Prepared for

Occidental Chemical Corporation
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Semiannual Groundwater Monitoring Program Report – May 2021

Petarcik Site
Consent Order No. 87-S105

Prepared by

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August 25, 2021

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1. INTRODUCTION

Remedial action at the Occidental Chemical Corporation (OxyChem) Petarcik Site (Site) was completed in July 1991. This action consisted of excavation of waste material from the Virginia Avenue on-Site right-of-way, placement of the excavated waste in on-Site disposal cells within the original waste disposal area, and installation of a soil cap across the entire disposal area, along with a vegetative cover of the cap. The requirements of the remedial action were specified in the Consent Order No. 87-S105 (amended December 1988).

The amended Consent Order also requires continuing groundwater monitoring with data review to provide for the continued evaluation of groundwater conditions at the Site. If the results of the monitoring program show the deterioration of groundwater quality OxyChem will, as specified in the Consent Order and Addendum to Attachment 2, install and operate a groundwater collection and treatment system.

The first groundwater-monitoring event for the remedial action-monitoring program was conducted in November 1992. The monitoring data review and reporting requirements for this program are specified in the "Addendum to Attachment 2, Consent Order 87-S105, Petarcik Site, December 1988."

This report presents and evaluates data from the May 2020 semiannual monitoring event.

2. GROUNDWATER MONITORING PROGRAM

Groundwater monitoring has been conducted at the Site on a regular schedule since 1990. Monitoring of all wells was conducted quarterly between February 1990 and August 1992. The hydraulic and water quality data collected over this period comprise the baseline for the continuing evaluation of groundwater conditions.

Between November 1992 and November 1999, groundwater monitoring was conducted semi-annually as described in Addendum to Attachment 2, Consent Order 87-S105, Petarcik Site, December 1988, and briefly in the report "Data Review, Semi-Annual Groundwater Monitoring Program, Petarcik Site, February 1993." Following the November 1999 Data Review, OxyChem proposed that the monitoring program be modified. On March 15, 2000, the Washington Department of Ecology (Ecology) approved modification of the monitoring program as follows:

- Semi-annual water quality monitoring of wells B-3, B-3A/B-3AR, B-4, and B-12
- Biennial water quality monitoring of the remaining wells
- Biennial hydraulic monitoring of all wells

These modifications were effective immediately upon receipt of the approval letter from WDOE. The semi-annual monitoring events are conducted in May and November. The biennial water monitoring events are conducted in November.

In November 2011, monitoring well B-10A was removed from the monitoring program due to a stainless steel bailer that is stuck in the well preventing sampling. Concentrations of all

analyzed parameters for samples collected from B-10A have been non-detect since 1998. Monitoring wells B-4 and B-4A are near well B-10A and are closer in proximity to the waste disposal area. Based on the locations of B-4 and B-4A and the historical analytical results, continued monitoring of B-10A is not warranted. Mr. Jason Cornetta (CRA) contacted Mr. Dom Reale by telephone on January 17, 2012 and confirmed that Ecology was in agreement with removing the well from the monitoring program.

In June 2017, monitoring well B-15A was removed from the monitoring program and scheduled for decommissioning due to a failing surface seal and monument. It was determined given the historical data trends and proximity of neighboring wells that the well could be removed without a degradation to the overall monitoring plan. Monitoring Well B-15A was decommissioned by a licensed driller on November 11, 2017.

Well locations are shown on Figure 2.1. For reference purposes, the water level database is presented in Appendix A, and a tabulation of water quality data is presented in Appendix B.

3. FIELD ACTIVITIES – MAY 2021

Groundwater sampling was conducted at the Site on May 24, 2021. Groundwater samples were collected from the four (4) monitoring wells monitored semi-annually. One (1) duplicate sample and one MS/MSD sample were collected.

Wells were sampled using well-dedicated equipment. Wells equipped with bladder pumps were purged using these pumps, and wells equipped with bailers were purged using the well-dedicated bailer or a disposable Teflon® bailer.

Measurements of pH, conductivity, and temperature were made after the removal of each well volume of purged water. Samples were collected after wells were purged to dryness or when stabilization of parameters occurred. Unless purged to dryness, a minimum of three (3) well volumes were purged from each well prior to sample collection.

Groundwater samples were collected, placed on ice, and shipped via overnight courier under chain of custody to APPL Laboratories in Clovis, CA. Samples were analyzed for Tetrachloroethene (PCE), Trichloroethene (TCE), Vinyl Chloride, and Chloroform by EPA Method 8260B.

Sample collection summary logs are contained in Appendix C.

4. DATA REVIEW

The analytical data have been reviewed for quality assurance/quality control (QA/QC) (see Appendix D). The conclusion of the review is that the data are acceptable for their intended use without qualification. The data are presented in Table 4.1.

4.1 Data Evaluation

The data from the May 2021 monitoring event have been evaluated in accordance with the procedure in Section 2.3 of the Addendum to Attachment 2 of Consent Order No. 87-S105.

The review consists of a step-wise comparison of the analytical data to specified water quality criteria and, if necessary, to the site-specific groundwater cleanup criteria. The water quality criteria applicable to the data review are presented in Table 4.2. The relevant steps required in the evaluation and the actual results of the evaluation are as follows:

Required: "The water quality for each of the remaining wells [that is, the Site monitoring wells excluding wells B7 and B8] will be compared with the criteria/level listed in Table 1 [Table 4.2 of this report]. If the water quality for each remaining well meets the criteria/level listed in Table 1, no further evaluation will be conducted."

Actual: Table 4.1 indicates that the above requirement was met for all analytes in all subject wells. Therefore, no further evaluation was conducted.

4.2 Action

Since the data obtained from the May 2021 event do not show an exceedance of the groundwater data evaluation criteria listed in Table 4.2, monitoring will continue in accordance with the current schedule.

5. SUMMARY

The semiannual groundwater monitoring event was conducted in May 2021. The analytical data obtained from this monitoring event are consistent with the historic data. The analytical results show that in May 2020, no analyte was reported at a concentration exceeding the evaluation criteria. Therefore, no increase in Site monitoring or review of remedial alternatives is required.

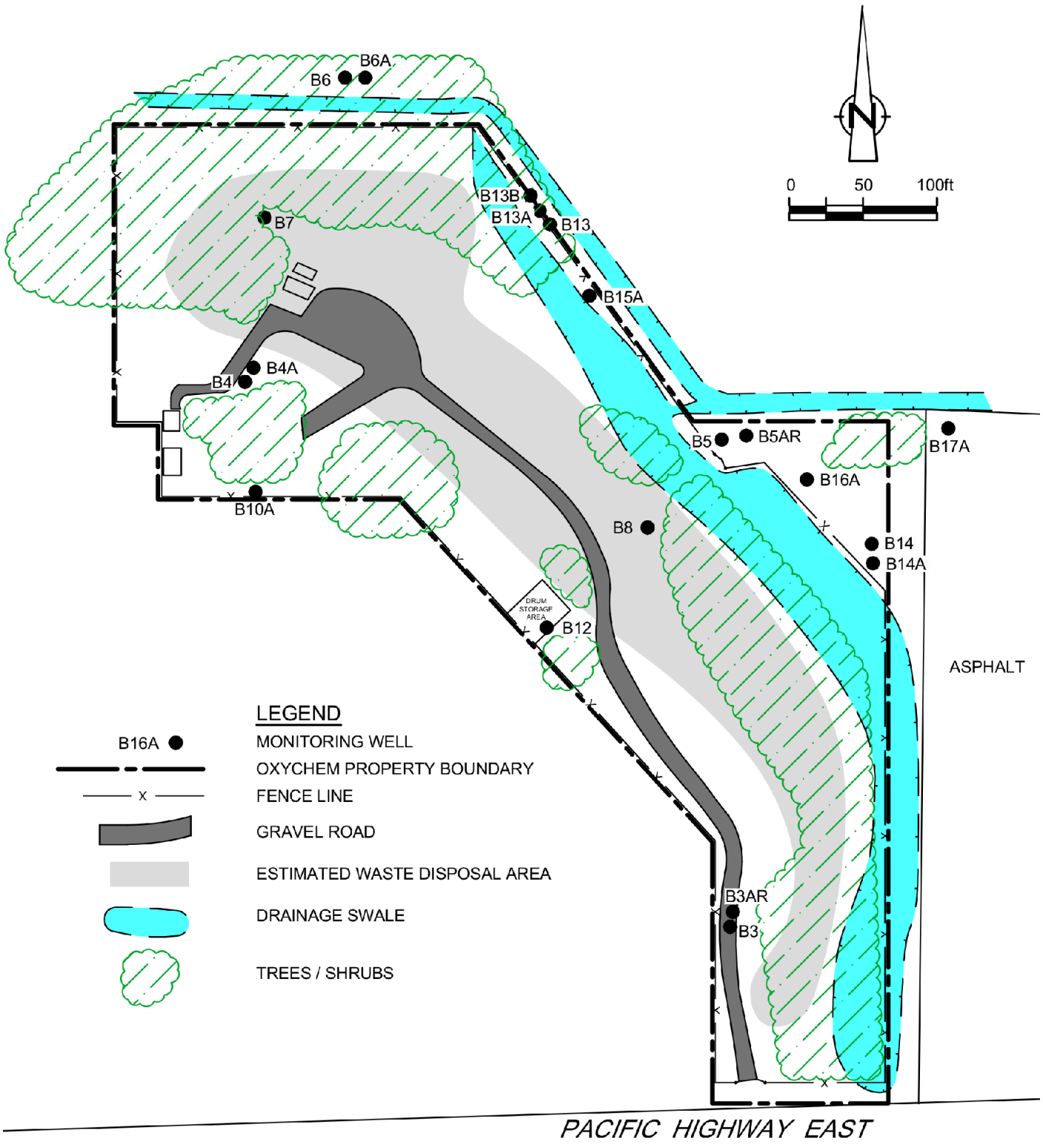
The next monitoring event will be a semi-annual event and will be conducted in November 2021.

All of which is respectfully submitted,

GHD

Rick Bieber, LG

FIGURES



Monitoring Well Locations

Petarcik Site – Tacoma WA
Occidental Chemical Company

Geosyntec consultants

TR0837-05-02 | September 2021

Figure 2.1

P:\CAD_GIS\Projects\TR0837-05-02_Tacoma\MXDs\Figure 2_1 Monitoring Well Locations.mxd 9/29/2020 8:01:14 AM

TABLES

Table 4.1

Groundwater Analytical Data
Semi-annual Groundwater Monitoring
Petarcik Site - May 2021
Occidental Chemical Corporation
Tacoma, Washington

	Sample Location:	B-3	B-3	B-4	B-12R	B-3AR
	Sample ID:	GW-052421-NT-B3	GW-052421-NT-FD-1	GW-052421-NT-B-4	GW-052421-NT-B12	GW-052421-NT-B3AR
	Sample Date:	05/24/21	05/24/21	05/24/21	05/24/21	05/24/21
			Duplicate			
Parameters	**Units**					
Volatile Organic Compounds						
Chloroform (Trichloromethane)	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Tetrachloroethene	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Trichloroethene	µg/L	0.50 U	0.50 U	0.32 J	0.50 U	0.50 U
Vinyl chloride	µg/L	0.50 U	0.15 J	0.50 U	0.50 U	0.50 U

Notes:
J = Estimated Concentration

U = Not present at or above the associated value.
µg/L = Micrograms per liter
Concentration exceeds the water quality criteria presented in Table 4.2.

Table 4.2

Groundwater Data Evaluation Criteria
Semi-Annual Groundwater Monitoring
Occidental Chemical Corporation
Petarcik Site - May 2021
Tacoma, Washington

Chemical	Level/Criteria	
Chloroform (Tricloromethane)	MCL	100 µg/L*
Tetrachloroethene	WQC	8 µg/L**
Trichloroethene	MCL	5 µg/L
Vinyl chloride	MCL	2 µg/L

Notes:

* Total trihalomethanes (the sum of bromodichloromethane, dibromochloromethane, bromoform, and chloroform).

