



REPORT

**PERFORMANCE GROUNDWATER MONITORING
REPORT – WINTER 2018
GROUNDWATER DATA**

SUMMARY SEA-TAC DEVELOPMENT SITE (MASTERPARK LOT C)

Submitted to:

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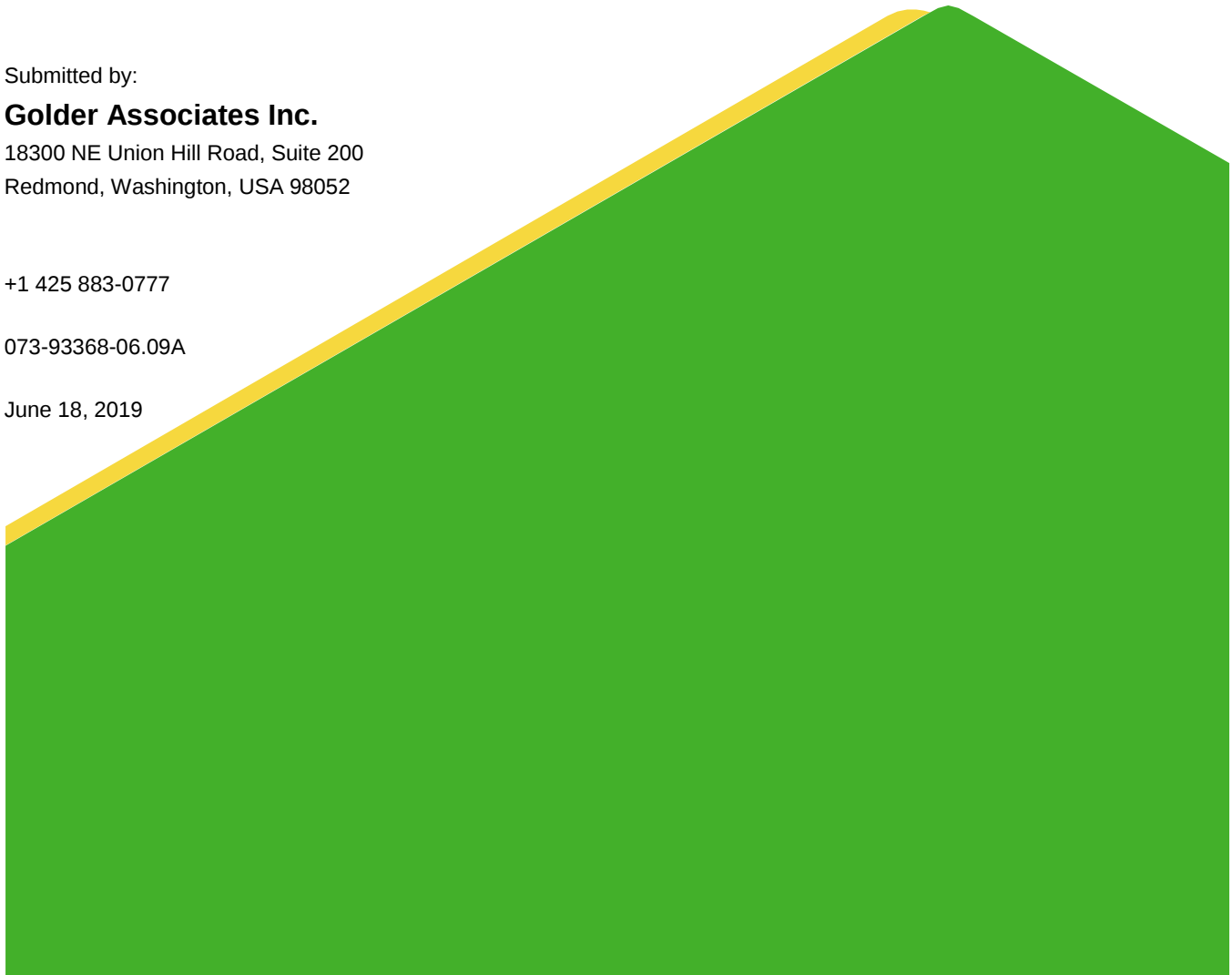


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1.0 INTRODUCTION

Golder Associates Inc. (Golder) completed performance groundwater monitoring event at the Sea-Tac Development Site (MasterPark Lot C) on November 7 and 8, 2018. All groundwater sampling was conducted in accordance with the Compliance Monitoring Plan for the Sea-Tac Development Site (Golder 2011¹). Groundwater samples were collected from monitoring wells MW-06, MW-07, MW-09, MW-12, MW-13, MW-15, MW-17A, MW-18, MW-19, MW-20, MW-21, MW-22, MW-23, and PORT-MW-B (Figure 1). Monitoring wells MW-07, MW-09, MW-12, MW-13, MW-17A, MW-18, and MW-22 are completed to monitor the approximate groundwater plume boundary. Monitoring wells MW-06, MW-19, MW-20, MW-21, and PORT-MW-B are completed to monitor background concentrations. Static water elevations were collected at site wells this sampling round, including those previously listed above, MW-01, MW-05, MW-08A, MW-09, MW-10, MW-11, MW-14, and MW-16.

