	--
MW-10		12/21/00	ND	<0.500	<0.500	<0.500	1.10	--	0.0657	0.555/<0.250	<0.750/<0.750	--
MW-10		06/21/01	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.301/<0.250	<0.750/<0.750	--
MW-10		12/19/01	ND	<0.500	<2.00	<1.00	<1.50	--	<0.100	0.551/<0.250[10]	<0.750/<0.750[10]	--
MW-10		06/19/02	ND	<0.500	<0.500	<0.500	1.43	--	0.0545	0.656/<0.250	<0.750/<0.750	--
MW-10		12/13/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-10		12/02/03	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-20		01/31/89	--	<0.5	<0.5	<0.5	<0.5	1.1	--	--	--	<5
MW-20		04/27/89	--	<0.5	<0.5	<0.5	<0.5	1.6	--	--	--	<5
MW-20		07/25/89	--	1.0	<0.5	<0.5	<0.5	0.31	--	--	--	<5
MW-20		10/26/89	--	0.7	<0.5	<0.5	<0.5	3.2	--	--	--	<5
MW-20		01/16/90	--	<0.5	<0.5	<0.5	<0.5	1.4	--	--	--	<5
MW-20		04/16/90	--	0.6	<0.5	<0.5	<0.5	<1	--	--	--	<5
MW-20		07/25/90	--	<0.5	<0.5	<0.5	<0.5	<1	--	--	--	<5
MW-20		10/16/90	--	<0.5	<0.5	<0.5	<0.5	<1	--	--	--	<5
MW-20		01/17/91	--	<0.5	<0.5	<0.5	<0.5	--	<1	<1	--	<5
MW-20		04/16/91	--	<0.5	<0.5	<0.5	<0.5	--	<1	<1	--	<2
MW-20		09/17/91	--	<0.5	<0.5	<0.5	<0.5	--	<1	<1	--	<2
MW-20		12/10/91	--	<0.5	<0.5	<0.5	<0.5	--	<1	<1	--	3.4
MW-20		06/25/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	<1.00
MW-20		12/15/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.287/<0.250	<0.750/<0.750	--
MW-20		07/01/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.291/<0.250	<0.750/<0.750	--
MW-20		12/16/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.452/<0.250	<0.750/<0.750	--
MW-20		06/22/00	ND	<0.500	<0.500	<0.500	1.67	--	<0.0500	<0.250	<0.750	--
MW-20		12/21/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.569/<0.250	<0.750/<0.750	--
MW-20		06/21/01	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.277/<0.250	<0.750/<0.750	--
MW-20		12/19/01	ND	<0.500	<2.00	<1.00	<1.50	--	<0.100	1.05/<0.250[10]	<0.750/<0.750[10]	--
MW-20		06/20/02	ND	6.60	<0.500	<0.500	3.30	--	<0.0500	0.627/<0.250	<0.750/<0.750	--
MW-20		12/13/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-20		12/02/03	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-25		01/31/89	--	<0.5	4.7	<0.5	2.3	3.7	--	--	--	<5
MW-25		04/27/89	--	7.2	1.2	1.6	<0.5	0.93	--	--	--	<5
MW-25		07/25/89	--	1.4	0.8	<0.5	1.2	3.4	--	--	--	<5
MW-25		10/26/89	--	<0.5	<0.5	<0.5	<0.5	7.8	--	--	--	<5
MW-25		01/16/90	--	1.3	<0.5	<0.5	<0.5	4.9	--	--	--	<5
MW-25		04/16/90	--	6.6	1.4	0.8	2.7	<1	--	--	--	<5
MW-25		07/25/90	--	2.5	0.6	0.6	0.8	<1	--	--	--	<5
MW-25		10/16/90	--	<0.5	<0.5	<0.5	0.8	<1	--	--	--	<5

Appendix E
Historical Summary of Groundwater Analytical Data
Total Petroleum Hydrocarbons
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Monitoring Well[1]	Notes	Date Sampled	LNAPL[2]	BTEX (EPA Method 8020 or 8021B) (µg/L)				TPH (EPA Method 418.1) (mg/L)	NWTPH-Gx (mg/L)	NWTPH-D Extended[3] (mg/L)		Dissolved Lead (EPA 6000/7000 Series Method) (µg/L)
									Gasoline	Diesel	Heavy Oil	
				B	T	E	X		C_7 - C_{12}	C_{12} - C_{24}	>C_{24}	
Upper Yard RALs			***No visible sheen***	***40***	***14,300***	***1,400***	***4,400***	***--***	***1***	***10***	***15***	***50***
MW-25		01/17/91	--	1.0	0.7	<0.5	1.4	<1	<1	<1	--	<5
MW-25		04/16/91	--	0.9	<0.5	<0.5	<0.5	--	<1	<1	--	<20
MW-25		09/19/91	--	<0.5	<0.5	<0.5	0.6	--	<1	<1	--	<20
MW-25		12/10/91	--	<0.5	<0.5	<0.5	<0.5	--	<1	<1	--	<3.0
MW-25		03/13/98	ND	<0.500	<0.500	<0.500	<1.00	--	0.160	<0.250	<0.750	--
MW-25		06/24/98	ND	<0.500	1.68	<0.500	<1.00	--	0.689	<0.250	<0.750	<1.00
MW-25		09/03/98	ND	<0.500	<0.500	<0.500	<1.00	--	0.0716	<0.250	<0.750	--
MW-25		12/14/98	ND	<0.500	<0.500	0.795	1.31	--	0.0697	1.26/<0.250	<0.750/<0.750	--
MW-25		03/24/99	ND	<0.600	<0.700	<1.00	<2.50	--	0.118	0.969/<0.250	<0.750/<0.750	--
MW-25		07/01/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.719/<0.250	<0.750/<0.750	<20.0
MW-25		09/29/99	ND	<0.500	3.52	<0.500	<10.0	--	0.136	1.58/<0.476	<1.43/<1.43	--
MW-25		12/16/99	ND	<0.500	<0.500	0.632	1.81	--	0.166	1.31/<0.250	<0.750/<0.750	--
MW-25		03/22/00	ND	<0.500	1.94	<0.500	<1.00	--	0.148	1.36/<0.447	<1.34/<1.34	--
MW-25		06/22/00	ND	<0.500	<0.500	<0.500	<1.00	--	0.0876	0.674/<0.250	<0.750/<0.750	<10.0
MW-25		09/15/00	ND	<0.500	<0.607	<0.500	<1.28	--	0.716	1.26/<0.250	<0.750/<0.750	--
MW-25		12/21/00	ND	<0.500	<0.500	<0.500	1.18	--	0.0991	1.25/<0.250	<0.750/<0.750	--
MW-25		03/15/01	ND	<0.500	<0.500	<0.500	1.75	--	0.0664	1.19/<0.250	<0.750/<0.750	--
MW-25		06/21/01	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.538/<0.250	<0.750/<0.750	<1.00
MW-25		09/25/01	ND	<0.500	<0.500	<0.500	<1.00	--	0.0596	0.864/<0.250	<0.750/<0.750	--
MW-25		12/19/01	ND	<0.500	<2.00	<1.00	<1.50	--	0.175	2.22/<0.250[10]	0.852/<0.750[10]	--
MW-25		03/26/02	ND	<0.500	<0.500	<0.500	1.39	--	0.12	0.861/<0.250	<0.750/<0.750	--
MW-25		06/19/02	ND	<0.500	<0.500	<0.500	1.44	--	0.108	0.706/<0.250	<0.750/<0.750	<1.00
MW-25		12/13/02	ND	<0.500	<0.500	<0.500	<1.00	--	0.0578	<0.250	<0.750	--
MW-25		12/02/03	ND	<0.500	<0.500	<0.500	<1.00	--	0.110	<0.250	<0.750	--
MW-26		01/31/89	--	<0.5	<0.5	<0.5	<0.5	0.64	--	--	--	25
MW-26		04/27/89	--	<0.5	<0.5	<0.5	<0.5	0.08	--	--	--	<5
MW-26		07/25/89	--	<0.5	<0.5	<0.5	<0.5	1.4	--	--	--	<5
MW-26		10/26/89	--	<0.5	<0.5	<0.5	<0.5	0.94	--	--	--	<5
MW-26		01/16/90	--	<0.5	<0.5	<0.5	<0.5	1.8	--	--	--	<5
MW-26		04/16/90	--	<0.5	<0.5	<0.5	<0.5	<1	--	--	--	<5
MW-26		07/25/90	--	<0.5	<0.5	<0.5	<0.5	2	--	--	--	<5
MW-26		10/16/90	--	<0.5	<0.5	<0.5	<0.5	<1	--	--	--	<50
MW-26		01/17/91	--	<0.5	<0.5	<0.5	<0.5	<1	<1	<1	--	<50
MW-26		04/16/91	--	<0.5	<0.5	<0.5	<0.5	--	<1	<1	--	<2
MW-26		09/19/91	--	<0.5	<0.5	<0.5	<0.5	--	<1	<1	--	<2
MW-26		12/10/91	--	<0.5	<0.5	<0.5	<0.5	--	<1	<1	--	<3.0
MW-26		06/30/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-26		12/15/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-26		07/01/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-26		12/16/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250/<0.250	<0.750/<0.750	--
MW-26		06/22/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-26		12/22/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-26		06/21/01	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-26		12/19/01	ND	<0.500	<2.00	<1.00	<1.50	--	<0.100	0.445/<0.250[10]	<0.750/<0.750[10]	--
MW-26		06/20/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-26		12/13/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-26		12/02/03	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-27		01/31/89	--	<0.5	1.8	<0.5	<0.5	0.64	--	--	--	<5
MW-27		04/27/89	--	<0.5	<0.5	<0.5	<0.5	0.23	--	--	--	<5
MW-27		07/25/89	--	1.0	<0.5	<0.5	<0.5	0.68	--	--	--	<5

Appendix E
Historical Summary of Groundwater Analytical Data
Total Petroleum Hydrocarbons
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Monitoring Well[1]	Notes	Date Sampled	LNAPL[2]	BTEX (EPA Method 8020 or 8021B) (µg/L)				TPH (EPA Method 418.1) (mg/L)	NWTPH-Gx (mg/L)	NWTPH-D Extended[3] (mg/L)		Dissolved Lead (EPA 6000/7000 Series Method) (µg/L)
				B	T	E	X		Gasoline C_7 - C_{12}	Diesel C_{12} - C_{24}	Heavy Oil $>C_{24}$	
Upper Yard RALs			***No visible sheen***	***40***	***14,300***	***1,400***	***4,400***	***--***	***1***	***10***	***15***	***50***
MW-27		10/26/89	--	1.3	0.7	<0.5	0.7	1.1	--	--	--	<5
MW-27		01/16/90	--	<0.5	<0.5	<0.5	<0.5	1.3	--	--	--	<5
MW-27		04/16/90	--	<0.5	<0.5	<0.5	0.6	<1	--	--	--	<5
MW-27		07/25/90	--	<0.5	<0.5	<0.5	<0.5	2	--	--	--	<5
MW-27		10/16/90	--	<0.5	<0.5	<0.5	<0.5	<1	--	--	--	<5
MW-27		01/17/91	--	0.6	<0.5	<0.5	<0.5	--	<1	<1	--	<5
MW-27		04/16/91	--	<0.5	<0.5	<0.5	0.9	--	<1	<1	--	<2
MW-27		09/19/91	--	<0.5	<0.5	<0.5	1.1	--	<1	<1	--	4
MW-27		12/10/91	--	<0.5	<0.5	<0.5	<0.5	--	<1	<1	--	<3.0
MW-27		03/13/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-27		06/24/98	ND	<0.500	2.85	<0.500	<1.00	--	0.188	<0.250	<0.750	<1.00
MW-27		09/03/98	ND	<0.800	<0.500	<0.500	<1.00	--	0.0961	0.316	<0.750	--
MW-27		12/14/98	ND	<4.00	<0.500	<0.500	1.33	--	0.119	0.485/<0.250	<0.750/<0.750	--
MW-27		03/24/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.394/<0.250	<0.750/<0.750	--
MW-27		07/01/99	ND	<0.500	<2.20	<0.500	<1.00	--	0.0823	0.394/<0.250	<0.750/<0.750	--
MW-27		09/29/99	ND	<0.500	1.87	<0.500	<1.00	--	<0.0500	0.830/<0.323	<0.750/<0.750	--
MW-27		12/16/99	ND	<0.500	<0.500	<0.500	1.29	--	0.0925	0.544[15]	<0.750[15]	--
MW-27		03/22/00	ND	<0.500	0.874	<0.500	<1.00	--	<0.0500	0.468/<0.250	<0.750/<0.750	--
MW-27		06/22/00	ND	0.692	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-27		09/15/00	ND	<0.605	<0.500	<0.500	<1.00	--	<0.0500	0.420/<0.250	<0.750/<0.750	--
MW-27		12/21/00	ND	1.89	<0.500	<0.500	<1.00	--	0.0727	0.308/<0.250	<0.750/<0.750	--
MW-27		03/15/01	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.537/<0.250	<0.750/<0.750	--
MW-27		06/21/01	Sheen	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.259/<0.250	<0.750/<0.750	--
MW-27		09/25/01	ND	0.571	<0.500	<0.500	<1.00	--	<0.0500	1.38/0.547	<0.750/<0.750	--
MW-27		12/19/01	Sheen	<0.500	<2.00	<1.00	<1.50	--	<0.100	<0.250[10]	<0.750[10]	--
MW-27		03/26/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.257/<0.250	<0.750/<0.750	--
MW-27		06/19/02	ND	<0.500	<0.500	<0.500	1.05	--	<0.0500	<0.250	<0.750	--
MW-27		09/19/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-27		12/13/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-27		03/21/03	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-27		06/19/03	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-27		09/18/03	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.672	<0.750	--
MW-27		12/03/03	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-27		03/09/04	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-27		06/03/04	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-27		09/03/04	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-27		12/06/04	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-27		03/04/05	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-27		06/03/05	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-27		09/01/05	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-27		12/01/05	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.236	<0.708	--
MW-27		03/02/06	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.236	<0.708	--
MW-27R		03/07/07	ND	<0.5	<0.5	<0.5	<1.5	--	<0.048	<0.076	<0.094	--
MW-27R		09/26/07	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.077	<0.096	<0.47
MW-27R		11/27/07	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.080	<0.100	0.091
MW-34		10/26/89	--	1.7	3	<0.5	2.1	0.27	--	--	--	<5
MW-34		01/16/90	--	<0.5	<0.5	<0.5	<0.5	0.08	--	--	--	<5
MW-34		04/16/90	--	<0.5	<0.5	<0.5	<0.5	<1	--	--	--	<5
MW-34		07/25/90	--	<0.5	<0.5	<0.5	<0.5	<1	--	--	--	<5
MW-34		10/16/90	--	<0.5	<0.5	<0.5	<0.5	<1	--	--	--	<5

Appendix E
Historical Summary of Groundwater Analytical Data
Total Petroleum Hydrocarbons
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Monitoring Well[1]	Notes	Date Sampled	LNAPL[2]	BTEX (EPA Method 8020 or 8021B) (µg/L)				TPH (EPA Method 418.1) (mg/L)	NWTPH-Gx (mg/L)	NWTPH-D Extended[3] (mg/L)		Dissolved Lead (EPA 6000/7000 Series Method) (µg/L)
				B	T	E	X		Gasoline C_7 - C_{12}	Diesel C_{12} - C_{24}	Heavy Oil $>C_{24}$	
Upper Yard RALs			***No visible sheen***	***40***	***14,300***	***1,400***	***4,400***	***--***	***1***	***10***	***15***	***50***
MW-34		01/17/91	--	<0.5	<0.5	<0.5	<0.5	--	<1	<1	--	<5
MW-34		04/16/91	--	<0.5	<0.5	<0.5	<0.5	--	<1	<1	--	<2
MW-34		09/17/91	--	<0.5	<0.5	<0.5	<0.5	--	<1	<1	--	3
MW-34		12/01/91	--	<0.5	<0.5	<0.5	<0.5	--	<1	<1	--	3.0
MW-35		10/26/89	--	33	1.1	<0.5	1.4	<0.5	--	--	--	<5
MW-35		01/16/90	--	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	<5
MW-35		04/16/90	--	<0.5	<0.5	<0.5	<0.5	<1	--	--	--	<5
MW-35		07/25/90	--	<0.5	<0.5	<0.5	<0.5	<1	--	--	--	<5
MW-35		10/16/90	--	<0.5	<0.5	<0.5	<0.5	<1	--	--	--	<5
MW-35		01/17/91	--	<0.5	<0.5	<0.5	<0.5	--	<1	<1	--	<5
MW-35		04/16/91	--	<0.5	<0.5	<0.5	<0.5	--	<1	<1	--	<5
MW-35		09/17/91	--	<0.5	<0.5	<0.5	<0.5	--	<1	<1	--	2
MW-35		12/01/91	--	<0.5	<0.5	<0.5	<0.5	--	<1	<1	--	3.3
MW-36		10/26/89	--	330	1.9	2.5	8.0	2	--	--	--	<5
MW-36		01/16/90	--	95	3.1	<0.5	9.4	0.39	--	--	--	<5
MW-36		04/16/90	--	140	7.8	<0.5	<5.0	3.2	--	--	--	<5
MW-36		07/25/90	--	<0.5	<0.5	3.4	17	4	--	--	--	<5
MW-36		10/16/90	--	8.0	<0.5	<0.5	4.8	8	--	--	--	<5
MW-36		01/17/91	--	1.2	5.6	12	58	6	11	20	--	<5
MW-36		04/16/91	--	1.7	6.4	<0.5	4.9	--	<1	<1	--	<2
MW-36		09/17/91	--	<0.5	<0.5	1.1	3.2	--	15	29	--	<2
MW-36		12/01/91	--	<0.5	<0.5	2.5	6.5	--	<1	<1	--	<3.0
MW-36		03/13/98	ND	<0.500	<0.500	<0.500	<1.00	--	0.609	12.5	2.69	--
MW-36		06/25/98	ND	<0.500	<0.500	<0.500	<2.50	--	0.345	<0.250	<0.750	<1.00
MW-36		09/03/98	ND	<0.800	<0.500	<0.750	<4.00	--	0.499	7.42	1.43	--
MW-36		12/14/98	ND	1.24	0.699	0.707	4.12	--	0.536	1.43/<0.250	<0.750/<0.750	--
MW-36		03/24/99	ND	1.96	<1.10	<1.40	<3.50	--	0.999	27.1/18.1	5.86/3.39	--
MW-36		07/01/99	ND	<0.500	<0.500	<0.500	<2.00	--	0.257[4]	1.28/<0.250	<0.750/<0.750	--
MW-36		09/29/99	ND	<0.500	<0.500	<5.00	<10.0	--	0.562[4]	4.63/2.01	0.849/<0.0750	--
MW-36		12/16/99	ND	0.813	<1.50	<5.00	<2.00	--	0.344	0.867/<0.250	<0.750/<0.750	--
MW-36		03/22/00	ND	<0.500	0.792	<0.500	<3.00	--	0.584	6.42/4.30	1.58/<0.750	--
MW-36		06/22/00[8]	ND	5.80	70.0	33.2	240	--	2.17	0.850/<0.250	<0.750/<0.750	--
MW-36		09/15/00	Sheen	<0.500	<2.39	<0.704	<5.46	--	0.923	9.25/6.10	1.70/0.927	--
MW-36		12/21/00	ND	0.636	<1.12	<0.500	<2.20	--	0.229	1.26/<0.250	<0.750/<0.750	--
MW-36		03/15/01	ND	2.00	<1.04	<0.500	<12.5	--	2.19	5.46/4.03	1.40/<0.750	--
MW-36		06/21/01	ND	<0.500	<0.500	<0.500	<1.00	--	0.207	0.643/<0.250	<0.750/<0.750	--
MW-36		09/25/01	Sheen	1.03	<0.500	<0.500	2.54	--	0.514	8.88/6.64	1.92/<0.750	--
MW-36		12/19/01	ND	1.49	<2.00	<1.00	<1.50	--	0.415	1.15/<0.250[10]	<0.750/<0.750[10]	--
MW-36		03/26/02	ND	1.01	<0.500	<0.500	1.9	--	0.38	1.47/0.794	<0.750/<0.750	--
MW-36		06/20/02	ND	0.618	<0.500	<0.500	<1.00	--	0.106	1.01/<0.250	<0.750/<0.750	--
MW-36		09/19/02	Sheen	0.914	<0.500	<0.500	1.85	--	0.307	1.39[13]	<0.750[6]	--
MW-36		12/13/02	Sheen	<0.500	<0.500	<0.500	1.07	--	0.186	15.5	<0.750	--
MW-36		03/21/03	Sheen	0.846	<0.500	<0.500	2.4	--	0.398	3.25	<0.750	--
MW-36		06/19/03[14]	Sheen	0.691	0.508	0.503	2.93	--	0.623[7]	6.09	1.27	--
MW-36		09/18/03	Sheen	<0.500	<0.500	<0.500	1.29	--	0.219	4.87	0.943	--
MW-36		12/02/03	Sheen	0.538	<0.500	<0.500	1.37	--	0.242	1.97	<0.750	--
MW-41		09/18/90	--	--	--	--	--	2	--	--	--	<5
MW-41		10/16/90	--	<0.5	<0.5	<0.5	<0.5	<1	--	--	--	<5
MW-41		01/17/91	--	<0.5	<0.5	1.2	3.9	<1	1	<1	--	<5
MW-41		04/16/91	--	3.5	0.9	4.5	1.4	--	<1	<1	--	<2

Appendix E
Historical Summary of Groundwater Analytical Data
Total Petroleum Hydrocarbons
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Monitoring Well[1]	Notes	Date Sampled	LNAPL[2]	BTEX (EPA Method 8020 or 8021B) (µg/L)				TPH (EPA Method 418.1) (mg/L)	NWTPH-Gx (mg/L)	NWTPH-D Extended[3] (mg/L)		Dissolved Lead (EPA 6000/7000 Series Method) (µg/L)
				B	T	E	X		Gasoline C_7 - C_{12}	Diesel C_{12} - C_{24}	Heavy Oil $>C_{24}$	
Upper Yard RALs			***No visible sheen***	***40***	***14,300***	***1,400***	***4,400***	***--***	***1***	***10***	***15***	***50***
MW-41		09/17/91	--	<0.5	<0.5	<0.5	<0.5	--	<1	4	--	<2
MW-41		12/10/91	--	<0.5	<0.5	<0.5	<0.5	--	<1	<1	--	<3.0
MW-41		06/29/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-41		12/15/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-41		07/01/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-41		12/16/99	ND	<0.500	<0.500	<5.00	<1.00	--	<0.0500	<0.250	<0.750	--
MW-41		06/22/00[8]	ND	<0.500	6.55	3.97	35.8	--	0.433	<0.250	<0.750	--
MW-41		12/22/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-41		06/22/01	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-41		12/18/01	ND	<0.500	<2.00	<1.00	<1.50	--	<0.100	<0.250[10]	<0.750[10]	--
MW-41		06/20/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-41		12/13/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-42		10/16/90	--	<0.5	<0.5	<0.5	<0.5	<1	--	--	--	<5
MW-42		01/17/91	--	<0.5	<0.5	<0.5	<0.5	--	<1	<1	--	<5
MW-42		04/16/91	--	<0.5	<0.5	<0.5	<0.5	--	<1	<1	--	<2
MW-42		09/17/91	--	<0.5	<0.5	<0.5	<0.5	--	<1	<1	--	3
MW-42		12/10/91	--	<0.5	<0.5	<0.5	<0.5	--	<1	<1	--	<3.0
MW-43		10/16/90	--	2.9	<0.5	17	5.3	<1	--	--	--	<5
MW-43		01/17/91	--	<0.5	<0.5	<0.5	<0.5	--	<1	<1	--	<5
MW-43		04/16/91	--	<0.5	<0.5	0.7	0.6	--	<1	<1	--	<2
MW-43		09/17/91	--	<0.5	<0.5	<0.5	<0.5	--	3	9	--	3
MW-43		12/10/91	--	<0.5	<0.5	<0.5	<0.5	--	<1	<1	--	<3.0
MW-52		06/25/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	<1.00
MW-52		12/15/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-52		07/01/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.522/<0.250	<0.750/<0.750	--
MW-52		12/16/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.250/<0.250	<0.750/<0.750	--
MW-52		06/22/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-52		12/21/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.257/<0.250	<0.750/<0.750	--
MW-52		06/22/01	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-52		12/19/01	ND	<0.500	<2.00	<1.00	<1.50	--	<0.100	0.325/<0.250[10]	<0.750/<0.750[10]	--
MW-52		06/20/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.289/<0.250	<0.750/<0.750	--
MW-52		12/13/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-52		12/02/03	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-67		03/13/98	ND	<0.500	0.658	1.57	3.37	--	0.237	<0.250	<0.750	--
MW-67		06/24/98	ND	<0.500	1.44	<0.500	<1.00	--	0.0597	<0.250	<0.750	<1.00
MW-67		09/03/98	ND	<1.00	<0.500	0.913	<1.00	--	0.0661	0.287	<0.750	--
MW-67		12/14/98	ND	<0.800	<2.00	2.44	4.87	--	0.432	0.813/0.328	<0.750/<0.750	--
MW-67		03/24/99	ND	4.84	<0.500	<0.500	<1.00	--	0.158	0.566/<0.250	<0.750/<0.750	--
MW-67		07/01/99	ND	<4.20	<1.00	2.68	4.66	--	0.341	0.833/0.275	<0.750/<0.750	<20.0
MW-67		09/29/99	ND	0.554	1.88	0.884	1.55	--	0.239	0.544/<0.250	<0.750/<0.750	--
MW-67		12/16/99	ND	<8.20	<1.25	1.9	8.65	--	0.561	0.807/<0.250	<0.750/<0.750	--
MW-67		03/22/00	ND	<0.500	1.71	0.533	1.46	--	0.156	0.651/0.292	<0.750/<0.750	--
MW-67		06/22/00	ND	4.74	1.02	1.65	4.53	--	0.395	0.951/<0.250	<0.750/<0.750	<10.0
MW-67		09/15/00	ND	<3.00	<0.500	<0.520	<1.81	--	0.157	0.607/<0.250	<0.750/<0.750	--
MW-67		12/21/00	ND	7.35	<1.38	<2.04	5.73	--	0.413	0.646/<0.250	<0.750/<0.750	--
MW-67		03/15/01	ND	<0.500	<0.500	<0.624	<1.77	--	0.165	0.524/<0.250	<0.750/<0.750	--
MW-67		06/21/01	ND	<0.500	1.21	2.47	2.61	--	0.403	0.479/<0.250	<0.750/<0.750	<1.00
MW-67		09/25/01	ND	3.45	<0.500	1.46	2.10	--	0.230	0.585/0.295	<0.750/<0.750	--
MW-67		12/19/01	ND	13.2	<2.00	1.46	2.97	--	1.01	0.760/<0.250[10]	<0.750/<0.750[10]	--
MW-67		03/26/02	ND	3.01	<0.500	0.671	1.09	--	0.178	0.672/<0.250	0.839/<0.750	--

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Monitoring Well[1]	Notes	Date Sampled	LNAPL[2]	BTEX (EPA Method 8020 or 8021B) (µg/L)				TPH (EPA Method 418.1) (mg/L)	NWTPH-Gx (mg/L)	NWTPH-D Extended[3] (mg/L)		Dissolved Lead (EPA 6000/7000 Series Method) (µg/L)
				B	T	E	X		Gasoline C_7 - C_{12}	Diesel C_{12} - C_{24}	Heavy Oil $>C_{24}$	
Upper Yard RALs			***No visible sheen***	***40***	***14,300***	***1,400***	***4,400***	**--**	***1***	***10***	***15***	***50***
MW-67		06/19/02	ND	<0.500	<0.500	<0.500	1.21	--	<0.0500	<0.250	<0.750	<1.00
MW-67		09/19/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250[13]	<0.750[13]	--
MW-67		12/13/02	ND	<0.500	<0.500	0.751	2.99	--	<0.0500	<0.250	<0.750	--
MW-67		03/21/03	ND	<0.500	<0.500	0.751	<1.00	--	<0.0500	0.352	1.44	--
MW-67		06/19/03	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-67		09/18/03	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-67		12/03/03	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-70		06/25/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	<1.00
MW-70		12/15/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.488/<0.250	<0.750/<0.750	--
MW-70		07/01/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	<20.0
MW-70		12/16/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.392/<0.250	<0.750/<0.750	--
MW-70		06/22/00[8]	ND	<0.500	1.31	0.610	3.83	--	0.0632	<0.250[13]	<0.750[13]	<1.00
MW-70		12/21/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-70		06/21/01	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-70		12/19/01	ND	<0.500	<2.00	<1.00	<1.50	--	<0.100	0.372/<0.250[10]	<0.750/<0.750[10]	--
MW-70		06/19/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-70		12/13/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-70		12/02/03	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-70		12/06/04	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-70R		02/16/16	ND	<0.500	<0.500	<0.500	<1.50	--	<0.0500	<0.029	<0.067	--
MW-70R	Duplicate	02/16/16	ND	<0.500	<0.500	<0.500	<1.50	--	<0.0500	<0.029	<0.067	--
MW-70R		06/14/16	ND	<0.500	<0.500	<0.500	<1.50	--	<0.0500	<0.028	<0.066	--
MW-70R		09/22/16	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.030	<0.070	--
MW-70R		01/12/17	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	0.046	<0.070	--
MW-70R	Duplicate	01/12/17	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	0.046	<0.070	--
MW-70R		03/27/17	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.029	<0.067	--
MW-70R		06/16/17	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.029	<0.068	--
MW-70R		11/08/17	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.047	<0.100	--
MW-70R		03/26/18	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.029	<0.067	--
MW-70R	Duplicate	03/26/18	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.029	<0.067	--
MW-70R		06/20/18	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.029	<0.067	--
MW-70R	Duplicate	06/20/18	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.029	<0.066	--
MW-70R		09/27/18	ND	<0.5	<0.5	<0.5	<1.5	--	<0.019	<0.030	<0.070	--
MW-70R	Duplicate	09/27/18	ND	<0.5	<0.5	<0.5	<1.5	--	<0.019	<0.031	<0.072	--
MW-70R		12/13/18	ND	<0.5	<0.5	<0.5	<1.5	--	<0.019	<0.045	<0.100	--
MW-70R		03/25/19	ND	<0.5	<0.5	<0.5	<1.5	--	<0.019	<0.046	<0.100	--
MW-70R	Duplicate	03/25/19	ND	<0.5	<0.5	<0.5	<1.5	--	<0.019	<0.046	<0.100	--
MW-70R		06/25/19	ND	<0.2	<0.2	<0.4	<1	--	<0.019	<0.046	<0.100	--
MW-70R		09/26/19	ND	<0.2	<0.2	<0.4	<1	--	<0.019	<0.120	<0.280	--
MW-70R	Duplicate	09/26/19	ND	<0.2	<0.2	<0.4	<1	--	<0.019	<0.044	<0.099	--
MW-70R		12/18/19	ND	<0.2	<0.2	<0.4	<1	--	<0.019	<0.055	<0.120	--
MW-70R	Duplicate	12/18/19	ND	<0.2	<0.2	<0.4	<1	--	<0.019	<0.048	<0.110	--
MW-70R		03/24/20	ND	<0.2	<0.2	<0.4	<1	--	<0.019	<0.047	<0.10	--
MW-70R	Duplicate	03/24/20	ND	<0.2	<0.2	<0.4	<1	--	<0.019	<0.048	<0.11	--
MW-70R		06/16/20	ND	<0.2	<0.2	<0.4	<1	--	<0.019	<0.046	<0.10	--
MW-70R	Duplicate	06/16/20	ND	<0.2	<0.2	<0.4	<1	--	<0.019	<0.047	<0.10	--
MW-70R		09/11/20	ND	<0.2	<0.2	<0.4	<1	--	<0.019	<0.052 *1	<0.110	--
MW-70R	Duplicate	09/11/20	ND	<0.2	<0.2	<0.4	<1	--	<0.019	<0.052 *1	<0.120	--
MW-70R		11/18/20	ND	<0.2	<0.2	<0.4	<1	--	<0.019	<0.047 *	<0.110	--
MW-70R	Duplicate	11/18/20	ND	<0.2	<0.2	<0.4	<1	--	<0.019	<0.049 *	<0.110	--