** Protection of human health from carcinogen effects due to exposure through ingestion of contaminated water and contaminated aquatic organisms 10-5 risk = 8 µg/L.

MCL Maximum Contaminant Level (Dec. 1988).

WQC Water Quality Criteria (Dec. 1988).

APPENDIX A

Water Level Elevation Database

Appendix A

Water Level Elevation Database
Biennial Groundwater Monitoring
Petarcik Site - November 2019
Occidental Chemical Corporation
Tacoma, Washington

Well Number		TOC Elevation	Feb-90	May-90	Aug-90	Feb-91	May-91	Aug-91	Nov-91	Feb-92	May-92	Aug-92	Nov-92	May-93	Aug-93	Nov-93	May-94
B3		10.08	3.70	2.60	1.31	3.51	2.52	1.48	2.28	3.79	1.55	1.22	1.92	3.54	1.74	1.73	2.77
B3A/B3AR	**	10.80	5.21	2.22	1.32	5.72	NM	2.10	3.10	5.67	2.90	1.60	2.62	4.65	2.22	1.95	3.66
B4		6.40	3.56	2.17	1.39	3.11	2.32	4.50	5.21	6.51	1.87	1.20	2.17	3.38	1.70	1.73	2.52
B4A		6.61	3.25	1.38	2.24	2.79	1.35	1.15	1.93	3.18	1.48	1.21	1.98	2.86	1.32	1.58	2.11
B5		7.38	2.83	1.78	1.71	2.15	1.33	1.24	1.69	2.37	1.41	1.24	2.10	2.36	1.41	1.48	1.76
B5A/B5AR	**	6.21	2.71	1.78	1.73	2.29	1.24	NM	1.75	1.53	0.58	0.38	0.27	1.51	0.56	0.63	0.93
B6		8.55	3.80	2.52	1.52	3.37	2.31	1.84	2.30	3.41	2.08	1.68	2.62	3.33	2.11	1.73	2.67
B6A		8.61	4.48	2.24	1.82	4.87	2.06	1.61	2.52	3.86	1.88	1.62	2.78	3.79	2.01	1.90	2.45
B7		6.05	2.95	1.13	0.66	NM	0.25	-0.31	0.33	1.25	-0.15	-0.35	0.31	0.90	-0.38	-0.33	0.01
B8		8.45	3.65	1.85	0.98	2.74	1.97	1.91	2.32	3.28	1.87	1.55	2.22	2.80	1.65	1.49	2.17
B9		9.49	3.56	2.21	1.32					----A B A N D O N E D ----							
B10A		7.03	4.50	NM	-0.31	3.92	2.86	0.12	1.83	4.51	1.35	-0.47	1.49	3.55	0.80	1.01	2.95
B12/B12R	**	8.25	3.71	2.95	1.23	3.49	2.52	1.39	2.19	3.68	1.94	1.11	2.11	3.53	1.69	1.68	2.68
B13 (artesian)		7.19	10.22	9.50	8.30	10.37	9.79	8.63	9.79	10.66	9.42	8.69	9.07	10.42	9.78	9.07	10.23
B13A		6.22	3.78	2.54	1.65	2.49	1.91	-0.48	2.37	3.49	2.19	-0.17	2.54	3.37	2.15	1.90	2.63
B13B		7.45	2.67	1.71	1.66	2.14	1.25	1.25	1.82	2.57	1.50	1.31	2.17	1.95	1.50	1.55	1.90
B14		7.12	2.81	1.82	1.74	2.56	1.35	1.29	1.89	2.77	1.71	1.30	2.19	2.55	1.62	1.49	1.98
B14A		7.20	3.02	2.03	1.74	2.58	1.51	1.28	1.82	2.67	1.53	1.33	2.24	2.45	1.45	1.50	1.86
B15A*	**	7.96						1.23	1.72	2.61	1.47	1.03	2.11	2.41	1.29	1.55	1.88
B16A*	**	6.71						1.29	1.79	2.47	1.46	0.45	2.16	2.33	1.56	1.50	1.91
B17A*	**	7.73						1.13	1.61	2.26	1.25	1.06	2.11	2.33	1.30	1.37	1.61

Appendix A

Water Level Elevation Database
Biennial Groundwater Monitoring
Petarcik Site - November 2019
Occidental Chemical Corporation
Tacoma, Washington

Well Number		TOC Elevation	Nov-94	May-95	Nov-95	May-96	Nov-96	May-97	Nov-97	May-98	Nov-98	May-99	Jul-99	Nov-99	May-00	Nov-00
B3		10.08	2.54	2.60	2.38	3.94	4.37	3.84	4.04	3.00	2.20	2.38	1.55	1.72	2.85	2.04
B3A/B3AR	**	10.80	3.51	3.46	3.49	5.54	5.94	5.12	5.35	3.86	2.28	3.44	2.11	1.72	3.88	2.50
B4		6.40	2.70	2.44	2.65	3.64	4.16	3.69	3.9	2.88	2.22	1.98	1.30	1.50	2.52	1.81
B4A		6.61	2.44	2.15	2.53	3.30	3.96	3.45	3.62	2.59	2.06	1.89	1.08	1.42	NM	NM
B5		7.38	2.16	1.73	2.21	2.66	3.53	2.73	2.96	2.45	2.07	1.11	0.79	1.31	NM	NM
B5A/B5AR	**	6.21	1.31	0.89	1.35	1.81	2.70	1.91	2.12	0.97	1.21	0.26	-0.04	0.45	NM	NM
B6		8.55	2.75	2.25	2.65	3.49	3.94	3.67	3.77	2.83	2.07	1.85	NM	1.30	NM	NM
B6A		8.61	3.40	2.20	2.60	3.3.7	5.31	3.63	3.99	2.69	2.37	1.9	NM	1.51	NM	NM
B7		6.05	0.34	-0.16	0.20	1.24	1.87	1.24	1.25	0.52	0.19	-0.40	NM	-0.60	NM	NM
B8		8.45	2.42	2.02	2.41	3.42	3.52	3.33	3.6	2.47	2.00	1.7	1.35	1.42	NM	NM
B9		9.49		----A B A N D O N E D ----										----A B A N D O N E D ----		
B10A		7.03	2.08	2.11	3.17	4.75	4.93	4.71	4.88	3.00	1.35	2.98	0.89	0.90	2.75	1.95
B12/B12R	**	8.25	2.75	2.53	2.70	3.88	4.31	3.80	4.06	2.95	2.16	2.28	NM	1.59	NM	NM
B13 (artesian)		7.19	9.08	10.89	8.83	10.21	9.96	10.36	10.65	10.65	8.92	8.35	NM	8.55	NM	NM
B13A		6.22	2.68	2.17	2.60	3.55	3.67	3.67	3.8	2.84	2.36	1.74	1.81	1.80	NM	NM
B13B		7.45	2.29	1.82	2.28	2.78	3.64	2.93	3.13	2.25	2.10	1.2	0.86	1.31	NM	NM
B14		7.12	2.23	1.93	2.12	2.65	3.59	2.90	3.07	2.30	2.13	1.65	1.18	1.56	NM	NM
B14A		7.20	2.34	1.70	2.25	2.80	3.61	2.75	3.01	2.16	2.07	1.42	1.00	1.54	NM	NM
B15A*	**	7.96	2.24	1.68	2.23	2.69	3.54	2.85	3.03	2.18	2.06	1.11	0.81	1.25	NM	NM
B16A*	**	6.71	2.10	1.75	2.25	2.67	3.56	2.70	1.92	2.11	2.07	1.22	0.85	1.38	NM	NM
B17A*	**	7.73	2.23	1.63	2.15	2.48	3.41	2.46	2.74	1.91	2.01	1.04	NM	1.29	NM	NM

Appendix A

Water Level Elevation Database
Biennial Groundwater Monitoring
Petarcik Site - November 2019
Occidental Chemical Corporation
Tacoma, Washington

Well Number		TOC Elevation	May-01	Nov-01	May-02	Nov-02	May-03	Nov-03	May-04	Nov-04	May-05	Nov-05	May-06	Nov-06	May-07
B3		10.08	2.76	2.25	2.54	1.87	3.30	3.46	1.47	4.03	2.48	2.38	1.82	0.89	1.81
B3A/B3AR	**	10.80	3.80	3.43	4.25	1.72	3.15	4.18	2.76	3.54	4.18	3.50	2.75	1.11	3.04
B4		6.40	2.36	1.92	2.11	1.73	2.04	2.27	1.59	2.40	2.10	1.85	1.55	1.75	1.50
B4A		6.61	NM	1.93	NM	NM	NM	2.36	NM	NM	NM	1.88	NM	4.41	1.53
B5		7.38	NM	1.67	NM	NM	NM	2.21	NM	NM	NM	1.58	NM	2.48	1.37
B5A/B5AR	**	6.21	NM	NM	NM	NM	NM	0.98	NM	NM	NM	0.21	NM	1.21	0.10
B6		8.55	NM	2.25	NM	NM	NM	3.11	NM	NM	NM	2.56	NM	4.00	2.40
B6A		8.61	NM	2.41	NM	NM	NM	2.96	NM	NM	NM	2.82	NM	5.11	2.06
B7		6.05	NM	-0.19	NM	NM	NM	0.05	NM	NM	NM	-0.1	NM	2.62	-0.35
B8		8.45	NM	2.04	NM	NM	NM	2.42	NM	NM	NM	2.4	NM	1.46	1.77
B9		9.49									----A B A N D O N E D ----				
B10A		7.03	2.65	2.99	NM	NM	NM	3.32	NM	NM	NM	2.63	NM	5.28	2.66
B12/B12R	**	8.25	NM	2.57	3.51	2.82	3.35	4.76	2.76	3.74	3.40	3.15	2.70	5.00	2.70
B13 (artesian)		7.19	NM	NM	NM	NM	NM	NM	NM	NM	NM	11.34	NM	NM	NM
B13A		6.22	NM	2.37	NM	NM	NM	2.66	NM	NM	NM	3.12	NM	3.34	2.32
B13B		7.45	NM	1.7	NM	NM	NM	2.27	NM	NM	NM	1.67	NM	4.31	1.43
B14		7.12	NM	1.97	NM	NM	NM	2.45	NM	NM	NM	1.82	NM	2.43	1.65
B14A		7.20	NM	1.79	NM	NM	NM	2.42	NM	NM	NM	1.8	NM	2.53	1.54
B15A*	**	7.96	NM	1.6	NM	NM	NM	2.22	NM	NM	NM	1.56	NM	4.26	1.36
B16A*	**	6.71	NM	1.72	NM	NM	NM	2.27	NM	NM	NM	1.66	NM	2.32	1.41
B17A*	**	7.73	NM	1.66	NM	NM	NM	2.27	NM	NM	NM	1.63	NM	4.37	1.37

Appendix A

Water Level Elevation Database
Biennial Groundwater Monitoring
Petarcik Site - November 2019
Occidental Chemical Corporation
Tacoma, Washington