1.0 SAMPLING PROTOCOL

Groundwater sampling was conducted in accordance with the Compliance Monitoring Plan, Sea-Tac Development Site (Golder 2011), and included the following activities:

- Measurement of static water elevations at monitoring wells
- Well purging to ensure sample representativeness with the dedicated submersible bladder pumping systems
- Measurement of field parameters (pH, specific conductance, temperature, dissolved oxygen, and turbidity)
- Collection of all purge water in appropriate containers for on-site storage prior to disposal
- Collection of representative and quality assurance / quality control (QA/QC) samples in appropriate containers
- Analyses of groundwater for volatile organic compounds (VOCs, EPA Method 8260C): gasoline range hydrocarbons, benzene, toluene, ethylbenzene, xylene, ethylene dibromide (EDB), naphthalene, and n-hexane; and for diesel and motor oil range Northwest Total Petroleum Hydrocarbons (Method NWTPH-D)

Sampling activities were documented on Sample Integrity Data Sheets (SIDS), which are provided in Appendix A for each sampling event. Appendix B provides data tables and trend graphs inclusive of groundwater results from both sampling events. Table 1 presents water depth measurements and elevations that were collected from wells during the spring 2018 sampling activities. Table 2 shows a summary of the field parameters and laboratory analytical results for all groundwater samples collected during the spring 2018 sampling event. A summary of all recent and historical data, including water level depths, groundwater elevations, field parameters, and analytical data is provided by sample location in Figures B-1 through B-12 (Appendix B).

2.0 WINTER 2018 GROUNDWATER SAMPLING RESULTS

Following sample collection, all bottles were sealed, labeled, and placed in an iced cooler until delivery to the laboratory. All groundwater samples from monitoring wells were transported under chain-of-custody procedures to Analytical Resources Incorporated (ARI), of Tukwila, Washington, for analysis. Upon receipt of laboratory data reports, data underwent a data validation review. Results were compared to State of Washington Model Toxics

¹ Golder Associates Inc. 2011. Attachment E Compliance Monitoring Plan Sea-Tac Development Site SeaTac, Washington, Redmond project number 073-93368-05.04, November 2.

Control Act (MTCA) Method A or B cleanup levels and Secondary Maximum Contaminant Levels (MCLs), whichever value is lower.

The analytical results indicate that groundwater conditions have improved significantly from those observed during the historical groundwater monitoring during the Remedial Investigation (RI) and since the startup of the In-situ Air Sparging (IAS)-Soil Vapor Extraction (SVE) system. Table 2 presents the field parameter measurements and laboratory analytical results for each groundwater sample collected in November 2018. In summary, the performance monitored groundwater locations that have any MTCA or MCL exceedances are from monitoring wells MW-07, MW-12, MW-18, and MW-22. MW-15 and MW-23 are not part of the performance monitoring, but were sampled for NWTPH-Gasoline, NWTPH-Diesel and BTEX to evaluate rebound. Below are more details on the detections during the fall 2018 monitoring event.

Results for NWTPH-Gasoline (gasoline) exceeded the MTCA Method A limit for groundwater when benzene is present (0.8 milligrams per liter [mg/L]) in wells MW-07, MW-12, MW-15, MW-18, and MW-22. Gasoline was not detected in wells MW-06, MW-09, MW-13, MW-17A, MW-19, MW-20, MW-21, and PORT-MW-B.

The MTCA Method A limit for benzene (5 µg/L) was exceeded in two wells MW-12 and MW-18. Benzene was detected in MW-07, MW-15, and MW-22, but was less than the MTCA standard. Benzene was not detected in wells MW-06, MW-13, MW-17A, MW-19, MW-20, MW-21, and PORT-MW-B.

There were detections of toluene and/or ethylbenzene in wells MW-07, MW-12, MW-15, MW-18, and MW-22, but the values did not exceed the MTCA standard (640 µg/L for toluene and 700 µg/L for ethylbenzene). Toluene and ethylbenzene were not detected in wells MW-06, MW-09, MW-13, MW-17A, MW-19, MW-20, MW-21, and PORT-MW-B.

Results for total xylenes did not exceed the MTCA Method A standard (1,000 µg/L) in any wells. Xylenes were detected, but below the standard, in MW-07, MW-12, MW-15, MW-18, and MW-22, and were not detected in wells MW-06, MW-09, MW-13, MW-17A, MW-19, MW-20, MW-21, and PORT-MW-B.