Appendix E
Historical Summary of Groundwater Analytical Data
Total Petroleum Hydrocarbons
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Monitoring Well[1]	Notes	Date Sampled	LNAPL[2]	BTEX (EPA Method 8020 or 8021B) (µg/L)				TPH (EPA Method 418.1) (mg/L)	NWTPH-Gx (mg/L)	NWTPH-D Extended[3] (mg/L)		Dissolved Lead (EPA 6000/7000 Series Method) (µg/L)
				B	T	E	X		Gasoline C_7 - C_{12}	Diesel C_{12} - C_{24}	Heavy Oil >C_{24}	
Upper Yard RALs			***No visible sheen***	***40***	***14,300***	***1,400***	***4,400***	**--**	***1***	***10***	***15***	***50***
MW-70R		03/16/21	ND	<0.20	<0.20	<0.40	<1.4	--	<0.019	<0.048	<0.110	--
MW-70R	Duplicate	03/16/21	ND	<0.20	<0.20	<0.40	<1.4	--	<0.019	<0.048 *1	<0.110	--
MW-70R		06/07/21	ND	<0.30	<0.30	<0.40	<1.4	--	<0.019	<0.049 H	<0.110 H	--
MW-70R	Duplicate	06/09/21	ND	<0.30	<0.30	<0.40	<1.4	--	<0.019	<0.049	<0.110	--
MW-70R		09/21/21	ND	<0.30	<0.30	<0.40	<1.4	--	<0.019	<0.051	<0.11	--
MW-70R	Duplicate	09/21/21	ND	<0.30	<0.30	<0.40	<1.4	--	<0.019	<0.051	<0.11	--
MW-70R		12/01/21	ND	<0.0941	<0.278	<0.137	<0.174	--	<0.0316	<0.0333	<0.0833	--
MW-70R	Duplicate	12/01/21	ND	<0.0941	<0.278	<0.137	<0.174	--	<0.0316	<0.0333	<0.0833	--
MW-70R		03/31/22	ND	<0.30	<0.30	<0.40	<1.4	--	<0.019	<0.046	<0.100	--
MW-70R	Duplicate	03/30/22	ND	<0.30	<0.30	<0.40	<1.4	--	<0.019	<0.046	<0.100	--
MW-70R		06/01/22	ND	<0.30	<0.30	<0.40	<1.4	--	<0.019	<0.047 cn	<0.100 cn	--
MW-70R	Duplicate	06/01/22	ND	<0.30	<0.30	<0.40	<1.4	--	<0.019	0.077 J cn	<0.110 cn	--
MW-70R		08/11/22	ND	<0.30	<0.30	<0.40	<1.4	--	<0.043	<0.047 *1	<0.100	--
MW-70R	Duplicate	08/11/22	ND	<0.30	<0.30	<0.40	<1.4	--	<0.043	<0.046 *1	<0.100	--
MW-70R		10/25/22	ND	<0.30	<0.30	<0.40	<1.4	--	<0.043	<0.047 *1 cn	<0.100 cn	--
MW-70R	Duplicate	10/25/22	ND	<0.30	<0.30	<0.40	<1.4	--	<0.043	<0.047 *1 cn	<0.100 cn	--
MW-70R		03/21/23	ND	<0.30	<0.30	<0.40	<1.4	--	<0.043 cn	<0.051	<0.110	--
MW-70R	Duplicate	03/21/23	ND	<0.30	<0.30	<0.40	<1.4	--	<0.043	<0.047	<0.100	--
MW-70R		06/21/23	ND	<0.30	<0.30	<0.40	<0.40	--	<0.043	<0.051	<0.110	--
MW-70R		08/29/23	ND	<0.30	<0.30	<0.40	<0.40	--	<0.043	<0.049 cn	<0.110 cn	--
MW-70R	Duplicate	08/29/23	ND	<0.30	<0.30	<0.40	<0.40	--	<0.043	<0.054 cn	<0.120 cn	--
MW-70R		10/26/23	ND	<0.30	<0.30	<0.40	<0.40	--	<0.043	<0.050 cn	<0.110 cn	--
MW-70R	Duplicate	10/26/23	ND	<0.30	<0.30	<0.40	<0.40	--	<0.043	<0.051 cn	<0.110 cn	--
MW-70R		03/12/24	ND	<0.30	<0.40	<0.30	<0.40	--	<0.043 F1	<0.051	<0.110	--
MW-70R	Duplicate	03/12/24	ND	<0.30	<0.40	<0.30	<0.40	--	<0.043	<0.050	<0.110	--
MW-70R		**06/10/24**	**ND**	**<0.30 cn**	**<0.40**	**<0.30**	**<0.40**	--	**<0.043**	**<0.046**	**<0.100**	--
MW-71		06/25/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	<1.00
MW-71		12/14/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	3.77/<0.250	<0.750/<0.750	--
MW-71		07/01/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	<20.0
MW-71		12/16/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.430[15]	<0.904[15]	--
MW-71		06/22/00[8]	ND	<0.500	0.980	0.522	3.08	--	0.0746	<0.250	<0.750	<1.00
MW-71		12/21/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-71		06/21/01	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	<1.00
MW-71		12/19/01	ND	<0.500	<2.00	<1.00	<1.50	--	<0.100	0.514/<0.0.250[10]	<0.750/<0.750[10]	--
MW-71		06/19/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	<1.00
MW-71		12/13/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-71		12/02/03	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-72		03/13/98	ND	<11.0	<3.00	<3.00	<11.0	--	1.30	0.369	<0.750	--
MW-72		06/24/98	ND	<1.00	<1.00	<0.500	<2.00	--	0.699	0.286	<0.750	<1.00
MW-72		09/03/98	ND	<9.38	<2.50	<2.50	<4.50	--	1.03	3.11	1.78	--
MW-72		12/14/98	Sheen	5.45	0.644	1.07	1.68	--	0.196	0.847/<0.250	<0.750/<0.750	--
MW-72		03/24/98	Sheen	4.69	<0.950	<0.950	<3.30	--	0.269	1.74/0.744	1.42/<0.750	--
MW-72		07/01/99	ND	<2.80	<0.900	<0.500	<2.26	--	0.248	1.05/<0.250	<0.750/<0.750	<1.00
MW-72		09/29/99	Sheen	5.71	2.71	0.68	5.01	--	0.481	1.86/0.424[13]	1.01/<0.750[13]	--
MW-72		12/16/99	Sheen	<7.40	<1.40	<0.500	6.87	--	0.421	0.905/<0.475	<1.43/<1.43	--
MW-72		03/22/00	ND	2.88	5.40	0.846	6.42	--	0.596	1.40/0.462	<0.750/<0.750	--
MW-72		06/22/00	ND	5.98	1.11	0.599	2.38	--	0.344	1.11/<0.250	<0.750/<0.750	<1.00
MW-72		09/15/00	ND	1.47	<1.20	<0.525	<5.42	--	0.547	1.35/0.427	<0.750/<0.750	--
MW-72		12/21/00	ND	5.71	<1.00	<0.500	4.46	--	0.422	0.698/<0.250	<0.750/<0.750	--
MW-72		03/15/01	ND	1.90	<1.06	<0.791	<3.29	--	0.454	1.47/<0.250	0.752/<0.750	--

Appendix E
Historical Summary of Groundwater Analytical Data
Total Petroleum Hydrocarbons
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Monitoring Well[1]	Notes	Date Sampled	LNAPL[2]	BTEX (EPA Method 8020 or 8021B) (µg/L)				TPH (EPA Method 418.1) (mg/L)	NWTPH-Gx (mg/L)	NWTPH-D Extended[3] (mg/L)		Dissolved Lead (EPA 6000/7000 Series Method) (µg/L)
				B	T	E	X		Gasoline C_7 - C_{12}	Diesel C_{12} - C_{24}	Heavy Oil $>C_{24}$	
Upper Yard RALs			***No visible sheen***	***40***	***14,300***	***1,400***	***4,400***	***--***	***1***	***10***	***15***	***50***
MW-72		06/21/01	ND	1.08	1.29	<0.500	2.78	--	0.274	0.591/<0.250	<0.750/<0.750	--
MW-72		09/25/01	Sheen	7.98	0.679	1.07	3.24	--	0.695	3.37/1.35	1.90/0.942	--
MW-72		12/19/01	ND	12.2	<2.00	<1.00	3.21	--	0.835	1.59/0.261[10]	<0.750/<0.750[10]	--
MW-72		03/26/02	Sheen	6.4	0.753	<0.500	3.88	--	0.47	1.05/<0.250	<0.750/<0.750	--
MW-72		06/19/02	ND	10.3	0.722	1.48	4.60	--	0.697	3.19/<0.250	<0.750/<0.750	--
MW-72		09/19/02	Sheen	13.3	0.798	2.29	4.29	--	0.828	0.769[11]	<0.750[11]	--
MW-72		12/13/02	Sheen	8.35	0.747	2.27	6.10	--	0.594	4.15	2.94	--
MW-72		03/21/03	Sheen	3.2	<0.500	0.909	1.29	--	0.360	0.281	<0.750	--
MW-72		06/19/03	Sheen	8.28	0.509	1.79	3.82	--	0.476	1.61	1.25	--
MW-72		09/18/03	Sheen	4.54	<0.500	0.931	4.28	--	0.522	1.17	0.775	--
MW-72		12/02/03	Sheen	2.26	<0.500	<0.500	2.34	--	0.439	1.20	0.979	--
MW-72		03/09/04	Sheen	0.738	<0.500	<0.500	1.31	--	0.133	0.315	<0.750	--
MW-72		06/03/04	Sheen	0.656	<0.500	<0.500	<1.00	--	0.195	0.265	<0.750	--
MW-72		09/03/04	ND	1.41	<0.500	<0.500	1.72	--	0.294	0.275	<0.750	--
MW-72		12/06/04	ND	1.27	<0.500	<0.500	1.47	--	0.238	<0.250	<0.750	--
MW-72		03/04/05	ND	1.07	<0.500	<0.500	2.20	--	0.202	0.524	<0.750	--
MW-72		06/03/05	ND	1.10	<0.500	<0.500	<1.00	--	0.141	<0.250	<0.750	--
MW-73		03/12/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-73		06/29/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	<1.00
MW-73		09/03/98	ND	<0.500	<0.500	<0.500	1.30	--	<0.0500	<0.250	<0.750	--
MW-73		12/15/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.388/<0.250	<0.750/<0.750	--
MW-73		03/24/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.665/<0.250	<0.750/<0.750	--
MW-73		06/29/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.370/<0.250	<0.750/<0.750	<1.00
MW-73		09/29/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.430/<0.250	<0.750/<0.750	--
MW-73		12/15/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.830/<0.250	<0.750/<0.750	--
MW-73		03/22/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.559/<0.250	<0.750/<0.750	--
MW-73		06/22/00	ND	<0.500	<0.500	<0.500	<1.00	--	0.0737	0.407/<0.250	<0.750/<0.750	<10.0
MW-73		09/14/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.298/<0.250	<0.750/<0.750	--
MW-73		12/22/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-73		03/15/01	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-73		06/22/01	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-73		09/25/01	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-73		12/18/01	ND	<0.500	<2.00	<1.00	<1.50	--	<0.100	0.693/<0.250[10]	<0.750/<0.750[10]	--
MW-73		03/26/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.618/<0.250	<0.750/<0.750	--
MW-73		06/20/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.287/<0.250	<0.750/<0.750	<1.00
MW-74		03/12/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-74		06/29/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	1.93
MW-74		09/03/98	ND	<0.500	<0.500	<0.500	1.02	--	<0.0500	0.29	1.07	--
MW-74		12/15/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.517/<0.250	<0.750/<0.750	--
MW-74		03/24/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.600/<0.250	0.993/<0.750	--
MW-74		06/29/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.251/<0.250	<0.750/<0.750	<1.00
MW-74		09/29/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.462/<0.250	<0.750/<0.750	--
MW-74		12/15/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.659/<0.250	<0.750/<0.750	--
MW-74		03/22/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.500/<0.250	0.923/<0.750	--
MW-74		06/22/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.234	<0.748	<1.00
MW-74		09/14/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-74		12/22/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-74		03/15/01	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.273/<0.250	0.863/<0.750	--
MW-74		06/22/01	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.505/<0.250	<0.750/<0.750	--
MW-74		09/25/01	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--

Appendix E
Historical Summary of Groundwater Analytical Data
Total Petroleum Hydrocarbons
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Monitoring Well[1]	Notes	Date Sampled	LNAPL[2]	BTEX (EPA Method 8020 or 8021B) (µg/L)				TPH (EPA Method 418.1) (mg/L)	NWTPH-Gx (mg/L)	NWTPH-D Extended[3] (mg/L)		Dissolved Lead (EPA 6000/7000 Series Method) (µg/L)
				B	T	E	X		Gasoline C_7 - C_{12}	Diesel C_{12} - C_{24}	Heavy Oil $>C_{24}$	
Upper Yard RALs			***No visible sheen***	***40***	***14,300***	***1,400***	***4,400***	**--**	***1***	***10***	***15***	***50***
MW-74		12/18/01	ND	<0.500	<2.00	<1.00	<1.50	--	<0.100	1.06/<0.250[10]	1.11/<0.750[10]	--
MW-74		03/26/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.430/<0.250	<0.750/<0.750	--
MW-74		06/20/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.305/<0.250	<0.750/<0.750	<1.00
MW-75		03/12/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-75		06/29/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	<1.00
MW-75		09/03/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-75		12/15/98	ND	<0.500	<0.500	<0.500	1.33	--	<0.0500	<0.250	<0.750	--
MW-75		03/24/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-75		06/29/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	<1.00
MW-75		09/29/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250/<0.250	<0.750/<0.750	--
MW-75		12/15/99	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-75		03/22/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-75		06/22/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.239	<0.744	<1.00
MW-75		09/14/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-75		12/22/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-75		03/15/01	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-75		06/22/01	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	<1.00
MW-75		09/25/01	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-75		12/18/01	ND	<0.500	<2.00	<1.00	<1.50	--	<0.100	<0.250[10]	<0.750[10]	--
MW-75		03/26/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-75		06/20/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	<1.00
MW-76		06/24/98	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	<5.00
MW-76		09/03/98	ND	0.962	0.774	0.609	<1.00	--	0.0593	0.361	<0.750	--
MW-76		12/14/98	ND	<1.00	<0.500	1.29	<1.00	--	0.0779	0.789/<0.250	<0.750/<0.750	--
MW-76		03/24/98	ND	<1.00	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-76		07/01/99	ND	<1.20	<0.500	1.64	1.31	--	0.0998	0.786/<0.250	<0.750/<0.750	<20.0
MW-76		09/29/99	ND	<0.500	0.538	0.583	<1.00	--	0.0577	0.632/<0.250	<0.750/<0.750	--
MW-76		12/16/99	ND	0.582	<0.500	0.631	<1.00	--	0.728	0.667/<0.250	<0.750/<0.750	--
MW-76		03/22/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.640/<0.250	<0.750/<0.750	--
MW-76		06/22/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.259/<0.250	<0.750/<0.750	<1.00
MW-76		09/15/00	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.605/<0.250	<0.750/<0.750	--
MW-76		12/21/00	ND	<0.600	<0.500	0.628	<1.00	--	0.784	0.606/<0.250	<0.750/<0.750	--
MW-76		03/15/01	ND	0.506	1.35	<0.500	1.22	--	<0.0500	0.278/<0.250	<0.750/<0.750	--
MW-76		06/21/01	ND	<0.500	<0.500	0.808	<1.00	--	<0.0500	<0.250	<0.750	--
MW-76		09/25/01	ND	0.508	<0.500	0.774	<1.00	--	<0.0500	0.461/0.316	<0.750/<0.750	--
MW-76		12/19/01	ND	<0.500	<2.00	<1.00	<1.50	--	0.114	0.549/<0.250	<0.750/<0.750	--
MW-76		03/26/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	0.317/<0.250	<0.750/<0.750	--
MW-76		06/19/02	ND	<0.500	<0.500	<0.500	1.11	--	<0.0500	<0.250	<0.750	--
MW-76		12/13/02	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-76		12/03/03	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-76		12/06/04	ND	<0.500	<0.500	<0.500	<1.00	--	<0.0500	<0.250	<0.750	--
MW-200		03/08/07	Sheen	2.80	0.5	3.7	4	--	0.39	0.46	<0.095	--
MW-200		06/07/07	ND	2.4	0.6	2.1	2.5	--	0.250	0.310	<0.095	<0.037
MW-200		09/26/07	ND	1.6	<0.5	0.9	<1.5	--	0.230	0.270	<0.100	<0.047
MW-200	Duplicate	09/26/07	ND	1.7	<0.5	0.8	<1.5	--	0.230	0.310	0.120	<0.047
MW-200		11/28/07	ND	2.0	<0.5	1.2	2.1	--	0.250	0.330	<0.100	0.064
MW-200		02/13/08	ND	3.44	<0.500	1.19	1.79	--	0.497	<0.236	<0.472	<1.00
MW-200		05/13/08	ND	2.70	<0.500	1.15	2.07	--	0.426	<0.240	<0.481	<1.00
MW-200		09/03/08	ND	<0.500	0.883	1.46	<1.00	--	0.337	<0.236	<0.472	<1.00
MW-200		12/04/08	ND	3.19	<0.500	0.975	2.01	--	0.427	<0.238	<0.476	<1.00

Appendix E
Historical Summary of Groundwater Analytical Data
Total Petroleum Hydrocarbons
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Monitoring Well[1]	Notes	Date Sampled	LNAPL[2]	BTEX (EPA Method 8020 or 8021B) (µg/L)				TPH (EPA Method 418.1) (mg/L)	NWTPH-Gx (mg/L)	NWTPH-D Extended[3] (mg/L)		Dissolved Lead (EPA 6000/7000 Series Method) (µg/L)
									Gasoline	Diesel	Heavy Oil	
				B	T	E	X		C_7 - C_{12}	C_{12} - C_{24}	>C_{24}	
Upper Yard RALs			***No visible sheen***	***40***	***14,300***	***1,400***	***4,400***	**--**	***1***	***10***	***15***	***50***
MW-200		02/18/09	ND	2.54	<0.500	0.619	1.14	--	0.355	<0.250	<0.500	<1.00
MW-200		05/13/09	ND	3.43	<0.500	1.12	1.91	--	0.513	<0.278	<0.556	<1.00
MW-200		09/11/09	ND	<0.500	<0.500	0.52	<1.00	--	0.360	<0.248	<0.495	<2.0
MW-200		04/14/10	ND	<0.50	<0.50	0.54	<2.0	--	0.35	0.31	<0.25	<2.0
MW-200		08/12/10	Sheen	--	--	--	--	--	--	--	--	
MW-200		09/22/10	ND	<0.50	<0.50	0.56	1.2	--	0.43	0.56	<0.25	<2.0
MW-200		04/26/11	ND	6.2	<0.50	0.59	1.5	--	0.39	--	--	<2.0
MW-200		04/28/11	ND	--	--	--	--	--	--	0.33	<0.24	--
MW-200		09/22/11	ND	6.7 [18]	<0.50 [18]	0.83 [18]	1.9 [18]	--	0.27	0.39 [17]	<0.24	--
MW-200	Duplicate	09/22/11	ND	5.0	<0.50	0.65	1.4	--	0.24	0.37 [17]	<0.24	--
MW-200		04/18/12	ND	3.7	<0.50	0.73	1.4	--	0.20	0.27 [17]	<0.24	--
MW-200		10/11/12	ND	<0.50	0.75 [21]	<0.50	<0.50	--	0.39	0.30 [17,19,20]	<0.24	--
MW-200		04/25/13	ND	6.5	<0.5	1.1	2.1	--	0.35	0.120	<0.068	--
MW-200		09/19/13	ND	2.3	<0.5	<0.5	<1.5	--	0.11	0.160	<0.068	--
MW-200		06/24/14	ND	2.4	<0.5	<0.5	<1.5	--	0.120 J	0.083	<0.067	--
MW-200		12/16/14	ND	<6.0	<0.7	1.1	<2.4	--	0.460	0.130	<0.066	--
MW-200		06/18/15	ND	<3.0	<0.5	<0.5	<1.5	--	0.092	0.074	<0.066	--
MW-200		12/08/15	ND	<0.5	0.5	0.8	<1.5	--	0.460	0.092	<0.067	--
MW-200		06/14/16	ND	<0.5	<0.5	0.6	<1.5	--	0.290	0.150	<0.067	--
MW-200		01/13/17	ND	4.2	0.5	0.9	2.2	--	0.490	0.140	<0.067	--
MW-200		06/13/17	ND	2.0	<0.5	0.6	<1.5	--	0.340	0.080	<0.067	--
MW-200		11/08/17	ND	<4.0	<0.5	<0.5	<1.5	--	0.530	0.076	<0.110	--
MW-200		06/20/18	ND	<0.5	<0.5	<0.5	<1.5	--	0.370	0.110	<0.073	--
MW-200		12/13/18	ND	<0.5	0.6	<0.5	<1.5	--	0.230	0.130	0.130	--
MW-200		06/25/19	ND	<0.2	<0.2	<0.4	<1	--	0.240 J	0.057 J	<0.110	--
MW-200		12/18/19	ND	<0.2	<0.2	<0.4	<1	--	0.190 J	0.130	<0.110	--
MW-200		06/16/20	ND	<0.2	<0.2	<0.4	<1	--	0.21 J	0.072 J	<0.110	--
MW-200		11/19/20	ND	<0.2	<0.2	<0.4	<1	--	0.31	<0.045 * *1	<0.100	--
MW-200		06/07/21	ND	<0.30	<0.30	<0.40	<1.4	--	0.210 J	<0.047	<0.110	--
MW-200		12/01/21	ND	<0.0941	<0.278	<0.137	0.406 J	--	0.159	0.115	<0.0833	--
MW-200		06/01/22	ND	<0.30	<0.30	<0.40	<1.4	--	0.200 J	0.054 J cn	<0.100 cn	--
MW-200		10/25/22	ND	<0.30	<0.30	<0.40	<1.4	--	0.160 J	<0.047 *1 cn	<0.100 cn	--
MW-200		06/21/23	ND	<0.30	<0.30	<0.40	<0.40	--	0.120 J	<0.051	<0.110	--
MW-200		10/25/23	ND	<0.30	<0.30	<0.40	<0.40	--	0.190 J	<0.051 cn	0.130 J cn	--
MW-200		**06/11/24**	**ND**	**<0.30**	**<0.40**	**<0.30**	**<0.40**	--	**0.065 J**	**<0.053**	**<0.120**	--
MW-201		03/08/07	Sheen	0.50	<0.5	<0.5	<1.5	--	0.076	0.51	0.18	--
MW-201		06/07/07	ND	0.50	<0.5	<0.5	<1.5	--	0.08	0.53	0.17	0.1
MW-201	Duplicate	06/07/07	ND	0.60	<0.5	<0.5	<1.5	--	0.069	0.39	0.13	--
MW-201		09/27/07	Sheen	<0.5	<0.5	<0.5	<1.5	--	0.076	0.810	0.470	0.080
MW-201		11/27/07	ND	0.6	<0.5	<0.5	<1.5	--	0.065	0.390	0.150	0.098
MW-201		02/12/08	ND	0.813	<0.500	<0.500	<1.00	--	0.111	<0.243	<0.485	<1.00
MW-201		05/14/08	Sheen	0.616	<0.500	<0.500	<1.00	--	0.110	<0.236	<0.472	<1.00
MW-201		09/05/08	ND	<0.500	0.517	<0.500	<1.00	--	0.153	<0.238	<0.476	<1.00
MW-201		12/05/08	ND	2.24	0.511	<0.500	1.87	--	0.323	<0.248	<0.495	<1.00
MW-201		02/17/09	ND	0.552	<0.500	<0.500	<1.00	--	0.0887	<0.263	<0.526	<1.00
MW-201		05/13/09	ND	2.42	<0.500	<0.500	1.76	--	0.372	<0.250	<0.500	<1.00
MW-201		09/11/09	ND	<0.500	<0.500	<0.500	1.4	--	0.43	<0.248	<0.495	<2.0
MW-201		04/14/10	ND	<0.50	<0.50	<0.50	<2.0	--	0.15	0.17	<0.25	<2.0
MW-201		08/11/10	Sheen	--	--	--	--	--	--	--	--	
MW-201		09/22/10	ND	<0.50	<0.50	<0.50	1.1	--	0.27	0.47	<0.25	<2.0

Appendix E
Historical Summary of Groundwater Analytical Data
Total Petroleum Hydrocarbons
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Monitoring Well[1]	Notes	Date Sampled	LNAPL[2]	BTEX (EPA Method 8020 or 8021B) (µg/L)				TPH (EPA Method 418.1) (mg/L)	NWTPH-Gx (mg/L)	NWTPH-D Extended[3] (mg/L)		Dissolved Lead (EPA 6000/7000 Series Method) (µg/L)
									Gasoline	Diesel	Heavy Oil	
				B	T	E	X		C_7 - C_{12}	C_{12} - C_{24}	>C_{24}	
Upper Yard RALs			***No visible sheen***	***40***	***14,300***	***1,400***	***4,400***	**--**	***1***	***10***	***15***	***50***
MW-201		04/26/11	ND	1.6	<0.50	<0.50	<1.0	--	0.18	--	--	<2.0
MW-201		09/22/11	ND	3.6	<0.50	<0.50	1.4	--	0.22	0.33 [17]	<0.24	--
MW-201		04/18/12	ND	1.8	<0.50	<0.50	<1.0	--	0.14	0.29 [17]	<0.24	--
MW-201		10/11/12	ND	<0.50	0.61 [21]	<0.50	0.81	--	0.37	0.28 [17,19,20]	<0.24	--
MW-201		04/25/13	ND	1.7	0.9	<0.5	<1.5	--	0.14	0.049	<0.067	--
MW-201		09/19/13	ND	1.8	<0.5	<0.5	<1.5	--	0.13	0.075	<0.067	--
MW-201		06/23/14	ND	2.2	<0.5	<0.5	<1.5	--	0.210 J	0.068	<0.067	--
MW-201		12/16/14	ND	2.4	<0.7	0.6	2.3	--	0.450	0.063	<0.067	--
MW-201		06/18/15	ND	<2.0	<0.5	<0.5	<1.5	--	0.130	0.32	0.46	--
MW-201		12/08/15	ND	<0.5	<0.5	0.6	1.6	--	0.580	0.062	<0.066	--
MW-201	Duplicate	12/08/15	ND	<0.5	<0.5	<0.5	<1.5	--	0.500	0.19	0.27	--
MW-201		06/14/16	ND	<0.5	<0.5	<0.5	<1.5	--	0.160	0.072	<0.068	--
MW-201		01/13/17	ND	2.6	<0.5	0.6	<1.5	--	0.400	0.062	<0.067	--
MW-201		06/13/17	ND	1.3	0.9	<0.5	<1.5	--	0.350	0.260	0.350	--
MW-201		11/08/17	ND	<3.0	0.5	<0.5	<1.5	--	0.370	0.053	<0.110	--
MW-201		06/20/18	ND	<0.5	<0.5	<0.5	<1.5	--	0.340	0.063	<0.067	--
MW-201		12/13/18	ND	<0.5	<0.5	<0.5	<1.5	--	0.220	0.054	<0.100	--
MW-201		06/25/19	ND	<0.2	<0.2	<0.4	<1	--	0.300	<0.047	<0.110	--
MW-201		12/18/19	ND	<0.2	<0.2	<0.4	<1	--	0.200 J	<0.048	<0.110	--
MW-201		06/16/20	ND	<0.2	<0.2	<0.4	<1	--	**0.25**	**0.052 J**	<0.110	--
MW-201		11/18/20	ND	<0.2	<0.2	<0.4	<1	--	0.26	0.084 J *	0.240 J	--
MW-201		06/08/21	ND	<0.30	<0.30	<0.40	<1.4	--	0.170 J	<0.047	<0.100	--
MW-201		12/02/21	Sheen on probe[22]	<0.0941	<0.278	<0.137	0.292 J	--	0.251	0.0745 J	<0.0833	--
MW-201		06/01/22	ND	<0.30	<0.30	<0.40	<1.4	--	0.270	<0.051 cn	<0.110 cn	--
MW-201		10/26/22	Sheen on probe[22]	<0.30	<0.30	<0.40	<1.4	--	0.250	<0.046 *1 cn	<0.100 cn	--
MW-201		06/21/23	Sock in well [22]	<0.30	<0.30	<0.40	<0.40	--	0.220 J	0.047 J	<0.100	--
MW-201		10/25/23	ND	<0.30	<0.30	<0.40	<0.40	--	<0.220 cn	<0.050 cn	<0.110 cn	--
MW-201		**06/11/24**	**ND**	**<0.30**	**<0.40**	**<0.30**	**<0.40**	--	**0.220 J cn**	**0.057 J cn**	**0.290 cn**	--
MW-202		03/08/07	ND	0.60	<0.5	<0.5	<1.5	--	0.16	0.18	<0.095	--
MW-202		06/07/07	ND	<0.5	<2.0[16]	0.9	<1.5	--	0.072	0.150	<0.095	0.19
MW-202		09/27/07	ND	<0.5	<0.5	<0.5	<1.5	--	0.110	0.380	0.360	<0.24
MW-202		11/26/07	ND	<0.5	<0.5	0.8	<1.5	--	0.100	0.290	0.120	0.37
MW-202		02/12/08	ND	<0.500	<0.500	0.751	<1.00	--	0.249	<0.240	<0.481	<1.00
MW-202		05/13/08	ND	<0.500	<0.500	0.620	<1.00	--	0.188	<0.236	<0.472	<1.00
MW-202		09/04/08	ND	<0.500	<0.500	1.55	<1.00	--	0.135	<0.238	<0.476	<1.00
MW-202		12/04/08	ND	<0.500	<0.500	<0.500	1.34	--	0.132	<0.245	<0.490	<1.00
MW-202		02/18/09	ND	<0.500	<0.500	0.583	<1.00	--	0.314	<0.245	<0.490	<1.00
MW-202		05/13/09	ND	<0.500	<0.500	<0.500	<1.00	--	0.233	<0.243	<0.485	<1.00
MW-202		09/11/09	ND	<0.500	<0.500	<0.500	<1.00	--	0.120	<0.245	<0.490	<2.0
MW-202		04/14/10	ND	<0.50	<0.50	<0.50	<2.0	--	0.10	<0.12	<0.25	<2.0
MW-202		09/22/10	ND	<0.50	<0.50	<0.50	<2.0	--	0.090	<0.12	<0.25	<2.0
MW-202		04/27/11	ND	<0.50	<0.50	<0.50	<1.0	--	0.072	--	--	<2.0
MW-202		04/28/11	ND	--	--	--	--	--	--	<0.12	<0.24	--
MW-202		09/21/11	ND	<0.50	<0.50	<0.50	<1.0	--	<0.050	0.18 [17]	<0.24	--
MW-202		04/18/12	ND	<0.50	<0.50	<0.50	<1.0	--	0.074	0.24 [17]	<0.24	--
MW-202		10/11/12	ND	<0.50	<0.50	<0.50	<0.50	--	0.100	0.19 [17,19,20]	<0.24	--
MW-202		04/25/13	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.031	<0.073	--
MW-202		09/19/13	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.030	<0.069	--
MW-202		06/23/14	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050 UJ	<0.029	<0.067	--
MW-202		12/16/14	ND	<0.5	<0.5	<0.5	<1.5	--	0.052	<0.028	<0.066	--

Appendix E
Historical Summary of Groundwater Analytical Data
Total Petroleum Hydrocarbons
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Monitoring Well[1]	Notes	Date Sampled	LNAPL[2]	BTEX (EPA Method 8020 or 8021B) (µg/L)				TPH (EPA Method 418.1) (mg/L)	NWTPH-Gx (mg/L)	NWTPH-D Extended[3] (mg/L)		Dissolved Lead (EPA 6000/7000 Series Method) (µg/L)
				B	T	E	X		Gasoline C_7 - C_{12}	Diesel C_{12} - C_{24}	Heavy Oil $>C_{24}$	
Upper Yard RALs			***No visible sheen***	***40***	***14,300***	***1,400***	***4,400***	**--**	***1***	***10***	***15***	***50***
MW-202		06/18/15	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.028	<0.066	--
MW-202		12/08/15	ND	<0.5	<0.5	<0.5	<1.5	--	0.064	<0.029	<0.068	--
MW-202		06/14/16	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.029	<0.068	--
MW-202		01/13/17	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.030	<0.070	--
MW-202		06/13/17	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.028	<0.066	--
MW-202		11/08/17	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.046	<0.100	--
MW-202		06/20/18	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.031	<0.072	--
MW-202		12/13/18	ND	<0.5	<0.5	<0.5	<1.5	--	<0.019	<0.046	<0.100	--
MW-202	Duplicate	12/13/18	ND	<0.5	<0.5	<0.5	<1.5	--	<0.019	<0.045	<0.100	--
MW-202		06/25/19	ND	<0.2	<0.2	<0.4	<1	--	0.047 J	<0.047	<0.110	--
MW-202		12/17/19	ND	<0.2	<0.2	<0.4	<1	--	<0.019	0.055 J	<0.110	--
MW-202		06/16/20	ND	<0.2	<0.2	<0.4	<1	--	0.0047 J	<0.47	<0.110	--
MW-202		11/18/20	ND	<0.2	<0.2	<0.4	<1	--	0.039 J	<0.048 *	<0.110	--
MW-202		06/08/21	ND	<0.30	<0.30	<0.40	<1.4	--	0.039 J	<0.048	<0.110	--
MW-202		12/01/21	ND	<0.0941	<0.278	<0.137	<0.174	--	0.0463 J	0.0357 J	<0.0833	--
MW-202		06/01/22	ND	<0.30	<0.30	<0.40	<1.4	--	0.030 J	<0.047 cn	<0.100 cn	--
MW-202		10/25/22	ND	<0.30	<0.30	<0.40	<1.4	--	<0.043	<0.046 *1 cn	<0.100 cn	--
MW-202		06/21/23	ND	<0.30	<0.30	<0.40	<0.40	--	<0.043	<0.046	<0.100	--
MW-202		10/25/23	ND	<0.30	<0.30	<0.40	<0.40	--	<0.220 cn	<0.050 cn	<0.110 cn	--
MW-202		**06/11/24**	**ND**	**<0.30**	**<0.40**	**<0.30**	**<0.40**	--	**<0.043**	**<0.049**	**<0.110**	--
MW-203		03/08/07	ND	<0.5	<0.5	<0.5	<1.5	--	<0.048	0.32	<0.095	--
MW-203		06/07/07	ND	<0.5	<0.5	<0.5	<1.5	--	<0.0500	0.150	<0.097	0.045
MW-203		09/28/07	ND	<0.5	<0.5	<0.5	<1.5	--	<0.500	0.400	0.270	<0.047
MW-203		11/27/07	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	0.290	<0.100	0.058
MW-203		02/12/08	ND	<0.500	<0.500	<0.500	<1.00	--	<0.050	<0.240	<0.481	<1.00
MW-203	Duplicate	02/12/08	ND	<0.500	<0.500	<0.500	<1.00	--	<0.050	<0.236	<0.472	<1.00
MW-203		05/14/08	ND	<0.500	<0.500	<0.500	<1.00	--	<0.050	<0.243	<0.485	<1.00
MW-203	Duplicate	05/14/08	ND	<0.500	<0.500	<0.500	<1.00	--	<0.050	--	--	--
MW-203		09/03/08	ND	<0.500	<0.500	<0.500	<1.00	--	<0.050	<0.236	<0.472	<1.00
MW-203		12/04/08	ND	<0.500	<0.500	<0.500	<1.00	--	<0.050	<0.240	<0.481	<1.00
MW-203		02/17/09	ND	<0.500	<0.500	<0.500	<1.00	--	<0.050	<0.236	<0.472	<1.00
MW-203		05/13/09	ND	<0.500	<0.500	<0.500	<1.00	--	<0.050	<0.243	<0.485	<1.00
MW-203		09/11/09	ND	<0.500	<0.500	<1.00	<1.00	--	0.082	<0.248	<0.495	<2.0
MW-203		04/14/10	ND	<0.50	<0.50	<0.50	<2.0	--	<0.050	<0.12	<0.25	<2.0
MW-203		09/22/10	ND	<0.50	<0.50	<0.50	<2.0	--	0.058	<0.12	<0.24	<2.0
MW-203		04/27/11	ND	<0.50	<0.50	<0.50	<1.0	--	<0.050	--	--	<2.0
MW-203		04/28/11	ND	--	--	--	--	--	--	<0.12	<0.24	--
MW-203		09/21/11	ND	<0.50	<0.50	<0.50	<1.0	--	<0.050	<0.12	<0.25	--
MW-203		04/18/12	ND	<0.50	<0.50	<0.50	<1.0	--	<0.050	0.14 [17]	<0.24	--
MW-203		10/11/12	ND	<0.50	<0.50	<0.50	<0.50	--	<0.025	0.22 [17,19,20]	<0.24	--
MW-203		04/25/13	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.031	<0.072	--
MW-203		09/19/13	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.029	<0.068	--
MW-203		06/24/14	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050 UJ	<0.029	<0.067	--
MW-203	Duplicate	06/24/14	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050 UJ	<0.029	<0.067	--
MW-203		12/16/14	ND	<0.5	<0.5	<0.5	<1.5	--	0.110	0.032	<0.067	--
MW-203		06/18/15	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.029	<0.069	--
MW-203		12/07/15	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.030	<0.069	--
MW-203		06/15/16	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	0.047	<0.067	--
MW-203	Duplicate	06/15/16	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	0.035	<0.067	--
MW-203		01/13/17	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.029	<0.069	--