Well Number		TOC Elevation	Nov-07	May-08	Nov-08	May-09	Nov-09	Nov-11	May-12	Nov-12	May-13	Nov-13	May-14	Nov-14	May-15
B3		10.08	2.36	3.69	2.63	2.40	3.44	1.82	2.36	3.52	2.18	3.49	4.32	2.47	0.69
B3A/B3AR	**	10.80	3.71	4.59	4.98	4.34	5.75	2.10	3.47	5.30	3.12	5.10	4.14	4.26	2.14
B4		6.40	1.99	1.75	2.97	1.02	1.93	2.19	2.09	3.05	2.15	3.25	3.10	2.44	1.95
B4A		6.61	2.27	1.83	3.28	1.07	2.27	2.32	2.19	3.10	2.09	3.52	3.15	2.47	0.09
B5		7.38	1.71	1.44	3.05	1.83	1.71	2.40	2.16	2.94	2.09	3.63	3.33	2.2	1.89
B5A/B5AR	**	6.21	0.47	0.39	1.80	0.59	3.07	1.20	0.88	1.67	0.72	2.29	2.06	0.96	0.64
B6		8.55	3.06	2.72	3.48	2.78	3.56	2.17	2.24	3.47	2.93	3.44	3.44	2.94	0.99
B6A		8.61	2.18	2.90	4.15	2.00	3.49	2.00	2.89	2.56	2.72	3.27	2.76	2.76	1.05
B7		6.05	0.26	0.08	1.15	0.10	1.16	-0.15	0.33	1.36	0.29	1.65	1.23	0.68	0.29
B8		8.45	2.77	2.41	4.64	3.01	4.37	2.54	2.42	4.41	2.04	3.61	3.64	2.956	0.69
B9		9.49						----A B A N D O N E D ----							
B10A		7.03	2.19	0.87	4.70	1.55	3.18	NM	1.71	4.72	--	4.74	4.23	3.98	NM
B12/B12R	**	8.25	NM	2.83	4.17	3.49	4.33	3.21	3.23	4.65	3.11	4.39	4.33	4.62	3.09
B13 (artesian)		7.19	10.42	NM	NM	NM	11.35	7.19	11.12	11.81	3.73	11.81	12.97	8.345	12.96
B13A		6.22	2.95	3.54	3.09	3.01	2.49	0.90	2.87	3.92	2.86	3.11	3.65	4.32	0.51
B13B		7.45	2.00	2.02	3.19	1.94	3.02	2.48	2.18	3.04	2.04	3.58	3.34	2.32	1.56
B14		7.12	2.17	2.04	3.19	2.17	3.39	2.55	2.29	3.18	2.22	3.68	3.40	2.39	1.23
B14A		7.20	2.11	2.03	3.23	2.00	3.36	2.48	2.22	3.11	2.07	3.53	3.34	2.4	1.74
B15A*	**	7.96	1.74	1.75	3.05	1.85	3.22	2.45	2.14	2.91	1.98	3.56	3.32	2.22	0.89
B16A*	**	6.71	1.98	2.39	3.12	1.90	3.34	2.44	2.19	2.96	1.95	3.52	3.31	2.27	0.8
B17A*	**	7.73	2.09	1.96	3.12	1.84	3.36	2.46	2.08	2.90	1.93	3.60	3.36	2.2	2.09

Appendix A

Water Level Elevation Database
Biennial Groundwater Monitoring
Petarcik Site - November 2019
Occidental Chemical Corporation
Tacoma, Washington

Well Number		TOC Elevation	Nov-15	May-16	Nov-16	May-17	Nov-17	May-18	Nov-18	May-19	Nov-19	May-20	Nov-21	May-21
B3		10.08	2.35	1.55	3.65	0.59	0.59	1.84	-0.14	1.23	0.63	2.3	1.23	0.62
B3A/B3AR	**	10.80	2.8	2.48	5.15	3.3	NM	3.02	0.34	0.85	0.6	2.9	1.15	1.76
B4		6.40	2.11	1.65	3.35	1.89	1.89	2.1	0.59	1.61	2.3	2.21	2.7	0.8
B4A		6.61	2.29	1.80	3.41	-1.2	-1.2	0.34	-1.04	-0.25	0.66	1.42	1.1	1.4
B5		7.38	2.07	1.65	3.17	1.46	1.46	2.26	2.05	1.55	2.62	2.33	3.23	2.15
B5A/B5AR	**	6.21	0.8	0.44	1.83	0.21	0.21	1.08	0.84	0.81	1.31	1.11	1.93	0.81
B6		8.55	2.65	2.42	3.68	1.07	1.07	2.02	0.61	0.53	1.4	1.9	2.5	1.64
B6A		8.61	1.91	1.85	3.07	2.22	2.22	2.06	1.57	1.4	1.96	2.56	5.38	2.27
B7		6.05	0.28	-0.10	1.23	-0.08	-0.08	-1.29	-1.76	-1.46	0.23	0.29	-0.55	-0.8
B8		8.45	3.31	1.85	4.46	3.32	3.32	0.99	3.32	0.36	2.57	2.09	1.82	1.83
B9		9.49												NM
B10A		7.03	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
B12/B12R	**	8.25	3.2	2.68	4.54	2.94	2.94	3.19	2.62	2.82	3.3	3.33	4.5	2.9
B13 (artesian)		7.19	12.98	12.36	13.20	13.2	13.2	10.0	13.88	12.5	13.8	13.88	0.5	13.88
B13A		6.22	0.44	2.19	1.02	2.13	2.13	2.49	0.42	1.64	1.67	1.12	2.99	1.44
B13B		7.45	2.13	1.72	2.55	1.02	1.02	1.94	0.87	1.46	2.55	2.4	2.6	1.71
B14		7.12	2.31	1.88	3.11	0.69	0.69	0.41	0.85	1.1	1.37	1.87	2.97	1.67
B14A		7.20	2.26	1.81	3.18	1.22	1.22	2.36	1.66	0.84	1.95	2.5	3.29	2.05
B15A*	**	7.96	2.02	1.66	3.95	NM	NM	0.76	NM	NM	NM	NM	NM	NM
B16A*	**	6.71	2.1	1.70	2.93	0.15	0.15	1.37	0.73	0.56	2.58	2.36	3	1.71
B17A*	**	7.73	2.08	1.73	3.01	1.13	1.13	2.27	1.91	-0.95	2.25	2.5	1.81	1.82

APPENDIX B

Comprehensive Water Quality Database

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B-3

Sample Location:		**B-3**	**B-3**	**B-3**	**B-3**	**B-3**
Sample ID:		**GW-MPT-007**	**B-3**	**B-3**	**B-3**	**B-3-110700-DC**
Sample Date:		**5/8/1998**	**5/13/1999**	**11/3/1999**	**5/8/2000**	**11/7/2000**
Parameter	**Units**					
Volatiles						
Chloroform (Trichloromethane)	µg/L	1.0 U	0.20 U	0.50 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	0.20 U	0.50 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	0.20 U	0.50 U	1.0 U	1.0 U
Vinyl chloride	µg/L	1.2	0.26	3.2	90	1.4

B-3

Sample Location:		**B-3**	**B-3**	**B-3**	**B-3**	**B-3**
Sample ID:		**B-3-0503**	**B3-1103**	**B-3-0504**	**B-3-1104**	**B-3-0505**
Sample Date:		**5/9/2003**	**11/11/2003**	**5/15/2004**	**11/11/2004**	**5/13/2005**
Parameter	**Units**					
Volatiles						
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	µg/L	1.4	1.2	3.1	0.72	3.3

B-3

Sample Location:		**B-3**	**B-3**	**B-3**	**B-3**	**B-3**
Sample ID:		**GW-112807-TG-B3**	**GW-052008-TG-B3**	**GW-111408-TG-pet-B3-07**	**GW-052909-TG-PET-B3**	**GW-111109-TG-B3**
Sample Date:		**11/28/2007**	**5/20/2008**	**11/14/2008**	**5/29/2009**	**11/11/2009**
Parameter	**Units**					
Volatiles						
Chloroform (Trichloromethane)	µg/L	1 U	1 U	1 U	1.0U	1.0 U
Tetrachloroethene	µg/L	1 U	1 U	1 U	1.0U	1.0 U
Trichloroethene	µg/L	1 U	1 U	1 U	1.0U	1.0 U
Vinyl chloride	µg/L	1.3	0.32 J	0.67	0.5U	1.2

B-3

Sample Location:		**B-3**	**B-3**	**B-3**	**B-3**	**B-3**
Sample ID:		**GW-111811-AK-B3**	**GW-053112-AK-B3**	**GW-112812-MD-B3**	**GW-051713-MD-B3**	**GW-112013-BP-B-3**
Sample Date:		**11/18/2011**	**5/31/2012**	**11/28/2012**	**5/17/2013**	**11/20/2013**

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Parameter	**Units**					
Volatiles						
Chloroform (Trichloromethane)	µg/L	1.0 U	0.50 U	0.50 U	0.50 U	0.50 U
Tetrachloroethene	µg/L	1.0 U	0.50 U	0.50 U	0.13 J	0.50 U
Trichloroethene	µg/L	1.0 U	0.11 J	0.50 U	0.12 J	0.50 U
Vinyl chloride	µg/L	0.5 U	1.7	0.29J	0.31 J	0.25 J
B-3						
Sample Location:		**B-3**	**B-3**	**B-3**	**B-3**	**B-3**
Sample ID:		**GW-111115-BP-B-3**	**GW-051716-BP-B-3**	**GW-111516-NT-B-3**	**GW-052517-NT-B3**	**GW-171117-NT-B3**
Sample Date:		**11/11/2015**	**05/17/16**	**11/15/16**	**05/25/17**	**11/17/17**
Parameter	**Units**					
Volatiles						
Chloroform (Trichloromethane)	µg/L	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	µg/L	0.16 J	0.5 U	0.5 U	0.5 U	0.5 U

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B-3

Sample Location:		**B-3**	**B-3**	**B-3**	**B-3**	
Sample ID:		**GW-051320-RB-B-3**	**GW-111720-NT-B-3**	**GW-052421-NT-B-3**	**GW-052421-NT-FD-1**	
Sample Date:		**05/13/2020**	**11/17/2020**	**05/24/2021**	**05/24/2021**	
Parameter	**Units**					
Volatiles						
Chloroform (Trichloromethane)	µg/L	0.5 U	1.0 U	0.5 U	0.5 U	
Tetrachloroethene	µg/L	0.5 U	1.0 U	0.5 U	0.5 U	
Trichloroethene	µg/L	0.5 U	1.0 U	0.5 U	0.5 U	
Vinyl chloride	µg/L	0.16 J	0.5 U	0.5 U	0.15 J	

B-3A

Sample Location:		**B-3A**	**B-3A**	**B-3AR**	**B-3AR**	**B-3AR**
Sample ID:		**GW-MPT-008**	**B-3A**	**B-3**	**5/13/1999**	**B-3AR**
Sample Date:		**5/8/1998**	**11/2/1998**	**11/2/1998**		**11/3/1999**
Parameter	**Units**					
Volatiles					0.20 U	
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	0.27	0.50 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	0.39	0.50 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	0.96	0.20 J
Vinyl chloride	µg/L	1.5	1.9	1.0 U		3.2
Vinyl chloride	µg/L	0.5 U	1.5 J	0.5 U		0.5 U

B-3A

Sample Location:		**B-3AR**	**B-3AR**	**B-3AR**	**GW-112607-TG-B3AR**	**B-3AR**
Sample ID:		**GW-052506-B-3AR-001**	**GW-110306-B-3AR-003**	**GW-051007-B-3AR-001**	**11/26/2007**	**GW-052008-TG-B3AR**
Sample Date:		**5/25/2006**	**11/03/06**	**5/10/2007**		**5/20/2008**
		Duplicate				
Parameter	**Units**					
Volatiles					1.0 U	
Chloroform (Trichloromethane)	µg/L	1.0U	1.0U	1.0U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0U	1.0U	1.0U	0.73 J	1.0 U
Trichloroethene	µg/L	1.0U	0.38J	1.0U	0.8	0.55 J
Vinyl chloride	µg/L	0.5U	1.0U	0.5U		0.5 U

B-3A

Sample Location:	**B-3AR**	**B-3AR**	**B-3AR**	**B-3AR**	**B-3AR**
Sample ID:	**GW-111710-MD-B3AR**	**GW-111710-MD-FD1**	**GW-052611-MD-B3AR**	**GW-111811-AK-B3AR**	**GW-053112-AK-B3AR**
Sample Date:	**11/17/2010**	**11/17/2010**	**5/26/2011**	**11/18/2011**	**5/31/2012**
		Duplicate			

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Parameter	Units					
Volatiles					1.0 U	
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	0.50 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	0.50 U
Trichloroethene	µg/L	0.57 J	0.35 J	0.37 J	0.5 U	0.35 J
Vinyl chloride	µg/L	0.29 J	0.5 U	0.5 U		0.50 U