N-hexane was detected at levels below the MTCA Method B cleanup level (480 µg/L) in wells MW-07, MW-12, MW-22. N-hexane was not detected in wells MW-06, MW-09, MW-13, MW-17A, MW-18, MW-19, MW-20, MW-21, and PORT-MW-B.

Naphthalene was detected above the MTCA limit (160 µg/L) in well MW-22. Naphthalene was also detected, but below the MTCA limit, in MW-07, MW-12, and MW-17A. Naphthalene was not detected in wells MW-06, MW-09, MW-13, MW-19, MW-20, MW-21 and PORT-MW-B.

NWTPH-Diesel (diesel) was detected at levels above the MTCA Method A limit (0.5 mg/L) in wells MW-07, MW-09, MW-15, MW-18, MW-22, and MW-23. Diesel was not detected in MW-06, MW-12, MW-13, MW-17A, MW-19, MW-20, MW-21, and PORT-MW-B. MW-12 was also analyzed for diesel using acid silica gel cleanup. Both diesel analysis resulted in a non-detects, therefore the MW-12 recent diesel concentration is likely to be non-fuel organics in the diesel range.

NWTPH-Motor Oil (Motor Oil) exceeded the MTCA Method A limit (0.5 mg/L) in MW-23. During the winter 2018 sampling event, Motor Oil was not detected at any of the performance monitoring wells.

3.0 DATA QUALITY ASSURANCE / VALIDATION

The following data qualifications were applied to the results from this sampling event. The diesel and motor oil were re-analyzed for MW-22 and MW-23 due to method blank contamination. The Diesel concentrations have

J-flags due to being re-analyzed out of holding time. The motor oil concentration for MW-22 was UJ-flagged due to being re-analyzed out of holding time. The motor oil concentration for MW-23 was J-flagged due to being re-analyzed out of holding time. The n-Hexane concentration for MW-12 was J+ flagged due to surrogate recovery above QC Criteria. Results for QA/QC samples (field blanks, trip blanks, and field duplicate) were acceptable.

4.0 SUMMARY

The analytical results from the fall 2018 semi-annual groundwater sampling event indicate that there continues to be significant improvements to the groundwater conditions following the startup of the IAS-SVE system and since the first quarter (February 2014) groundwater sampling event. Prior to the temporary shutdown of the treatment system during summer of 2017, the wells inside of the IAS and SVE system area had shown significant reductions and were almost meeting performance goals. The first sampling event in February 2014 had 24 results that were greater than the MTCA cleanup levels, while the most recent sampling event in November 2018 respectively had 10 out of 120 results above MTCA cleanup levels. This is a slight decrease in MTCA cleanup level exceedances from the spring groundwater sampling event. Overall, concentrations are still trending downward as shown in the historical data tables and graphs in Appendix B.

The only on-site performance monitoring wells containing compounds in groundwater with analytical results above MTCA cleanup levels in November 2018 were MW-07, MW-12, and MW-18. A single on-site monitoring well (MW-11), which had detected contaminants over MTCA cleanup levels during the RI, is not sampled for performance monitoring and thus no new results from MW-11 are available for comparison. At MW-07, although there has been a continual decrease in gasoline, benzene and diesel concentrations over the last few sampling rounds, gasoline and diesel results remained above the MTCA cleanup levels. Diesel concentration at MW-09, decreased below the MTCA cleanup concentration during the November 2018 sampling event.

MW-18, which was in the source area, had an increase in benzene level above the MTCA cleanup level in May 2016. However, benzene concentrations decreased in the last two sampling events (3.6 µg/L in November 2017; non-detect in January 2018), and not analyzed for during the March 2018 sampling. When compared to a former trending stabilization of lower benzene concentrations over the previous sampling events during 2014 and 2015, the May 2016 and May 2017 benzene levels were slightly above the MTCA cleanup level with concentrations of 8.0 and 6.8 µg/L, respectively. The November 2018 MW-18 Benzene concentration also exceeded the MTCA cleanup level with a concentration of 6.59 µg/L. MW-18 gasoline and diesel concentrations rebounded above MTCA cleanup levels during the November 2017, March 2018, and May 2018 sampling events.

The only off-site performance monitoring well that was sampled and contained compounds in groundwater with analytical results above the MTCA cleanup levels in May 2018 was MW-22. Two off-site monitoring wells were sampled for comparison (MW-15 and MW-23). Both MW-15 and MW-22 had diesel concentrations greater than the MTCA cleanup level. MW-23 had also had a motor oil concentration greater than MTCA cleanup levels.