Appendix E
Historical Summary of Groundwater Analytical Data
Total Petroleum Hydrocarbons
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Monitoring Well[1]	Notes	Date Sampled	LNAPL[2]	BTEX (EPA Method 8020 or 8021B) (µg/L)				TPH (EPA Method 418.1) (mg/L)	NWTPH-Gx (mg/L)	NWTPH-D Extended[3] (mg/L)		Dissolved Lead (EPA 6000/7000 Series Method) (µg/L)
				B	T	E	X		Gasoline C_7 - C_{12}	Diesel C_{12} - C_{24}	Heavy Oil $>C_{24}$	
Upper Yard RALs			***No visible sheen***	***40***	***14,300***	***1,400***	***4,400***	**--**	***1***	***10***	***15***	***50***
MW-203		06/13/17	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.029	<0.067	--
MW-203		11/08/17	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.046	<0.100	--
MW-203		06/20/18	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	0.037	<0.068	--
MW-203		12/13/18	ND	<0.5	<0.5	<0.5	<1.5	--	0.032	0.054	<0.100	--
MW-203		06/25/19	ND	<0.2	<0.2	<0.4	<1	--	0.051 J	<0.046	<0.100	--
MW-203		12/17/19	ND	<0.2	<0.2	<0.4	<1	--	0.021 J	<0.046	<0.100	--
MW-203		06/16/20	ND	<0.2	<0.4	<0.2	<1	--	0.065 J	<0.46	<0.100	--
MW-203		11/19/20	ND	<0.2	<0.2	<0.4	<1	--	0.040 J	<0.045 * *1	<0.100	--
MW-203		06/08/21	ND	<0.30	<0.30	<0.40	<1.4	--	0.063 J	<0.046	<0.100	--
MW-203		12/01/21	ND	<0.0941	<0.278	<0.137	<0.174	--	<0.0316	0.0815 J	<0.0833	--
MW-203		06/02/22	ND	<0.30	<0.30	<0.40	<1.4	--	0.050 J	<0.048	<0.110	--
MW-203		10/26/22	ND	<0.30	<0.30	<0.40	<1.4	--	0.049 J	<0.048 *1 cn	<0.110 cn	--
MW-203		06/21/23	ND	<0.30	<0.30	<0.40	<0.40	--	<0.043	<0.050	<0.110	--
MW-203	Duplicate	06/21/23	ND	<0.30	<0.30	<0.40	<0.40	--	0.045 J	<0.049	<0.110	--
MW-203		10/26/23	ND	<0.30	<0.30	<0.40	<0.40	--	<0.220 cn	<0.052 cn	<0.120 cn	--
MW-203		**06/11/24**	**ND**	**<0.30**	**<0.40**	**<0.30**	**<0.40**	--	**<0.043**	**<0.045**	**<0.100**	--
MW-204		03/08/07	Sheen	1.00	0.9	<0.5	<1.5	--	0.47	0.89	0.14	--
MW-204		06/07/07	ND	1.40	1.8	<0.5	2.6	--	0.670	1.400	0.170	<0.037
MW-204		09/28/07	ND	0.70	0.9	<0.5	1.6	--	0.640	1.000	0.260	<0.24
MW-204		11/27/07	ND	0.9	0.8	0.9	<5.0[16]	--	0.670	0.700	0.160	<0.047
MW-204		02/12/08	ND	1.76	1.09	<0.500	2.12	--	0.713	<0.240	<0.481	<1.00
MW-204		05/14/08	ND	1.32	1.71	<0.500	4.17	--	0.782	0.310	0.784	<1.00
MW-204		09/03/08	ND	4.42	1.06	3.07	1.47	--	1.070	0.384	<0.476	<1.00
MW-204		10/01/08	ND	--	--	--	--	--	0.796	--	--	--
MW-204		12/04/08	ND	1.45	1.20	1.05	4.22	--	0.869	0.291	<0.495	<1.00
MW-204		02/17/09	ND	1.48	1.32	1.82	7.50	--	1.060	0.341	<0.500	<1.00
MW-204	Duplicate	02/17/09	ND	1.54	1.30	1.81	7.45	--	1.120	0.332	<0.556	<1.00
MW-204		05/13/09	ND	1.93	1.55	1.86	4.79	--	1.190	0.593	<0.500	<1.00
MW-204	Duplicate	05/13/09	ND	1.82	1.58	1.88	7.70	--	1.230	0.553	<0.556	<1.00
MW-204		09/11/09	ND	<0.500	1.10	<0.500	1.8	--	1.200	0.396	<0.495	<2.0
MW-204	Duplicate	09/11/09	ND	<0.500	1.10	<0.500	1.8	--	1.100	0.393	<0.495	<2.0
MW-204		04/14/10	ND	1.1	2.1	<0.50	3.6	--	1.5	1.2	0.84	<2.0
MW-204	Duplicate	04/14/10	ND	1.1	2.1	<0.50	3.7	--	1.5	1.1	<0.25	<2.0
MW-204		09/22/10	ND	<0.50	1.5	<0.50	3.2	--	1.3	1.5	<0.25	<2.0
MW-204		04/26/11	ND	1.6	1.5	<0.50	3.9	--	0.71	--	--	<2.0
MW-204	Duplicate	04/26/11	ND	1.9	1.7	<0.50	5.0	--	1.0	--	--	<2.0
MW-204		04/28/11	ND	--	--	--	--	--	--	0.69	<0.24	--
MW-204	Duplicate	04/28/11	ND	--	--	--	--	--	--	0.58	<0.24	--
MW-204		09/22/11	ND	1.7	1.6	<0.50	6.1	--	0.92	0.88[17]	<0.25	--
MW-204	Duplicate	09/22/11	ND	1.7	1.8	<0.50	6.5	--	0.92	0.65[17]	<0.24	--
MW-204	MW-204-NEAR	09/22/11	ND	1.7	1.7	<0.50	6.3	--	0.94	0.91[17]	<0.25	--
MW-204		04/18/12	ND	1.6	1.7	<0.50	4.1	--	0.69	1.2[17]	0.64[17]	--
MW-204	Duplicate	04/18/12	ND	2.0	1.7	<0.50	5.3	--	0.87	1.2[17]	1.4[17]	--
MW-204	MW-204-NEAR	04/18/12	ND	2.0	1.8	<0.50	5.3	--	0.90	1.2[17]	1.6[17]	--
MW-204	Duplicate	04/18/12	ND	2.0	1.8	<0.50	5.3	--	0.90	1.3[17]	2.8[17]	--
MW-204		10/12/12	ND	<0.50	1.3	<0.50	2.3	--	0.95	0.6[17,19,20]	<0.24	--
MW-204	Duplicate	10/12/12	ND	<0.50	1.2	<0.50	2.3	--	0.62	0.62[17,19,20]	<0.24	--
MW-204	MW-204-NEAR	10/12/12	ND	<0.50	1.3	<0.50	2.4	--	0.71	0.51[17,19,20]	<0.24	--
MW-204		04/26/13	ND	0.7	2.2	1.6	4.6	--	0.89	0.24	<0.067	--
MW-204	Duplicate	04/26/13	ND	0.7	2.2	1.7	4.9	--	0.88	0.32	0.077	--

Appendix E
Historical Summary of Groundwater Analytical Data
Total Petroleum Hydrocarbons
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Monitoring Well[1]	Notes	Date Sampled	LNAPL[2]	BTEX (EPA Method 8020 or 8021B) (µg/L)				TPH (EPA Method 418.1) (mg/L)	NWTPH-Gx (mg/L)	NWTPH-D Extended[3] (mg/L)		Dissolved Lead (EPA 6000/7000 Series Method) (µg/L)
									Gasoline	Diesel	Heavy Oil	
				B	T	E	X		C_7 - C_{12}	C_{12} - C_{24}	>C_{24}	
Upper Yard RALs			***No visible sheen***	***40***	***14,300***	***1,400***	***4,400***	**--**	***1***	***10***	***15***	***50***
MW-204		09/19/13	ND	1.1	1.5	1.1	3.5	--	0.58	0.31	<0.067	--
MW-204		06/24/14	ND	1.0	1.4	<0.5	2.6	--	0.600 J	0.24	<0.066	--
MW-204		07/25/14	ND	--	--	--	--	--	0.880	--	--	--
MW-204	Duplicate	07/25/14	ND	--	--	--	--	--	0.90	--	--	--
MW-204		12/16/14	ND	0.9	1.5	1.3	<6.0	--	0.990	0.240	<0.066	--
MW-204	Duplicate	12/16/14	ND	0.9	1.5	1.2	<6.0	--	1.000	0.200	<0.066	--
MW-204		06/18/15	ND	<0.5	0.9	0.6	<3.0	--	0.430	0.250	<0.069	--
MW-204		12/09/15	ND	1.0	1.6	1.4	3.8	--	1.400	0.190	<0.069	--
MW-204		01/15/16	ND	0.9	1.4	<1.2	3.5	--	1.400	0.840	0.4	--
MW-204	Duplicate	01/15/16	ND	0.9	1.4	<1.1	3.5	--	1.400	0.210	<0.070	--
MW-204		06/13/16	ND	<0.5	1.6	1.4	2.9	--	0.890	0.210	<0.067	--
MW-204		01/13/17	ND	<0.5	1.4	1.3	3.3	--	1.400	0.260	<0.068	--
MW-204		06/13/17	ND	0.7	1.1	<0.5	2.3	--	1.200	0.170	<0.067	--
MW-204		11/08/17	ND	<0.9	1.2	1.2	2.3	--	1.000	0.160	<0.100	--
MW-204	MW-204	06/20/18	ND	<0.5	1.2	1.2	2.4	--	1.200	0.230	<0.066	--
MW-204		12/13/18	ND	<0.5	1.1	0.9	2.0	--	0.830	0.075	<0.100	--
MW-204		06/24/19	ND	<0.2	0.5 J	<0.4	<1	--	0.890	0.130	<0.110	--
MW-204	Duplicate	06/24/19	ND	<0.2	0.4 J	<0.4	<1	--	0.900	1.000	<0.110	--
MW-204		12/17/19	ND	<0.2	0.3 J	<0.4	<1	--	0.590	<0.047	<0.100	--
MW-204		06/16/20	ND	<0.2	0.4 J	<0.4	<1	--	0.950	0.19	<0.100	--
MW-204		11/19/20	ND	<0.2	0.26 J	<0.4	<1	--	1.100	0.130 * *1	<0.100	--
MW-204		06/08/21	ND	<0.30	0.31 J	<0.30	<1.4	--	0.9	0.067 J	<0.100	--
MW-204		12/02/21	ND	<0.0941	<0.278	<0.137	0.478 J	--	0.531	0.302	<0.0833	--
MW-204		06/02/22	ND	<0.30	<0.30	<0.40	<1.4	--	0.980	0.110	<0.100	--
MW-204		10/26/22	ND	<0.30	<0.30	<0.40	<1.4	--	0.790	0.053 J *1 cn	<0.100 cn	--
MW-204		06/21/23	Sock in well [22]	<0.30	0.33 J	<0.40	<0.40	--	0.810	0.130	<0.100	--
MW-204		10/26/23	ND	<0.30	<0.30	<0.40	<0.40	--	0.620 J cn	0.097 J cn	<0.110 cn	--
MW-204	Duplicate	10/26/23	ND	<0.30	<0.30	<0.40	<0.40	--	0.830	0.110 cn	<0.110 cn	--
MW-204		**06/11/24**	**ND**	**<0.30**	**<0.40**	**<0.30**	**<0.40**	--	**0.5**	**0.14**	**<0.100**	--
MW-205	MW-205	03/08/07	ND	<0.5	<0.5	<0.5	<1.5	--	<0.048	0.18	<0.095	--
MW-205		06/07/07	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	0.098	<0.100	<0.037
MW-205		09/28/07	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.081	<0.100	<0.047
MW-205		11/27/07	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	0.120	0.560	<0.047
MW-205		02/12/08	ND	<0.500	<0.500	<0.500	<1.00	--	<0.050	<0.248	0.529	<1.00
MW-205		05/14/08	ND	<0.500	<0.500	<0.500	<1.00	--	<0.050	<0.238	<0.476	<1.00
MW-205		09/03/08	ND	<0.500	<0.500	<0.500	<1.00	--	<0.050	<0.240	<0.481	<1.00
MW-205		12/05/08	ND	<0.500	<0.500	<0.500	<1.00	--	<0.050	<0.236	<0.472	<1.00
MW-205	MW-205	02/17/09	ND	<0.500	<0.500	<0.500	<1.00	--	<0.050	<0.248	<0.495	<1.00
MW-205		05/13/09	ND	<0.500	<0.500	<0.500	<1.00	--	<0.050	<0.245	<0.490	<1.00
MW-205		09/11/09	ND	<0.500	<0.500	<0.500	<1.00	--	0.1	<0.248	<0.495	<2.0
MW-205		04/14/10	ND	<0.50	<0.50	<0.50	<2.0	--	0.051	<0.12	<0.25	<2.0
MW-205		09/22/10	ND	<0.50	<0.50	<0.50	<2.0	--	0.082	0.15	<0.25	<2.0
MW-205		04/26/11	LNAPL	--	--	--	--	--	--	--	--	--
MW-205		09/22/11	ND	<0.50	<0.50	<0.50	<1.0	--	0.07	<0.12	<0.25	--
MW-205	MW-205-NEAR	09/22/11	ND	<0.50	<0.50	<0.50	<1.0	--	<0.050	<0.12	<0.25	--
MW-205		04/18/12	ND	<0.50	<0.50	<0.50	<1.0	--	<0.050	0.16 [17]	<0.24	--
MW-205	Duplicate	04/18/12	ND	<0.50	<0.50	<0.50	<1.0	--	<0.050	0.25 [17]	0.44 [17]	--
MW-205	MW-205-NEAR	04/18/12	ND	<0.50	<0.50	<0.50	<1.0	--	<0.050	7.4 [17]	4.8 [17]	--
MW-205		10/12/12	ND	<0.50	<0.50	<0.50	<0.50	--	0.027	0.23 [17,19,20]	<0.24	--
MW-205	Duplicate	10/12/12	ND	<0.50	<0.50	<0.50	<0.50	--	0.035	0.54 [17,19,20]	0.34 [17]	--

Appendix E
Historical Summary of Groundwater Analytical Data
Total Petroleum Hydrocarbons
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Monitoring Well[1]	Notes	Date Sampled	LNAPL[2]	BTEX (EPA Method 8020 or 8021B) (µg/L)				TPH (EPA Method 418.1) (mg/L)	NWTPH-Gx (mg/L)	NWTPH-D Extended[3] (mg/L)		Dissolved Lead (EPA 6000/7000 Series Method) (µg/L)
				B	T	E	X		Gasoline C_7 - C_{12}	Diesel C_{12} - C_{24}	Heavy Oil $>C_{24}$	
Upper Yard RALs			***No visible sheen***	***40***	***14,300***	***1,400***	***4,400***	**--**	***1***	***10***	***15***	***50***
MW-205	MW-205-NEAR	10/12/12	ND	<0.50	<0.50	<0.50	<0.50	--	0.036	0.30 [17,19,20]	<0.24	--
MW-205		04/26/13	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.030	<0.069	--
MW-205		09/19/13	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.029	<0.067	--
MW-205	Duplicate	09/19/13	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.029	<0.067	--
MW-205		06/24/14	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050 UJ	<0.028	<0.066	--
MW-205		12/16/14	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.028	<0.066	--
MW-205		06/18/15	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.028	<0.066	--
MW-205	Duplicate	06/18/15	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.028	<0.066	--
MW-205		12/09/15	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.031	<0.072	--
MW-205		06/13/16	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	0.05	<0.068	--
MW-205		01/13/17	MD	<0.5	<0.5	<0.5	<1.5	--	<0.050	0.089	<0.071	--
MW-205		06/13/17	ND	<0.5	<0.5	<0.5	<1.5	--	0.28	<0.029	<0.067	--
MW-205		11/08/17	ND	<0.5	<0.5	<0.5	<1.5	--	0.071	<0.046	<0.100	--
MW-205		06/20/18	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	0.035	<0.070	--
MW-205		12/13/18	ND	<0.5	<0.5	<0.5	<1.5	--	<0.019	<0.045	<0.100	--
MW-205		06/24/19	ND	<0.2	<0.2	<0.4	<1	--	0.130 J	0.068 J	<0.100	--
MW-205		12/17/19	ND	<0.2	<0.2	<0.4	<1	--	0.040 J	<0.047	<0.100	--
MW-205		06/16/20	ND	<0.2	<0.2	<0.4	<1	--	0.082 J	**0.053 J**	<0.100	--
MW-205		11/19/20	ND	<0.2	<0.2	<0.4	<1	--	0.056 J	<0.045 * *1	<0.100	--
MW-205		06/08/21	ND	<0.30	<0.30	<0.40	<1.4	--	0.093 J	<0.051	<0.110	--
MW-205		12/02/21	Sheen on probe[22]	<0.0941	<0.278	<0.137	<0.174	--	<0.0316	0.0935 J	<0.0833	--
MW-205		06/02/22	Sheen on probe[22]	<0.30	0.37 J	<0.40	<1.4	--	0.078 J	<0.048	<0.110	--
MW-205		10/26/22	ND	<0.30	<0.30	<0.40	<1.4	--	0.083 J	<0.047 *1 cn	<0.100 cn	--
MW-205		06/22/23	ND	<0.30	<0.30	<0.40	<0.40	--	0.065 J	<0.046	<0.100	--
MW-205	Duplicate	06/22/23	ND	<0.30	<0.30	<0.40	<0.40	--	0.081 J	<0.047	<0.100	--
MW-205		10/27/23	ND	<0.30	<0.30	<0.40	<0.40	--	0.045 J	<0.050 cn	<0.110 cn	--
MW-205		06/11/24	ND	<0.30	<0.40	<0.30	<0.40	--	0.050 J	<0.051	<0.110	--
MW-205	**Duplicate**	**06/11/24**	**ND**	**<0.30**	**<0.40**	**<0.30**	**<0.40**	--	**0.048 J**	**<0.049**	**<0.110**	--
MW-206		03/08/07	ND	<0.5	<0.5	<0.5	<1.5	--	<0.048	<0.075	<0.094	--
MW-206		06/07/07	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.076	<0.095	0.078
MW-206		09/27/07	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.076	<0.095	<0.047
MW-206		11/27/07	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.077	<0.096	<0.24
MW-206		02/12/08	ND	<0.500	<0.500	<0.500	<1.00	--	<0.050	<0.236	<0.472	<1.00
MW-206		05/13/08	ND	<0.500	<0.500	<0.500	<1.00	--	<0.050	<0.250	<0.505	<1.00
MW-206		09/04/08	ND	<0.500	<0.500	<0.500	<1.00	--	<0.050	<0.240	<0.481	<1.00
MW-206	Duplicate	09/04/08	ND	<0.500	<0.500	<0.500	<1.00	--	<0.050	<0.240	<0.481	<1.00
MW-206		12/04/08	ND	<0.500	<0.500	<0.500	<1.00	--	<0.050	<0.236	<0.472	<1.00
MW-206	Duplicate	12/04/08	ND	<0.500	<0.500	<0.500	<1.00	--	<0.050	<0.236	<0.472	<1.00
MW-206		02/18/09	ND	<0.500	<0.500	<0.500	<1.00	--	<0.050	<0.278	<0.556	<1.00
MW-206		05/12/09	ND	<0.500	<0.500	<0.500	<1.00	--	<0.050	<0.278	<0.556	<1.00
MW-206		09/11/09	ND	<0.500	<0.500	<0.500	<1.00	--	<0.050	<0.248	<0.495	<2.0
MW-206		04/13/10	ND	<0.50	<0.50	<0.50	<2.0	--	<0.050	--	--	--
MW-206		04/14/10	ND	--	--	--	--	--	--	<0.12	<0.24	<2.0
MW-206		09/22/10	ND	<0.50	<0.50	<0.50	<2.0	--	<0.050	<0.12	<0.25	<2.0
MW-206		04/27/11	ND	<0.50	<0.50	<0.50	<1.0	--	<0.050	--	--	<2.0
MW-206		04/28/11	ND	--	--	--	--	--	--	<0.12	<0.24	--
MW-206		09/21/11	ND	<0.50	<0.50	<0.50	<1.0	--	<0.050	<0.12	<0.24	--
MW-206		04/18/12	ND	<0.50	<0.50	<0.50	<1.0	--	<0.050	<0.12	<0.24	--
MW-206		10/11/12	ND	<0.50	<0.50	<0.50	<0.50	--	<0.025	0.16 [17,19,20]	<0.24	--
MW-206		04/25/13	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.029	<0.067	--

Appendix E
Historical Summary of Groundwater Analytical Data
Total Petroleum Hydrocarbons
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Monitoring Well[1]	Notes	Date Sampled	LNAPL[2]	BTEX (EPA Method 8020 or 8021B) (µg/L)				TPH (EPA Method 418.1) (mg/L)	NWTPH-Gx (mg/L)	NWTPH-D Extended[3] (mg/L)		Dissolved Lead (EPA 6000/7000 Series Method) (µg/L)
				B	T	E	X		Gasoline C_7 - C_{12}	Diesel C_{12} - C_{24}	Heavy Oil $>C_{24}$	
Upper Yard RALs			***No visible sheen***	***40***	***14,300***	***1,400***	***4,400***	**--**	***1***	***10***	***15***	***50***
MW-206		09/19/13	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.029	<0.069	--
MW-206		06/23/14	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050 UJ	<0.029	<0.067	--
MW-206		12/16/14	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.028	<0.066	--
MW-206		06/17/15	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.029	<0.068	--
MW-206		12/08/15	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.029	<0.067	--
MW-206		06/14/16	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.028	<0.066	--
MW-206		01/13/17	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.028	<0.066	--
MW-206		06/13/17	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.029	<0.067	--
MW-206	Duplicate	06/13/17	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.030	<0.069	--
MW-206		11/08/17	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.048	<0.110	--
MW-206		06/20/18	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.028	<0.066	--
MW-206		12/13/18	ND	<0.5	<0.5	<0.5	<1.5	--	<0.019	0.050	<0.100	--
MW-206		06/25/19	ND	<0.2	<0.2	<0.4	<1	--	<0.019	<0.049	<0.110	--
MW-206		12/17/19	ND	<0.2	<0.2	<0.4	<1	--	<0.019	<0.046	<0.100	--
MW-206		06/16/20	ND	<0.2	<0.2	<0.2	<1	--	<0.019	<0.047	<0.10	--
MW-206		11/19/20	ND	<0.2	<0.2	<0.4	<1	--	<0.019	<0.045 * *1	<0.100	--
MW-206		06/08/21	ND	<0.30	<0.30	<0.40	<1.4	--	<0.019	<0.045	<0.100	--
MW-206		12/03/21	ND	<0.0941	<0.278	<0.137	<0.174	--	<0.0316	<0.0333	<0.0833	--
MW-206		06/01/22	ND	<0.30	0.35 J	<0.40	<1.4	--	<0.019	<0.045 cn	<0.100 cn	--
MW-206		10/25/22	ND	<0.30	<0.30	<0.40	<1.4	--	<0.043	<0.047 *1 cn	<0.100 cn	--
MW-206		06/21/23	ND	<0.30	<0.30	<0.40	<0.40	--	<0.043	<0.045	<0.099	--
MW-206		10/26/23	ND	<0.30	<0.30	<0.40	<0.40	--	<0.220 cn	<0.050 cn	<0.110 cn	--
MW-206		**06/11/24**	**ND**	**<0.30**	**<0.40**	**<0.30**	**<0.40**	--	**<0.043**	**<0.050**	**<0.110**	--
MW-207		03/08/07	ND	<0.5	<0.5	0.9	<1.5	--	<0.048	0.12	<0.095	--
MW-207	Duplicate	03/08/07	ND	<0.5	<0.5	1.1	<1.5	--	<0.048	0.15	<0.095	--
MW-207		06/07/07	ND	<0.5	<0.5	<0.5	<1.5	--	<0.05	<0.077	<0.096	0.11
MW-207		09/27/07	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.081	<0.10	<0.47
MW-207		11/27/07	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.076	<0.095	<0.047
MW-207		02/12/08	ND	<0.500	<0.500	<0.500	<1.00	--	<0.050	<0.248	<0.495	<1.00
MW-207		05/13/08	ND	<0.500	<0.500	<0.500	<1.00	--	<0.050	<0.250	<0.500	<1.00
MW-207		09/04/08	ND	<0.500	<0.500	<0.500	<1.00	--	<0.050	<0.238	<0.476	<1.00
MW-207		12/03/08	ND	<0.500	<0.500	<0.500	<1.00	--	<0.050	<0.238	<0.476	<1.00
MW-207		02/18/09	ND	<0.500	<0.500	<0.500	<1.00	--	<0.050	<0.248	<0.495	<1.00
MW-207		05/12/09	ND	<0.500	<0.500	<0.500	<1.00	--	<0.050	<0.250	<0.500	<1.00
MW-207		09/11/09	ND	<0.500	<0.500	<0.500	<1.00	--	<0.050	<0.248	<0.495	<2.0
MW-207		04/14/10	ND	<0.50	<0.50	<0.50	<2.0	--	<0.050	<0.12	<0.24	<2.0
MW-207		09/21/10	ND	<0.50	<0.50	<0.50	<2.0	--	<0.050	<0.12	<0.24	<2.0
MW-207	Duplicate	09/21/10	ND	<0.50	<0.50	<0.50	<2.0	--	0.092	<0.12	<0.25	<2.0
MW-207		04/27/11	ND	<0.50	<0.50	<0.50	<1.0	--	<0.050	--	--	<2.0
MW-207		04/28/11	ND	--	--	--	--	--	--	<0.12	<0.24	--
MW-207		09/21/11	ND	<0.50	<0.50	<0.50	<1.0	--	<0.050	<0.12	<0.24	--
MW-207		04/18/12	ND	<0.50	<0.50	<0.50	<1.0	--	<0.050	<0.12	<0.24	--
MW-207		10/11/12	ND	<0.50	<0.50	<0.50	<0.50		<0.025	0.15 [17,19,20]	<0.24	--
MW-207		04/25/13	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.029	<0.068	--
MW-207		09/19/13	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.029	<0.067	--
MW-207		06/23/14	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050 UJ	<0.028	<0.066	--
MW-207		12/16/14	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.028	<0.066	--
MW-207		06/17/15	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.028	<0.066	--
MW-207		12/08/15	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.028	<0.066	--
MW-207		06/14/16	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.029	<0.068	--

Appendix E
Historical Summary of Groundwater Analytical Data
Total Petroleum Hydrocarbons
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Monitoring Well[1]	Notes	Date Sampled	LNAPL[2]	BTEX (EPA Method 8020 or 8021B) (µg/L)				TPH (EPA Method 418.1) (mg/L)	NWTPH-Gx (mg/L)	NWTPH-D Extended[3] (mg/L)		Dissolved Lead (EPA 6000/7000 Series Method) (µg/L)
									Gasoline	Diesel	Heavy Oil	
				B	T	E	X		C_7 - C_{12}	C_{12} - C_{24}	>C_{24}	
Upper Yard RALs			***No visible sheen***	***40***	***14,300***	***1,400***	***4,400***	**--**	***1***	***10***	***15***	***50***
MW-207		01/13/17	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.029	<0.067	--
MW-207	Duplicate	01/13/17	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	0.130	1.700	--
MW-207		06/13/17	ND	<0.5	<0.5	<0.5	<1.5	--	0.071	0.031	<0.067	--
MW-207		11/08/17	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.046	<0.110	--
MW-207	Duplicate	11/08/17	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.046	<0.110	--
MW-207		06/20/18	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	<0.028	<0.066	--
MW-207		12/13/18	ND	<0.5	<0.5	<0.5	<1.5	--	<0.019	<0.046	<0.100	--
MW-207		06/25/19	ND	<0.2	<0.2	<0.4	<1	--	<0.019	<0.048	<0.110	--
MW-207		12/17/19	ND	<0.2	<0.2	<0.4	<1	--	<0.019	<0.046	<0.100	--
MW-207		06/16/20	ND	<0.2	<0.2	<0.4	<1	--	<0.019	<0.048	<0.100	--
MW-207		11/18/20	ND	<0.2	<0.2	<0.4	<1	--	<0.019	<0.049 *	<0.110	--
MW-207		06/07/21	ND	<0.30	<0.30	<0.40	<1.4	--	<0.019	<0.048	<0.110	--
MW-207		12/01/21	ND	<0.0941	<0.278	<0.137	<0.174	--	<0.0316	<0.0333	<0.0833	--
MW-207		06/01/22	ND	<0.30	0.33 J	<0.40	<1.4	--	0.021 J	<0.046 cn	<0.100 cn	--
MW-207		10/25/22	ND	<0.30	<0.30	<0.40	<1.4	--	<0.043	<0.046 *1 cn	<0.100 cn	--
MW-207		06/21/23	ND	<0.30	<0.30	<0.40	<0.40	--	<0.043	<0.051	<0.110	--
MW-207		10/26/23	ND	<0.30	<0.30	<0.40	<0.40	--	<0.220 cn	<0.052 cn	0.290 cn	--
MW-207		**06/11/24**	**ND**	**<0.30**	**<0.40**	**<0.30**	**<0.40**	--	**<0.043**	**<0.047**	**<0.100**	--
MW-209		02/16/16	ND	1.4	1.2	1.3	4.2	--	1.600	0.150	<0.067	--
MW-209		06/13/16	ND	1.5	1.3	1.6	3.7	--	0.930	0.200	<0.066	--
MW-209		09/22/16	ND	0.9	0.9	<1.1	2.9	--	0.990	0.140	<0.072	--
MW-209		01/12/17	ND	1.3	1.3	1.4	3.6	--	1.400	0.140	<0.072	--
MW-209		03/27/17	ND	1.5	1.4	1.5	3.3	--	0.920	0.190	<0.068	--
MW-209		06/16/17	ND	1.1	0.8	<0.5	2.4	--	1.300	0.730	0.230	--
MW-209		12/16/19	ND	<0.2	0.3 J	<0.4	<1	--	0.590	<0.048	<0.110	--
MW-209		03/25/20	ND	<0.2	<0.2	<0.4	<1	--	0.690	<0.10	0.05 J	--
MW-209		06/16/20	ND	<0.2	0.3 J	<0.4	<1	--	0.590	0.580	0.18 J	--
MW-209		11/17/20	ND	<0.2	0.22 J	<0.4	<1	--	0.66	0.063 J *	<0.110	--
MW-209		03/15/21	ND	<0.20	0.47 J	<0.40	<1.4	--	0.69	0.083 J *1	<0.110	--
MW-209		06/09/21	ND	<0.30	0.32 J	<0.40	<1.4	--	0.51	<0.048	<0.110	--
MW-209		09/20/21	ND	<0.30	<0.30	<0.40	<1.4	--	0.28	0.055 J	<0.11	--
MW-209		12/03/21	ND	0.112 J	<0.278	<0.137	0.577 J	--	0.394	0.162	<0.0833	--
MW-209		03/30/22	ND	<0.30	0.31 J	<0.40	<1.4	--	1.00	0.071 J	<0.110	--
MW-209		06/03/22	ND	<0.30	<0.30	<0.40	<1.4	--	0.620	0.065 J	<0.100	--
MW-209		08/11/22	ND	<0.30	<0.30	<0.40	<1.4	--	0.330	<0.047 *1	<0.110	--
MW-209		03/21/23	ND	<0.30	0.46 J	<0.40	<1.4	--	0.640	0.061 J	<0.100	--
MW-209		06/20/23	ND	<0.30	<0.30	<0.40	<0.40	--	0.470	0.061 J	<0.100	--
MW-209		08/29/23	ND	<0.30 F1	<0.30 F1	<0.40 F1	<0.40 F1	--	0.350	0.055 J F1 cn	<0.110 cn	--
MW-209		10/25/23	ND	<0.30	<0.30	<0.40	<0.40	--	0.260 J cn	<0.050 cn	<0.110 cn	--
MW-209		03/12/24	ND	<0.30	<0.40	0.30 J	<0.40	--	0.770 J B cn	0.089 J	<0.110	--
MW-209		**06/10/24**	**ND**	**<0.30**	**<0.40**	**<0.30**	**<0.40**	--	**0.230 J**	**<0.051**	**<0.110**	--
MW-210		02/16/16	ND	<0.5	1.1	1.4	4.7	--	2.500	8.600	1.600	--
MW-210		06/13/16	ND	<0.5	1.6	<0.5	5.1	--	2.100	3.200	0.510	--
MW-210		09/22/16	ND	1.3	1.1	1.3	4.7	--	2.100	2.300	0.390	--
MW-210		01/12/17	ND	<0.5	1.1	<0.5	<1.5	--	0.130	0.037	<0.070	--
MW-210		03/27/17	ND	<0.5	<0.5	<0.5	<1.5	--	0.220	1.500	0.320	--
MW-210	Duplicate	03/27/17	ND	<0.5	<0.5	<0.5	<1.5	--	0.160	0.200	<0.066	--
MW-210		06/16/17	ND	<0.5	0.5	0.6	2.6	--	1.200	2.800	0.550	--
MW-210		12/16/19	ND	<0.2	<0.2	<0.4	<1	--	0.072 J	<0.047	<0.100	--
MW-210		03/25/20	ND	<0.2	<0.2	<0.4	<1	--	0.04 J	<0.10	<0.05	--