B-3A

Sample Location:		**B-3AR**	**B-3AR**	**B-3AR**	**B-3AR**	**B-3AR**
Sample ID:		**GW-112013-BP-B-3AR**	**GW-050814-BP-B-3AR**	**GW-050914-BP-FD-1**	**GW-111714-BP-B-3AR**	**GW-050515-NH-B-3A**
Sample Date:		**11/20/2013**	**5/8/2014**	**5/8/2014 (Duplicate)**	**11/17/2014**	**5/5/2014**
Parameter	**Units**					
Volatiles						
Chloroform (Trichloromethane)	µg/L	0.50 U	0.50 UJ	0.50 UJ	0.50 U	0.50 U
Tetrachloroethene	µg/L	0.50 U	0.50 UJ	0.50 UJ	0.50 U	0.50 U
Trichloroethene	µg/L	0.39 J	0.35 J	0.44 J	0.32 J	0.35J
Vinyl chloride	µg/L	0.12 J	0.50 UJ	0.50 UJ	0.12 J	0.50U

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B-3A

Sample Location:		**B-3AR**	**B-3AR**	**B-3AR**	**B-3AR**	**B-3AR**
Sample ID:		**GW-052517-NT-B-3ARD**	**GW-053018-NT-B-3AR**	**GW-110718-NT-B-3AR**	**GW-050619-NT-B-3AR**	**GW-112019-NT-B-3AR**
Sample Date:		**05/25/17**	**5/30/2018**	**11/07/18**	**5/06/2019**	**11/20/2019**
		Duplicate				
Parameter	**Units**					
Volatiles						
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	0.27 J	1.0 U	1.0 U
Vinyl chloride	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

B-4

Sample Location:		**B-4**	**B-4**	**B-4**	**B-4**	**B-4**
Sample ID:		**GW-MLP-018**	**B-4**	**B-4**	**11/3/1999**	**B-4**
Sample Date:		**5/12/1998**	**11/2/1998**	**5/14/1999**		**5/8/2000**
Parameter	**Units**					
Volatiles						
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	0.20 U	0.80 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	0.20 U	0.80 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	0.20 U	0.80 U	1.0 U
Vinyl chloride	µg/L	1.0 U	1.0 U	3.1	4.7	1.0 U

B-4

Sample Location:		**B-4**	**B-4**	**B-4**	**B-4-0504**	**B-4**
Sample ID:		**B-4-DC-111302**	**B-4-0503**	**B4-1103**	**5/15/2004**	**B-4-1104**
Sample Date:		**11/13/2002**	**5/9/2003**	**11/11/2003**		**11/11/2004**
Parameter	**Units**					
Volatiles					1.0 U	
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	0.89	1.0 U
Vinyl chloride	µg/L	1.1 J	0.81	0.87		0.5 U

B-4

Sample Location:		**B-4**	**B-4**	**B-4**	**GW-052008-TG-B4**	**B-4**
Sample ID:		**GW-111408-TG-pet-B3-07**	**GW-051007-FDUP**	**GW-112607-TG-B4**	**5/20/2008**	**GW-111308-TG-pet-B4-01**
Sample Date:		**11/14/2008**	**5/10/2007**	**11/26/2007**		**5/20/2008**
			Duplicate			
Parameter	**Units**					
Volatiles					1 U	

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Chloroform (Trichloromethane)	µg/L	1.0U	1.0U	1 U	1 U	1 U
Tetrachloroethene	µg/L	1.0U	1.0U	1 U	1 U	1 U
Trichloroethene	µg/L	1.0U	1.0U	1 U	0.5 U	1 U
Vinyl chloride	µg/L	0.67	0.5U	0.5 U		0.5 U
B-4						
Sample Location:		**B-4**	**B-4**	**B-4**	**GW-111911-AK-B4**	**B-4**
Sample ID:		**GW-052410-CM-FD**	**GW-111810-MD-B4**	**GW-052611-MD-B4**	**11/19/2011**	**GW-053112-AK-B4**
Sample Date:		**5/24/2010**	**11/18/2010**	**5/26/2011**		**5/31/2012**
		Duplicate				
Parameter	**Units**					
Volatiles					1.0 U	
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	0.50 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	0.50 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	0.5 U	0.50 U
Vinyl chloride	µg/L	0.5 U	0.5 U	0.5 U		0.50 U

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B-4

Sample Location:		**B-4**	**B-4**	**B-4**	**B-4**	**B-4**
Sample ID:		**GW-111714-BP-B-4**	**GW-050515-NH-B4**	**GW-111315-BP-B-4**	**GW-051716-BP-B-4**	**GW-111416-NT-B-4**
Sample Date:		**11/17/2014**	**5/5/2015**	**11/13/2015**	**05/17/16**	**11/14/16**
Parameter	**Units**					
Volatiles						
Chloroform (Trichloromethane)	µg/L	0.50 U	0.50 U	0.50 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	0.50 U	0.50 U	0.50 U	1.0 U	1.0 U
Trichloroethene	µg/L	0.50 U	0.50 U	0.50 U	1.0 U	1.0 U
Vinyl chloride	µg/L	0.50 U	0.50 U	0.50 U	0.5 U	0.5 U

B-4

Sample Location:		**B-4**	**B-4**	**B-4**	**B-4**	**B-4**
Sample ID:		**GW-050619-NT-B4**	**GW-050619-NT-FD-1**	**GW-112019-NT-B4**	**GW-05120-RB-B-4**	**GW-111720-NT-B4**
Sample Date:		**05/06/2019**	**05/06/2019**	**11/20/2019**	**05/13/2020**	**11/17/2020**
			Duplicate			
Parameter	**Units**					
Volatiles						
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

B-4A

Sample Location:		**B-4A**	**B-4A**	**B-4A**	**B-4A**	**B-4A**
Sample ID:		**GW-MLP-013**	**B-4A**	**B-4A**	**11/3/1999**	**B-4A-TR-110901**
Sample Date:		**5/11/1998**	**11/2/1998**	**5/14/1999**		**11/9/2001**
Parameter	**Units**					
Volatiles					0.50 U	
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	0.20 U	0.50 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	0.20 U	0.50 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	0.20 U	0.20 U	1.0 U
Vinyl chloride	µg/L	1.0 U	1.0 U	0.20 U		0.5 U

B-4A

Sample Location:		**B-4A**	**B-4A**	**B-4A**	**B-4A**	**B-4A**
Sample ID:		**GW-111911-AK-B4A**	**GW-112213-BP-B-4A**	**GW-111315-BP-B-4A**	**GW-171117-NT-B-4A**	**GW-111919-NT-B-4A**
Sample Date:		**11/19/2011**	**11/22/2013**	**11/13/2015**	**11/17/2017**	**11/19/2019**
Parameter	**Units**					

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Volatiles						
Chloroform (Trichloromethane)	µg/L	1.0 U	0.50 U	0.50 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	0.50 U	0.50 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	0.50 U	0.50 U	1.0 U	1.0 U
Vinyl chloride	µg/L	0.5 U	0.50 U	0.50 U	0.5 U	0.5 U

B-5

Sample Location:		**B-5**	**B-5**	**B-5**	**B-5**	**B-5**
Sample ID:		**GW-MPT-002**	**B-5**	**B-5**	**11/2/1999**	**B-5-TR-111001**
Sample Date:		**5/8/1998**	**11/3/1998**	**5/13/1999**		**11/10/2001**
Parameter	**Units**					
Volatiles					0.50 U	
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	0.20 U	0.50 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	0.20 U	0.50 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	0.20 U	0.40 U	1.0 U
Vinyl chloride	µg/L	1.0 U	1.0 U	0.20 U		0.5 U

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B-5

Sample Location:		**B-5**	**B-5**	**B-5**	**B-5**	**B-5**
Sample ID:		**GW-111811-AK-B5**	**GW-111811-AK-D3**	**GW-112713-BP-B-5**	**GW-111315-BP-B-5**	**GW-111315-BP-FD2**
Sample Date:		**11/18/2011**	**11/18/2011 (Duplicate)**	**11/27/2013**	**11/13/2015**	**11/13/2015 (Duplicate)**
Parameter	**Units**					
Volatiles						
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	0.50 U	0.50 U	0.50 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	0.50 U	0.50 U	0.50 U
Trichloroethene	µg/L	1.0 U	1.0 U	0.50 U	0.50 U	0.50 U
Vinyl chloride	µg/L	0.5 U	0.5 U	0.50 U	0.32 J	0.50 U

B-5AR

Sample Location:		**B-5AR**	**B-5AR**	**B-5AR**	**B-5AR**	**B-5AR2**
Sample ID:		**GW-MPT-001**	**B-5AR**	**B-5AR**	**11/2/1999**	**B-5AR-TR-013002**
Sample Date:		**5/8/1998**	**11/3/1998**	**5/13/1999**		**1/30/2002**
Parameter	**Units**					
Volatiles					0.50 U	
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	0.20 U	0.50 U	1.0 UJ
Tetrachloroethene	µg/L	1.0 U	1.0 U	0.20 U	0.50 U	1.0 UJ
Trichloroethene	µg/L	1.0 U	1.0 U	0.20 U	0.20 U	1.0 UJ
Vinyl chloride	µg/L	1.5	1.0 U	0.20 U		0.5 UJ

B-5AR

Sample Location:		**B-5AR**	**B-5AR**	**B-5AR**	**B-5AR**	**B-5AR**
Sample ID:		**GW-111811-AK-B5AR**	**GW-112113-BP-B-5AR**	**GW-111115-BP-B-5AR**	**GW-151117-NT-B5AR**	**GW-151117-NT-FD2**
Sample Date:		**11/18/2011**	**11/21/2013**	**11/11/2015**	**11/15/2017**	**11/15/2017 Duplicate**
Parameter	**Units**					
Volatiles						
Chloroform (Trichloromethane)	µg/L	1.0 U	0.50 U	0.50 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	0.50 U	0.50 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	0.50 U	0.50 U	1.0 U	1.0 U
Vinyl chloride	µg/L	0.5 U	0.50 U	0.50 U	0.5 U	0.5 U

B-6

Sample Location:		**B-6**	**B-6**	**B-6**	**B-6**	**B-6**
Sample ID:		**GW-MLP-022**	**B-6**	**B-6**	**11/2/1999**	**B-6-TR-111001**
Sample Date:		**5/12/1998**	**11/3/1998**	**5/13/1999**		**11/11/2001**
Parameter	**Units**					

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Volatiles					0.50 U	
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	0.20 U	0.50 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	0.20 U	0.50 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	0.21	0.20 U	1.0 U
Vinyl chloride	µg/L	1.0 U	1.0 U	0.20 U		0.5 U

B-6

Sample Location:		**B-6**	**B-6**	**B-6**	**B-6**	**B-6**
Sample ID:		**GW-111711-AK-B6**	**GW-112223-BP-B-6**	**GW-111315-BP-B-6**	**GW-141117-NT-B6**	**GW-111819-NT-B6**
Sample Date:		**11/17/2011**	**11/22/2013**	**11/13/2015**	**11/14/2017**	**11/18/2019**
Parameter	**Units**					
Volatiles						
Chloroform (Trichloromethane)	µg/L	1.0 U	0.50 U	0.50 U	1.0 UJ	0.50 U
Tetrachloroethene	µg/L	1.0 U	0.50 U	0.50 U	1.0 UJ	0.50 U
Trichloroethene	µg/L	1.0 U	0.50 U	0.50 U	1.0 UJ	0.50 U
Vinyl chloride	µg/L	0.5 U	0.50 U	0.50 U	0.5 UJ	0.50 U

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B-6A

Sample Location:		**B-6A**	**B-6A**	**B-6A**	**B-6A**	**B-6A**
Sample ID:		**GW-MLP-021**	**B-6A**	**B-6A**	**11/2/1999**	**B-6A-TR-111101**
Sample Date:		**5/12/1998**	**11/3/1998**	**5/13/1999**		**11/11/2001**
Parameter	**Units**					
Volatiles					0.50 U	
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	0.20 U	0.50 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	0.20 U	0.50 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	0.20 U	0.20 U	1.0 U
Vinyl chloride	µg/L	1.0 U	1.0 U	0.20 U		0.5 U