Appendix E
Historical Summary of Groundwater Analytical Data
Total Petroleum Hydrocarbons
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Monitoring Well[1]	Notes	Date Sampled	LNAPL[2]	BTEX (EPA Method 8020 or 8021B) (µg/L)				TPH (EPA Method 418.1) (mg/L)	NWTPH-Gx (mg/L)	NWTPH-D Extended[3] (mg/L)		Dissolved Lead (EPA 6000/7000 Series Method) (µg/L)
				B	T	E	X		Gasoline C_7 - C_{12}	Diesel C_{12} - C_{24}	Heavy Oil >C_{24}	
Upper Yard RALs			***No visible sheen***	***40***	***14,300***	***1,400***	***4,400***	***--***	***1***	***10***	***15***	***50***
MW-210		06/17/20	ND	<0.2	<0.2	<0.4	<1	--	0.019 J	<0.46	<0.100	--
MW-210		09/11/20	ND	<0.2	<0.2	<0.4	<1	--	0.071 J	<0.048 *1	<0.110	--
MW-210		11/17/20	ND	<0.2	0.22 J	<0.4	<1	--	0.150 J	<0.049 *	<0.110	--
MW-210		03/15/21	ND	<0.20	<0.20	<0.40	<1.4	--	0.038 J	<0.051 *1	<0.110	--
MW-210		06/09/21	ND	<0.30	<0.30	<0.40	<1.4	--	0.045 J	<0.049	<0.110	--
MW-210		09/20/21	ND	<0.30	<0.30	<0.40	<1.4	--	0.038 J	<0.054	<0.12	--
MW-210		12/03/21	ND	<0.0941	<0.278	<0.137	<0.174	--	<0.0316	<0.0333	<0.0833	--
MW-210		03/30/22	ND	<0.30	<0.30	<0.40	<1.4	--	0.022 J	<0.050	<0.110	--
MW-210		06/03/22	ND	<0.30	0.30 J	<0.40	<1.4	--	0.078 J	<0.046	<0.100	--
MW-210		08/11/22	ND	<0.30	<0.30	<0.40	<1.4	--	0.044 J	<0.047 *1	<0.100	--
MW-210		10/24/22	ND	<0.30	<0.30	<0.40	<1.4	--	<0.043	<0.052 *1 cn	<0.120 cn	--
MW-210		03/21/23	ND	<0.30	<0.30	<0.40	<1.4	--	<0.043	<0.050	<0.110	--
MW-210		06/20/23	ND	<0.30	<0.30	<0.40	<0.40	--	0.047 J	<0.048	<0.110	--
MW-210		08/29/23	ND	<0.30	<0.30	<0.40	<0.40	--	0.051 J	<0.050 cn	<0.110 cn	--
MW-210		10/25/23	ND	<0.30	<0.30	<0.40	<0.40	--	<0.043	<0.050 cn	<0.110 cn	--
MW-210		03/12/24	ND	<0.30	<0.40	<0.30	<0.40	--	<0.043	<0.049	<0.110	--
MW-210		**06/10/24**	**ND**	**<0.30 cn**	**<0.40**	**<0.30**	**<0.40**	--	**<0.043**	**<0.046**	**<0.110**	--
MW-211		02/16/16	ND	<0.5	<0.5	<0.5	<1.5	--	0.210	0.069	<0.067	--
MW-211		06/13/16	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	0.084	<0.068	--
MW-211		09/22/16	ND	<0.5	<0.5	<0.5	<1.5	--	0.100	0.062	<0.069	--
MW-211		01/12/17	ND	<0.5	<0.5	<0.5	<1.5	--	0.065	0.049	<0.070	--
MW-211		03/27/17	ND	<0.5	<0.5	<0.5	<1.5	--	<0.050	0.061	<0.067	--
MW-211		06/16/17	ND	<0.5	<0.5	<0.5	<1.5	--	0.130	0.081	<0.066	--
MW-211	Duplicate	06/16/17	ND	<0.5	<0.5	<0.5	<1.5	--	0.130	0.072	<0.067	--
MW-211		12/16/19	ND	<0.2	<0.2	<0.4	<1	--	0.031 J	<0.049	<0.110	--
MW-211		03/25/20	ND	<0.2	<0.2	<0.4	<1	--	0.031 J	<0.049	<0.110	--
MW-211		06/17/20	ND	<0.2	<0.2	<0.4	<1	--	0.044 J	<0.047	<0.100	--
MW-211		11/17/20	ND	<0.2	<0.2	<0.4	<1	--	0.053 J	<0.052 *	<0.120	--
MW-211		03/15/21	ND	<0.20	<0.20	<0.40	<1.4	--	0.055 J	<0.051 *1	<0.110	--
MW-211		06/09/21	ND	<0.30	<0.30	<0.40	<1.4	--	0.052 J	<0.048	<0.110	--
MW-211		09/20/21	ND	<0.30	<0.30	<0.40	<1.4	--	0.035 J	<0.052	<0.12	--
MW-211		12/03/21	ND	<0.0941	<0.278	<0.137	<0.174	--	<0.0316	0.0509 J	<0.0833	--
MW-211		03/30/22	ND	<0.30	<0.30	<0.40	<1.4	--	0.062 J	<0.046	<0.100	--
MW-211		06/03/22	ND	<0.30	<0.30	<0.40	<1.4	--	0.026 J	<0.050	<0.110	--
MW-211		08/11/22	ND	<0.30	<0.30	<0.40	<1.4	--	0.058 J	<0.046 *1	<0.100	--
MW-211		10/24/22	ND	<0.30	<0.30	<0.40	<1.4	--	0.048 J	<0.048 *1 cn	<0.110 cn	--
MW-211		03/21/23	ND	<0.30	<0.30	<0.40	<1.4	--	<0.043	<0.048	<0.110	--
MW-211		06/20/23	ND	<0.30	<0.30	<0.40	<0.40	--	0.052 J	<0.052	<0.120	--
MW-211		08/29/23	ND	<0.30	<0.30	<0.40	<0.40	--	0.054 J	<0.050 cn	<0.110 cn	--
MW-211		10/25/23	ND	<0.30	<0.30	<0.40	<0.40	--	<0.043	<0.051 cn	<0.110 cn	--
MW-211		03/12/24	ND	<0.30	<0.40	<0.30	<0.40	--	0.078 J B	<0.048	<0.110	--
MW-211		**06/10/24**	**ND**	**<0.30**	**<0.40**	**<0.30**	**<0.40**	--	**<0.043**	**0.061 J cn**	**0.430 cn**	--

Notes:

[1]Monitoring well locations are shown in Figure 2.

[2]LNAPL = light nonaqueous phase liquid.

[3]For December 2000 through June 2002, samples were first analyzed without the sulfuric acid/silica gel cleanup procedure (first or only result). If analytes were detected, the sulfuric acid/silica gel cleanup procedure was performed (second result). For September 2002 and after, samples obtained from Upper Yard wells were analyzed without the sulfuric acid/silica gel cleanup procedure, and samples obtained from Elliott Avenue and Offsite Area wells were analyzed with the sulfuric acid/silica gel cleanup procedure.

Appendix E
Historical Summary of Groundwater Analytical Data
Total Petroleum Hydrocarbons
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Monitoring Well[1]	Notes	Date Sampled	LNAPL[2]	BTEX (EPA Method 8020 or 8021B) (µg/L)				TPH (EPA Method 418.1) (mg/L)	NWTPH-Gx (mg/L)	NWTPH-D Extended[3] (mg/L)		Dissolved Lead (EPA 6000/7000 Series Method) (µg/L)
									Gasoline	Diesel	Heavy Oil	
				B	T	E	X		C_7 - C_{12}	C_{12} - C_{24}	>C_{24}	
Upper Yard RALs			***No visible sheen***	***40***	***14,300***	***1,400***	***4,400***	**--**	***1***	***10***	***15***	***50***

[4]According to the laboratory, the sample chromatogram does not resemble the gasoline standard.
[5]According to the laboratory, sample contains diesel-range hydrocarbons that extend into the hydrocarbon range quantified as gasoline.
[6]Due to an error in the identification of two sets of samples, (MW-64 and Dup 121699), the results from the sampling date of 01/04/00 were not considered reliable. The 12/26/99 results were not reported by the laboratory and a resampling took place.
[7]Due to an extraction anomaly during the silica gel cleanup procedure, a second analytical result is not available for this sample.
[8]After review of field procedures and historic analytical results, the sample appears to have been cross-contaminated in the field or in the laboratory.
[9]BTEX and gasoline-range hydrocarbon analyses were completed outside of the recommended holding time. Results should be qualified as estimated.
[10]Samples were extracted 3 or 4 days after expiration of the recommended holding time.
[11]Results should be considered bias low or estimated due to laboratory QA/QC exception.
[12]MW-30 was not sampled between July 1989 and September 1990 because of the presence of free product.
[13]Due to an extraction anomaly, the surrogate recoveries in the WTPH-D extended analyses were outside the established control limits and the results should be considered a low estimated value, according to the laboratory.
[14]The 03/23/99 data for diesel-range hydrocarbons (20.8/14.6 mg/L) for MW-84 appeared anomalous due to field sample handling or laboratory analytical error. The well was resampled on 04/01/99.
[15]Due to a lab error, the sample extract evaporated before testing and was not analyzed with the silica gel cleanup.
[16]Due to the presence of an interferent near its retention time, the normal reporting limit was not attained for this compound. The presence of or concentration cannot be determined.
[17]The chromatographic response resembles a typical fuel pattern.
[18]Sample was reanalyzed due to a surrogate failure. The surrogates were within QC limits in the reanalysis.
[19]Instrument related QC exceeds the control limits.
[20]Compound was found in the blank and sample.
[21]The %RDP between the primary and confirmation column/detector is 40%. The lower value has been reported.
[22]Non-measurable sheen/LNAPL observed on the interface probe. Oil absorbent sock in well removed before sampling.
µg/L = micrograms per liter
mg/L = milligrams per liter
ND = not detected
NG = not gauged
RAL = remedial action level
-- = not tested
Shaded concentrations are greater than corresponding Remedial Action Levels. Bolded data are for the current reporting period.
NEAR = The sample was collected from the top 12 inches of the water column within the respective monitoring well.
F1 = MS and/or MSD recovery exceeds control limits.
UJ = Non-detect value was analyzed outside of hold time, but less than two times hold time, concentration is an estimated value.
J = Concentration is an estimated value and was analyzed outside of hold time, but less than two times hold time.
* = LCS or LCSD is outside acceptance limits.
*1 = LCS/LCSD RPD exceeds control limits.
H = Sample was prepped or analyzed beyond the specified holding time
Well in compliance or decommissioned

Appendix E
Historical Summary of Groundwater Analytical Data
Carcinogenic Polycyclic Aromatic Hydrocarbons
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Monitoring Well[1]	Notes	Sample Date	Carcinogenic PAHs[2,3] (µg/L)							Noncarcinogenic PAHs[2] (µg/L)								
			Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Indeno(1,2,3-cd)pyrene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(g,h,i)perylene	Fluoranthene	Fluorene	Naphthalene[4]	Phenanthrene	Pyrene
Offsite Area RALs			0.03	0.03	0.03	0.03	0.03	0.03	0.03	NE	NE	NE	NE	NE	NE	NE	NE	NE
MW-27		12/13/02	0.0282	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.398	<0.100	<0.100	<0.100	0.149	<0.100	<0.100	<0.100	<0.100
MW-27		06/19/03	0.0639	<0.0100	<0.0100	<0.0100	<0.0100	0.0288	0.0232	3.46	<0.100	0.226	<0.100	0.963	0.296	0.188	0.357	0.952
MW-27		12/03/03	0.0266	<0.0100	<0.0100	<0.0100	0.0195	<0.0100	<0.0100	--	--	--	--	--	--	<0.100	--	--
MW-27		06/03/04	0.0357	<0.0100	<0.0100	<0.0100	0.0276	<0.0100	<0.0100	2.66	<0.100	0.178	<0.100	0.962	0.348	0.821	0.299	0.826
MW-27		12/06/04	0.0286	<0.0100	<0.0100	<0.0100	0.0190	<0.0100	<0.0100	1.57	<0.100	<0.100	<0.100	0.269	<0.100	<0.100	<0.100	0.488
MW-27		06/03/05	0.0709	0.0127	0.0157	0.0166	0.0440	<0.0100	<0.0100	2.01	<0.100	<0.100	<0.100	0.995	<0.100	<0.100	<0.100	1.21
MW-27		12/01/05	0.0921	0.0576	0.0649	0.0393	0.0698	<0.0100	0.0444	--	--	--	--	--	--	--	--	--
MW-27		03/08/07	<0.02	<0.02	<0.02	<0.009	<0.02	<0.02	<0.02	--	--	--	--	--	--	--	--	--
MW-27R		09/26/07	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	--	--	--	--	--	--	0.079 [5]	--	--
MW-27R		11/27/07	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	0.19	--	--
MW-67		06/19/03	0.0769	0.0195	<0.0100	<0.0100	0.0278	0.0849	0.0730	1.99	<0.100	0.242	<0.100	0.602	0.106	<0.100	0.229	0.549
MW-67		12/03/03	0.0284	0.0101	<0.0100	0.0106	0.0337	<0.0100	<0.0100	--	--	--	--	--	--	0.133	--	--
MW-67		06/03/04	0.0362	<0.0100	<0.0100	0.0132	0.0389	<0.0100	<0.0100	1.25	<0.100	0.152	<0.100	0.839	<0.100	<0.100	<0.100	0.763
MW-67		12/06/04	0.0273	<0.0100	<0.0100	<0.0100	0.0258	<0.0100	<0.0100	0.930	<0.100	<0.100	<0.100	0.342	<0.100	<0.100	<0.100	0.519
MW-67		03/04/05	0.0293	0.01	0.01	0.01	0.0221	0.01	0.01	0.793	<0.100	0.148	<0.100	0.518	<0.100	<0.100	<0.100	0.511
MW-67		06/03/05	0.0323	<0.0100	<0.0100	<0.0100	0.0262	<0.0100	<0.0100	0.714	<0.100	<0.100	<0.100	0.816	<0.100	<0.100	<0.100	0.843
MW-70R		02/16/16	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-70R	Duplicate	02/16/16	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-70R		06/14/16	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	<0.030	--	--
MW-70R		09/22/16	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	--	--	--	--	--	--	<0.033	--	--
MW-70R		01/12/17	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	--	--	--	--	--	--	--	--	--
MW-70R	Duplicate	01/12/17	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	--	--	--	--	--	--	--	--	--
MW-70R		03/27/17	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-70R		06/13/17	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-70R		11/08/17	0.018	0.015	0.026	0.018	0.019	0.019	0.015	--	--	--	--	--	--	--	--	--
MW-70R		03/26/18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--	--	--	--	--	--	--	--	--
MW-70R	Duplicate	03/26/18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--	--	--	--	--	--	--	--	--
MW-70R		06/20/18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-70R	Duplicate	06/20/18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-70R		09/27/18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-70R	Duplicate	09/27/18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-70R		12/13/18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-70R		03/25/19	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-70R	Duplicate	03/25/19	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-70R		06/25/19	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-70R		09/26/19	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	<0.03	--	--
MW-70R	Duplicate	09/26/19	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	<0.03	--	--

Appendix E
Historical Summary of Groundwater Analytical Data
Carcinogenic Polycyclic Aromatic Hydrocarbons
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Monitoring Well[1]	Notes	Sample Date	Carcinogenic PAHs[2,3] (µg/L)							Noncarcinogenic PAHs[2] (µg/L)								
			Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Indeno(1,2,3-cd)pyrene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(g,h,i)perylene	Fluoranthene	Fluorene	Naphthalene[4]	Phenanthrene	Pyrene
Offsite Area RALs			0.03	0.03	0.03	0.03	0.03	0.03	0.03	NE	NE	NE	NE	NE	NE	NE	NE	NE
MW-70R		12/18/19	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-70R	Duplicate	12/18/19	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-70R		03/24/20	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-70R	Duplicate	03/24/20	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-70R		06/16/20	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-70R	Duplicate	06/16/20	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-70R		09/11/20	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-70R	Duplicate	09/11/20	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-70R		11/18/20	<0.01	<0.01	<0.010	<0.010	<0.010	<0.02 *	<0.01	--	--	--	--	--	--	--	--	--
MW-70R	Duplicate	11/18/20	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02 *	<0.01	--	--	--	--	--	--	--	--	--
MW-70R		03/16/21	<0.011	<0.011	<0.011	<0.011	<0.011	<0.021	<0.021	--	--	--	--	--	--	--	--	--
MW-70R	Duplicate	03/16/21	<0.010	<0.010	<0.010	<0.010	<0.010	<0.020	<0.020	--	--	--	--	--	--	--	--	--
MW-70R		06/07/21	<0.011	<0.011	<0.011	<0.011	<0.011	<0.022	<0.022	--	--	--	--	--	--	--	--	--
MW-70R	Duplicate	06/07/21	<0.011	<0.011	<0.011	<0.011	<0.011	<0.023	<0.023	--	--	--	--	--	--	--	--	--
MW-70R		09/21/21	<0.011	<0.011	<0.011	<0.011	<0.011	<0.023	<0.023	--	--	--	--	--	--	--	--	--
MW-70R	Duplicate	09/21/21	<0.010	<0.010	<0.010	<0.010	<0.010	<0.021	<0.021	--	--	--	--	--	--	--	--	--
MW-70R		12/01/21	<0.0203	<0.0184	<0.0168	<0.0202	<0.0179	<0.0160	<0.0158	--	--	--	--	--	--	--	--	--
MW-70R	Duplicate	12/01/21	<0.0203	<0.0184	<0.0168	<0.0202	<0.0179	<0.0160	<0.0158	--	--	--	--	--	--	--	--	--
MW-70R		03/31/22	<0.010	<0.010	<0.010	<0.010	<0.010	<0.020	<0.020	--	--	--	--	--	--	--	--	--
MW-70R	Duplicate	03/30/22	<0.010	<0.010	<0.010	<0.010	<0.010	<0.020	<0.020	--	--	--	--	--	--	--	--	--
MW-70R		06/01/22	<0.010	<0.010	<0.010	<0.010	<0.010	<0.021	<0.021	--	--	--	--	--	--	--	--	--
MW-70R	Duplicate	06/01/22	<0.011	<0.011	<0.011	<0.011	<0.011	<0.021	<0.021	--	--	--	--	--	--	--	--	--
MW-70R		08/11/22	<0.011	<0.011	<0.011	<0.011	<0.011	<0.022	<0.022	--	--	--	--	--	--	--	--	--
MW-70R	Duplicate	08/11/22	<0.010	<0.010	<0.010	<0.010	<0.010	<0.021	<0.021	--	--	--	--	--	--	--	--	--
MW-70R		10/25/22	<0.011	<0.011	<0.011	<0.011	<0.011	<0.021	<0.021	--	--	--	--	--	--	--	--	--
MW-70R	Duplicate	10/25/22	<0.010	<0.010	<0.010	<0.010	<0.010	<0.021	<0.021	--	--	--	--	--	--	--	--	--
MW-70R		03/21/23	<0.011	<0.011	<0.011	<0.011	<0.011	<0.021	<0.021	--	--	--	--	--	--	--	--	--
MW-70R	Duplicate	03/21/23	<0.011	<0.011	<0.011	<0.011	<0.011	<0.022	<0.022	--	--	--	--	--	--	--	--	--
MW-70R		06/21/23	<0.011	<0.011	<0.011	<0.011	<0.011	<0.023	<0.023	--	--	--	--	--	--	--	--	--
MW-70R		08/29/23	<0.011	<0.011	<0.011	<0.011	<0.011	<0.022	<0.022	--	--	--	--	--	--	--	--	--
MW-70R	Duplicate	08/29/23	<0.012	<0.012	<0.012	<0.012	<0.012	<0.023	<0.023	--	--	--	--	--	--	--	--	--
MW-70R		10/26/23	<0.012	<0.012	<0.012	<0.012	<0.012	<0.023	<0.023	--	--	--	--	--	--	--	--	--
MW-70R	Duplicate	10/26/23	<0.011	<0.011	<0.011	<0.011	<0.011	<0.022	<0.022	--	--	--	--	--	--	--	--	--
MW-70R		03/12/24	<0.012	<0.012	<0.012	<0.012	<0.012	<0.023	<0.023	--	--	--	--	--	--	--	--	--
MW-70R	Duplicate	03/12/24	<0.011	<0.011	<0.011	<0.011	<0.011	<0.022	<0.022	--	--	--	--	--	--	--	--	--
MW-70R		**06/10/24**	**<0.010**	**<0.010**	**<0.010**	**<0.010**	**<0.010**	**<0.021**	**<0.021**	--	--	--	--	--	--	--	--	--
MW-76		12/13/02	0.0247	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100

Appendix E
Historical Summary of Groundwater Analytical Data
Carcinogenic Polycyclic Aromatic Hydrocarbons
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Monitoring Well[1]	Notes	Sample Date	Carcinogenic PAHs[2,3] (µg/L)							Noncarcinogenic PAHs[2] (µg/L)								
			Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Indeno(1,2,3-cd)pyrene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(g,h,i)perylene	Fluoranthene	Fluorene	Naphthalene[4]	Phenanthrene	Pyrene
Offsite Area RALs			0.03	0.03	0.03	0.03	0.03	0.03	0.03	NE	NE	NE	NE	NE	NE	NE	NE	NE
MW-76		06/19/03	0.0824	0.0262	<0.0100	<0.0100	0.0258	0.0718	0.0589	0.484	<0.100	<0.100	<0.100	0.628	<0.100	<0.100	<0.100	0.342
MW-76		12/03/03	0.0194	<0.0100	0.0107	<0.0100	0.0172	<0.0100	<0.0100	--	--	--	--	--	--	<0.100	--	--
MW-76		06/03/04	<0.0100	<0.0100	0.0104	<0.0100	0.0253	<0.0100	<0.0100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
MW-76		12/06/04	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
MW-76		06/03/05	0.0725	0.0528	0.0448	0.0452	0.0797	0.0142	0.0267	<0.100	<0.100	<0.100	<0.100	0.482	<0.100	<0.100	<0.100	0.369
MW-200		06/07/07	<1	<1	<1	<1	<1	<1	<1	22	<1	<1	<1	<1	6	31	1	<1
MW-200		07/06/07	0.01	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	20	<0.30	0.51	<0.0095	0.7	5	24	0.93	0.46
MW-200		09/26/07	0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	--	--	--	--	--	--	24 [5]	--	--
MW-200	Duplicate	9/26/07[D]	0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	--	--	--	--	--	--	22 [5]	--	--
MW-200		11/28/07	0.012	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	31	--	--
MW-200		02/13/08	0.0126	<0.00990	<0.00990	<0.00990	0.0137	<0.00990	<0.00990	--	--	--	--	--	--	--	--	--
MW-200		05/13/08	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	--	--	--	--	--	--	--	--	--
MW-200	Filtered	05/13/08	<0.0101	<0.0101	<0.0101	<0.0101	<0.0101	<0.0101	<0.0101	--	--	--	--	--	--	--	--	--
MW-200		09/03/08	<0.00943	<0.00943	<0.00943	<0.00943	<0.00943	<0.00943	<0.00943	--	--	--	--	--	--	--	--	--
MW-200	Filtered	09/03/08	<0.0476	<0.0476	<0.0476	<0.0476	<0.0476	<0.0476	<0.0476	--	--	--	--	--	--	--	--	--
MW-200		12/04/08	<0.00943	<0.00943	<0.00943	<0.00943	<0.00943	<0.00943	<0.00943	--	--	--	--	--	--	--	--	--
MW-200	Filtered	12/04/08	<0.00962	<0.00962	<0.00962	<0.00962	<0.00962	<0.00962	<0.00962	--	--	--	--	--	--	--	--	--
MW-200		02/18/09	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	--	--	--	--	--	--	--	--	--
MW-200	Filtered	02/18/09	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	--	--	--	--	--	--	--	--	--
MW-200		05/13/09	<0.0111	<0.0111	<0.0111	<0.0111	<0.0111	<0.0111	<0.0111	--	--	--	--	--	--	--	--	--
MW-200	Filtered	05/13/09	<0.0111	<0.0111	<0.0111	<0.0111	<0.0111	<0.0111	<0.0111	--	--	--	--	--	--	--	--	--
MW-200		09/11/09	<0.0111	<0.0220	<0.0111	<0.0111	<0.0111	<0.0111	<0.0111	--	--	--	--	--	--	--	--	--
MW-200		09/11/09	<0.0111	<0.0111	<0.0111	<0.0111	<0.0111	<0.0111	<0.0111	--	--	--	--	--	--	--	--	--
MW-200		04/14/10	<0.0099	<0.020	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	--	--	--	--	--	--	--	--	--
MW-200	Filtered	04/14/10	<0.0099	<0.020	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	--	--	--	--	--	--	--	--	--
MW-200		09/22/10	0.013	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-200	Filtered	09/22/10	<0.0099	<0.020	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	--	--	--	--	--	--	--	--	--
MW-200		04/26/11	<0.094	<0.19	<0.094	<0.094	<0.094	<0.094	<0.094	17	0.26	0.77	<0.094	1.3	5.5	13	4.7	0.88
MW-200		04/26/11	<0.094	<0.19	<0.094	<0.094	<0.094	<0.094	<0.094	13	0.22	0.24	<0.094	<0.094	3.1	11	1.5	<0.094
MW-200	Original	9/22/11 [9]	<0.0094	<0.019	<0.0094	<0.0094	<0.0094	<0.0094	<0.0094	2.5	0.26	0.16	<0.0094	0.043	2.5	0.70	1.1	0.039
MW-200	Original Duplicate	9/22/11[D]	0.010	<0.020	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	19	0.19	1.1	<0.0099	1.4	6.6	8.50	4.7	1.0
MW-200	Re-Analysis	9/22/11[7]	<0.0094	<0.019	<0.0094	<0.0094	<0.0094	<0.0094	<0.0094	2.6	0.25	0.16	<0.0094	0.045	2.6	0.80	1.3	0.042
MW-200	Filtered	9/22/11[9]	<0.0094	<0.019	<0.0094	<0.0094	<0.0094	<0.0094	<0.0094	12	0.12	0.57	<0.0094	0.69	2.8	6.60	2.5	0.52
MW-200	Duplicate Filtered	9/22/11[D]	<0.0098	<0.020	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	14	0.15	0.57	<0.0098	0.74	3.6	7.00	3.0	0.56
MW-200	Re-Analysis Filtered	9/22/11[7]	<0.0094	<0.019	<0.0094	<0.0094	<0.0094	<0.0094	<0.0094	15	0.16	0.61	<0.0094	0.76	4.0	6.80	3.5	0.57
MW-200		04/18/12	<0.019	<0.0096	<0.019	<0.019	<0.019	<0.019	<0.019	24 [DL]	0.28	0.94	<0.019	1.4	7.8	18 [DL]	5.4	1.0
MW-200	Filtered	04/18/12	<0.019	<0.0096	<0.019	<0.019	<0.019	<0.019	<0.019	5.5	0.054	0.046	<0.019	<0.019	0.085	10 [DL]	0.036	<0.019

Appendix E
Historical Summary of Groundwater Analytical Data
Carcinogenic Polycyclic Aromatic Hydrocarbons
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Monitoring Well[1]	Notes	Sample Date	Carcinogenic PAHs[2,3] (µg/L)							Noncarcinogenic PAHs[2] (µg/L)								
			Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Indeno(1,2,3-cd)pyrene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(g,h,i)perylene	Fluoranthene	Fluorene	Naphthalene[4]	Phenanthrene	Pyrene
Offsite Area RALs			0.03	0.03	0.03	0.03	0.03	0.03	0.03	NE	NE	NE	NE	NE	NE	NE	NE	NE
MW-200		10/11/12	0.01	<0.019	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	23	0.23	0.92	<0.0095	1.00	4.4	8.6	4.4	0.73
MW-200	Filtered	10/11/12	<0.0095	<0.019	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	14	0.093	0.07	<0.0095	<0.0095	0.73	5.5	0.0099	<0.0095
MW-200		04/25/13	0.011	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-200		09/19/13	0.011	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-200		06/24/14	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-200		12/16/14	0.011	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-200		06/18/15	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-200		12/08/15	0.017	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-200		06/14/15	0.011	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	8.36	--	--
MW-200		01/13/17	0.012	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-200		06/13/17	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-200		11/08/17	0.064	0.037	0.11	0.096	0.072	0.081	0.088	--	--	--	--	--	--	--	--	--
MW-200		06/20/18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-200		12/13/18	0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-200		06/25/19	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-200		12/18/19	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-200		06/16/20	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-200		11/19/20	0.011 J	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-200		06/07/21	<0.010	<0.010	<0.010	<0.010	<0.010	<0.021	<0.021	--	--	--	--	--	--	--	--	--
MW-200		12/01/21	<0.0203	<0.0184	<0.0168	<0.0202	<0.0179	<0.0160	<0.0158	--	--	--	--	--	--	--	--	--
MW-200		06/01/22	<0.010	<0.010	<0.010	<0.010	<0.010	<0.020	<0.020	--	--	--	--	--	--	--	--	--
MW-200		10/25/22	<0.011	<0.011	<0.011	<0.011	<0.011	<0.021	<0.021	--	--	--	--	--	--	--	--	--
MW-200		06/21/23	<0.011	<0.011	<0.011	<0.011	<0.011	<0.022	<0.022	--	--	--	--	--	--	--	--	--
MW-200		10/25/23	0.028 J	0.013 J	0.023 J	0.020 J	0.018 J	<0.022	0.024 J	--	--	--	--	--	--	--	--	--
MW-200		**06/11/24**	**<0.011 cn**	**<0.011 cn**	**<0.011 cn**	**<0.011 cn**	**<0.011 cn**	**<0.021 cn**	**<0.021 cn**	**--**	--	--	--	--	--	--	--	--
MW-201		06/07/07	<1	<1	<1	<1	<1	<1	<1	6	<1	<1	<1	<1	2	1	<1	<1
MW-201		07/06/07	0.027	0.014	0.017	<0.0096	0.02	<0.0096	<0.0096	6.7	<0.10	0.52	<0.0096	0.83	2	2.6	0.3	0.72
MW-201		09/27/07	0.018	<0.011	<0.011	<0.011	0.027	<0.011	<0.011	--	--	--	--	--	--	2.3 [5]	--	--
MW-201		11/27/07	0.016	<0.0095	<0.0095	<0.0095	0.023	<0.0095	<0.0095	--	--	--	--	--	--	0.99	--	--
MW-201		02/12/08	0.0179	0.0584	<0.0490	<0.0490	0.0210	<0.00980	<0.00980	--	--	--	--	--	--	--	--	--
MW-201		05/14/08	0.051	<0.0472	<0.0472	<0.0472	0.0756	<0.0472	<0.0472	--	--	--	--	--	--	--	--	--
MW-201	Filtered	05/14/08	<0.00952	<0.00952	<0.00952	<0.00952	<0.00952	<0.00952	<0.00952	--	--	--	--	--	--	--	--	--
MW-201		09/05/08	0.0243	<0.00962	<0.00962	<0.00962	0.0175	<0.00962	<0.00962	--	--	--	--	--	--	--	--	--
MW-201	Filtered	09/05/08	<0.00962	<0.00962	<0.00962	<0.00962	<0.00962	<0.00962	<0.00962	--	--	--	--	--	--	--	--	--
MW-201		12/05/08	0.0247	<0.00980	<0.00980	<0.00980	0.0268	<0.00980	<0.00980	--	--	--	--	--	--	--	--	--
MW-201	Filtered	12/05/08	<0.00971	<0.00971	<0.00971	<0.00971	<0.00971	<0.00971	<0.00971	--	--	--	--	--	--	--	--	--
MW-201		02/17/09	<0.00990	<0.00990	<0.00990	<0.00990	<0.00990	<0.00990	<0.00990	--	--	--	--	--	--	--	--	--