B-6A

Sample Location:		**B-6A**	**B-6A**	**B-6A**	**B-6A**	**B-6A**
Sample ID:		**GW-111711-AK-B6A**	**GW-112223-BP-B-6A**	**GW-111315-BP-B-6A**	**GW-141117-NT-B6A**	**GW-111819-NT-B-6A**
Sample Date:		**11/17/2011**	**11/22/2013**	**11/13/2015**	**11/14/2017**	**11/18/2019**
Parameter	**Units**					
Volatiles						
Chloroform (Trichloromethane)	µg/L	1.0 UJ	0.50 U	0.50 U	1.0 UJ	1.0U
Tetrachloroethene	µg/L	1.0 UJ	0.50 U	0.50 U	1.0 UJ	1.0U
Trichloroethene	µg/L	1.0 UJ	0.50 U	0.50 U	1.0 UJ	1.0U
Vinyl chloride	µg/L	0.5 UJ	0.50 U	0.50 U	0.5 UJ	0.5U

B-7

Sample Location:		**B-7**	**B-7**	**B-7**	**D-2**	**B-7**
Sample ID:		**B-7**	**GW-MLP-019**	**B-7**	**11/3/1998**	**B-7**
Sample Date:		**5/12/1998**	**5/12/1998**	**11/3/1998**	**Duplicate**	**5/14/1999**
		Duplicate				
Parameter	**Units**					
Volatiles					100 U	
Chloroform (Trichloromethane)	µg/L	20 U	20 U	10 U	100 U	2.0 U
Tetrachloroethene	µg/L	20 U	20 U	10 U	100 U	17
Trichloroethene	µg/L	20 U	20 U	44	400	240
Vinyl chloride	µg/L	120 J	200 J	460		570 J

B-7

Sample Location:		**B-7**	**B-7**	**B-7**	**231105-B-7-001**	**B-7**
Sample ID:		**FD02-TR-111001**	**B-7-1103**	**FD2-1103**	**11/23/2005**	**231105-B-18-001**
Sample Date:		**11/10/2001**	**11/12/2003**	**11/12/2003**		**11/23/2005**
		Duplicate		**Duplicate**		**Duplicate**
Parameter	**Units**					

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Volatiles					1.0U	
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0U	1.0U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	5.5	1.0U
Trichloroethene	µg/L	1.0 U	5.0	5.6	9.4	6.5
Vinyl chloride	µg/L	1.5 J	11.0 J	12.0 J		9.8

B-7

Sample Location:		**B-7**	**B-7**	**B-7**
Sample ID:		**GW-111315-BP-B-7**	**GW-171117-NT-B7**	**GW-111919-NT-B7**
Sample Date:		**11/13/2015**	**11/17/2017**	**11/19/2019**
Parameter	**Units**			
Volatiles				
Chloroform (Trichloromethane)	µg/L	0.50 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	0.50 U	1.0 U	1.0 U
Trichloroethene	µg/L	0.27 J	1.0 U	1.0 U
Vinyl chloride	µg/L	4.4	16	1.1

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B-8						
Sample Location:		**B-8**	**B-8**	**B-8**	**D-1**	**B-8**
Sample ID:		**GW-MPT-006**	**GW-MPT-009**	**B-8**	**11/3/1998**	**B-8**
Sample Date:		**5/8/1998**	**5/8/1998**	**11/3/1998**	**Duplicate**	**5/14/1999**
			Duplicate			
Parameter	**Units**					
Volatiles					100 U	
Chloroform (Trichloromethane)	µg/L	100 U	50 U	100 U	100 U	20 U
Tetrachloroethene	µg/L	100 U	50 U	100 U	100 U	22
Trichloroethene	µg/L	170	160	100 U	890	20 U
Vinyl chloride	µg/L	840	940	770		1300

B-8						
Sample Location:		**B-8**	**B-8**	**B-8**	**GW-112907-TG-B8**	**B-8**
Sample ID:		**FD01-TR-111001**	**B-8-1103DL**	**231105-B8-001**	**11/29/2007**	**GW-111209-CM-B8**
Sample Date:		**11/10/2001**	**11/12/2003**	**11/23/2005**		**11/12/2009**
		Duplicate				
Parameter	**Units**					
Volatiles					1 U	
Chloroform (Trichloromethane)	µg/L	1.0 U	2 U	1.0U	1 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	2 U	8.9	3.4	0.22 J
Trichloroethene	µg/L	1.5	2 U	38	66	2.9
Vinyl chloride	µg/L	640 J	430	150		78

Sample Location:	**B-8**
Sample ID:	**GW-111819-NT-B8**
Sample Date:	**11/18/2019**
	1.0 U
B-10A	1.0 U
	1.0 U
	0.5 U

					B-10A	
Sample Location:		**B-10A**	**B-10A**	**B-10A**	**B-10A**	**B-10A**
Sample ID:		**GW-MLP-012**	**B-10A**	**B-10A**	**11/3/1999**	**B-10A-TR-110901**
Sample Date:		**5/11/1998**	**11/2/1998**	**5/14/1999**		**11/9/2001**
Parameter	**Units**					
Volatiles					0.50 U	
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	0.20 U	0.50 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	0.20 U	0.50 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	0.20 U	0.20 U	1.0 U
Vinyl chloride	µg/L	1.0 U	1.0 U	0.20 U		0.5 U

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B-10A

Sample Location:		**B-10A**
Sample ID:		**GW-111209-CM-FD2**
Sample Date:		**11/12/2009**
		Duplicate
Parameter	**Units**	
Volatiles		
Chloroform (Trichloromethane)	µg/L	1.0 U
Tetrachloroethene	µg/L	1.0 U
Trichloroethene	µg/L	1.0 U
Vinyl chloride	µg/L	0.5 U

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B-12						
Sample Location:		**B-12**	**B-12**	**B-12**	**B-12**	**B-12**
Sample ID:		**GW-MLP-011**	**B-12**	**B-12**	**11/3/1999**	**B-12**
Sample Date:		**5/11/1998**	**11/2/1998**	**5/13/1999**		**5/8/2000**
Parameter	**Units**					
Volatiles					0.50 U	
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	0.20 U	0.50 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	0.20 U	0.50 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	0.20 U	1.9	1.0 U
Vinyl chloride	µg/L	1.0 U	1.7	0.35		1.0 U

B-12						
Sample Location:						
Sample ID:		**B-12**	**B-12**	**B-12**	**B-12**	
Sample Date:		**FD1-DC-051701**	**B-12-TR-111001**	**B-12-TR-050202**	**FD1-TR-050202**	
		5/17/2001	**11/10/2001**	**5/2/2002**	**5/2/2002**	
Parameter	**Units**	**Duplicate**			**Duplicate**	
Volatiles						
Chloroform (Trichloromethane)	µg/L					
Tetrachloroethene	µg/L	2.0 U	1.0 U	1.0 U	1.0 U	
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	
Vinyl chloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	
		1.0 U	0.5 U	0.5 U	0.5 U	

B-12R						
Sample Location:		**B-12R**	**B-12R**	**B-12R**	**FD1-0503**	**B-12R**
Sample ID:		**B-12R-DC-111302**	**FD1-DC-111302**	**B-12R-0503**	**5/9/2003**	**B12R-1103**
Sample Date:		**11/13/2002**	**11/13/2002**	**5/9/2003**	**Duplicate**	**11/11/2003**
			Duplicate			
Parameter	**Units**					
Volatiles					1.0 U	
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0	1.0 U
Vinyl chloride	µg/L	0.53 J	0.71 J	1.0		0.52 J

B-12R						
Sample Location:		**B-12R**	**B-12R**	**B-12R**	**GW-052606-B-12R-001**	**B-12R**
Sample ID:		**B-12R-0505**	**FD1-0505**	**241105-B-12R-001**	**5/25/2006**	**GW-110206-B-12R-001**
Sample Date:		**5/13/2005**	**5/13/2005**	**11/24/2005**		**11/02/2006**
			Duplicate			

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Parameter	Units					
Volatiles					1.0 U	
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0U	0.5 U	1.0 U
Vinyl chloride	µg/L	3.5	3.4	1.7		1.3

B-12R						
Sample Location:		**B-12R**	**B-12R**	**B-12R**	**GW-111109-TG-FD1**	**B-12R**
Sample ID:		**GW-111308-TG-pet-B12R-04**	**GW-052909-TG-PET-B12R**	**GW-111109-TG-B12R**	**11/11/2009**	**GW-052410-CM-B12R**
Sample Date:		**11/13/2008**	**5/29/2009**	**11/11/2009**	**Duplicate**	**5/24/2010**
Parameter	**Units**					
Volatiles					1.0 U	
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0U	1.0 U	1.0	1.0 U
Vinyl chloride	µg/L	0.5 U	0.5U	0.95		0.97

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B-12R

Sample Location:		**B-12R**	**B-12R**	**B-12R**	**B-12R**	**B-12R**
Sample ID:		**GW-112812-MD-B4**	**GW-051713-MD-B12R**	**GW-051713-MD-FD1**	**GW-112013-BP-B-12R**	**GW-050914-BP-B12**
Sample Date:		**11/28/2012**	**5/17/2013**	**5/17/2013 (Duplicate)**	**11/20/2013**	**5/9/2014**
Parameter	**Units**					
Volatiles						
Chloroform (Trichloromethane)	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 UJ
Tetrachloroethene	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 UJ
Trichloroethene	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 UJ
Vinyl chloride	µg/L	0.31 J	0.14 J	0.15 J	0.18 J	0.50 UJ

B-12R

Sample Location:		**B-12R**	**B-12R**	**B-12R**	**B-12R**	**B-12R**
Sample ID:		**GW-051716-BP-B12**	**GW-111416-NT-B12**	**GW-111416-NT-FD-1**	**GW-112517-NT-B12**	**GW-151117-NT-B12**
Sample Date:		**05/17/2016**	**11/14/2016**	**11/14/2016**	**05/25/2017**	**11/15/2017**
Parameter	**Units**					
Volatiles						
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ
Vinyl chloride	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ

B-12R

Sample Location:		**B-12R**	**B-12R**	**B-12R**	**B-12R**	**B-12R**
Sample ID:		**GW-110718-NT-FD2**	**GW-050619-NT-B12R**	**GW-111919-NT-B12R**	**GW-05120-RB-B-12R**	**GW-111720-NT-B12R**
Sample Date:		**11/07/18 Duplicate**	**05/06/19**	**11/19/19**	**05/13/2020**	**11/17/20**
Parameter	**Units**					
Volatiles						
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

B-13

Sample Location:		**B-13**	**B-13**	**B-13**	**B-13**	**B-13**
Sample ID:		**GW-MLP-016**	**B-13**	**B-13**	**11/3/1999**	**B-13-TR-111001**
Sample Date:		**5/11/1998**	**11/3/1998**	**5/13/1999**		**11/10/2001**
Parameter	**Units**					

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Volatiles					0.50 U	
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	0.20 U	0.50 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	0.20 U	0.50 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	0.20 U	0.20 U	1.0 U
Vinyl chloride	µg/L	1.0 U	1.0 U	0.20 U		0.5 U

B-13

Sample Location:		**B-13**	**B-13**	**B-13**	**B-13**	**B-13**
Sample ID:		**GW-111811-AK-B13**	**GW-112223-BP-B-13**	**GW-112223-BP-FD-2**	**GW-111215-BP-B-13**	**GW-052318-NT-B-13**
Sample Date:		**11/18/2011**	**11/22/2013**	**11/22/2013 (Duplicate)**	**11/12/2015**	**05/24/18**
Parameter	**Units**					
Volatiles						
Chloroform (Trichloromethane)	µg/L	1.0 U	0.50 U	0.50 U	0.50 U	0.50 U
Tetrachloroethene	µg/L	1.0 U	0.50 U	0.50 U	0.50 U	0.50 U
Trichloroethene	µg/L	1.0 U	0.50 U	0.50 U	0.50 U	0.50 U
Vinyl chloride	µg/L	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U

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B-13A

Sample Location:		**B-13A**	**B-13A**	**B-13A**	**B-13A**	**B-13A**
Sample ID:		**GW-MLP-017**	**B-13A**	**B-13A**	**11/3/1999**	**B-13A-TR-111001**
Sample Date:		**5/12/1998**	**11/2/1998**	**5/13/1999**		**11/10/2001**
Parameter	**Units**					
Volatiles					0.50 U	
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	0.20 U	0.50 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	0.46	0.50 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	0.20 U	0.20 U	1.0 U
Vinyl chloride	µg/L	1.0 U	1.0 U	0.20 U		0.5 U

B-13A

Sample Location:		**B-13A**	**B-13A**	**B-13A**	**B-13A**	**B-13A**
Sample ID:		**GW-111811-AK-B13A**	**GW-112513-BP-B13A**	**GW-111215-BP-B13A**	**GW-171117-NT-B13A**	**GW-112119-NT-B13A**
Sample Date:		**11/18/2011**	**11/25/2013**	**11/12/2015**	**11/17/17**	**11/21/19**
Parameter	**Units**					
Volatiles						
Chloroform (Trichloromethane)	µg/L	1.0 U	0.50 U	0.50 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	0.50 U	0.50 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	0.50 U	0.50 U	1.0 U	1.0 U
Vinyl chloride	µg/L	0.5 U	0.50 U	0.50 U	0.5 U	0.5 U

B-13B

Sample Location:		**B-13B**	**B-13B**	**B-13B**	**B-13B**	**B-13B**
Sample ID:		**GW-MLP-014**	**B-13B**	**B-13B**	**11/3/1999**	**B-13B-TR-111001**
Sample Date:		**5/11/1998**	**11/2/1998**	**5/13/1999**		**11/10/2001**
Parameter	**Units**					
Volatiles					0.50 U	
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	0.20 U	0.50 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	0.20 U	0.50 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	0.20 U	0.20 U	1.0 U
Vinyl chloride	µg/L	1.0 U	1.0 U	0.20 U		0.5 U

B-13B

Sample Location:		**B-13B**	**B-13B**	**B-13B**	**B-13B**	**B-13B**
Sample ID:		**GW-111811-AK-B13B**	**GW-112113-BP-B-13B**	**GW-111215-BP-B-13B**	**GW-111215-BP-B-FD1**	**GW-161117-NT-B13B**
Sample Date:		**11/18/2011**	**11/21/2013**	**11/12/2015**	**11/12/2015 (Duplicate)**	**11/16/17**
Parameter	**Units**					

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Volatiles						
Chloroform (Trichloromethane)	µg/L	1.0 U	0.50 U	0.50 U	0.50 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	0.50 U	0.50 U	0.50 U	1.0 U
Trichloroethene	µg/L	1.0 U	0.50 U	0.50 U	0.50 U	1.0 U
Vinyl chloride	µg/L	0.5 U	0.50 U	0.50 U	0.50 U	0.5 U
B-14						
Sample Location:		**B-14**	**B-14**	**B-14**	**B-14**	**B-14**
Sample ID:		**GW-MPT-003**	**B-14**	**B-14**	**11/2/1999**	**B-14-TR-111001**
Sample Date:		**5/8/1998**	**11/3/1998**	**5/13/1999**		**11/10/2001**
Parameter	**Units**					
Volatiles					0.50 U	
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	0.20 U	0.50 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	0.20 U	0.50 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	0.20 U	0.20 U	1.0 U
Vinyl chloride	µg/L	1.0 U	1.0 U	0.20 U		0.5 U

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B-14

Sample Location:		**B-14**	**B-14**	**B-14**	**B-14**	**B-14**
Sample ID:		**GW-111711-AK-14**	**GW-112113-BP-B-14**	**GW-111315-BP-B-14**	**GW-151117-NT-B14**	**GW-111919-NT-B14**
Sample Date:		**11/17/2011**	**11/21/2013**	**11/13/2015**	**11/15/2017**	**11/19/2019**
Parameter	**Units**					
Volatiles						
Chloroform (Trichloromethane)	µg/L	1.0 U	0.50 U	0.50 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	0.50 U	0.50 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	0.50 U	0.50 U	1.0 U	1.0 U
Vinyl chloride	µg/L	0.5 U	0.50 U	0.50 U	0.5 U	0.5 U

B-14A

Sample Location:		**B-14A**	**B-14A**	**B-14A**	**B-14A**	**B-14A**
Sample ID:		**GW-MPT-004**	**B-14A**	**B-14A**	**11/2/1999**	**B-14A-TR-111001**
Sample Date:		**5/8/1998**	**11/3/1998**	**5/13/1999**		**11/10/2001**
Parameter	**Units**					
Volatiles					0.50 U	
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	0.20 U	0.50 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	0.20 U	0.50 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	0.20 U	0.20 U	1.0 U
Vinyl chloride	µg/L	1.0 U	1.0 U	0.20 U		0.5 U

B-14A

Sample Location:		**B-14A**	**B-14A**	**B-14A**	**B-14A**	**B-14A**
Sample ID:		**GW-111811-AK-B14A**	**GW-112113-BP-B-14A**	**GW-111315-BP-B-14A**	**GW-151117-NT-B14A**	**GW-112019-NT-B14A**
Sample Date:		**11/18/2011**	**11/21/2013**	**11/13/2015**	**11/15/2017**	**11/20/2019**
Parameter	**Units**					
Volatiles						
Chloroform (Trichloromethane)	µg/L	1.0 U	0.50 U	0.50 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	0.50 U	0.50 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	0.50 U	0.50 U	1.0 U	1.0 U
Vinyl chloride	µg/L	0.5 U	0.50 U	0.50 U	0.5 U	0.5 U

B-15A

Sample Location:		**B-15A**	**B-15A**	**B-15A**	**B-15A**	**B-15A**
Sample ID:		**GW-MLP-015**	**B-15A**	**B-15A**	**11/3/1999**	**B-15A-TR-111001**
Sample Date:		**5/11/1998**	**11/2/1998**	**5/13/1999**		**11/10/2001**
Parameter	**Units**					

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Volatiles					0.50 U	
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	0.20 U	0.50 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	0.28	0.50 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	0.20 U	0.20 U	1.0 U
Vinyl chloride	µg/L	1.0 U	1.0 U	0.20 U		0.5 U

B-15A

Sample Location:		**B-15A**	**B-15A**	**B-15A**	**B-15A**
Sample ID:		**GW-111109-TG-B15A**	**GW-111811-AK-B15A**	**GW-112113-BP-B-15A**	**GW-111215-BP-B-15A**
Sample Date:		**11/11/2009**	**11/18/2011**	**11/21/2013**	**11/12/2015**
Parameter	**Units**				
Volatiles					
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	0.50 U	0.50 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	0.50 U	0.50 U
Trichloroethene	µg/L	1.0 U	1.0 U	0.50 U	0.50 U
Vinyl chloride	µg/L	0.5 U	0.5 U	0.50 U	0.53

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B-16A						
Sample Location:		**B-16A**	**B-16A**	**B-16A**	**B-16A**	**B-16A**
Sample ID:		**GW-MPT-005**	**B-16A**	**B-16A**	**11/2/1999**	**B-16A-TR-111001**
Sample Date:		**5/8/1998**	**11/3/1998**	**5/13/1999**		**11/10/2001**
Parameter	**Units**					
Volatiles					0.50 U	
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	0.20 U	0.50 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	0.20 U	0.50 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	0.20 U	0.20 U	1.0 U
Vinyl chloride	µg/L	1.0 U	1.0 U	0.20 U		0.5 U

B-16A						
Sample Location:		**B-16A**	**B-16A**	**B-16A**	**B-16A**	**B-16A**
Sample ID:		**GW-111811-AK-B16A**	**GW-112113-BP-B-16A**	**GW-112113-BP-FD-1**	**GW-111215-BP-B-16A**	**GW-161117-NT-B16A**
Sample Date:		**11/18/2011**	**11/21/2013**	**11/21/2013 (Duplicate)**	**11/12/2015**	**11/16/2017**
Parameter	**Units**					
Volatiles						
Chloroform (Trichloromethane)	µg/L	1.0 U	0.50 U	0.50 U	0.50 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	0.50 U	0.50 U	0.50 U	1.0 U
Trichloroethene	µg/L	1.0 U	0.50 U	0.50 U	0.50 U	1.0 U
Vinyl chloride	µg/L	0.5 U	0.50 U	0.50 U	0.50 U	0.5 U

B-17A						
Sample Location:		**B-17A**	**B-17A**	**B-17A**	**B-17A**	**B-17A**
Sample ID:		**GW-MLP-010**	**B-17A**	**B-17A**	**11/2/1999**	**B-17A-TR-111101**
Sample Date:		**5/11/1998**	**11/3/1998**	**5/13/1999**		**11/11/2001**
Parameter	**Units**					
Volatiles					0.50 U	
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	0.20 U	0.50 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	0.20 U	0.50 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	0.20 U	0.20 U	1.0 U
Vinyl chloride	µg/L	1.0 U	1.0 U	0.20 U		0.5 U

B-17A						
Sample Location:		**B-17A**	**B-17A**	**B-17A**	**B-17A**	**B-17A**
Sample ID:		**GW-111109-CM-B17A**	**GW-111711-AK-B17A**	**GW-111711-AK-D2**	**GW-112113-BP-B-17A**	**GW-111315-BP-B-17A**
Sample Date:		**11/11/2009**	**11/17/2011**	**11/17/2011 (Duplicate)**	**11/21/2013**	**11/13/2015**
Parameter	**Units**					

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Volatiles						
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	0.50 U	0.50 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	0.50 U	0.50 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	0.50 U	0.50 U
Vinyl chloride	µg/L	0.5 U	0.5 U	0.5 U	0.50 U	0.50 U

Notes:

µg/L Micrograms per liter.
U Non-detect at associated level
J Estimated

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B-3 **B-3-DC-051701** **5/17/2001**	**B-3** **B-3-TR-111001** **11/10/2001**	**B-3** **B-3-TR-050202** **5/2/2002**	**B-3** **B-3-DC-111302** **11/13/2002**
2.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U
1.6	0.70 J	0.5 U	0.80 J

B-3 **241105-B3-001** **11/24/2005**	**B-3** **GW-052506-B-3-001** **05/25/2006**	**B-3** **GW-110306-B-3-004** **11/3/2006**	**B-3** **GW-051007-B-3-001** **5/10/2007**
1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	0.275	1.0 U
3.7	11	3.2	4.3

B-3 **GW-052410-CM-B3** **5/24/2010**	**B-3** **GW-111710-MD-B3** **11/17/2010**	**B-3** **GW-052611-MD-B3** **5/26/2011**	**B-3** **GW-052611-MD-FD1** **5/26/2011** **(Duplicate)**
1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	0.29 J	1.0 U	1.0 U
1.2	5.6	1.5	2.0

B-3 **GW-050814-BP-B-3** **5/8/2014**	**B-3** **GW-111714-BP-B-3** **11/17/2014**	**B-3** **GW-050515-NH-B-3** **5/5/2014**	**B-3** **GW-050515-NH-B-3** **5/5/2014** **(Duplicate)**

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0.50 UJ	0.50 U	0.50 U	0.50 U
0.50 UJ	0.50 U	0.50 U	0.50 U
0.50 UJ	0.50 U	0.50 U	0.50 U
0.60 J	0.21 J	0.62	0.62

B-3 **GW-053018-NT-B3** **5/30/18**	**B-3** **GW-110718-NT-B3** **11/07/18**	**B-3** **GW-050619-NT-B3** **05/06/2019**	**B-3** **GW-0112019-NT-B3** **11/20/2019**
1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U
0.5 U	0.5 U	0.5 U	0.5 U

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B-3AR B-3AR 5/8/2000	B-3AR B-3AR-110700-DC 11/7/2000	B-3AR B-3AR-DC-051701 5/17/2001	B-3AR B-3AR-TR-110901 11/9/2001
1.0 U	1.0 U	2.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.3	1.0 U	1.9 J
0.5 U	0.5 U	0.69	0.5U