Appendix E
Historical Summary of Groundwater Analytical Data
Carcinogenic Polycyclic Aromatic Hydrocarbons
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Monitoring Well[1]	Notes	Sample Date	Carcinogenic PAHs[2,3] (µg/L)							Noncarcinogenic PAHs[2] (µg/L)								
			Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Indeno(1,2,3-cd)pyrene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(g,h,i)perylene	Fluoranthene	Fluorene	Naphthalene[4]	Phenanthrene	Pyrene
Offsite Area RALs			0.03	0.03	0.03	0.03	0.03	0.03	0.03	NE	NE	NE	NE	NE	NE	NE	NE	NE
MW-201	Filtered	02/17/09	<0.0105	<0.0105	<0.0105	<0.0105	<0.0105	<0.0105	<0.0105	--	--	--	--	--	--	--	--	--
MW-201		05/13/09	0.0129	<0.0100	<0.0100	<0.0100	0.0191	<0.0100	<0.0100	--	--	--	--	--	--	--	--	--
MW-201	Filtered	05/13/09	<0.0111	<0.0111	<0.0111	<0.0111	<0.0111	<0.0111	<0.0111	--	--	--	--	--	--	--	--	--
MW-201		09/11/09	0.021	<0.0200	<0.0100	<0.0100	0.025	<0.0100	<0.0100	--	--	--	--	--	--	--	--	--
MW-201	Filtered	09/11/09	<0.0100	<0.0220	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	--	--	--	--	--	--	--	--	--
MW-201		04/14/10	0.014	<0.020	<0.0099	<0.0099	0.019	<0.0099	<0.0099	--	--	--	--	--	--	--	--	--
MW-201	Filtered	04/14/10	<0.0099	<0.020	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	--	--	--	--	--	--	--	--	--
MW-201		09/22/10	0.026	<0.020	<0.0099	<0.0099	0.030	<0.0099	<0.0099	--	--	--	--	--	--	--	--	--
MW-201	Filtered	09/22/10	<0.0098	<0.020	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	--	--	--	--	--	--	--	--	--
MW-201		04/26/11	<0.094	<0.19	<0.094	<0.094	<0.094	<0.094	<0.094	7.3	0.10	0.41	<0.094	1.2	1.2	0.25	0.50	0.97
MW-201	Filtered	04/26/11	<0.094	<0.19	<0.094	<0.094	<0.094	<0.094	<0.094	5.5	0.12	<0.094	<0.094	<0.094	0.59	0.22	<0.094	<0.094
MW-201	Original	9/22/11 [8,9]	<0.094	<0.19	<0.094	<0.094	<0.094	<0.094	<0.094	8.3	0.10	0.80	<0.094	1.5	1.8	0.40	0.94	1.3
MW-201	Original Filtered	9/22/11 [9]	0.014	<0.019	<0.0094	<0.0094	0.014	<0.0094	<0.0094	6.3	0.077	0.37	<0.0094	0.63	1.1	0.33	0.55	0.52
MW-201	Re-Analysis Filtered	9/22/11[7]	0.017	<0.019	<0.0094	<0.0094	0.017	<0.0094	<0.0094	7.9	0.072	0.47	<0.0094	0.82	1.3	0.48	0.74	0.66
MW-201		04/18/12	0.025	<0.0096	<0.019	<0.019	0.021	<0.019	<0.019	8.2	0.11	0.44	<0.019	1.1	1.3	0.2	0.51	0.85
MW-201	Filtered	04/18/12	<0.019	<0.0096	<0.019	<0.019	<0.019	<0.019	<0.019	1.4	0.022	0.054	<0.019	<0.019	<0.019	0.098	<0.019	<0.019
MW-201		10/11/12	0.029	<0.019	<0.0095	<0.0095	0.027	<0.0095	<0.0095	9.7	0.11	0.6	<0.0095	1.1	0.92	0.27	0.53	1.0
MW-201	Filtered	10/11/12	<0.019	<0.038	<0.019	<0.019	<0.019	<0.019	<0.019	3.9	0.043	0.12	<0.019	<0.019	0.12	0.19	<0.019	<.019
MW-201		04/25/13	0.022	<0.010	<0.010	<0.010	0.026	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-201		09/19/13	0.02	<0.010	<0.010	<0.010	0.027	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-201		06/23/14	0.032	<0.010	<0.010	<0.010	0.034	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-201		12/16/14	0.016	<0.010	<0.010	<0.010	0.021	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-201		06/18/15	0.034	0.025	0.029	<0.010	0.029	<0.010	0.023	--	--	--	--	--	--	--	--	--
MW-201		12/08/15	0.029	0.011	0.013	<0.010	0.030	<0.010	0.011	--	--	--	--	--	--	--	--	--
MW-201	Duplicate	12/08/15	0.022	<0.010	<0.010	<0.010	0.022	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-201		06/14/16	0.030	<0.010	0.014	<0.010	0.032	<0.010	<0.010	--	--	--	--	--	--	0.863	--	--
MW-201		01/13/17	0.017	<0.010	<0.010	<0.010	0.017	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-201		06/13/17	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-201		11/08/17	0.018	<0.010	<0.010	<0.010	0.019	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-201		06/20/18	0.010	<0.01	<0.01	<0.01	0.010	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-201		12/13/18	0.020	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-201		06/25/19	0.01 J	<0.01	<0.01	<0.01	0.02 J	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-201		12/18/19	<0.01	0.02 J	0.02 J	<0.01	<0.01	<0.02	0.03 J	--	--	--	--	--	--	--	--	--
MW-201		06/16/20	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-201		11/18/20	<0.01	<0.01	<0.01	<0.01	0.012 J	<0.02 *	<0.01	--	--	--	--	--	--	--	--	--
MW-201		06/08/21	<0.010	<0.010	<0.010	<0.010	<0.010	<0.021	<0.021	--	--	--	--	--	--	--	--	--
MW-201		12/02/21	0.0216 J	0.0203 J	0.0243 J	<0.0202	<0.0179	<0.0160	0.0320 J	--	--	--	--	--	--	--	--	--

Appendix E
Historical Summary of Groundwater Analytical Data
Carcinogenic Polycyclic Aromatic Hydrocarbons
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Monitoring Well[1]	Notes	Sample Date	Carcinogenic PAHs[2,3] (µg/L)							Noncarcinogenic PAHs[2] (µg/L)								
			Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Indeno(1,2,3-cd)pyrene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(g,h,i)perylene	Fluoranthene	Fluorene	Naphthalene[4]	Phenanthrene	Pyrene
Offsite Area RALs			0.03	0.03	0.03	0.03	0.03	0.03	0.03	NE	NE	NE	NE	NE	NE	NE	NE	NE
MW-201		06/01/22	<0.011	<0.011	<0.011	<0.011	<0.011	<0.022	<0.022	--	--	--	--	--	--	--	--	--
MW-201		10/26/22	<0.010	<0.010	<0.010	<0.010	<0.010	<0.021	<0.021	--	--	--	--	--	--	--	--	--
MW-201		06/21/23	<0.010	<0.010	<0.010	<0.010	<0.010	<0.020	<0.020	--	--	--	--	--	--	--	--	--
MW-201		10/25/23	0.018 J	<0.011	<0.011	<0.011	<0.011	<0.022	<0.022	--	--	--	--	--	--	--	--	--
MW-201		**06/11/24**	**<0.011**	**<0.011**	**<0.011**	**<0.011**	**<0.011**	**<0.022**	**<0.022**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
MW-202		06/07/07	<1	<1	<1	<1	<1	<1	<1	2	<1	<1	<1	1	<1	<1	2	1
MW-202		07/06/07	0.05	0.014	0.016	<0.0097	0.049	<0.0097	<0.0097	0.27	<0.025	0.22	<0.0097	0.66	0.073	0.27	0.15	0.53
MW-202		09/27/07	0.042	<0.010	<0.010	<0.010	0.040	<0.010	<0.010	--	--	--	--	--	--	0.18 [5]	--	--
MW-202		11/26/07	0.043	<0.010	<0.010	<0.010	0.036	<0.010	<0.010	--	--	--	--	--	--	<0.010	--	--
MW-202	Filtered	11/26/07	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	--	--	--	--	--	--	0.057	--	--
MW-202		02/12/08	0.0457	<0.00990	<0.00990	0.0184	0.0444	<0.00990	<0.00990	--	--	--	--	--	--	--	--	--
MW-202	Filtered	02/12/08	<0.00980	<0.00980	<0.00980	<0.00980	<0.00980	<0.00980	<0.00980	--	--	--	--	--	--	--	--	--
MW-202		05/13/08	0.0406	<0.00943	0.0116	0.0149	0.0432	<0.00943	<0.00943	--	--	--	--	--	--	--	--	--
MW-202	Filtered	05/13/08	<0.0101	<0.0101	<0.0101	<0.0101	<0.0101	<0.0101	<0.0101	--	--	--	--	--	--	--	--	--
MW-202		09/04/08	0.0502	<0.00962	<0.00962	<0.00962	0.0482	<0.00962	<0.00962	--	--	--	--	--	--	--	--	--
MW-202	Filtered	09/04/08	<0.00971	<0.00971	<0.00971	<0.00971	<0.00971	<0.00971	<0.00971	--	--	--	--	--	--	--	--	--
MW-202		12/04/08	0.0286	<0.0100	<0.0100	<0.0100	0.0308	<0.0100	<0.0100	--	--	--	--	--	--	--	--	--
MW-202	Filtered	12/04/08	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	--	--	--	--	--	--	--	--	--
MW-202		02/18/09	0.0181	<0.00980	<0.00980	<0.00980	0.0222	<0.00980	<0.00980	--	--	--	--	--	--	--	--	--
MW-202	Filtered	02/18/09	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	--	--	--	--	--	--	--	--	--
MW-202		05/13/09	0.0146	<0.00943	<0.00943	<0.00943	0.0160	<0.00943	<0.00943	--	--	--	--	--	--	--	--	--
MW-202	Filtered	05/13/09	<0.00952	<0.00952	<0.00952	<0.00952	<0.00952	<0.00952	<0.00952	--	--	--	--	--	--	--	--	--
MW-202		09/11/09	0.0490	<0.0200	0.0110	<0.0100	0.0470	<0.0100	<0.0100	--	--	--	--	--	--	--	--	--
MW-202	Filtered	09/11/09	<0.0100	<0.0200	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	--	--	--	--	--	--	--	--	--
MW-202		04/14/10	0.013	<0.020	<0.0099	<0.0099	0.013	<0.0099	<0.0099	--	--	--	--	--	--	--	--	--
MW-202	Filtered	04/14/10	<0.0099	<0.020	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	--	--	--	--	--	--	--	--	--
MW-202		09/22/10	0.041	<0.020	0.012	<0.010	0.043	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-202	Filtered	09/22/10	<0.0095	<0.019	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	--	--	--	--	--	--	--	--	--
MW-202		04/27/11	<0.094	<0.19	<0.094	<0.094	<0.094	<0.094	<0.094	4.8	<0.094	<0.094	<0.094	0.55	0.36	2.9	<0.094	0.42
MW-202	Filtered	04/27/11	<0.094	<0.19	<0.094	<0.094	<0.094	<0.094	<0.094	3.6	<0.094	<0.094	<0.094	<0.094	0.19	2.6	<0.094	<0.094
MW-202		9/21/11 [8,9]	0.015	<0.019	<0.0094	<0.0094	0.013	<0.0094	<0.0094	0.35	<0.0094	0.021	<0.0094	0.17	0.019	0.16	0.013	0.19
MW-202		9/21/11 [9]	<0.0094	<0.019	<0.0094	<0.0094	<0.0094	<0.0094	<0.0094	0.28	<0.0094	0.0094	<0.0094	0.059	0.016	0.13	<0.0094	0.065
MW-202	Re-Analysis Filtered	9/21/11 [7]	<0.0094	<0.019	<0.0094	<0.0094	<0.0094	<0.0094	<0.0094	0.35	<0.0094	0.031	<0.0094	0.13	0.026	0.12	0.016	0.14
MW-202		04/18/12	0.029	<0.0096	<0.019	<0.019	0.031	<0.019	<0.019	6.5	0.058	0.051	<0.019	0.54	0.24	1.8	0.11	0.43
MW-202	Filtered	04/18/12	<0.019	<0.0096	<0.019	<0.019	<0.019	<0.019	<0.019	0.40	<0.019	<0.019	<0.019	<0.019	<0.019	0.76	<0.019	<0.019
MW-202		10/11/12	0.027	<0.019	<0.0095	<0.0095	0.02	<0.0095	<0.0095	0.82	0.011	0.068	<0.0095	0.23	0.032	0.075	0.016	0.26
MW-202	Filtered	10/11/12	<0.019	<0.038	<0.019	<0.019	<0.019	<0.019	<0.019	0.07	<0.019	<0.019	<0.019	<0.019	<0.019	0.03	<0.019	<0.019

Appendix E
Historical Summary of Groundwater Analytical Data
Carcinogenic Polycyclic Aromatic Hydrocarbons
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Monitoring Well[1]	Notes	Sample Date	Carcinogenic PAHs[2,3] (µg/L)							Noncarcinogenic PAHs[2] (µg/L)								
			Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Indeno(1,2,3-cd)pyrene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(g,h,i)perylene	Fluoranthene	Fluorene	Naphthalene[4]	Phenanthrene	Pyrene
Offsite Area RALs			**0.03**	**0.03**	**0.03**	**0.03**	**0.03**	**0.03**	**0.03**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**
MW-202	Filtered	10/11/12	<0.019	<0.038	<0.019	<0.019	<0.019	<0.019	<0.019	0.07	<0.019	<0.019	<0.019	<0.019	<0.019	0.03	<0.019	<0.019
MW-202		04/25/13	0.019	<0.010	<0.010	<0.010	0.017	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-202		09/19/13	0.025	<0.010	<0.010	<0.010	0.026	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-202		12/16/14	0.018	<0.010	<0.010	<0.010	0.014	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-202		06/18/15	0.013	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-202		12/08/15	0.025	<0.011	<0.011	<0.011	0.023	<0.011	<0.011	--	--	--	--	--	--	--	--	--
MW-202		06/14/16	0.014	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	--	--	--	--	--	--	0.98	--	--
MW-202		01/13/17	0.023	<0.011	<0.011	<0.011	0.017	<0.011	<0.011	--	--	--	--	--	--	--	--	--
MW-202		06/13/17	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-202		11/08/17	<0.010	<0.010	<0.010	<0.010	<0.010	0.021	<0.010	--	--	--	--	--	--	--	--	--
MW-202		06/20/18	0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-202		12/13/18	0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-202	Duplicate	12/13/18	0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-202		06/25/19	0.03 J	<0.01	<0.01	<0.01	0.02 J	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-202		12/17/19	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-202		06/16/20	0.021 J	<0.01	<0.01	<0.01	0.015 J	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-202		11/18/20	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02 *	<0.01	--	--	--	--	--	--	--	--	--
MW-202		06/08/21	<0.011	<0.011	<0.011	<0.011	<0.011	<0.021	<0.021	--	--	--	--	--	--	--	--	--
MW-202		12/01/21	0.0266 J	<0.0184	<0.0168	<0.0202	<0.0179	<0.0160	<0.0158	--	--	--	--	--	--	--	--	--
MW-202		06/01/22	<0.011	<0.011	<0.011	<0.011	<0.011	<0.021	<0.021	--	--	--	--	--	--	--	--	--
MW-202		10/25/22	<0.010	<0.010	<0.010	<0.010	<0.010	<0.020	<0.020	--	--	--	--	--	--	--	--	--
MW-202		06/21/23	<0.010	<0.010	<0.010	<0.010	<0.010	<0.020	<0.020	--	--	--	--	--	--	--	--	--
MW-202		10/26/23	<0.011	<0.011	<0.011	<0.011	<0.011	<0.022	<0.022	--	--	--	--	--	--	--	--	--
MW-202		**06/11/24**	**0.011 J**	**<0.011**	**<0.011**	**<0.011**	**<0.011**	**<0.022**	**<0.022**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
MW-203		06/07/07	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
MW-203		07/06/07	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	0.62	<0.0096	0.12	<0.0096	0.16	0.047	0.052	0.013	0.11
MW-203		09/28/07	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	0.13	--	--
MW-203		11/27/07	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	<0.010	--	--
MW-203		02/12/08	0.0127	<0.00980	<0.00980	<0.00980	<0.00980	<0.00980	<0.00980	--	--	--	--	--	--	--	--	--
MW-203	Duplicate	02/12/08	<0.00971	<0.00971	<0.00971	<0.00971	<0.00971	<0.00971	<0.00971	--	--	--	--	--	--	--	--	--
MW-203		05/14/08	<0.00971	<0.00971	<0.00971	<0.00971	<0.00971	<0.00971	<0.00971	--	--	--	--	--	--	--	--	--
MW-203	Filtered	05/14/08	<0.00962	<0.00962	<0.00962	<0.00962	<0.00962	<0.00962	<0.00962	--	--	--	--	--	--	--	--	--
MW-203		09/03/08	<0.00952	<0.00952	<0.00952	<0.00952	<0.00952	<0.00952	<0.00952	--	--	--	--	--	--	--	--	--
MW-203	Filtered	09/03/08	<0.00962	<0.00962	<0.00962	<0.00962	<0.00962	<0.00962	<0.00962	--	--	--	--	--	--	--	--	--
MW-203		12/04/08	<0.00952	<0.00952	<0.00952	<0.00952	<0.00952	<0.00952	<0.00952	--	--	--	--	--	--	--	--	--
MW-203	Filtered	12/04/08	<0.00952	<0.00952	<0.00952	<0.00952	<0.00952	<0.00952	<0.00952	--	--	--	--	--	--	--	--	--
MW-203		02/17/09	<0.00990	<0.00990	<0.00990	<0.00990	<0.00990	<0.00990	<0.00990	--	--	--	--	--	--	--	--	--

Appendix E
Historical Summary of Groundwater Analytical Data
Carcinogenic Polycyclic Aromatic Hydrocarbons
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Monitoring Well[1]	Notes	Sample Date	Carcinogenic PAHs[2,3] (µg/L)							Noncarcinogenic PAHs[2] (µg/L)								
			Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Indeno(1,2,3-cd)pyrene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(g,h,i)perylene	Fluoranthene	Fluorene	Naphthalene[4]	Phenanthrene	Pyrene
Offsite Area RALs			0.03	0.03	0.03	0.03	0.03	0.03	0.03	NE	NE	NE	NE	NE	NE	NE	NE	NE
MW-203	Filtered	02/17/09	<0.00990	<0.00990	<0.00990	<0.00990	<0.00990	<0.00990	<0.00990	--	--	--	--	--	--	--	--	--
MW-203		05/13/09	<0.00943	<0.00943	<0.00943	<0.00943	<0.00943	<0.00943	<0.00943	--	--	--	--	--	--	--	--	--
MW-203	Filtered	05/13/09	<0.00990	<0.00990	<0.00990	<0.00990	<0.00990	<0.00990	<0.00990	--	--	--	--	--	--	--	--	--
MW-203		09/11/09	<0.0110	<0.0220	<0.0110	<0.0110	<0.0110	<0.0110	<0.0110	--	--	--	--	--	--	--	--	--
MW-203	Filtered	09/11/09	<0.0110	<0.0220	<0.0110	<0.0110	<0.0110	<0.0110	<0.0110	--	--	--	--	--	--	--	--	--
MW-203		04/14/10	<0.010	<0.020	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-203	Filtered	04/14/10	<0.0097	<0.019	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	--	--	--	--	--	--	--	--	--
MW-203		09/22/10	<0.010	<0.020	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-203	Filtered	09/22/10	<0.010	<0.020	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-203		04/27/11	<0.094	<0.19	<0.094	<0.094	<0.094	<0.094	<0.094	0.44	<0.094	<0.094	<0.094	<0.094	<0.094	<0.094	<0.094	<0.094
MW-203	Filtered	04/27/11	<0.094	<0.19	<0.094	<0.094	<0.094	<0.094	<0.094	0.45	<0.094	<0.094	<0.094	<0.094	<0.094	<0.094	<0.094	<0.094
MW-203		9/21/11[9]	<0.0098	<0.020	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	0.34	<0.0098	0.012	<0.0098	0.039	0.0098	0.011	<0.0098	0.079
MW-203	Re-Analysis	9/21/11[7]	<0.010	<0.020	<0.010	<0.010	<0.010	<0.010	<0.010	0.51	<0.010	0.022	<0.010	0.047	0.017	0.02	<0.010	0.10
MW-203	Filtered	9/21/11[9]	<0.010	<0.020	<0.010	<0.010	<0.010	<0.010	<0.010	0.34	<0.010	0.011	<0.010	0.023	0.011	0.016	<0.010	0.043
MW-203	Re-Analysis Filtered	9/21/11[7]	<0.0095	<0.019	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	0.31	<0.0095	0.017	<0.0095	0.020	0.013	0.0095	<0.0095	0.039
MW-203		04/18/12	<0.019	<0.0096	<0.019	<0.019	<0.019	<0.019	<0.019	0.42	<0.019	0.028	<0.019	0.042	<0.019	<0.019	<0.019	0.076
MW-203	Filtered	04/18/12	<0.019	<0.0096	<0.019	<0.019	<0.019	<0.019	<0.019	<0.019	<0.019	<0.019	<0.019	<0.019	<0.019	<0.019	<0.019	<0.019
MW-203		10/11/12	<0.0095	<0.020	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	0.23	<0.0098	0.035	<0.0098	0.041	0.011	0.013	0.01	0.10
MW-203	Filtered	10/11/12	<0.0095	<0.019	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	0.056	<0.0095	0.019	<0.0095	<0.0095	<0.0095	0.028	<0.0095	<0.0095
MW-203		04/25/13	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	--	--	--	--	--	--	--	--	--
MW-203		09/19/13	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-203		06/24/14	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-203	Duplicate	06/24/14	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-203		12/16/14	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-203		06/18/15	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-203		12/07/15	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-203		06/15/16	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	0.128	--	--
MW-203	Duplicate	06/15/16	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	0.099	--	--
MW-203		01/13/17	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	--	--	--	--	--	--	--	--	--
MW-203		06/13/17	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-203		11/08/17	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-203		06/20/18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-203		12/13/18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-203		06/25/19	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-203		12/17/19	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-203		06/16/20	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-203		11/19/20	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--

Appendix E
Historical Summary of Groundwater Analytical Data
Carcinogenic Polycyclic Aromatic Hydrocarbons
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Monitoring Well[1]	Notes	Sample Date	Carcinogenic PAHs[2,3] (µg/L)							Noncarcinogenic PAHs[2] (µg/L)								
			Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Indeno(1,2,3-cd)pyrene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(g,h,i)perylene	Fluoranthene	Fluorene	Naphthalene[4]	Phenanthrene	Pyrene
Offsite Area RALs			**0.03**	**0.03**	**0.03**	**0.03**	**0.03**	**0.03**	**0.03**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**
MW-203		06/08/21	<0.010	<0.010	<0.010	<0.010	<0.010	<0.020	<0.020	--	--	--	--	--	--	--	--	--
MW-203		12/01/21	<0.0203	<0.0184	<0.0168	<0.0202	<0.0179	<0.0160	<0.0158	--	--	--	--	--	--	--	--	--
MW-203		06/02/22	0.027 J	0.015 J	0.026 J	0.011 J	0.024 J	<0.021	<0.021	--	--	--	--	--	--	--	--	--
MW-203		10/26/22	<0.010	<0.010	<0.010	<0.010	<0.010	<0.021	<0.021	--	--	--	--	--	--	--	--	--
MW-203		06/21/23	<0.011	<0.011	<0.011	<0.011	<0.011	<0.022	<0.022	--	--	--	--	--	--	--	--	--
MW-203	Duplicate	06/21/23	<0.011	<0.011	<0.011	<0.011	<0.011	<0.022	<0.022	--	--	--	--	--	--	--	--	--
MW-203		10/26/23	<0.012	<0.012	<0.012	<0.012	<0.012	<0.023	<0.023	--	--	--	--	--	--	--	--	--
MW-203		**06/11/24**	**<0.010**	**<0.010**	**<0.010**	**<0.010**	**<0.010**	**<0.020**	**<0.020**	--	--	--	--	--	--	--	--	--
MW-204		06/07/07	<1	<1	<1	<1	<1	<1	<1	5	<1	<1	<1	<1	3	<1	<1	<1
MW-204		07/06/07	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	3.3	<0.30	0.19	<0.0095	0.06	2.7	0.45	1.1	0.061
MW-204	Duplicate	07/06/07	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	3.3	<0.30	0.18	<0.0096	0.058	2.7	0.44	1	0.064
MW-204		09/28/07	0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	0.84	--	--
MW-204		11/27/07	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	<0.010	--	--
MW-204		02/12/08	<0.00971	<0.00971	<0.00971	<0.00971	<0.00971	<0.00971	<0.00971	--	--	--	--	--	--	--	--	--
MW-204		05/14/08	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	--	--	--	--	--	--	--	--	--
MW-204	Filtered	05/14/08	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	--	--	--	--	--	--	--	--	--
MW-204		09/03/08	<0.00962	<0.00962	<0.00962	<0.00962	<0.00962	<0.00962	<0.00962	--	--	--	--	--	--	--	--	--
MW-204	Filtered	09/03/08	<0.00962	<0.00962	<0.00962	<0.00962	<0.00962	<0.00962	<0.00962	--	--	--	--	--	--	--	--	--
MW-204		12/04/08	<0.00980	<0.00980	<0.00980	<0.00980	<0.00980	<0.00980	<0.00980	--	--	--	--	--	--	--	--	--
MW-204	Filtered	12/04/08	<0.00990	<0.00990	<0.00990	<0.00990	<0.00990	<0.00990	<0.00990	--	--	--	--	--	--	--	--	--
MW-204		02/17/09	<0.0105	<0.0105	<0.0105	<0.0105	<0.0105	<0.0105	<0.0105	--	--	--	--	--	--	--	--	--
MW-204	Duplicate	02/17/09	<0.0105	<0.0105	<0.0105	<0.0105	<0.0105	<0.0105	<0.0105	--	--	--	--	--	--	--	--	--
MW-204	Filtered	02/17/09	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	--	--	--	--	--	--	--	--	--
MW-204	Duplicate	02/17/09	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	--	--	--	--	--	--	--	--	--
MW-204		05/13/09	<0.0100	<0.0100	<0.0100	<0.0100	0.0193	<0.0100	<0.0100	--	--	--	--	--	--	--	--	--
MW-204	Duplicate	05/13/09	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	--	--	--	--	--	--	--	--	--
MW-204	Filtered	05/13/09	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	--	--	--	--	--	--	--	--	--
MW-204	Duplicate	05/13/09	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	--	--	--	--	--	--	--	--	--
MW-204		09/11/09	<0.0100	<0.0200	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	--	--	--	--	--	--	--	--	--
MW-204	Duplicate	09/11/09	<0.0100	<0.0200	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	--	--	--	--	--	--	--	--	--
MW-204	Filtered	09/11/09	<0.0110	<0.0220	<0.0110	<0.0110	<0.0110	<0.0110	<0.0110	--	--	--	--	--	--	--	--	--
MW-204	Duplicate	09/11/09	<0.0096	<0.0190	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	--	--	--	--	--	--	--	--	--
MW-204		04/14/10	<0.0097	<0.019	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	--	--	--	--	--	--	--	--	--
MW-204	Duplicate	04/14/10	<0.0099	<0.020	<0.0099	<0.0099	0.0099	<0.0099	<0.0099	--	--	--	--	--	--	--	--	--
MW-204	Filtered	04/14/10	<0.010	<0.020	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-204	Duplicate	04/14/10	<0.0099	<0.020	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	--	--	--	--	--	--	--	--	--
MW-204		09/22/10	<0.010	<0.020	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--

Appendix E
Historical Summary of Groundwater Analytical Data
Carcinogenic Polycyclic Aromatic Hydrocarbons
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Monitoring Well[1]	Notes	Sample Date	Carcinogenic PAHs[2,3] (µg/L)							Noncarcinogenic PAHs[2] (µg/L)								
			Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Indeno(1,2,3-cd)pyrene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(g,h,i)perylene	Fluoranthene	Fluorene	Naphthalene[4]	Phenanthrene	Pyrene
Offsite Area RALs			0.03	0.03	0.03	0.03	0.03	0.03	0.03	NE	NE	NE	NE	NE	NE	NE	NE	NE
MW-204	Filtered	09/22/10	<0.010	<0.020	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-204		04/26/11	<0.094	<0.19	<0.094	<0.094	<0.094	<0.094	<0.094	2.6	0.33	0.13	<0.094	<0.094	2.7	1.2	1.1	<0.094
MW-204	Duplicate	04/26/11	<0.094	<0.19	<0.094	<0.094	<0.094	<0.094	<0.094	2.5	0.30	0.14	<0.094	<0.094	2.6	1.3	1.0	<0.094
MW-204	Filtered	04/26/11	<0.094	<0.19	<0.094	<0.094	<0.094	<0.094	<0.094	2.6	0.28	<0.094	<0.094	<0.094	2.0	1.1	0.43	<0.094
MW-204	Duplicate	04/26/11	<0.094	<0.19	<0.094	<0.094	<0.094	<0.094	<0.094	2.1	0.23	0.094	<0.094	<0.094	1.7	1.1	0.53	<0.094
MW-204	Original	09/22/11 [9]	<0.010	<0.020	<0.010	<0.010	<0.010	<0.010	<0.010	1.7	0.14	0.16	<0.010	0.039	1.6	0.63	1.0	0.034
MW-204	Duplicate	09/22/11	<0.010	<0.020	<0.010	<0.010	<0.010	<0.010	<0.010	2.3	0.15	0.13	<0.010	0.058	2.2	0.68	0.59	0.054
MW-204	Re-Analysis	09/22/11 [7]	<0.010	<0.020	<0.010	<0.010	<0.010	<0.010	<0.010	2.4	0.19	0.13	<0.010	0.041	2.1	0.61	0.83	0.042
MW-204	Filtered	09/22/11 [9]	<0.010	<0.020	<0.010	<0.010	<0.010	<0.010	<0.010	1.8	0.14	0.067	<0.010	0.018	1.4	0.52	0.72	0.014
MW-204	Duplicate Filtered	09/22/11	<0.010	<0.020	<0.010	<0.010	<0.010	<0.010	<0.010	2.1	0.17	0.079	<0.010	<0.010	1.6	0.65	0.75	<0.010
MW-204	Re-Analysis Filtered	09/22/11 [7]	<0.0098	<0.020	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	1.6	0.13	0.073	<0.0098	0.015	1.4	0.36	0.54	0.012
MW-204	NEAR	09/22/11 [9]	<0.010	<0.020	<0.010	<0.010	<0.010	<0.010	<0.010	21	0.21	0.98	<0.010	1.3	4.7	9.6	4.1	0.94
MW-204	NEAR Re-Analysis	09/22/11 [7]	<0.0096	<0.019	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	18	0.21	0.83	<0.0096	1.2	6.0	5.7	4.6	0.89
MW-204	NEAR Filtered	09/22/11	<0.010	<0.020	<0.010	<0.010	<0.010	<0.010	<0.010	1.7	0.14	0.076	<0.010	0.018	1.3	0.53	0.68	0.013
MW-204		04/18/12	<0.019	<0.0096	<0.019	<0.019	<0.019	<0.019	<0.019	3.3	0.37	0.21	<0.019	0.05	3.2	0.34	1.1	0.032
MW-204	Filtered	04/18/12	<0.019	<0.0096	<0.019	<0.019	<0.019	<0.019	<0.019	2.8	0.19	0.10	<0.019	1.2	<0.019	0.28	<0.019	<0.019
MW-204	Duplicate	04/18/12	<0.019	<0.0096	<0.019	<0.019	<0.019	<0.019	<0.019	3.8	0.41	0.19	<0.019	0.047	3.6	0.37	1.2	0.037
MW-204	Duplicate Filtered	04/18/12	<0.019	<0.0096	<0.019	<0.019	<0.019	<0.019	<0.019	0.82	0.032	0.071	<0.019	<0.019	0.019	0.16	<0.019	<0.019
MW-204	NEAR	04/18/12	<0.019	<0.0096	<0.019	<0.019	<0.019	<0.019	<0.019	3.3	0.36	0.19	<0.019	0.048	3.0	0.33	1.1	0.03
MW-204	NEAR Duplicate	04/18/12	<0.019	<0.0096	<0.019	<0.019	<0.019	<0.019	<0.019	3.2	0.35	0.18	<0.019	0.045	2.9	0.31	1.2	0.037
MW-204	NEAR Filtered	04/18/12	<0.019	<0.0096	<0.019	<0.019	<0.019	<0.019	<0.019	3.2	0.30	0.085	<0.019	<0.019	1.7	0.76	0.023	<0.019
MW-204	NEAR Duplicate Filtered	04/18/12	<0.019	<0.0096	<0.019	<0.019	<0.019	<0.019	<0.019	0.91	0.053	0.084	<0.019	<0.019	0.14	0.21	<0.019	<0.019
MW-204		10/12/12	<0.095	<0.19	<0.095	<0.095	<0.095	<0.095	<0.095	2.5	0.29	0.23	<0.095	<0.095	2.4	0.94	1.1	<0.095
MW-204	Filtered	10/12/12	<0.095	<0.19	<0.095	<0.095	<0.095	<0.095	<0.095	0.98	0.11	<0.095	<0.095	<0.095	0.34	0.57	<0.095	<0.095
MW-204	Duplicate	10/12/12	<0.095	<0.19	<0.095	<0.095	<0.095	<0.095	<0.095	2.5	0.29	0.21	<0.095	<0.095	2.2	0.89	1.0	<0.095
MW-204	Duplicate Filtered	10/12/12	<0.095	<0.19	<0.095	<0.095	<0.095	<0.095	<0.095	2.2	0.24	<0.095	<0.095	<0.095	1.7	1.0	0.17	<0.095
MW-204	NEAR	10/12/12	<0.095	<0.19	<0.095	<0.095	<0.095	<0.095	<0.095	2.0	0.23	0.21	<0.095	<0.095	1.9	0.76	1.0	<0.095
MW-204	NEAR Filtered	10/12/12	<0.095	<0.19	<0.095	<0.095	<0.095	<0.095	<0.095	0.98	0.1	0.097	<0.095	<0.095	0.33	0.63	<0.095	<0.095
MW-204		04/26/13	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-204	Duplicate	04/26/13	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-204		09/19/13	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-204		06/24/14	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-204		12/16/14	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-204	Duplicate	12/16/14	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-204		06/18/15	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	--	--	--	--	--	--	--	--	--
MW-204		12/09/15	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-204		01/15/16	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--

Appendix E
Historical Summary of Groundwater Analytical Data
Carcinogenic Polycyclic Aromatic Hydrocarbons
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Monitoring Well[1]	Notes	Sample Date	Carcinogenic PAHs[2,3] (µg/L)							Noncarcinogenic PAHs[2] (µg/L)								
			Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Indeno(1,2,3-cd)pyrene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(g,h,i)perylene	Fluoranthene	Fluorene	Naphthalene[4]	Phenanthrene	Pyrene
Offsite Area RALs			**0.03**	**0.03**	**0.03**	**0.03**	**0.03**	**0.03**	**0.03**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**
MW-204	Duplicate	01/15/16	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	--	--	--	--	--	--	--	--	--
MW-204		06/13/16	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	0.15	--	--
MW-204		01/13/17	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	--	--	--	--	--	--	--	--	--
MW-204		06/13/17	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-204		11/08/17	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	--	--	--	--	--	--	--	--	--
MW-204		06/20/18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-204		12/13/18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-204		06/24/19	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-204	Duplicate	06/24/19	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-204		12/17/19	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-204		06/16/20	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-204		11/19/20	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-204		06/08/21	<0.010	<0.010	<0.010	<0.010	<0.010	<0.021	<0.021	--	--	--	--	--	--	--	--	--
MW-204		12/02/21	<0.0203	<0.0184	<0.0168	<0.0202	<0.0179	<0.0160	<0.0158	--	--	--	--	--	--	--	--	--
MW-204		06/02/22	0.037 J	0.021 J	0.039 J	0.012 J	0.035 J	<0.020	0.026 J	--	--	--	--	--	--	--	--	--
MW-204		10/26/22	<0.010	<0.010	0.012 J	<0.010	<0.010	<0.021	<0.021	--	--	--	--	--	--	--	--	--
MW-204		06/21/23	<0.010	<0.010	<0.010	<0.010	<0.010	<0.021	<0.021	--	--	--	--	--	--	--	--	--
MW-204		10/26/23	<0.010	<0.010	<0.010	<0.010	<0.010	<0.021	<0.021	--	--	--	--	--	--	--	--	--
MW-204	Duplicate	10/26/23	<0.011	<0.011	<0.011	<0.011	<0.011	<0.021	<0.021	--	--	--	--	--	--	--	--	--
MW-204		**06/11/24**	**<0.010**	**<0.010**	**<0.010**	**<0.010**	**<0.010**	**<0.020**	**<0.020**	--	--	--	--	--	--	--	--	--
MW-205		06/07/07	<1	<1	<1	<1	<1	<1	<1	4	<1	<1	<1	<1	<1	<1	<1	<1
MW-205		07/06/07	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	3.4	0.022	<0.0096	<0.0096	<0.0096	<0.0096	0.041	<0.0096	0.01
MW-205		09/28/07	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	0.050	--	--
MW-205		11/27/07	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	0.022	--	--
MW-205		02/12/08	<0.0111	<0.0111	<0.0111	<0.0111	<0.0111	<0.0111	<0.0111	--	--	--	--	--	--	--	--	--
MW-205		05/14/08	<0.00962	<0.00962	<0.00962	<0.00962	<0.00962	<0.00962	<0.00962	--	--	--	--	--	--	--	--	--
MW-205	Filtered	05/14/08	<0.00952	<0.00952	<0.00952	<0.00952	<0.00952	<0.00952	<0.00952	--	--	--	--	--	--	--	--	--
MW-205		09/03/08	<0.00943	<0.00943	<0.00943	<0.00943	<0.00943	<0.00943	<0.00943	--	--	--	--	--	--	--	--	--
MW-205	Filtered	09/03/08	<0.00943	<0.00943	<0.00943	<0.00943	<0.00943	<0.00943	<0.00943	--	--	--	--	--	--	--	--	--
MW-205		12/05/08	<0.00943	<0.00943	<0.00943	<0.00943	<0.00943	<0.00943	<0.00943	--	--	--	--	--	--	--	--	--
MW-205	Filtered	12/05/08	<0.00943	<0.00943	<0.00943	<0.00943	<0.00943	<0.00943	<0.00943	--	--	--	--	--	--	--	--	--
MW-205		02/17/09	<0.00990	<0.00990	<0.00990	<0.00990	<0.00990	<0.00990	<0.00990	--	--	--	--	--	--	--	--	--
MW-205	Filtered	02/17/09	<0.00990	<0.00990	<0.00990	<0.00990	<0.00990	<0.00990	<0.00990	--	--	--	--	--	--	--	--	--
MW-205		05/13/09	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	--	--	--	--	--	--	--	--	--
MW-205	Filtered	05/13/09	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	--	--	--	--	--	--	--	--	--
MW-205		09/11/09	<0.0110	<0.0220	<0.0110	<0.0110	<0.0110	<0.0110	<0.0110	--	--	--	--	--	--	--	--	--
MW-205	Filtered	09/11/09	<0.0110	<0.0220	<0.0110	<0.0110	<0.0110	<0.0110	<0.0110	--	--	--	--	--	--	--	--	--

Appendix E
Historical Summary of Groundwater Analytical Data
Carcinogenic Polycyclic Aromatic Hydrocarbons
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Monitoring Well[1]	Notes	Sample Date	Carcinogenic PAHs[2,3] (µg/L)							Noncarcinogenic PAHs[2] (µg/L)								
			Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Indeno(1,2,3-cd)pyrene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(g,h,i)perylene	Fluoranthene	Fluorene	Naphthalene[4]	Phenanthrene	Pyrene
Offsite Area RALs			0.03	0.03	0.03	0.03	0.03	0.03	0.03	NE	NE	NE	NE	NE	NE	NE	NE	NE
MW-205		04/14/10	<0.013	<0.026	<0.013	<0.013	<0.013	<0.013	<0.013	--	--	--	--	--	--	--	--	--
MW-205	Filtered	04/14/10	<0.0095	<0.019	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	--	--	--	--	--	--	--	--	--
MW-205		09/22/10	<0.0094	<0.019	<0.0094	<0.0094	<0.0094	<0.0094	<0.0094	--	--	--	--	--	--	--	--	--
MW-205	Filtered	09/22/10	<0.0099	<0.020	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	--	--	--	--	--	--	--	--	--
MW-205		04/26/11	LNAPL															
MW-205	Filtered	04/26/11	LNAPL															
MW-205		09/22/11	<0.0099	<0.020	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	1.6	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	0.016	<0.0099	0.015
MW-205	Filtered	09/22/11	<0.010	<0.020	<0.010	<0.010	<0.010	<0.010	<0.010	1.1	<0.010	<0.010	<0.010	<0.010	<0.010	0.011	<0.010	<0.010
MW-205	NEAR	09/22/11	<0.010	<0.020	<0.010	<0.010	<0.010	<0.010	<0.010	1.5	<0.010	<0.010	<0.010	<0.010	<0.010	0.015	<0.010	0.011
MW-205	NEAR Filtered	09/22/11	<0.0098	<0.020	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	1.4	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	0.015	<0.0098	<0.0098
MW-205		04/18/12	<0.019	<0.0096	<0.019	<0.019	<0.019	<0.019	<0.019	1.6	<0.019	<0.019	<0.019	<0.019	<0.019	<0.019	<0.019	<0.019
MW-205	Filtered	04/18/12	<0.019	<0.0096	<0.019	<0.019	<0.019	<0.019	<0.019	0.16	<0.019	<0.019	<0.019	<0.019	<0.019	<0.019	<0.019	<0.019
MW-205	Duplicate	04/18/12	<0.019	<0.0096	<0.019	<0.019	<0.019	<0.019	<0.019	1.9	<0.019	<0.019	<0.019	<0.019	<0.019	<0.019	<0.019	<0.019
MW-205	Duplicate Filtered	04/18/12	<0.019	<0.0096	<0.019	<0.019	<0.019	<0.019	<0.019	0.32	<0.019	<0.019	<0.019	<0.019	<0.019	<0.019	<0.019	<0.019
MW-205	NEAR	04/18/12	<0.019	<0.0096	<0.019	<0.019	<0.019	<0.019	<0.019	1.6	<0.019	<0.019	<0.019	<0.019	<0.019	<0.019	<0.019	<0.019
MW-205	NEAR Filtered	04/18/12	<0.019	<0.0096	<0.019	<0.019	<0.019	<0.019	<0.019	0.8	<0.019	<0.019	<0.019	<0.019	<0.019	<0.019	<0.019	<0.019
MW-205		10/12/12	<0.0095	<0.019	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	1.6	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	0.015	0.0095	<0.0095
MW-205	Filtered	10/12/12	<0.0095	<0.019	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	0.22	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	0.013	0.0095	<0.0095
MW-205	Duplicate	10/12/12	<0.0095	<0.019	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	1.5	0.015	0.011	<0.0095	<0.0095	0.014	0.017	<0.0095	0.0099
MW-205	Duplicate Filtered	10/12/12	<0.0095	<0.019	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	0.12	<0.0095	<0.0095	<00.095	<0.0095	<0.0095	0.016	<0.0095	<0.0095
MW-205	NEAR	10/12/12	<0.0095	<0.019	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	1.6	0.017	0.012	<0.0095	<0.0095	0.017	0.016	0.018	0.012
MW-205	NEAR Filtered	10/12/12	<0.019	<0.038	<0.019	<0.019	<0.019	<0.019	<0.019	0.12	<0.019	<0.019	<0.019	<0.019	<0.019	<0.019	<0.019	<0.019
MW-205		04/26/13	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-205		09/19/13	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-205	Duplicate	09/19/13	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-205		06/24/14	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-205		12/16/14	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-205		06/18/15	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-205	Duplicate	06/18/15	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-205		12/09/15	<0.010	0.012	0.011	<0.010	<0.010	<0.010	0.022	--	--	--	--	--	--	--	--	--
MW-205		06/13/16	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	<0.031	--	--
MW-205		01/13/17	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	--	--	--	--	--	--	--	--	--
MW-205		06/13/17	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-205		11/08/17	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-205		06/20/18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-205		12/13/18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-205		06/24/19	<0.01	<0.01	<0.01	<0.01	0.02 J	<0.02	<0.01	--	--	--	--	--	--	--	--	--

Appendix E
Historical Summary of Groundwater Analytical Data
Carcinogenic Polycyclic Aromatic Hydrocarbons
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Monitoring Well[1]	Notes	Sample Date	Carcinogenic PAHs[2,3] (µg/L)							Noncarcinogenic PAHs[2] (µg/L)								
			Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Indeno(1,2,3-cd)pyrene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(g,h,i)perylene	Fluoranthene	Fluorene	Naphthalene[4]	Phenanthrene	Pyrene
Offsite Area RALs			**0.03**	**0.03**	**0.03**	**0.03**	**0.03**	**0.03**	**0.03**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**
MW-205		12/17/19	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-205		06/16/20	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-205		11/19/20	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-205		06/08/21	<0.011	<0.011	<0.011	<0.011	<0.011	<0.022	<0.022	--	--	--	--	--	--	--	--	--
MW-205		12/02/21	<0.0203	<0.0184	<0.0168	<0.0202	<0.0179	<0.0160	<0.0158	--	--	--	--	--	--	--	--	--
MW-205		06/02/22	<0.010	<0.010	<0.010	<0.010	0.010 J	<0.020	<0.020	--	--	--	--	--	--	--	--	--
MW-205		10/26/22	<0.010	<0.010	<0.010	<0.010	<0.010	<0.021	<0.021	--	--	--	--	--	--	--	--	--
MW-205		06/22/23	<0.010	<0.010	<0.010	<0.010	<0.010	<0.021	<0.021	--	--	--	--	--	--	--	--	--
MW-205	Duplicate	06/22/23	<0.010	<0.010	<0.010	<0.010	<0.010	<0.021	<0.021	--	--	--	--	--	--	--	--	--
MW-205		10/27/23	<0.011	<0.011	<0.011	<0.011	<0.011	<0.021	<0.021	--	--	--	--	--	--	--	--	--
MW-205		**06/11/24**	**<0.011**	**<0.011**	**<0.011**	**<0.011**	**<0.011**	**<0.022**	**<0.022**	--	--	--	--	--	--	--	--	--
MW-205 (DUP)		**06/11/24**	**<0.011**	**<0.011**	**<0.011**	**<0.011**	**<0.011**	**<0.022**	**<0.022**	--	--	--	--	--	--	--	--	--
MW-206		06/07/07	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
MW-206		07/06/07	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	1.9	<0.0096	0.069	<0.0096	0.087	0.14	0.19	0.51	0.036
MW-206		09/27/07	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	0.063 [5]	--	--
MW-206		11/27/07	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	0.031	--	--
MW-206		02/12/08	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	--	--	--	--	--	--	--	--	--
MW-206		05/13/08	<0.00990	<0.00990	<0.00990	<0.00990	<0.00990	<0.00990	<0.00990	--	--	--	--	--	--	--	--	--
MW-206	Filtered	05/13/08	<0.00943	<0.00943	<0.00943	<0.00943	<0.00943	<0.00943	<0.00943	--	--	--	--	--	--	--	--	--
MW-206		09/04/08	<0.00943	<0.00943	<0.00943	<0.00943	<0.00943	<0.00943	<0.00943	--	--	--	--	--	--	--	--	--
MW-206	Duplicate[6]	09/04/08	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	--	--	--	--	--	--	--	--	--
MW-206	Filtered	09/04/08	0.0132	<0.00952	<0.00952	0.0107	0.0134	0.0638	0.0125	--	--	--	--	--	--	--	--	--
MW-206	Duplicate	09/04/08	<0.00952	<0.00952	<0.00952	<0.00952	<0.00952	<0.00952	<0.00952	--	--	--	--	--	--	--	--	--
MW-206		10/01/08	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	<0.0102	--	--	--	--	--	--	--	--	--
MW-206	Filtered	10/01/08	<0.0101	<0.0101	<0.0101	<0.0101	<0.0101	<0.0101	<0.0101	--	--	--	--	--	--	--	--	--
MW-206		12/04/08	<0.00952	<0.00952	<0.00952	<0.00952	<0.00952	<0.00952	<0.00952	--	--	--	--	--	--	--	--	--
MW-206	Filtered	12/04/08	<0.00943	<0.00943	<0.00943	<0.00943	<0.00943	<0.00943	<0.00943	--	--	--	--	--	--	--	--	--
MW-206	Duplicate	12/04/08	<0.00962	<0.00962	<0.00962	<0.00962	<0.00962	<0.00962	<0.00962	--	--	--	--	--	--	--	--	--
MW-206	Filtered	12/04/08	<0.00980	<0.00980	<0.00980	<0.00980	<0.00980	<0.00980	<0.00980	--	--	--	--	--	--	--	--	--
MW-206		02/18/09	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	--	--	--	--	--	--	--	--	--
MW-206	Filtered	02/18/09	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	--	--	--	--	--	--	--	--	--
MW-206		05/12/09	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	--	--	--	--	--	--	--	--	--
MW-206	Filtered	05/12/09	<0.0125	<0.0125	<0.0125	<0.0125	<0.0125	<0.0125	<0.0125	--	--	--	--	--	--	--	--	--
MW-206		09/11/09	<0.0100	<0.0200	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	--	--	--	--	--	--	--	--	--
MW-206	Filtered	09/11/09	<0.0110	<0.0220	<0.0110	<0.0110	<0.0110	<0.0110	<0.0110	--	--	--	--	--	--	--	--	--
MW-206		04/14/10	<0.010	<0.020	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-206	Filtered	04/14/10	<0.0098	<0.020	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	--	--	--	--	--	--	--	--	--

Appendix E
Historical Summary of Groundwater Analytical Data
Carcinogenic Polycyclic Aromatic Hydrocarbons
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Monitoring Well[1]	Notes	Sample Date	Carcinogenic PAHs[2,3] (µg/L)							Noncarcinogenic PAHs[2] (µg/L)								
			Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Indeno(1,2,3-cd)pyrene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(g,h,i)perylene	Fluoranthene	Fluorene	Naphthalene[4]	Phenanthrene	Pyrene
Offsite Area RALs			**0.03**	**0.03**	**0.03**	**0.03**	**0.03**	**0.03**	**0.03**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**
MW-206		09/22/10	<0.0095	<0.019	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	--	--	--	--	--	--	--	--	--
MW-206	Filtered	09/22/10	<0.0099	<0.020	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	--	--	--	--	--	--	--	--	--
MW-206		04/27/11	<0.094	<0.19	<0.094	<0.094	<0.094	<0.094	<0.094	0.14	<0.094	<0.094	<0.094	0.21	<0.094	<0.094	<0.094	0.15
MW-206	Filtered	04/27/11	<0.094	<0.19	<0.094	<0.094	<0.094	<0.094	<0.094	0.12	<0.094	<0.094	<0.094	<0.094	<0.094	<0.094	<0.094	<0.094
MW-206		09/21/11	<0.010	<0.020	<0.010	<0.010	<0.010	<0.010	<0.010	0.014	<0.010	<0.010	<0.010	0.063	<0.010	0.049	<0.010	0.046
MW-206	Filtered	09/21/11	<0.010	<0.020	<0.010	<0.010	<0.010	<0.010	<0.010	0.047	<0.010	<0.010	<0.010	0.011	<0.010	0.054	<0.010	0.01
MW-206		04/18/12	<0.019	<0.0096	<0.019	<0.019	<0.019	<0.019	<0.019	0.18	<0.019	0.042	<0.019	0.31	<0.019	0.022	<0.019	0.19
MW-206	Filtered	04/18/12	<0.019	<0.0096	<0.019	<0.019	<0.019	<0.019	<0.019	<0.019	<0.019	<0.019	<0.019	<0.019	<0.019	<0.019	<0.019	<0.019
MW-206		10/11/12	0.011	<0.019	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	0.21	<0.0095	0.066	<0.0095	0.37	0.018	0.0098	0.014	0.29
MW-206	Filtered	10/11/12	<0.0095	<0.019	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	0.018	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	0.011	<0.0095	<0.0095
MW-206		04/25/13	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-206		09/19/13	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-206		06/23/14	<0.010	<0.010	0.014	<0.010	<0.010	<0.010	0.013	--	--	--	--	--	--	--	--	--
MW-206		12/16/14	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-206		06/17/15	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-206		12/08/15	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-206		06/14/16	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	<0.031	--	--
MW-206		01/13/17	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	--	--	--	--	--	--	--	--	--
MW-206		06/13/17	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-206		11/08/17	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-206		06/20/18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-206		12/13/18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-206		06/25/19	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-206		12/17/19	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-206		06/16/20	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-206		11/19/20	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-206		06/08/21	<0.011	<0.011	<0.011	<0.011	<0.011	<0.022	<0.022	--	--	--	--	--	--	--	--	--
MW-206		12/03/21	<0.0203	<0.0184	<0.0168	<0.0202	<0.0179	<0.0160	<0.0158	--	--	--	--	--	--	--	--	--
MW-206		06/01/22	<0.010	<0.010	<0.010	<0.010	<0.010	<0.020	<0.020	--	--	--	--	--	--	--	--	--
MW-206		10/25/22	<0.010	<0.010	<0.010	<0.010	<0.010	<0.020	<0.020	--	--	--	--	--	--	--	--	--
MW-206		06/21/23	<0.010	<0.010	<0.010	<0.010	<0.010	<0.020	<0.020	--	--	--	--	--	--	--	--	--
MW-206		10/26/23	<0.011	<0.011	<0.011	<0.011	<0.011	<0.022	<0.022	--	--	--	--	--	--	--	--	--
MW-206		**06/11/24**	**<0.011**	**<0.011**	**<0.011**	**<0.011**	**<0.011**	**<0.021**	**<0.021**	--	--	--	--	--	--	--	--	--
MW-207		06/07/07	<1	<1	<1	<1	<1	<1	<1	2	<1	<1	<1	<1	<1	<1	<1	<1
MW-207		07/06/07	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	0.31	<1	0.01	<0.0096	0.017	0.033	0.014	0.064	<0.0096
MW-207		09/27/07	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	<0.010	--	--
MW-207		11/27/07	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	<0.010	--	--

Appendix E
Historical Summary of Groundwater Analytical Data
Carcinogenic Polycyclic Aromatic Hydrocarbons
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Monitoring Well[1]	Notes	Sample Date	Carcinogenic PAHs[2,3] (µg/L)							Noncarcinogenic PAHs[2] (µg/L)								
			Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Indeno(1,2,3-cd)pyrene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(g,h,i)perylene	Fluoranthene	Fluorene	Naphthalene[4]	Phenanthrene	Pyrene
Offsite Area RALs			0.03	0.03	0.03	0.03	0.03	0.03	0.03	NE	NE	NE	NE	NE	NE	NE	NE	NE
MW-207		02/12/08	<0.00990	<0.00990	<0.00990	<0.00990	<0.00990	<0.00990	<0.00990	--	--	--	--	--	--	--	--	--
MW-207		05/13/08	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	--	--	--	--	--	--	--	--	--
MW-207	Filtered	05/13/08	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	--	--	--	--	--	--	--	--	--
MW-207		09/04/08	<0.00943	<0.00943	<0.00943	<0.00943	<0.00943	<0.00943	<0.00943	--	--	--	--	--	--	--	--	--
MW-207	Filtered	09/04/08	<0.00952	<0.00952	0.0303	0.0256	<0.00952	<0.00952	<0.00952	--	--	--	--	--	--	--	--	--
MW-207		10/01/08	<0.00990	<0.00990	<0.00990	<0.00990	<0.00990	<0.00990	<0.00990	--	--	--	--	--	--	--	--	--
MW-207	Duplicate	10/01/08	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	--	--	--	--	--	--	--	--	--
MW-207	Filtered	10/01/08	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	--	--	--	--	--	--	--	--	--
MW-207	Duplicate	10/01/08	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	--	--	--	--	--	--	--	--	--
MW-207		12/03/08	<0.00952	<0.00952	<0.00952	<0.00952	<0.00952	<0.00952	<0.00952	--	--	--	--	--	--	--	--	--
MW-207	Filtered	12/03/08	<0.00943	<0.00943	<0.00943	<0.00943	<0.00943	<0.00943	<0.00943	--	--	--	--	--	--	--	--	--
MW-207		02/18/09	<0.00990	<0.00990	<0.00990	<0.00990	<0.00990	<0.00990	<0.00990	--	--	--	--	--	--	--	--	--
MW-207	Filtered	02/18/09	<0.00990	<0.00990	<0.00990	<0.00990	<0.00990	<0.00990	<0.00990	--	--	--	--	--	--	--	--	--
MW-207		05/12/09	<0.00980	<0.00980	<0.00980	<0.00980	<0.00980	<0.00980	<0.00980	--	--	--	--	--	--	--	--	--
MW-207	Filtered	05/12/09	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	--	--	--	--	--	--	--	--	--
MW-207		09/11/09	<0.0100	<0.0200	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	--	--	--	--	--	--	--	--	--
MW-207	Filtered	09/11/09	<0.0110	<0.0220	<0.0110	<0.0110	<0.0110	<0.0110	<0.0110	--	--	--	--	--	--	--	--	--
MW-207		04/14/10	<0.0097	<0.019	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	--	--	--	--	--	--	--	--	--
MW-207	Filtered	04/14/10	<0.0094	<0.019	<0.0094	<0.0094	<0.0094	<0.0094	<0.0094	--	--	--	--	--	--	--	--	--
MW-207		09/21/10	<0.0095	<0.019	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	--	--	--	--	--	--	--	--	--
MW-207	Duplicate	09/21/10	<0.0096	<0.019	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	--	--	--	--	--	--	--	--	--
MW-207	Filtered	09/21/10	<0.0094	<0.019	<0.0094	<0.0094	<0.0094	<0.0094	<0.0094	--	--	--	--	--	--	--	--	--
MW-207	Duplicate	09/21/10	<0.010	<0.020	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-207		04/27/11	<0.094	<0.19	<0.094	<0.094	<0.094	<0.094	<0.094	3.2	<0.094	0.10	<0.094	0.44	1.1	0.17	0.32	0.31
MW-207	Filtered	04/27/11	<0.094	<0.19	<0.094	<0.094	<0.094	<0.094	<0.094	2.6	<0.094	<0.094	<0.094	<0.094	0.53	0.22	<0.094	<0.094
MW-207		09/21/11	<0.0099	<0.020	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	0.57	<0.0099	0.031	<0.0099	0.22	0.085	0.035	0.016	0.23
MW-207	Filtered	09/21/11	<0.0098	<0.020	<0.0098	<0.0098	<0.0098	<0.0098	<0.0098	0.35	<0.0098	0.012	<0.0098	0.047	0.045	0.019	<0.0098	0.042
MW-207		04/18/12	<0.019	<0.0096	<0.019	<0.019	<0.019	<0.019	<0.019	0.84	0.019	0.040	<0.019	0.19	0.074	0.23	0.021	0.17
MW-207	Filtered	04/18/12	<0.019	<0.0096	<0.019	<0.019	<0.019	<0.019	<0.019	0.93	0.021	0.047	<0.019	0.21	0.080	0.23	0.025	0.19
MW-207		10/11/12	0.017	<0.019	<0.0095	<0.0095	0.0097	<0.0095	<0.0095	0.74	0.013	0.094	<0.0095	0.23	0.12	0.068	0.031	0.34
MW-207	Filtered	10/11/12	<0.0095	<0.019	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	0.18	<0.0095	0.029	<0.0095	<0.0095	<0.0095	0.033	0.017	<0.0095
MW-207		04/25/13	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-207		09/19/13	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-207		06/23/14	0.019	<0.010	<0.010	<0.010	0.011	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-207		12/16/14	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-207		06/17/15	0.030	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-207		12/08/15	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--

Appendix E
Historical Summary of Groundwater Analytical Data
Carcinogenic Polycyclic Aromatic Hydrocarbons
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Monitoring Well[1]	Notes	Sample Date	Carcinogenic PAHs[2,3] (µg/L)							Noncarcinogenic PAHs[2] (µg/L)								
			Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Indeno(1,2,3-cd)pyrene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(g,h,i)perylene	Fluoranthene	Fluorene	Naphthalene[4]	Phenanthrene	Pyrene
Offsite Area RALs			0.03	0.03	0.03	0.03	0.03	0.03	0.03	NE	NE	NE	NE	NE	NE	NE	NE	NE
MW-207		06/14/16	1.0	0.98	1.0	0.84	0.85	0.95	0.93	--	--	--	--	--	--	3.49	--	--
MW-207		01/13/17	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-207	Duplicate	01/13/17	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-207		06/13/17	0.020	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-207		11/08/17	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-207	Duplicate	11/08/17	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-207		06/20/18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-207		12/13/18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-207		06/25/19	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-207		12/17/19	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-207		06/16/20	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-207		11/18/20	<0.01	<0.01	0.013 J	<0.01	0.012 J	<0.02 *	<0.01	--	--	--	--	--	--	--	--	--
MW-207		06/07/21	<0.011	<0.011	<0.011	<0.011	<0.011	<0.021	<0.021	--	--	--	--	--	--	--	--	--
MW-207		12/01/21	<0.0203	<0.0184	<0.0168	<0.0202	<0.0179	<0.0160	<0.0158	--	--	--	--	--	--	--	--	--
MW-207		06/01/22	<0.010	<0.010	<0.010	<0.010	<0.010	<0.020	<0.020	--	--	--	--	--	--	--	--	--
MW-207		10/25/22	<0.010	<0.010	<0.010	<0.010	<0.010	<0.021	<0.021	--	--	--	--	--	--	--	--	--
MW-207		06/21/23	0.026 J	<0.011	0.011 J	<0.011	0.015 J	<0.022	<0.022	--	--	--	--	--	--	--	--	--
MW-207		10/26/23	0.019 J	<0.011	<0.011	<0.011	<0.011	<0.022	<0.022	--	--	--	--	--	--	--	--	--
MW-207		06/11/24	0.015 J	<0.011	<0.011	<0.011	<0.011	<0.022	<0.022	--	--	--	--	--	--	--	--	--
MW-209		02/16/16	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	--	--	--	--	--	--	--	--	--
MW-209		06/13/16	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	0.21	--	--
MW-209		09/22/16	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	<0.030	--	--
MW-209		01/12/17	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	--	--	--	--	--	--	--	--	--
MW-209		03/27/17	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-209		06/13/17	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-209		12/16/19	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-209		03/25/20	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-209		06/17/20	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-209		11/17/20	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-209		03/15/21	<0.011	<0.011	<0.011	<0.011	<0.011	<0.023	<0.023	--	--	--	--	--	--	--	--	--
MW-209		06/09/21	<0.010	<0.010	<0.010	<0.010	<0.010	<0.021	<0.021	--	--	--	--	--	--	--	--	--
MW-209		09/20/21	<0.012	<0.012	<0.012	<0.012	<0.012	<0.024	<0.024	--	--	--	--	--	--	--	--	--
MW-209		12/03/21	<0.0203	<0.0184	<0.0168	<0.0202	<0.0179	<0.0160	<0.0158	--	--	--	--	--	--	--	--	--
MW-209		03/30/22	<0.011	<0.011	<0.011	<0.011	<0.011	<0.023	<0.023	--	--	--	--	--	--	--	--	--
MW-209		06/03/22	<0.011	<0.011	<0.011	<0.011	<0.011	<0.022	<0.022	--	--	--	--	--	--	--	--	--
MW-209		08/11/22	<0.010	<0.010	<0.010	<0.010	<0.010	<0.021	<0.021	--	--	--	--	--	--	--	--	--
MW-209		10/24/22	<0.011	<0.011	<0.011	<0.011	<0.011	<0.022	<0.022	--	--	--	--	--	--	--	--	--

Appendix E
Historical Summary of Groundwater Analytical Data
Carcinogenic Polycyclic Aromatic Hydrocarbons
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Monitoring Well[1]	Notes	Sample Date	Carcinogenic PAHs[2,3] (µg/L)							Noncarcinogenic PAHs[2] (µg/L)								
			Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Indeno(1,2,3-cd)pyrene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(g,h,i)perylene	Fluoranthene	Fluorene	Naphthalene[4]	Phenanthrene	Pyrene
Offsite Area RALs			0.03	0.03	0.03	0.03	0.03	0.03	0.03	NE	NE	NE	NE	NE	NE	NE	NE	NE
MW-209		03/21/23	<0.011	<0.011	<0.011	<0.011	<0.011	<0.021	<0.021	--	--	--	--	--	--	--	--	--
MW-209		06/20/23	<0.010	<0.010	<0.010	<0.010	<0.010	<0.021	<0.021	--	--	--	--	--	--	--	--	--
MW-209		08/29/23	<0.011	<0.011	<0.011	<0.011	<0.011	<0.022	<0.022	--	--	--	--	--	--	--	--	--
MW-209		10/25/23	<0.011	<0.011	<0.011	<0.011	<0.011	<0.022	<0.022	--	--	--	--	--	--	--	--	--
MW-209		03/12/24	<0.011	<0.011	<0.011	<0.011	<0.011	<0.021	<0.021	--	--	--	--	--	--	--	--	--
MW-209		**06/10/24**	**<0.011**	**<0.011**	**<0.011**	**<0.011**	**<0.011**	**<0.022**	**<0.022**	--	--	--	--	--	--	--	--	--
MW-210		02/16/16	0.100	0.042	0.050	0.016	0.170	0.012	0.021	--	--	--	--	--	--	--	--	--
MW-210		06/13/16	0.110	0.056	0.073	0.027	0.210	0.015	0.024	--	--	--	--	--	--	<0.031	--	--
MW-210		09/22/16	0.016	0.014	0.016	<0.012	0.029	<0.012	<0.012	--	--	--	--	--	--	<0.037	--	--
MW-210		01/12/17	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-210		03/27/17	0.016	<0.010	0.011	<0.010	0.020	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-210	Duplicate	03/27/17	<0.010	<0.010	<0.010	<0.010	0.012	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-210		06/16/17	0.075	0.042	0.044	0.020	0.130	0.017	0.034	--	--	--	--	--	--	--	--	--
MW-210		12/16/19	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-210		03/25/20	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-210		06/17/20	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-210		09/11/20	0.020 J	0.040 J	0.039 J	0.038 J	0.020 J	0.062 J	0.077	--	--	--	--	--	--	--	--	--
MW-210		11/17/20	<0.011	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-210		03/15/21	<0.011	<0.011	<0.011	<0.011	<0.011	<0.023	<0.023	--	--	--	--	--	--	--	--	--
MW-210		06/09/21	<0.011	<0.011	<0.011	<0.011	<0.011	<0.021	<0.021	--	--	--	--	--	--	--	--	--
MW-210		09/20/21	<0.012	<0.012	<0.012	<0.012	<0.012	<0.024	<0.024	--	--	--	--	--	--	--	--	--
MW-210		12/03/21	<0.0203	<0.0184	<0.0168	<0.0202	<0.0179	<0.0160	<0.0158	--	--	--	--	--	--	--	--	--
MW-210		03/30/22	<0.011	<0.011	<0.011	<0.011	<0.011	<0.023	<0.023	--	--	--	--	--	--	--	--	--
MW-210		06/03/22	<0.010	<0.010	<0.010	<0.010	<0.010	<0.020	<0.020	--	--	--	--	--	--	--	--	--
MW-210		08/11/22	<0.010	<0.010	<0.010	<0.010	<0.010	<0.021	<0.021	--	--	--	--	--	--	--	--	--
MW-210		10/24/22	<0.011	<0.011	<0.011	<0.011	<0.011	<0.021	<0.021	--	--	--	--	--	--	--	--	--
MW-210		03/21/23	<0.014	<0.014	<0.014	<0.014	<0.014	<0.028	<0.028	--	--	--	--	--	--	--	--	--
MW-210		06/20/23	<0.011	<0.011	<0.011	<0.011	<0.011	<0.022	<0.022	--	--	--	--	--	--	--	--	--
MW-210		08/29/23	<0.011	<0.011	<0.011	<0.011	<0.011	<0.022	<0.022	--	--	--	--	--	--	--	--	--
MW-210		10/25/23	<0.011	<0.011	<0.011	<0.011	<0.011	<0.022	<0.022	--	--	--	--	--	--	--	--	--
MW-210		03/12/24	<0.011	<0.011	<0.011	<0.011	<0.011	<0.022	<0.022	--	--	--	--	--	--	--	--	--
MW-210		**06/10/24**	**<0.010**	**<0.010**	**<0.010**	**<0.010**	**<0.010**	**<0.021**	**<0.021**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
MW-211		02/16/16	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-211		06/13/16	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	<0.031	--	--
MW-211		09/22/16	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	--	--	--	--	--	--	<0.033	--	--
MW-211		01/12/17	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-211		03/27/17	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--