B-3AR GW-111308-TG-pet-B3AR-05 11/13/2008	B3-AR GW-052909-TG-PET-B3AR 5/29/2009	B3-AR GW-111109-TG-B3AR 11/11/2009	B-3AR GW-052410-CM-B3AR 5/24/2010
1.0 U	1.0U	1.0U	1.0 U
1.0 U	1.0U	1.0U	1.0 U
1.0 U	0.76J	0.65J	0.44 J
0.44J	0.5U	0.5U	0.5 U

B-3AR GW-053112-AK-SP1 5/31/2012 (Duplicate)	B-3AR GW-112812-MD-B3AR 11/28/2012	B-3AR GW-112812-MD-FD1 11/28/2012 (Duplicate)	B-3AR GW-051713-MD-B3AR 5/17/2013

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0.50 U	0.50 U	0.50 U	0.50 U
0.50 U	0.50 U	0.50 U	0.50 U
0.50 U	0.32 J	0.33 J	0.50
0.50 U	0.10 J	0.10 J	0.50 U

B-3AR	**B-3R**	**B-3R**	**B-3R**
GW-111115-BP-B-3AR	**GW-051716-BP-B-3R**	**GW-112816-NT-B-3AR**	**GW-052517-NT-B-3AR**
11/11/2015	**05/17/16**	**11/28/16**	**05/25/17**
0.50 U	1.0 U	1.0 U	1.0 U
0.50 U	1.0 U	1.0 U	1.0 U
0.40 J	0.27 J	1.0 U	1.0 U
0.12 J	0.5 U	0.5 U	0.5 U

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B-3AR GW-05120-RB-B-3AR 05/13/2020	B-3AR GW-05120-RB-B-3AR 05/13/2020 Duplicate	B-3AR GW-111720-NT-B-3AR 11/17/2020	B-3AR GW-05421-NT-B3AR 05/24/2021
1.0 U	1.0 U	1.0 U	0.5 U
1.0 U	1.0 U	1.0 U	0.5 U
1.0 U	1.0 U	1.0 U	0.32 J
0.5 U	0.5 U	0.5 U	0.5 U

B-4 B-4-110700-DC 11/7/2000	B-4 B-4-DC-051701 5/17/2001	B-4 B-4-TR-110901 11/9/2001	B-4 B-4-TR-050202 5/2/2002
1.0 U	2.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U
2.3	1.0 U	0.92 J	0.5 U

B-4 B-4-0505 5/13/2005	B-4 231105-B-4-001 11/23/2005	B-4 GW-052506-B-4-001 5/25/2006	B-4 GW-110306-B-4-005 11/3/2006
1.0 U	1.0U	1.0U	1.0U
1.0 U	1.0U	1.0U	1.0U
1.0 U	1.0U	1.0U	1.0U
0.5 U	0.5U	0.5U	0.5U

B-4 GW-052909-TG-PET-B4 5/29/2009	B-4 GW-052909-TG-PET-FD 5/20/2009 Duplicate	B-4 GW-111109-TG-B4 11/11/2009	B-4 GW-052410-CM-B4 5/24/2010

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1.0U	1.0U	1.0 U	1.0 U
1.0U	1.0U	1.0 U	1.0 U
1.0U	1.0U	1.0 U	1.0 U
0.5U	0.5U	0.5 U	0.5 U
B-4 **GW-112912-MD-B4** **11/29/2012**	**B-4** **GW-051713-MD-B4** **5/17/2013**	**B-4** **GW-112513-BP-B-4** **11/25/2013**	**B-4** **GW-050914-BP-B4** **5/9/2014**
0.50 U	0.50 U	0.50 U	0.50 UJ
0.50 U	0.26 J	0.50 U	0.50 UJ
0.50 U	0.50 U	0.50 U	0.50 UJ
0.50 U	0.50 U	0.50 U	0.50 UJ

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B-4 GW-052517-NT-B-4 05/25/17	B-4 GW-171117-NT-B4 11/17/17	B-4 GW-052418-NT-B4 05/24/2018	B-4 GW-171718-NT-B4 11/07/18
1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U
0.5 U	0.5 U	0.5 U	0.5 U

B-4 GW-05421-NT-B4 05/24/2021
0.5 U
0.5 U
0.5 U
0.5 U

B-4A B4A-1103 11/11/2003	B-4A 231105-B-4A-001 11/23/2005	B-4A GW-112607-TG-B4A 11/26/2007	B-4A GW-111109-TG-B4A 11/11/2009
1.0 U	1.0U	1 U	1.0 U
1.0 U	1.0U	1 U	1.0 U
1.0 U	1.0U	1 U	1.0 U
0.5 U	0.5U	0.5 U	0.5 U

B-4A GW-111919-NT-B-FD2 11/19/2019 Duplicate

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1.0 U			
1.0 U			
1.0 U			
0.5 U			
B-5	**B-5**	**B-5**	**B-5**
B-5-1103	**221105-B5-001**	**GW-112807-TG-B5**	**GW-111109-TG-B5**
11/12/2003	**11/23/2005**	**11/28/2007**	**11/11/2009**
1.0 U	1.0U	1 U	1.0 U
1.0 U	1.0U	1 U	1.0 U
1.0 U	1.0U	1 U	1.0 U
0.5 U	0.5U	0.5 U	0.5 U

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B-5 GW-171117-NT-B5 11/17/2017	B-5 GW-11219-NT-B5 11/21/2019		
1.0 U	1.0 U		
1.0 U	1.0 U		
1.0 U	1.0 U		
0.5 U	0.5 U		
B-5AR2 B-5AR2-1103 11/12/2003	**B-5AR 231105-B5AR-001 11/22/2005**	**B-5AR GW-112807-TG-B5AR 11/28/2007**	**B-5AR GW-111109-TG-B5AR 11/11/2009**
1.0 U	1.0U	1 U	1.0 U
1.0 U	1.0U	1 U	1.0 U
1.0 U	1.0U	1 U	1.0 U
0.5 U	0.5U	0.5 U	0.5 U
B-5AR GW-111919-NT-B5AR 11/19/2019			
1.0 U			
1.0 U			
1.0 U			
0.5 U			
B-6 B-6-1103 11/13/2003	**B-6 241105-B-6-001 11/24/2005**	**B-6 GW-112607-TG-B6 11/26/2007**	**B-6 GW-111209-CM-B6 11/12/2009**

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1.0 U	1.0U	1 U	1.0 U
1.0 U	1.0U	1 U	1.0 U
1.0 U	1.0U	1 U	1.0 U
0.5 U	0.5U	0.5 U	0.5 U

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B-6A B-6A-1103 11/13/2003	B-6A 241105-B-6A-001 11/24/2005	B-6A GW-112607-TG-B6A 11/26/2007	B-6A GW-111209-CM-B6A 11/12/2009
1.0 U	1.0U	1 U	1.0 U
1.0 U	1.0U	1 U	1.0 U
1.0 U	1.0U	1 U	1.0 U
0.5 U	0.5U	0.5 U	0.5 U

B-7 D-1 5/14/1999 Duplicate	B-7 B-7 11/3/1999	B-7 D-1 11/3/1999 Duplicate	B-7 B-7-TR-111001 11/10/2001
20 U	5.0	5.3	1.0 U
20 U	0.50 U	0.50 U	1.0 U
180	13	11	1.0 U
330 J	21	17	1.2 J

B-7 GW-112907-TG-B7 11/29/2007	B-7 GW-111209-CM-B7 11/12/2009	B-7 GW-111811-AK-B7 11/18/2011	B-7 GW-112513-BP-B-7 11/25/2013

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Petarcik Site - November 2020
Occidental Chemical Corporation
Tacoma, Washington

1 U	1.0 U	1.0 U	0.50 U
1 U	1.0 U	1.0 U	0.50 U
1 U	0.88 J	1.0 U	0.31 J
3.4	230	1.4	72

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Analytical Results Summary
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B-8 D-2 5/14/1999 Duplicate	B-8 B-8 11/3/1999	B-8 D-2 11/3/1999 Duplicate	B-8 B-8-TR-111001 11/10/2001
20 U	20 J	20 J	1.0 U
20 U	0.50 U	0.50 U	1.0 U
20 U	1.3 J	1.4 J	1.5
970	1500	1100	350 J

B-8 GW-111911-AK-B8 11/19/2011	B-8 GW-112513-BP-B-8 11/25/2013	B-8 GW-111315-BP-B-8 11/13/2015	B-8 GW-141117-NT-B8 11/14/2017
1.0 U	0.50 U	0.50 U	1.0 UJ
64	0.50 U	4.0	1.0 UJ
99	0.28 J	25	1.0 UJ
31	0.47 J	72	0.5 UJ

B-10A B-10A-1103 11/12/2003	B-10A 231105-B-10A-001 11/23/2005	B-10A GW-112707-TG-B10A 11/27/2007	B-10A GW-111209-CM-B10A 11/12/2009
1.0 U	1.0U	1 U	1.0 U
1.0 U	1.0U	1 U	1.0 U
1.0 U	1.0U	1 U	1.0 U
0.5 U	0.5U	0.5 U	0.5 U

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B-12 B-12 DUP 5/8/2000 Duplicate	B-12 B-12-110700-TR 11/7/2000	B-12 FD1-110700-TR 11/7/2000 Duplicate	B-12 B-12-DC-051701 5/17/2001
1.0 U	1.0 U	1.0 U	2.0 U
1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U

B-12R B-12R-0504 5/15/2004	B-12R FD1-0504 5/15/2004 Duplicate	B-12R B-12R-1104 11/11/2004	B-12R FD1-1104 11/11/2004 Duplicate
1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U
1.0 U	1.0 U	1.0 U	1.0 U
1.4	1.6	1.8	0.5 U

B-12R GW-110206-B-12R-002 11/02/2006	B-12R GW-051007-B-12R-001 5/10/2007	B-12R GW-112807-TG-B12R 11/28/2007	B-12R GW-052008-TG-B12R 5/20/2008

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1.0 U	1.0 U	1 U	1 U
1.0 U	1.0 U	1 U	1 U
1.0 U	1.0 U	1 U	1 U
1.3	0.97	0.5 U	0.96

B-12R	**B-12R**	**B-12R**	**B-12R**
GW-111810-MD-B12R	**GW-052611-MD-B12R**	**GW-111911-AK-B12R**	**GW-053112-AK-B12R**
11/18/2010	**5/26/2011**	**11/19/2011**	**5/31/2012**
1.0 U	1.0 U	1.0 U	0.50 U
1.0 U	1.0 U	1.0 U	0.50 U
1.0 U	1.0 U	1.0 U	0.50 U
0.5 U	0.5 U	0.5 U	0.24 J

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B-12R GW-111714-BP-B12 11/17/2014	B-12R GW-111714-BP-FD-1 11/17/2014 (Duplicate)	B-12R GW-050515-NH-B12 5/5/2015	B-12R GW-111115-BP-B12 11/11/2015
0.50 U	0.50 U	0.50 U	0.50 U
0.50 U	0.50 U	0.50 U	0.50 U
0.50 U	0.50 U	0.50 U	0.50 U
0.11 J	0.11 J	0.50 U	0.50

B-12 GW-151117-NT-B12R 11/15/2017 Duplicate	B-12R GW-052318-NT-B12R 05/23/18	B-12R GW-052318-NT-FD 05/23/18 Duplicate	B-12R GW-110718-NT-B12R 11/07/18
1.0 UJ	1.0 U	1.0 U	1.0 U
1.0 UJ	1.0 U	1.0 U	1.0 U
1.0 UJ	1.0 U	1.0 U	1.0 U
0.5 UJ	0.5 U	0.5 U	0.5 U

B-12R GW-05421-NT-B-12R 05/24/2021
0.5 U
0.5 U
0.5 U
0.5 U

B-13 B-13-1103 11/12/2003	B-13 241105-B-13-001 11/24/2005	B-13 GW-112807-TG-B13 11/28/2007	B-13 GW-111209-TG-B13 11/12/2009

1.0 U	1.0U	1 U	1.0 U
1.0 U	1.0U	1 U	1.0 U
1.0 U	1.0U	1 U	1.0 U
0.5 U	0.5U	0.5 U	0.5 U

B-13
GW-112019-NT-B-13
11/20/2019

1.0 U
1.0 U
1.0 U
0.5 U

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B-13A **B-13A-1103** **11/12/2003**	**B-13A** **241105-B-13A-001** **11/24/2005**	**B-13A** **GW-112707-TG-B13A** **11/27/2007**	**B-13A** **GW-111209-TG-B13A** **11/12/2009**
1.0 U	1.0U	1 U	1.0 U
1.0 U	1.0U	1 U	1.0 U
1.0 U	1.0U	1 U	1.0 U
0.5 U	0.5U	0.5 U	0.5 U

B-13B **B-13-B-1103** **11/12/2003**	**B-13B** **241105-B-13B-001** **11/24/2005**	**B-13B** **GW-112607-TG-B13B** **11/26/2007**	**B-13B** **GW-111209-TG-B13B** **11/12/2009**
1.0 U	1.0U	1 U	1.0 U
1.0 U	1.0U	1 U	1.0 U
1.0 U	1.0U	1 U	1.0 U
0.5 U	0.5U	0.5 U	0.5 U

B-13B **GW-1111819-NT-B13B** **11/18/19**	**B-13B** **GW-1111819-NT-FD-1** **11/18/19** **(Duplicate)**

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1.0 U	1.0 U		
1.0 U	1.0 U		
1.0 U	1.0 U		
0.5 U	0.5 U		
B-14	**B-14**	**B-14**	**B-14**
B-14-1103	**221105-B14-001**	**GW-112707-TG-B14**	**GW-111109-TG-B14**
11/12/2003	**11/22/2005**	**11/27/2007**	**11/11/2009**
1.0 U	1.0U	1 U	1.0 U
1.0 U	1.0U	1 U	1.0 U
1.0 U	1.0U	1 U	1.0 U
0.5 U	0.5U	0.5 U	0.5 U

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Analytical Results Summary
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B-14A **B-14A-1103** **11/12/2003**	**B-14A** **221105-B-14A-001** **11/22/2005**	**B-14A** **GW-112707-TG-B14A** **11/27/2007**	**B-14A** **GW-111109-TG-B14A** **11/11/2009**
1.0 U	1.0U	1 UJ	1.0 U
1.0 U	1.0U	1 UJ	1.0 U
1.0 U	1.0U	1 UJ	1.0 U
0.5 U	0.5U	0.5 UJ	0.5 U

B-15A **B-15A-1103** **11/13/2003**	**B-15A** **241105-B15A-001** **11/24/2005**	**B-15A** **241105-B19-001** **11/24/2005** **Duplicate**	**B-15A** **GW-112807-TG-B15A** **11/28/2007**

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Analytical Results Summary
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Occidental Chemical Corporation
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1.0 U	1.0U	1.0U	1 U
1.0 U	1.0U	1.0U	1 U
1.0 U	1.0U	1.0U	1 U
0.5 U	0.5U	0.5U	0.5 U

Appendix B
Analytical Results Summary
Biennial Groundwater Monitoring
Petarcik Site - November 2020
Occidental Chemical Corporation
Tacoma, Washington

B-16A B-16A-1103 11/12/2003	B-16A 221105-B16A-001 11/22/2005	B-16A GW-112807-TG-B16A 11/28/2007	B-16A GW-111109-TG-B16A 11/11/2009
1.0 U	1.0U	1 U	1.0 U
1.0 U	1.0U	1 U	1.0 U
1.0 U	1.0U	1 U	1.0 U
0.5 U	0.5U	0.5 U	0.5 U

B-16A GW-111919-NT-B16A 11/19/2019
1.0 U
1.0 U
1.0 U
0.5 U

B-17A B-17A-1103 11/12/2003	B-17A FD1-1103 11/12/2003 Duplicate	B-17A 231105-B17A-001 11/23/2005	B-17A GW-112607-TG-B17A 11/26/2007
1.0 U	1.0 U	1.0U	1 U
1.0 U	1.0 U	1.0U	1 U
1.0 U	1.0 U	1.0U	1 U
0.5 U	0.5 U	0.5U	0.5 U

B-17A GW-171117-NT-B17A 11/17/2017	B-17A GW-111919-NT-B17A 11/19/2019

1.0 U	1.0 U
1.0 U	1.0 U
1.0 U	1.0 U
0.5 U	0.5 U

APPENDIX C

Sample Collection Summary Log

APPENDIX C

SAMPLE COLLECTION SUMMARY LOG
BIENNIAL GROUNDWATER MONITORING
PETARCIK SITE - MAY 2021
OCCIDENTAL CHEMICAL CORPORATION
TACOMA, WASHINGTON

Petarcik — PROJECT NO. TR0837A

Nate Tandecki — SUPERVISOR R. Bieber

5/24/2021

[Note: For 2" dia. well, 1 ft. = 0.14 gal (imp) or 0.16 gal (us)]

Sample I.D. Number	Well Number	Measuring Point Elev. (ft. AMSL)	Bottom Depth (ft. btoc)	Water Depth (ft. btoc)	Water Elevation (ft. AMSL)	Well Volume (gallons)	Flow Rate (ml/min)	Volume Purged (gallons)	Field pH	Field Cond. (mS/cm)	Field Temp. (C)	Time	Date	Sample Description & Analysis
GW-052421-NT-B3	B3	10.08	21.80	9.46	0.62	2.00		6	7.11	3.08	14.43	12:30	5/24/21	light brown color
GW-052421-NT-FD1	B3	10.08	21.80	9.46	0.62	2.00		6	7.11	3.08	14.43	12:30	5/24/21	
GW-052421-NT-3A	B3AR	10.80	13.40	9.04	1.76	0.71		2	6.75	1.380	12.81	13:05	5/24/21	
GW-052421-NT-B4A	B4A	6.40	19.50	5.60	0.80	2.25		6.5	7.20	4.31	16.99	16:30	5/24/21	
GW-052421-NT-12R	B12R	8.25	13.70	5.50	2.75	1.25		4	7.22	1.74	13.41	14:05	5/24/21	light olive green

Additional Comments: SAMPLE SET: 3 x 40ml glass w/ HCl preserve for VOC

* Volume purged before well went dry

Copies to: (1) MS / MSD taken

(2) field duplicate taken

APPENDIX D

Analytical Results and QA/QC Review

Memorandum

June 29, 2021

To:	Rick Bieber [RBieber@Geosyntec.com]	Ref. No.:	11223486
From:	Sheri Finn/ro/1-NF	Tel:	716-205-1977

Subject: **Analytical Results and Reduced Validation**
Semiannual Groundwater Monitoring
Glenn Springs Holdings, Inc. - Petarcik Site
Tacoma, Washington
May 2021

1. Introduction

This document details a reduced validation of analytical results for groundwater samples collected in support of the Semiannual Groundwater Monitoring at the Petarcik Site located in Tacoma, Washington during May 2021. Samples were submitted to ALS Environmental Lab located in Kelso, Washington. A sample collection and analysis summary is presented in Table 1. The validated analytical results are summarized in Table 2. A summary of the analytical methodology is presented in Table 3. A copy of the chain of custody document can be found in Attachment A.

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

The QA/QC criteria by which these data have been assessed are outlined in the analytical method referenced in Table 3 and applicable guidance from the document entitled "USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review", United States Environmental Protection Agency (USEPA) 540-R-2016-002, September 2016, subsequently referred to as the "Guidelines" in this Memorandum.

2. Sample Holding Time and Preservation

The sample holding time criterion for the analyses is summarized in Table 3. The sample chain of custody document and analytical report were used to determine sample holding times. Samples were analyzed within the required holding times.

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

3. Laboratory Method Blank Analyses

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

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

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

4. Surrogate Spike Recoveries

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

All samples submitted for volatile organic compound (VOC) determinations were spiked with the appropriate number of surrogate compounds prior to sample analysis.

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

5. Laboratory Control Sample Analyses

LCS are prepared and analyzed as samples to assess the analytical efficiencies of the method employed, independent of sample matrix effects.

For this study, LCS were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch. It was analyzed in duplicate to assess analytical precision (LCSD).

The LCS contained all compounds of interest. All LCS/LCSD recoveries were within the laboratory control limits, demonstrating acceptable analytical accuracy and precision.

6. Matrix Spike/Matrix Spike Duplicate Analyses

To evaluate the effects of sample matrices on the preparation process, measurement procedures, and accuracy of a particular analysis, samples are spiked with known concentrations of the analytes of concern and analyzed as MS/MSD samples. The relative percent difference (RPD) between the MS and MSD is used to assess analytical precision.

MS/MSD analysis was performed as specified in Table 1.

The MS/MSD sample was spiked with all compounds of interest. All percent recoveries and RPD values were within the laboratory control limits, demonstrating acceptable analytical accuracy and precision.

7. Field QA/QC Samples

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

7.1 Trip Blank Sample Analysis

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

7.2 Field Duplicate Sample Analysis

To assess the analytical and sampling protocol precision, one field duplicate sample set was collected and submitted "blind" to the laboratory, as specified in Table 1. The RPDs associated with the duplicate sample must be less than 50 percent for water samples. If the reported concentration in either the investigative sample or its duplicate is less than five times the reporting limit (RL), the evaluation criterion is one times the RL value.

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

8. Analyte Reporting

The laboratory evaluated detected results down to the laboratory's method detection limit (MDL) for each analyte. Positive analyte detections less than the RL but greater than the MDL were reported as estimated (J) in Table 2. Non-detect results were presented as non-detect at the RL in Table 2.

9. Conclusion

Based on the assessment detailed in the foregoing, the data summarized in Table 2 are acceptable without qualification.

Table 1

Sample Collection and Analysis Summary
Semiannual Groundwater Monitoring
Glenn Springs Holdings, Inc. - Petarcik Site
Tacoma, Washington
May 2021

Sample Identification	Location	Matrix	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis: Volatiles	Comments
GW-052421-NT-B3	B-3	Water	05/24/2021	12:40	X	
GW-052421-NT-FD-1	B-3	Water	05/24/2021	00:00	X	Field Duplicate of GW-052421-NT-B3
GW-052421-NT-B3AR	B-3AR	Water	05/24/2021	13:05	X	Matrix Spike/ Matrix Spike Duplicate
GW-052421-NT-B4	B-4	Water	05/24/2021	16:40	X	
GW-052421-NT-B-12R	B-12R	Water	05/24/2021	14:10	X	
TRIP BLANK	-	-	05/24/2021	23:59	X	Trip Blank

Notes:

- - Not applicable

Table 2

Analytical Results Summary
Semiannual Groundwater Monitoring
Glenn Springs Holdings, Inc. - Petarcik Site
Tacoma, Washington
May 2021

Location ID:		B-3	B-3	B-3AR	B-4	B-12R
Sample Name:		GW-052421-NT-B3	GW-052421-NT-FD-1	GW-052421-NT-B3AR	GW-052421-NT-B4	GW-052421-NT-B-12R
Sample Date:		05/24/2021	05/24/2021	05/24/2021	05/24/2021	05/24/2021
		--	Duplicate	--	--	--
Parameters	**Unit**					
Volatile Organic Compounds (VOCs)						
Chloroform (Trichloromethane)	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Tetrachloroethene	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Trichloroethene	µg/L	0.50 U	0.50 U	0.32 J	0.50 U	0.50 U
Vinyl chloride	µg/L	0.50 U	0.15 J	0.50 U	0.50 U	0.50 U

Notes:

J - Estimated concentration
U - Not detected at the associated reporting limit

Table 3

Analytical Method
Semiannual Groundwater Monitoring
Glenn Springs Holdings, Inc. - Petarcik Site
Tacoma, Washington
May 2021

Parameter	Method	Matrix	Holding Time Collection to to Analysis (Days)
Volatile Organic Compounds (VOCs)	SW-846 8260B	Water	14

Notes:

Method References:

SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, 1986, with subsequent revisions