Appendix E
Historical Summary of Groundwater Analytical Data
Carcinogenic Polycyclic Aromatic Hydrocarbons
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

Monitoring Well[1]	Notes	Sample Date	Carcinogenic PAHs[2,3] (µg/L)							Noncarcinogenic PAHs[2] (µg/L)								
			Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Indeno(1,2,3-cd)pyrene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(g,h,i)perylene	Fluoranthene	Fluorene	Naphthalene[4]	Phenanthrene	Pyrene
Offsite Area RALs			**0.03**	**0.03**	**0.03**	**0.03**	**0.03**	**0.03**	**0.03**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**
MW-211		06/16/17	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-211		12/16/19	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-211		03/25/20	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-211		06/17/20	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-211		11/17/20	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	--	--	--	--	--	--	--	--	--
MW-211		03/15/21	<0.011	<0.011	<0.011	<0.011	<0.011	<0.022	<0.022	--	--	--	--	--	--	--	--	--
MW-211		06/09/21	<0.011	<0.011	<0.011	<0.011	<0.011	<0.021	<0.021	--	--	--	--	--	--	--	--	--
MW-211		09/20/21	<0.011	<0.011	<0.011	<0.011	0.015 J	0.027 J	<0.023	--	--	--	--	--	--	--	--	--
MW-211		12/03/21	<0.0203	<0.0184	<0.0168	<0.0202	<0.0179	<0.0160	<0.0158	--	--	--	--	--	--	--	--	--
MW-211		03/30/22	<0.010	<0.010	<0.010	<0.010	<0.010	<0.021	<0.021	--	--	--	--	--	--	--	--	--
MW-211		06/03/22	<0.011	<0.011	<0.011	<0.011	<0.011	<0.022	<0.022	--	--	--	--	--	--	--	--	--
MW-211		08/11/22	<0.010	<0.010	<0.010	<0.010	<0.010	<0.021	<0.021	--	--	--	--	--	--	--	--	--
MW-211		10/24/22	0.013 J	<0.010	0.013 J	<0.010	0.013 J	<0.021	<0.021	--	--	--	--	--	--	--	--	--
MW-211		03/21/23	<0.010	<0.010	<0.010	<0.010	<0.010	<0.021	<0.021	--	--	--	--	--	--	--	--	--
MW-211		06/20/23	0.013 J	0.011 J	0.011 J	<0.011	0.012 J	<0.021	<0.021	--	--	--	--	--	--	--	--	--
MW-211		08/29/23	<0.011	<0.011	<0.011	<0.011	<0.011	<0.022	<0.022	--	--	--	--	--	--	--	--	--
MW-211		10/25/23	<0.012	<0.012	<0.012	<0.012	<0.012	<0.023	<0.023	--	--	--	--	--	--	--	--	--
MW-211		03/12/24	<0.011	<0.011	<0.011	<0.011	<0.011	<0.023	<0.023	--	--	--	--	--	--	--	--	--
MW-211		**06/10/24**	**<0.011**	**<0.011**	**<0.011**	**<0.011**	**<0.011**	**<0.022**	**<0.022**	--	--	--	--	--	--	--	--	--
Elliott Avenue																		
MW-30		04/26/13	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MW-30		12/14/18	<0.010	<0.010	<0.010	<0.010	<0.010	<0.020	<0.010	--	--	--	--	--	--	--	--	--
MW-30		**06/12/24**	**<0.010**	**<0.010**	**<0.010**	**<0.010**	**<0.010**	**<0.021**	**<0.021**	--	--	--	--	--	--	--	--	--
Upper Yard																		
MW-61A-R		12/14/18	<0.010	<0.010	<0.010	<0.010	<0.010	<0.020	<0.010	--	--	--	--	--	--	--	--	--
MW-61A-R		06/25/19	<0.010	<0.010	<0.010	<0.010	<0.010	<0.020	<0.010	--	--	--	--	--	--	--	--	--
MW-61A-R		**06/12/24**	**<0.011**	**<0.011**	**<0.011**	**<0.011**	**<0.011**	**<0.022**	**<0.022**	--	--	--	--	--	--	--	--	--
MW-61A-R	**Duplicate**	**06/12/24**	**<0.011**	**<0.011**	**<0.011**	**<0.011**	**<0.011**	**<0.021**	**<0.021**	--	--	--	--	--	--	--	--	--

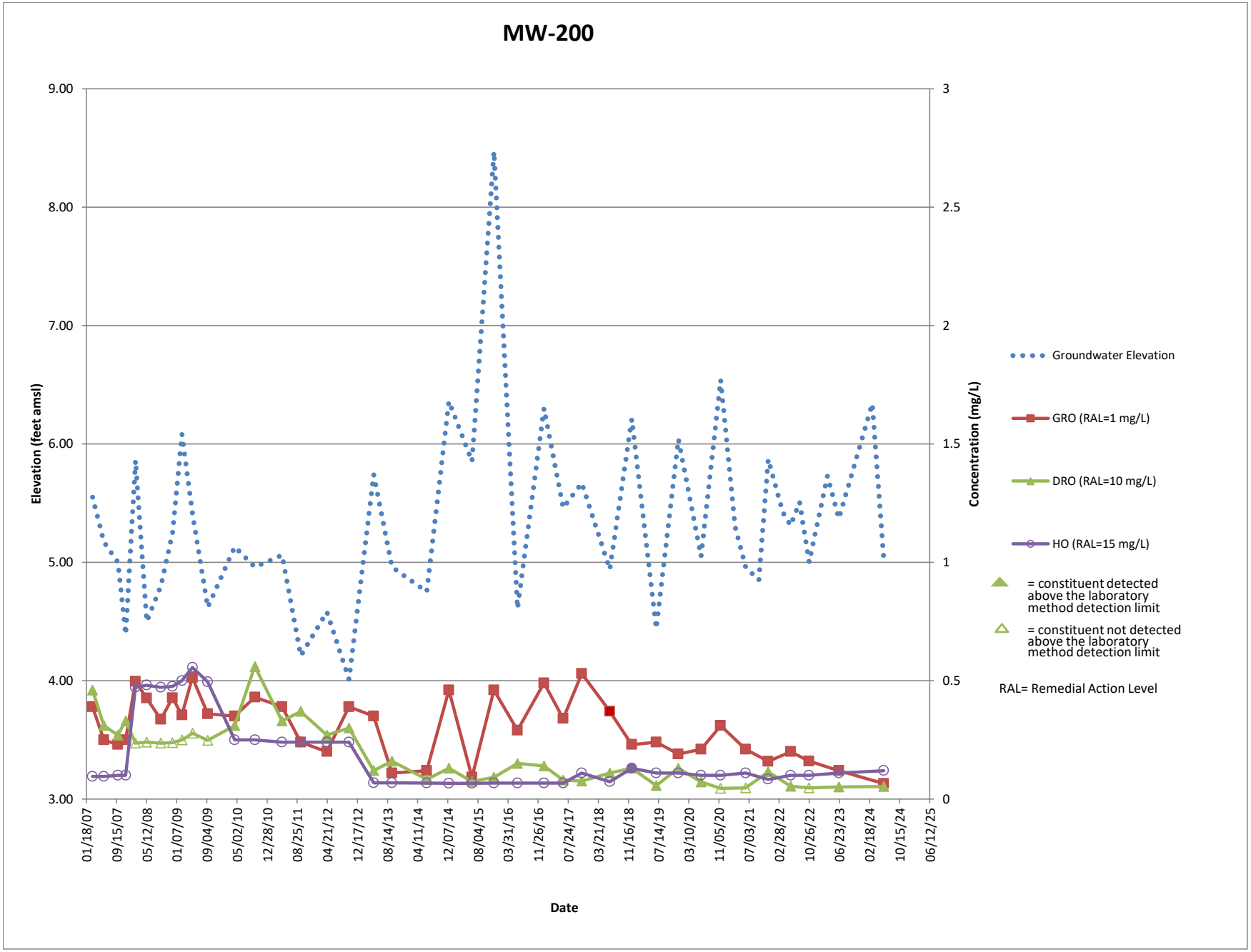
Appendix E
Historical Summary of Groundwater Analytical Data
Carcinogenic Polycyclic Aromatic Hydrocarbons
Former Unocal Seattle Marketing Terminal
3001 Elliott Avenue, Seattle, Washington

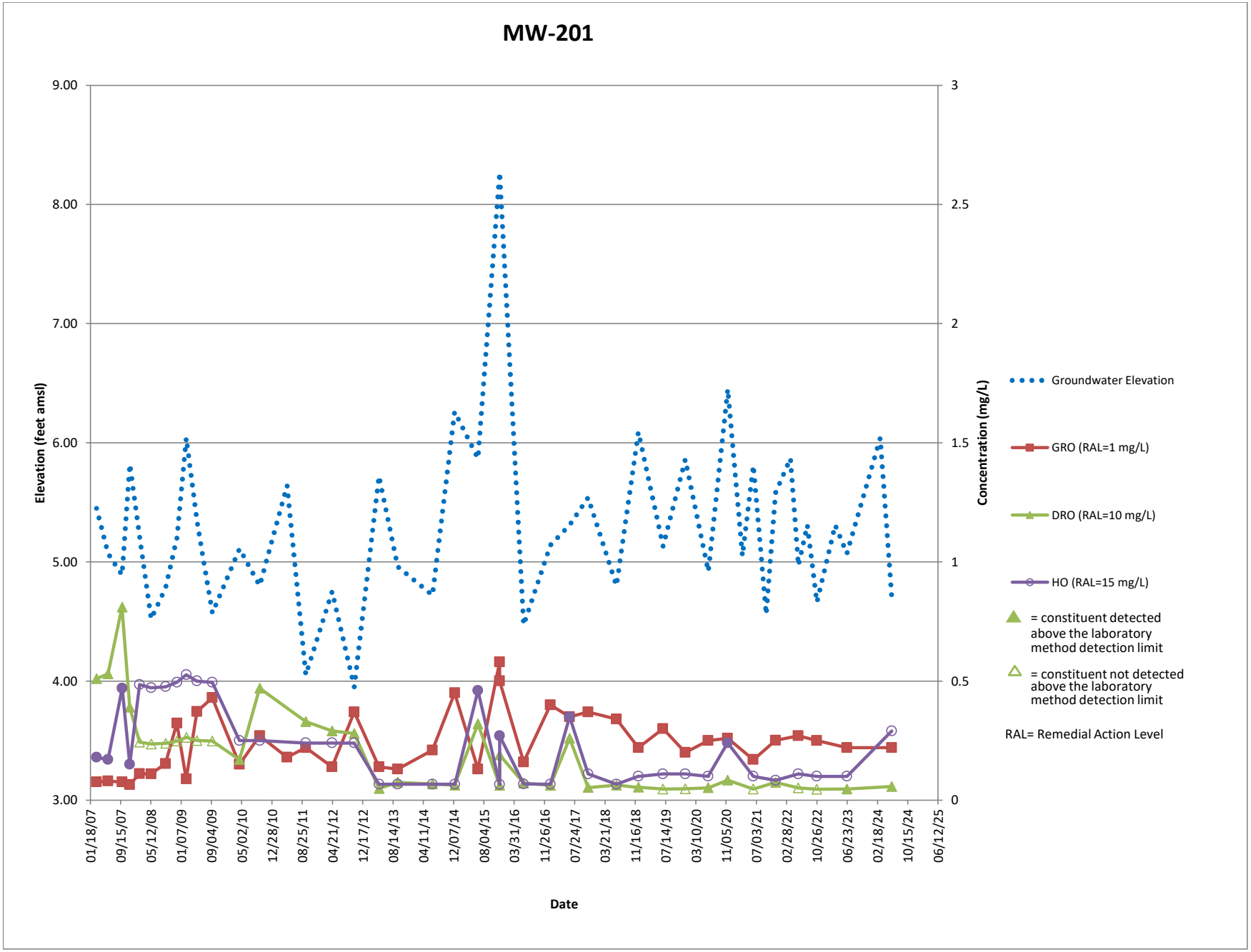
Monitoring Well[1]	Notes	Sample Date	Carcinogenic PAHs[2,3] (µg/L)							Noncarcinogenic PAHs[2] (µg/L)								
			Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Indeno(1,2,3-cd)pyrene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(g,h,i)perylene	Fluoranthene	Fluorene	Naphthalene[4]	Phenanthrene	Pyrene
Offsite Area RALs			**0.03**	**0.03**	**0.03**	**0.03**	**0.03**	**0.03**	**0.03**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**

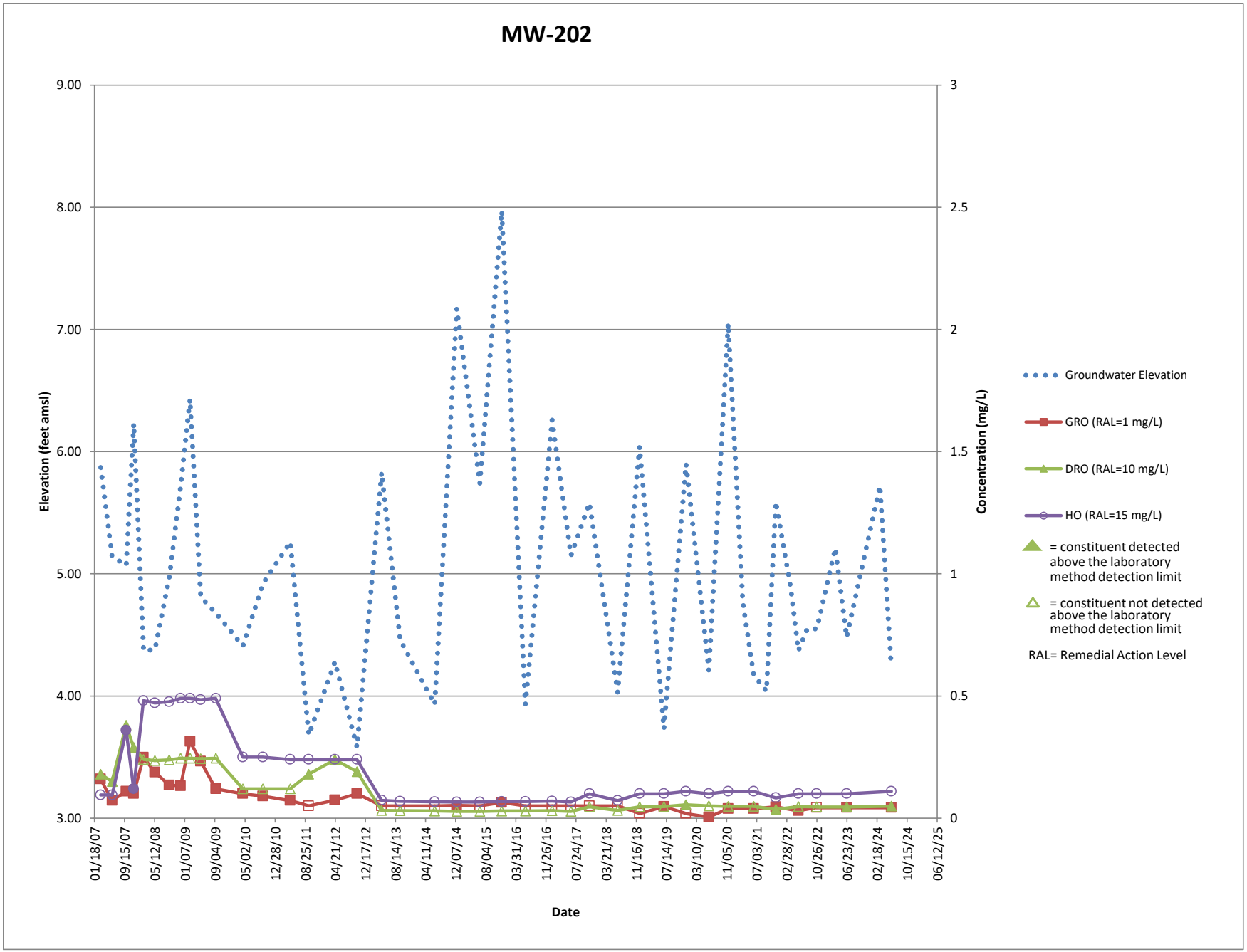
Notes:
[1]Monitoring well locations are shown on Figure 2.
[2]Analyses by EPA Method 8310 or 8270 (SIM).
[3]WAC 173-340-200 (MTCA).
[4]Numeric sum of detected concentrations. Where no compounds were detected, this figure is equal to the highest reporting limit for an individual compound.
[5]Napthalene detected in the method blank, these data are from the initial extraction of the sample.
[6]Sample was extracted past the holding time.
[7]Sample was re-prepared outside of preparation holding time. Results have been flagged as "H" in the laboratory report.
[8] There was insufficient sample to perform a re-extraction or re-analysis, therefore, the data have been reported.
[9]LCS or LCSD exceeds the control limits/RPD of the LCS exceeds the control limits.
[D]Duplicate of the preceding sample.
RAL = Remedial Action Level per Amendments No. 4 and No. 5 to Order on Consent; applicable for Offsite Area only.
There is no cPAH RAL for groundwater in the Upper Yard, Lower Yard or Elliott Avenue.
µg/L = micrograms per liter
NE = not established
"--" not sampled
cPAHs = carcinogenic polycyclic aromatic hydrocarbons.
PAHs = polynuclear aromatic hydrocarbons.
LNAPL = light nonaqueous phase liquid
Laboratory analyses by TestAmerica of Tacoma, Washington and Lancaster Laboratories of Lancaster, Pennsylvania.
Bolded data are for the current reporting period.
Shading indicates concentration greater than the RAL.
NEAR = The sample was collected from the top of the water column within the respective monitoring well.
DL, RA, RE, IN = Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample.

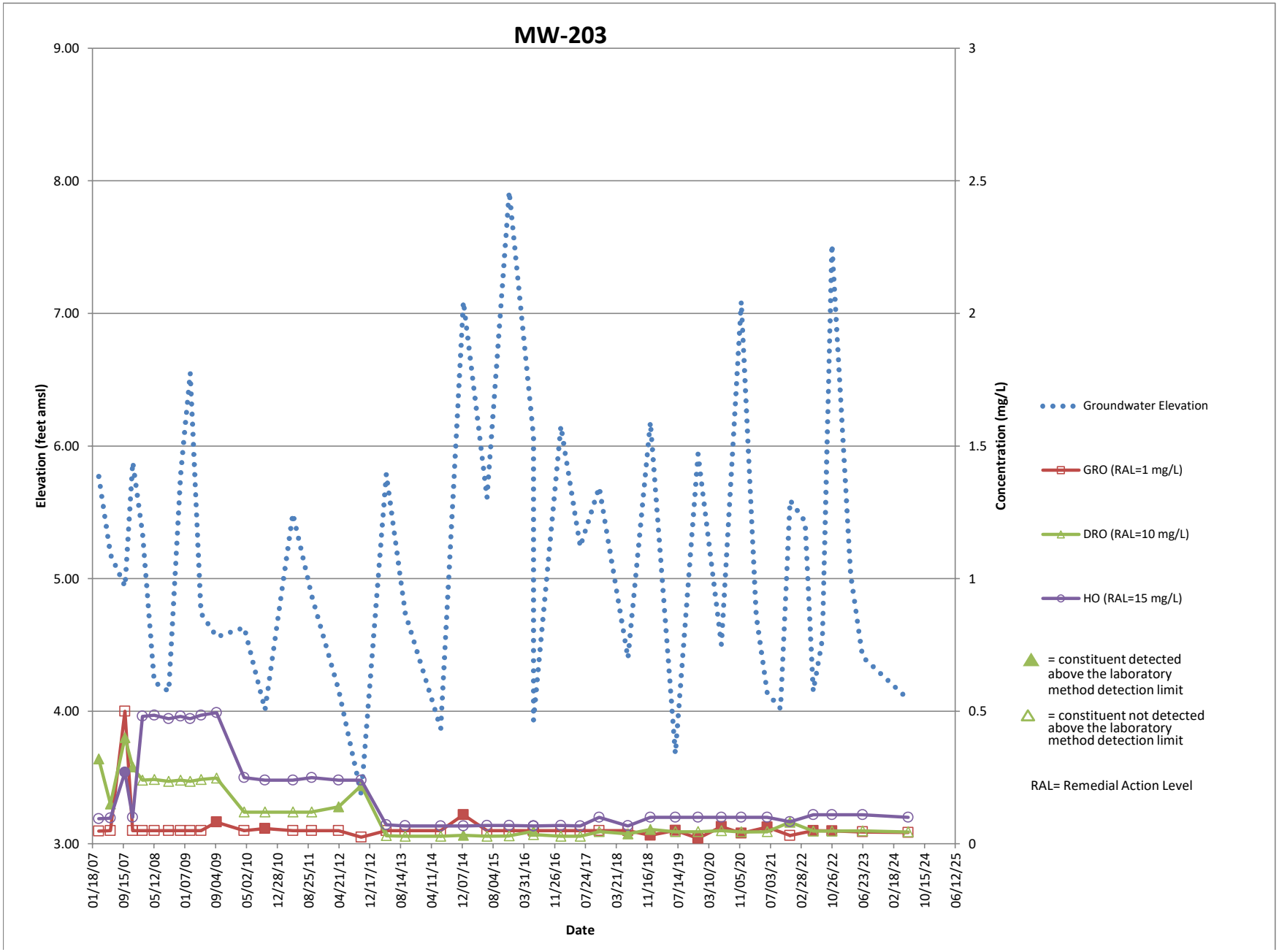
Appendix F

Historical Trends Graphs

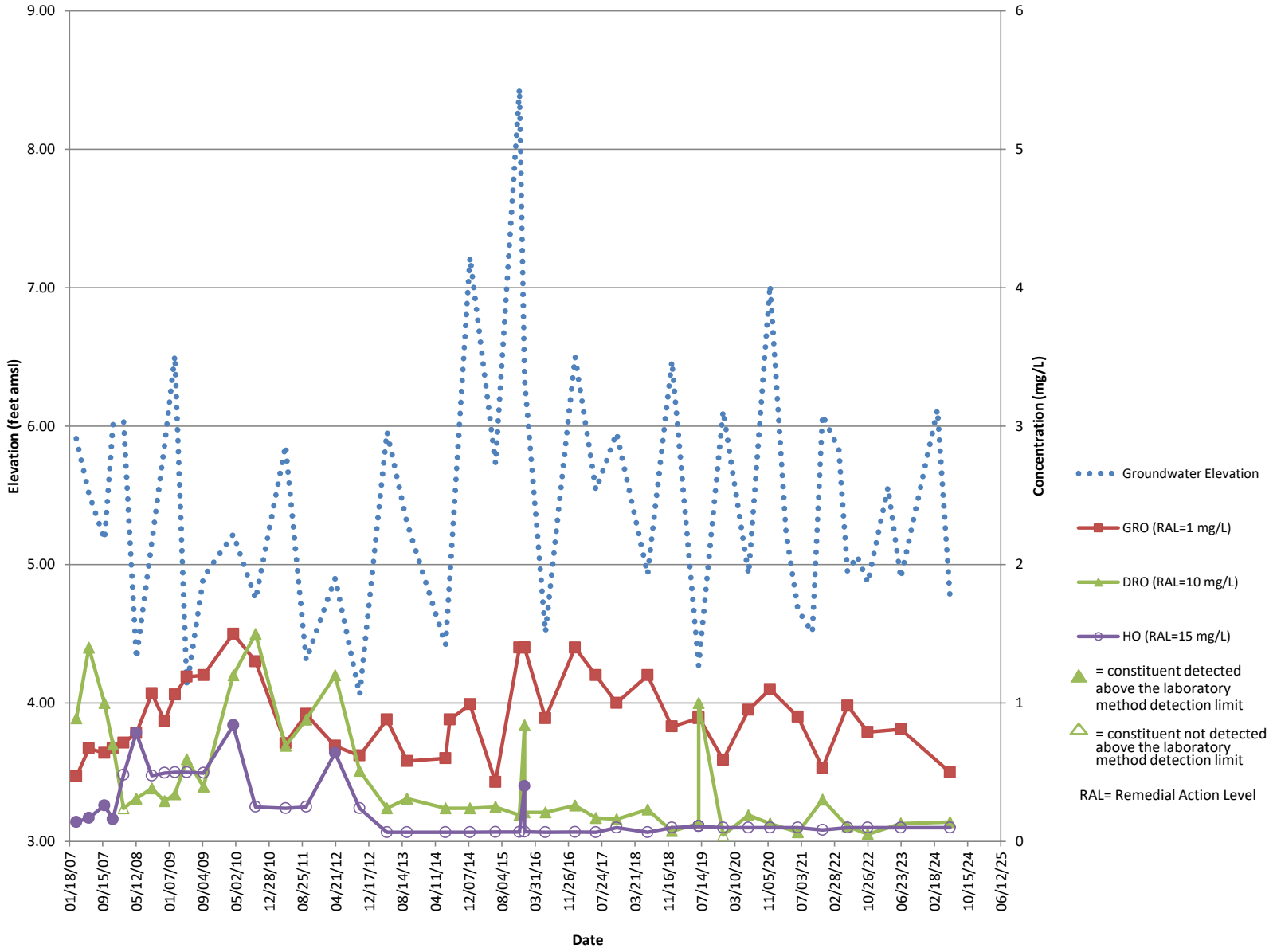

MW-200
Elevation (feet amsl)
Concentration (mg/L)
Date
9.00
8.00
7.00
6.00
5.00
4.00
3.00
3
2.5
2
1.5
1
0.5
0
01/18/07
09/15/07
05/12/08
01/07/09
09/04/09
05/02/10
12/28/10
08/25/11
04/21/12
12/17/12
08/14/13
04/11/14
12/07/14
08/04/15
03/31/16
11/26/16
07/24/17
03/21/18
11/16/18
07/14/19
03/10/20
11/05/20
07/03/21
02/28/22
10/26/22
06/23/23
02/18/24
10/15/24
06/12/25
Groundwater Elevation
GRO (RAL=1 mg/L)
DRO (RAL=10 mg/L)
HO (RAL=15 mg/L)
= constituent detected above the laboratory method detection limit
= constituent not detected above the laboratory method detection limit
RAL= Remedial Action Level

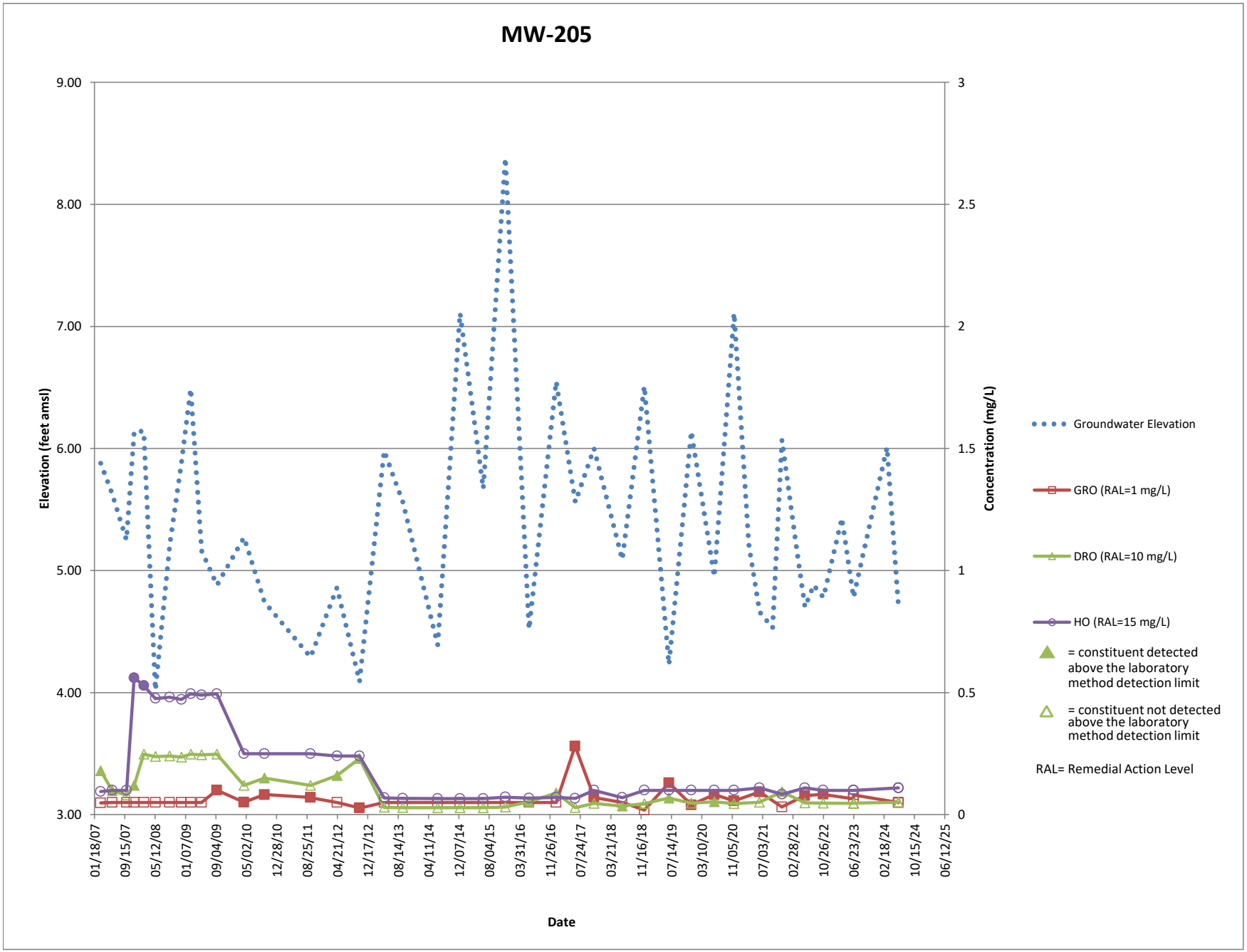

MW-201
9.00
8.00
7.00
6.00
5.00
4.00
3.00
Elevation (feet amsl)
3
2.5
2
1.5
1
0.5
0
Concentration (mg/L)
01/18/07
09/15/07
05/12/08
01/07/09
09/04/09
05/02/10
12/28/10
08/25/11
04/21/12
12/17/12
08/14/13
04/11/14
12/07/14
08/04/15
03/31/16
11/26/16
07/24/17
03/21/18
11/16/18
07/14/19
03/10/20
11/05/20
07/03/21
02/28/22
10/26/22
06/23/23
02/18/24
10/15/24
06/12/25
Date
Groundwater Elevation
GRO (RAL=1 mg/L)
DRO (RAL=10 mg/L)
HO (RAL=15 mg/L)
= constituent detected above the laboratory method detection limit
= constituent not detected above the laboratory method detection limit
RAL= Remedial Action Level

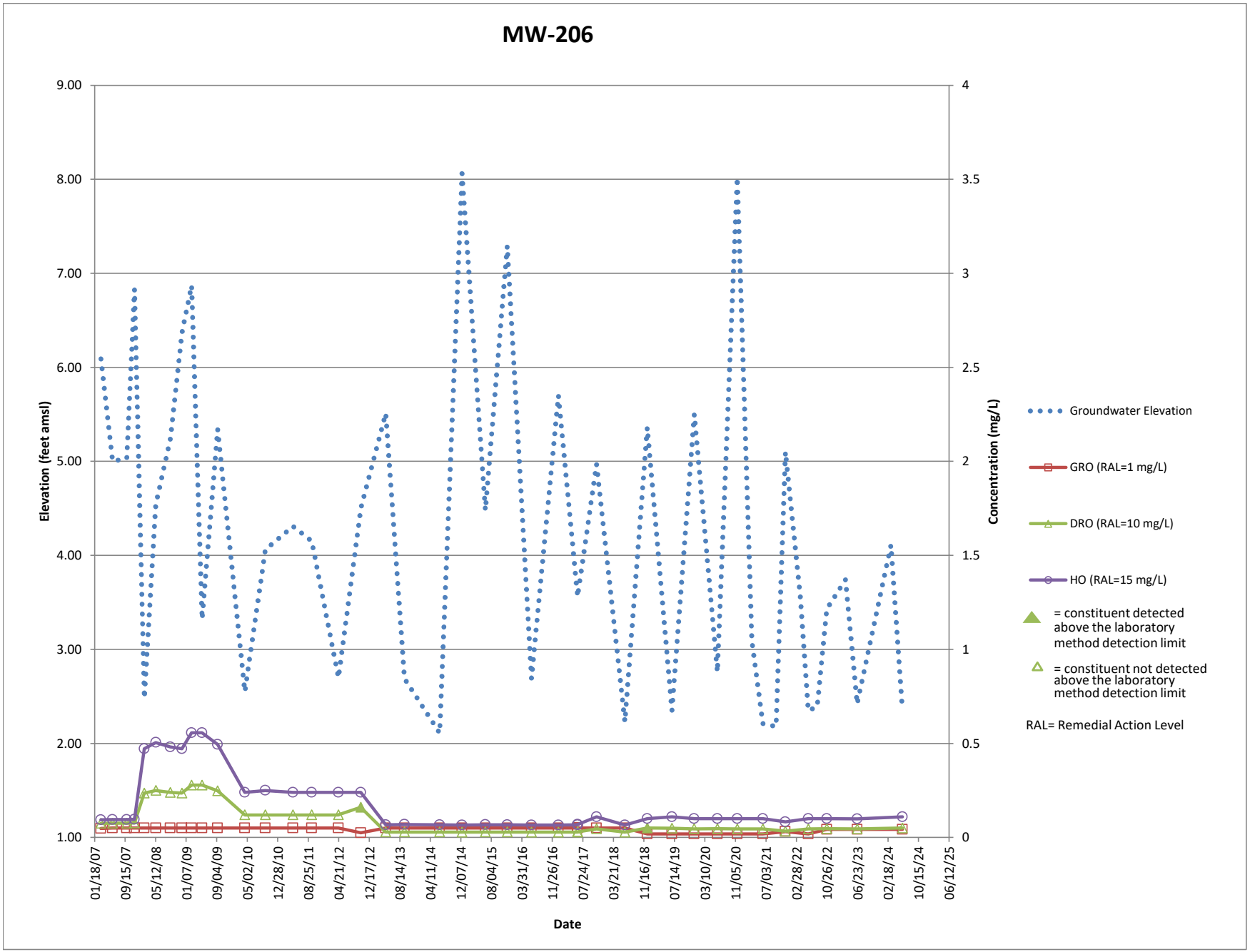

MW-202
9.00
8.00
7.00
6.00
5.00
4.00
3.00
Elevation (feet amsl)
3
2.5
2
1.5
1
0.5
0
Concentration (mg/L)
01/18/07
09/15/07
05/12/08
01/07/09
09/04/09
05/02/10
12/28/10
08/25/11
04/21/12
12/17/12
08/14/13
04/11/14
12/07/14
08/04/15
03/31/16
11/26/16
07/24/17
03/21/18
11/16/18
07/14/19
03/10/20
11/05/20
07/03/21
02/28/22
10/26/22
06/23/23
02/18/24
10/15/24
06/12/25
Date
Groundwater Elevation
GRO (RAL=1 mg/L)
DRO (RAL=10 mg/L)
HO (RAL=15 mg/L)
= constituent detected above the laboratory method detection limit
= constituent not detected above the laboratory method detection limit
RAL= Remedial Action Level

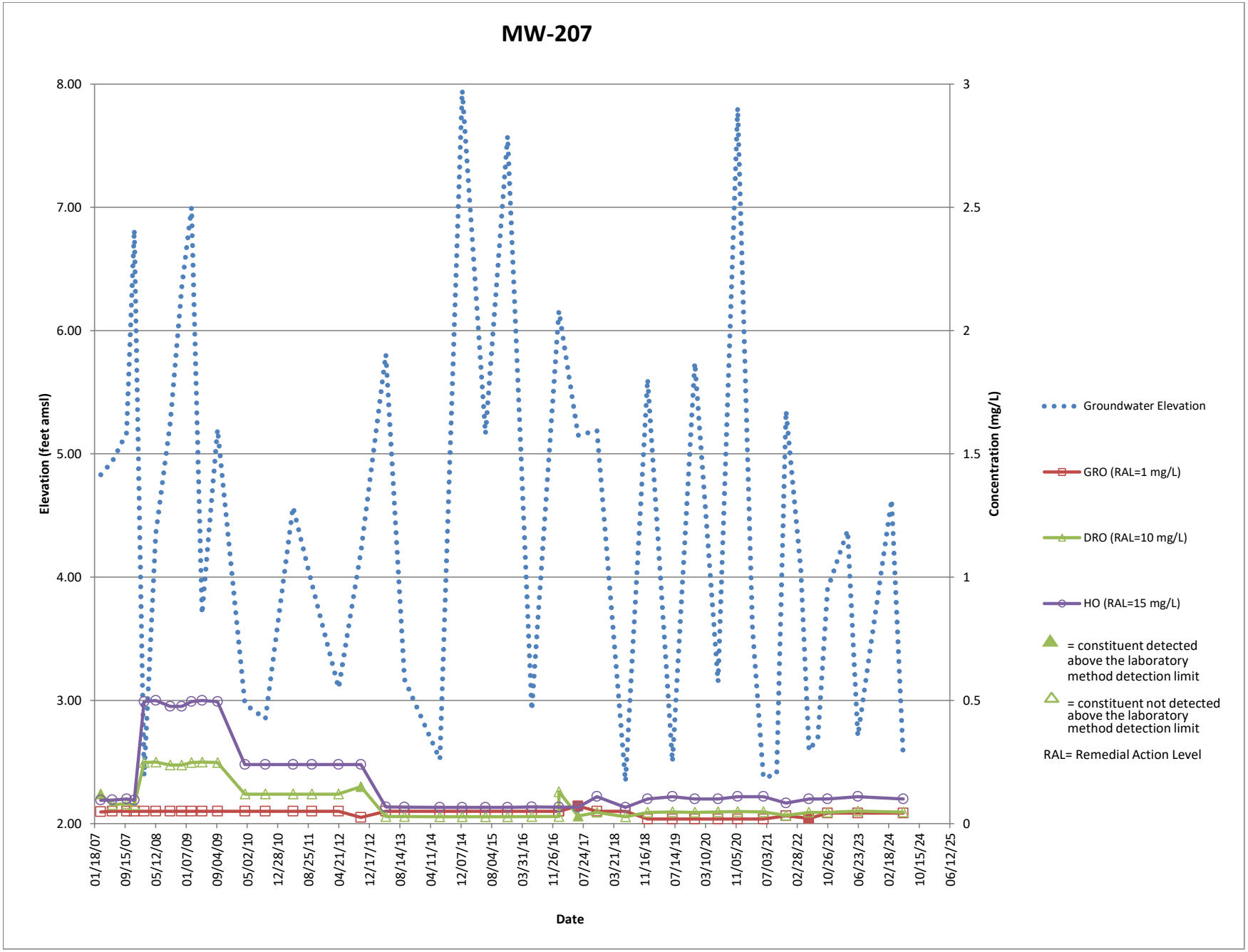

MW-203
Elevation (feet amsl)
Concentration (mg/L)
Date
9.00
8.00
7.00
6.00
5.00
4.00
3.00
3
2.5
2
1.5
1
0.5
0
01/18/07
09/15/07
05/12/08
01/07/09
09/04/09
05/02/10
12/28/10
08/25/11
04/21/12
12/17/12
08/14/13
04/11/14
12/07/14
08/04/15
03/31/16
11/26/16
07/24/17
03/21/18
11/16/18
07/14/19
03/10/20
11/05/20
07/03/21
02/28/22
10/26/22
06/23/23
02/18/24
10/15/24
06/12/25
Groundwater Elevation
GRO (RAL=1 mg/L)
DRO (RAL=10 mg/L)
HO (RAL=15 mg/L)
= constituent detected above the laboratory method detection limit
= constituent not detected above the laboratory method detection limit
RAL= Remedial Action Level

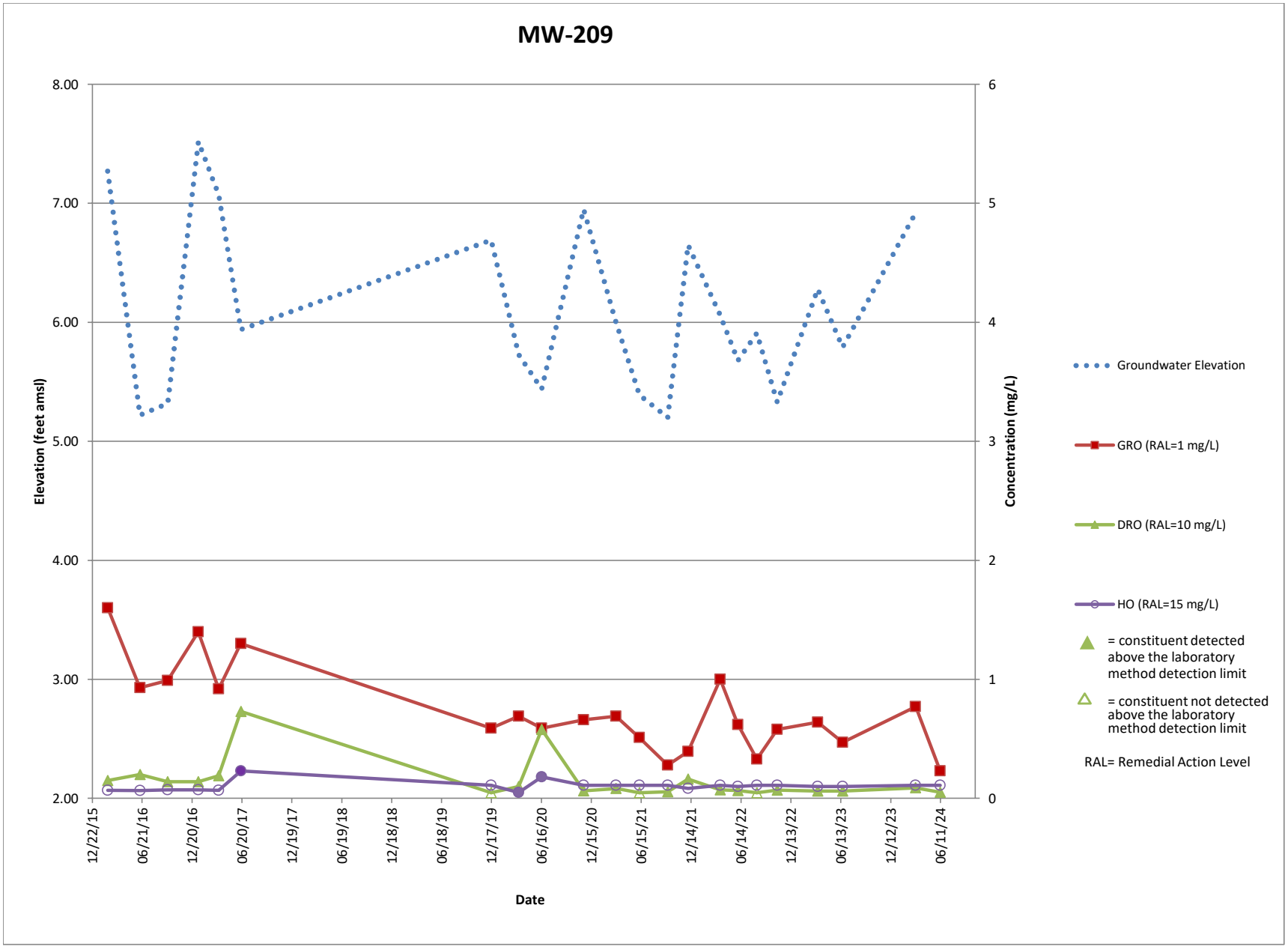
MW-204

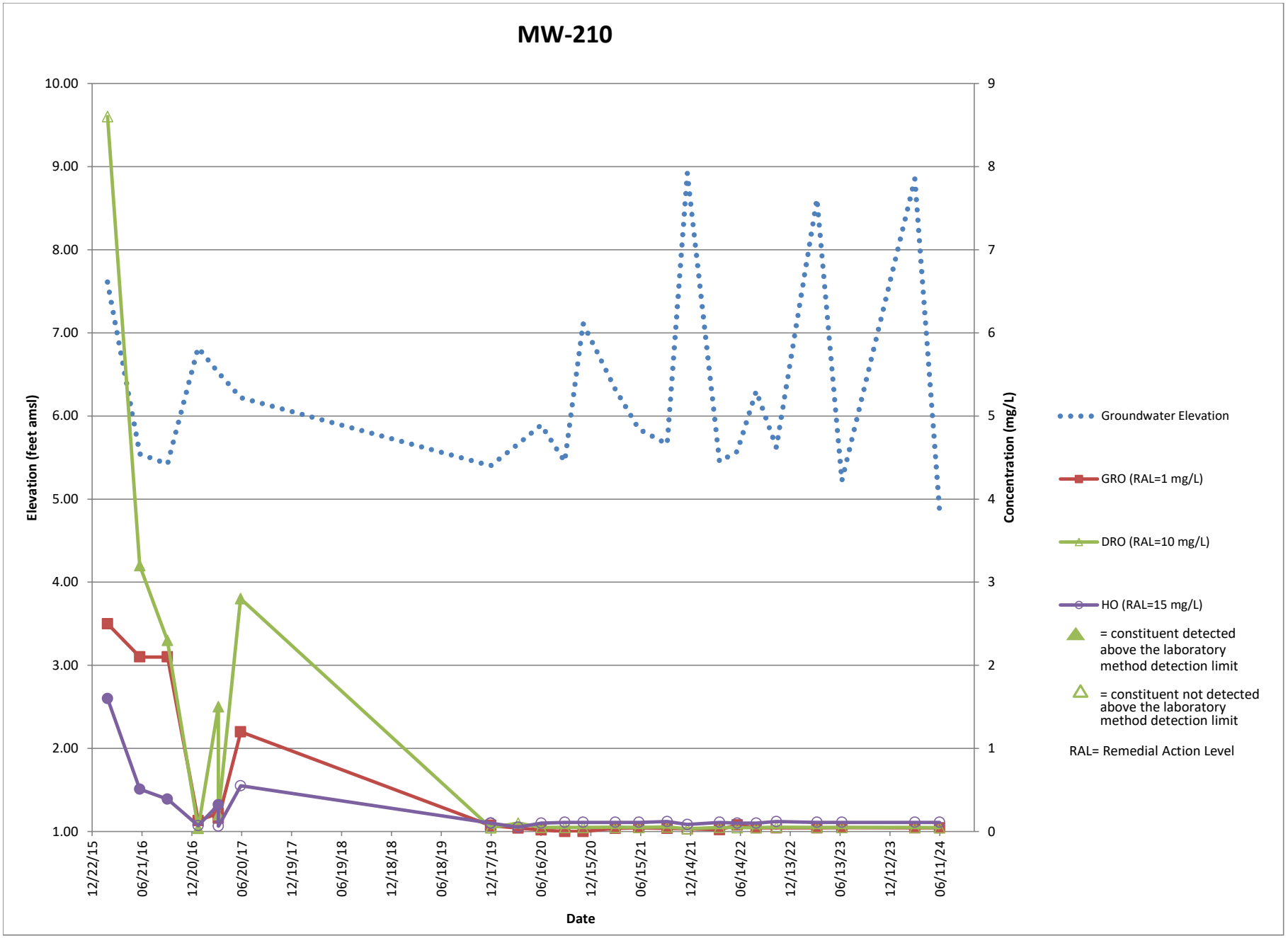

9.00
8.00
7.00
6.00
5.00
4.00
3.00
Elevation (feet amsl)
6
5
4
3
2
1
0
Concentration (mg/L)
01/18/07
09/15/07
05/12/08
01/07/09
09/04/09
05/02/10
12/28/10
08/25/11
04/21/12
12/17/12
08/14/13
04/11/14
12/07/14
08/04/15
03/31/16
11/26/16
07/24/17
03/21/18
11/16/18
07/14/19
03/10/20
11/05/20
07/03/21
02/28/22
10/26/22
06/23/23
02/18/24
10/15/24
06/12/25
Date
Groundwater Elevation
GRO (RAL=1 mg/L)
DRO (RAL=10 mg/L)
HO (RAL=15 mg/L)
= constituent detected above the laboratory method detection limit
= constituent not detected above the laboratory method detection limit
RAL= Remedial Action Level

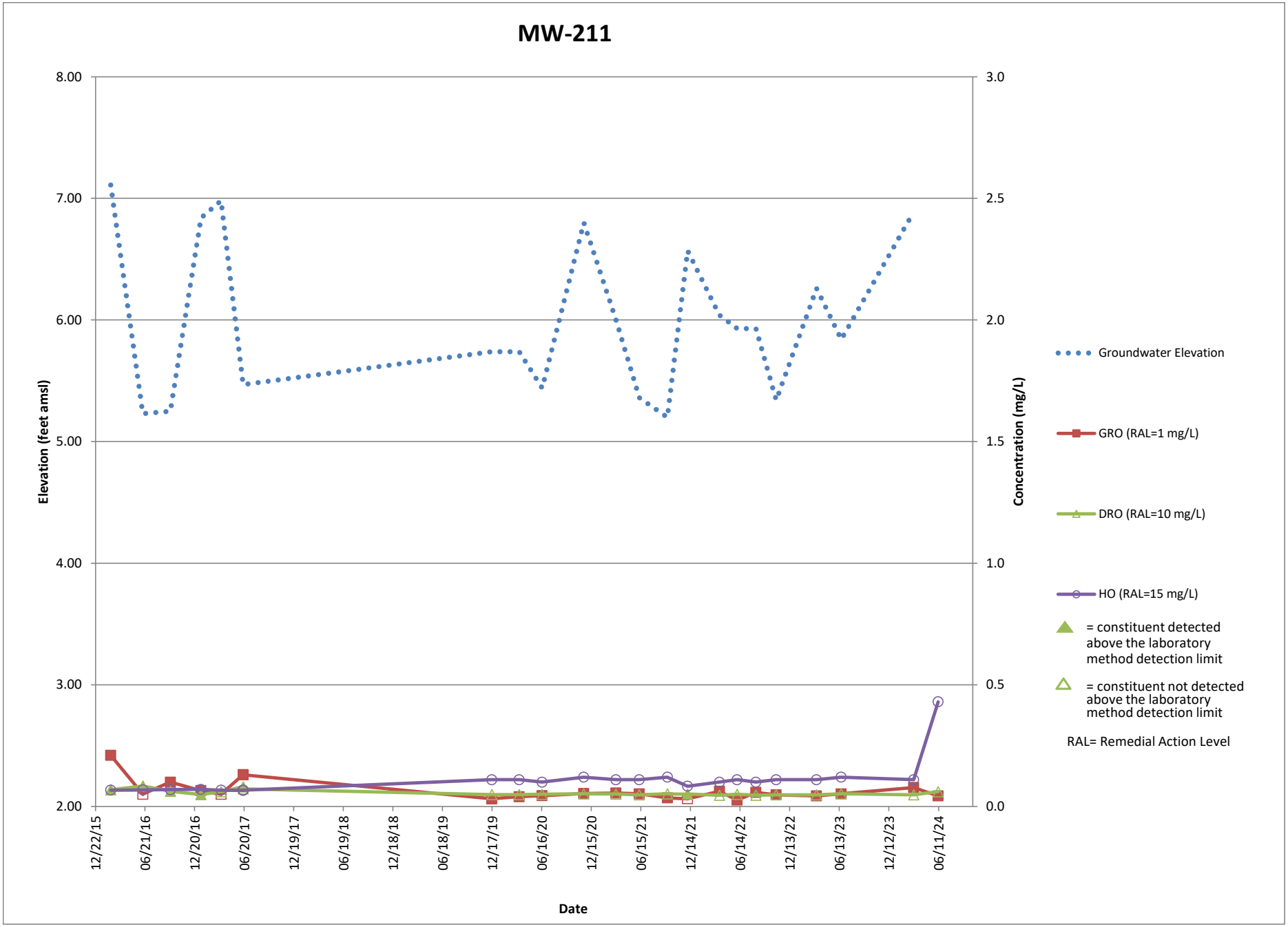

MW-205
Elevation (feet amsl)
Concentration (mg/L)
Date
9.00
8.00
7.00
6.00
5.00
4.00
3.00
3
2.5
2
1.5
1
0.5
0
01/18/07
09/15/07
05/12/08
01/07/09
09/04/09
05/02/10
12/28/10
08/25/11
04/21/12
12/17/12
08/14/13
04/11/14
12/07/14
08/04/15
03/31/16
11/26/16
07/24/17
03/21/18
11/16/18
07/14/19
03/10/20
11/05/20
07/03/21
02/28/22
10/26/22
06/23/23
02/18/24
10/15/24
06/12/25
Groundwater Elevation
GRO (RAL=1 mg/L)
DRO (RAL=10 mg/L)
HO (RAL=15 mg/L)
= constituent detected above the laboratory method detection limit
= constituent not detected above the laboratory method detection limit
RAL= Remedial Action Level

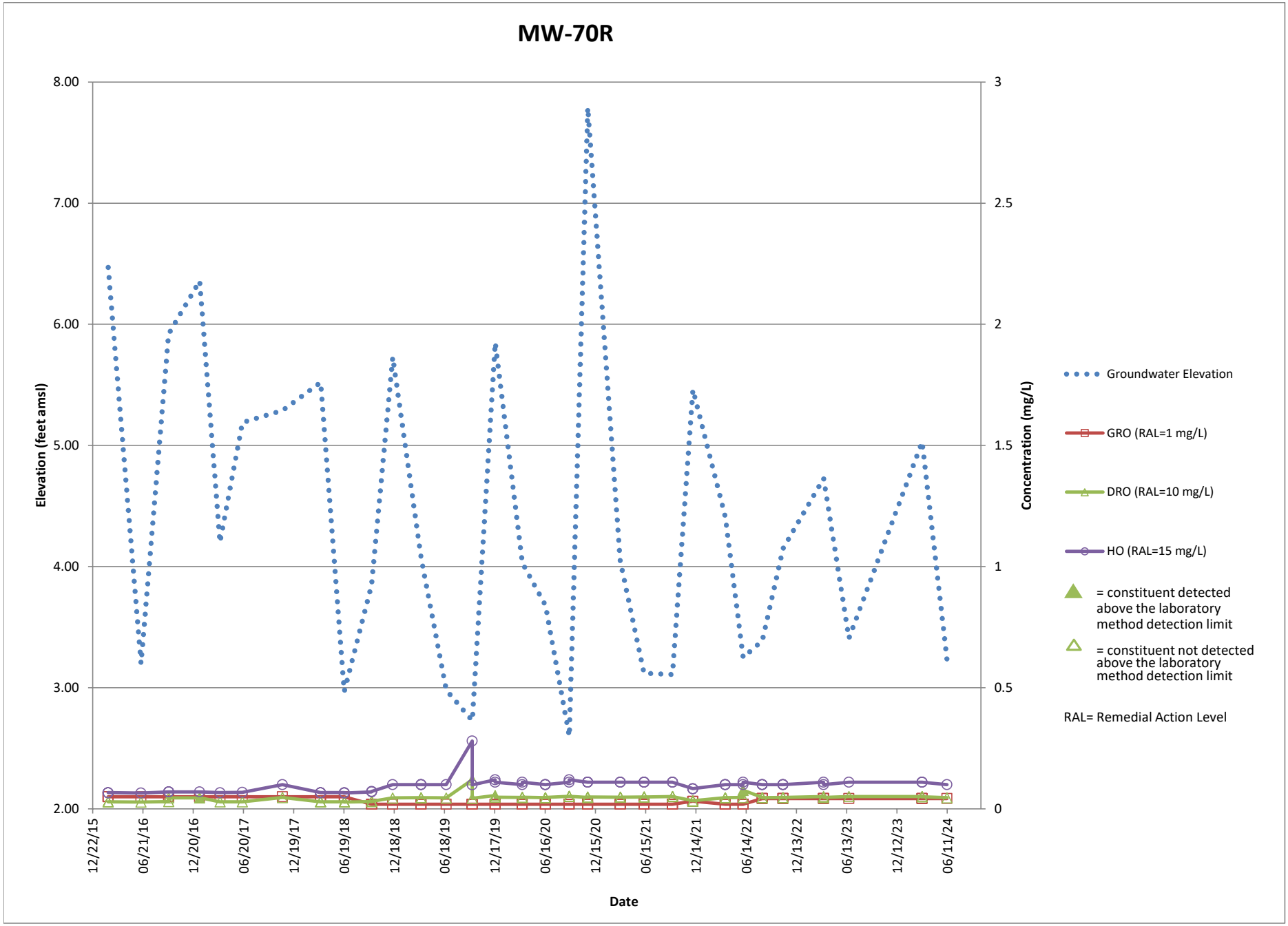

MW-206
Elevation (feet amsl)
Concentration (mg/L)
Date
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
4
3.5
3
2.5
2
1.5
1
0.5
0
01/18/07
09/15/07
05/12/08
01/07/09
09/04/09
05/02/10
12/28/10
08/25/11
04/21/12
12/17/12
08/14/13
04/11/14
12/07/14
08/04/15
03/31/16
11/26/16
07/24/17
03/21/18
11/16/18
07/14/19
03/10/20
11/05/20
07/03/21
02/28/22
10/26/22
06/23/23
02/18/24
10/15/24
06/12/25
Groundwater Elevation
GRO (RAL=1 mg/L)
DRO (RAL=10 mg/L)
HO (RAL=15 mg/L)
= constituent detected above the laboratory method detection limit
= constituent not detected above the laboratory method detection limit
RAL= Remedial Action Level

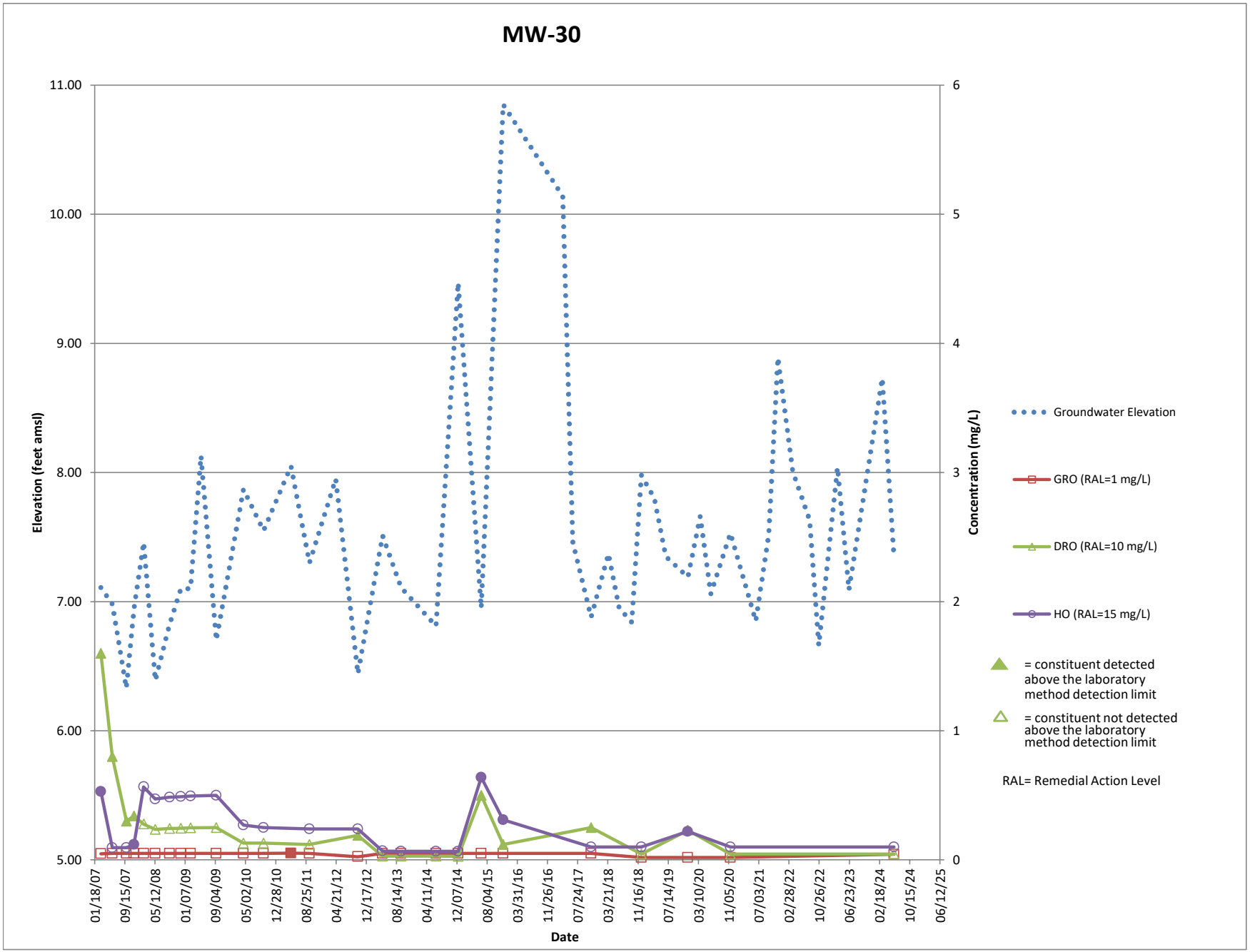

MW-207
Elevation (feet amsl)
Concentration (mg/L)
Date
8.00
7.00
6.00
5.00
4.00
3.00
2.00
3
2.5
2
1.5
1
0.5
0
01/18/07
09/15/07
05/12/08
01/07/09
09/04/09
05/02/10
12/28/10
08/25/11
04/21/12
12/17/12
08/14/13
04/11/14
12/07/14
08/04/15
03/31/16
11/26/16
07/24/17
03/21/18
11/16/18
07/14/19
03/10/20
11/05/20
07/03/21
02/28/22
10/26/22
06/23/23
02/18/24
10/15/24
06/12/25
Groundwater Elevation
GRO (RAL=1 mg/L)
DRO (RAL=10 mg/L)
HO (RAL=15 mg/L)
= constituent detected above the laboratory method detection limit
= constituent not detected above the laboratory method detection limit
RAL= Remedial Action Level


MW-209
8.00
7.00
6.00
5.00
4.00
3.00
2.00
Elevation (feet amsl)
6
5
4
3
2
1
0
Concentration (mg/L)
12/22/15
06/21/16
12/20/16
06/20/17
12/19/17
06/19/18
12/18/18
06/18/19
12/17/19
06/16/20
12/15/20
06/15/21
12/14/21
06/14/22
12/13/22
06/13/23
12/12/23
06/11/24
Date
Groundwater Elevation
GRO (RAL=1 mg/L)
DRO (RAL=10 mg/L)
HO (RAL=15 mg/L)
= constituent detected above the laboratory method detection limit
= constituent not detected above the laboratory method detection limit
RAL= Remedial Action Level


MW-210
Elevation (feet amsl)
Concentration (mg/L)
Date
10.00
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
9
8
7
6
5
4
3
2
1
0
12/22/15
06/21/16
12/20/16
06/20/17
12/19/17
06/19/18
12/18/18
06/18/19
12/17/19
06/16/20
12/15/20
06/15/21
12/14/21
06/14/22
12/13/22
06/13/23
12/12/23
06/11/24
Groundwater Elevation
GRO (RAL=1 mg/L)
DRO (RAL=10 mg/L)
HO (RAL=15 mg/L)
= constituent detected above the laboratory method detection limit
= constituent not detected above the laboratory method detection limit
RAL= Remedial Action Level


MW-211
8.00
7.00
6.00
5.00
4.00
3.00
2.00
Elevation (feet amsl)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Concentration (mg/L)
12/22/15
06/21/16
12/20/16
06/20/17
12/19/17
06/19/18
12/18/18
06/18/19
12/17/19
06/16/20
12/15/20
06/15/21
12/14/21
06/14/22
12/13/22
06/13/23
12/12/23
06/11/24
Date
Groundwater Elevation
GRO (RAL=1 mg/L)
DRO (RAL=10 mg/L)
HO (RAL=15 mg/L)
= constituent detected above the laboratory method detection limit
= constituent not detected above the laboratory method detection limit
RAL= Remedial Action Level


MW-70R
8.00
7.00
6.00
5.00
4.00
3.00
2.00
Elevation (feet amsl)
3
2.5
2
1.5
1
0.5
0
Concentration (mg/L)
12/22/15
06/21/16
12/20/16
06/20/17
12/19/17
06/19/18
12/18/18
06/18/19
12/17/19
06/16/20
12/15/20
06/15/21
12/14/21
06/14/22
12/13/22
06/13/23
12/12/23
06/11/24
Date
Groundwater Elevation
GRO (RAL=1 mg/L)
DRO (RAL=10 mg/L)
HO (RAL=15 mg/L)
= constituent detected above the laboratory method detection limit
= constituent not detected above the laboratory method detection limit
RAL= Remedial Action Level


MW-30
Elevation (feet amsl)
Concentration (mg/L)
Date
11.00
10.00
9.00
8.00
7.00
6.00
5.00
6
5
4
3
2
1
0
01/18/07
09/15/07
05/12/08
01/07/09
09/04/09
05/02/10
12/28/10
08/25/11
04/21/12
12/17/12
08/14/13
04/11/14
12/07/14
08/04/15
03/31/16
11/26/16
07/24/17
03/21/18
11/16/18
07/14/19
03/10/20
11/05/20
07/03/21
02/28/22
10/26/22
06/23/23
02/18/24
10/15/24
06/12/25
Groundwater Elevation
GRO (RAL=1 mg/L)
DRO (RAL=10 mg/L)
HO (RAL=15 mg/L)
= constituent detected above the laboratory method detection limit
= constituent not detected above the laboratory method detection limit
RAL= Remedial Action Level

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