Well MW-07 has shown a significant decrease in gasoline concentrations since the startup of the IAS-SVE system with levels reducing from 29 mg/L to 1.37 mg/L. Through May 2017, MW-12 and MW-13 have showed significant drops in gasoline concentrations from 8.6 mg/L to <0.10 mg/L and 14 mg/L to <0.10 mg/L, respectively. However, since temporary treatment system shutdown, gasoline concentrations at MW-12 were not only detected, but have increased to above MTCA cleanup levels in the November 2017, January 2018, May 2018, and November 2018 sampling events, which is likely indicative of early contaminant rebound. Benzene in MW-12 went from 79 µg/L in February 2014 to <0.20 µg/L in May 2017; however, more recently has rebounded to concentrations of 26.1 µg/L (Table and Figure B-4). Prior to the temporary system shut down, toluene, ethylbenzene, total xylenes, and naphthalene in MW-12 and MW-13 also showed significant decreases in concentrations. The concentrations of

these analytes showed rebound in MW-12 during the last three sampling rounds, while have not changed significantly at MW-13.

Refer to Appendix B for data tables and trend graphs for comparisons of the March 2010 final RI monitoring event with the 2014-2018 performance monitoring results.

5.0 CONTAMINANT REBOUND OBSERVATIONS

Comparison of groundwater data from the most recent event with historical data shows some indication of rebound in wells MW-12 and MW-18.

At MW-13, there has been a significant decrease in dissolved oxygen, reducing from 10.71 mg/L in May 2017 to 1.00 November 2018 sampling event. A significant decrease in dissolved oxygen observed in site wells MW-07, MW-12, MW-13, MW-18, and MW-19 is directly correlated with the temporary shutdown of the treatment system which injects ambient air into the aquifer and typically increases the dissolved oxygen concentrations around the IAS wells.

Contaminant rebound at MW-12 is more evident than at any other location, where prior to 2017 most analyte concentrations were below detections limits. However, in the last three rounds of monitoring there have been detections in most analytes, with exceedances of MTCA cleanup levels for gasoline (last 3 sampling events) and diesel (last 4 sampling events). The MW-12 benzene concentration of 26.1 ug/L exceeded the MTCA cleanup level during the November 2018 sampling event. Groundwater quality at MW-7 and MW-9 also shows a slight increase in diesel.

Following temporary treatment system shutdown, MW-18 results from November 2017 showed some initial increases in the gasoline and diesel concentrations (Figure B-7). The May 2018 and November 2018 gasoline and diesel concentrations show continued rebound. However, MW-18 results from January 2018 show non-detections for gasoline, diesel, and benzene. Dissolved oxygen levels at MW-18 also differed significantly between the spring 2017 and winter 2018 events. Due to the differences at MW-18 with the water quality and field parameters results between the November 2017 and January 2018 events and recent historical data, an additional groundwater sample was collected on March 9, 2018. During the March 2018 event, the MW-18 was analyzed only for gasoline, diesel and motor oil. The gasoline and diesel concentrations in May 2018 and November 2018 were similar to the concentrations in November 2017 and March 2018. Thus, the January 2018 results for MW-18 were anomalous. The data indicate that rebound may be occurring at MW-18, near the former source area.

Golder Associates Inc.


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Tables

**Table 1: November 2018 Groundwater Elevation Data,
Sea-Tac Development Site, Seatac, Washington**

Sample Location ID	Date/Time Sampled	Well Data			Water Levels		
		Total Well Depth (feet bgs)	Screened Interval (feet bgs)	Casing Diameter (inches)	TOC Elevation (feet msl)	Depth to Water (feet btoc)	Groundwater Elevation (feet msl)
MW-01	11/7/2018 16:03	51.0	41-51	2	361.38	48.91	312.47
MW-05	11/7/2018 15:35	58.0	48-58	2	364.26	52.06	312.20
MW-06	11/7/2018 7:49	60.0	50-60	2	369.68	57.41	312.27
MW-07	11/7/2018 16:50	53.5	43.5-53.5	2	358.69	46.32	312.37
MW-08A	11/7/2018 16:25	54.0	44-54	2	359.16	46.82	312.34
MW-09	11/7/2018 14:15	57.0	47.5-57	2	362.13	49.86	312.27
MW-10	11/7/2018 16:14	90.0	80-90	2	360.18	48.09	312.09
MW-11	11/7/2018 16:42	57.0	42-57	2	357.53	45.03	312.50
MW-12	11/7/2018 17:02	67.0	52-67	2	364.83	52.55	312.28
MW-13	11/7/2018 15:31	65.0	50-65	2	365.42	53.16	312.26
MW-14	11/7/2018 15:50	65.0	50-65	2	363.76	51.52	312.24
MW-15	11/7/2018 10:46	65.0	50-65	2	364.67	52.39	312.28
MW-16	11/7/2018 15:18	73.7	64-74	2	377.63	-	-
MW-17A ^a	11/7/2018 15:00	95.0	80-95	2	394.00	82.49	311.51
MW-18	11/7/2018 16:43	62.0	47-62	2	360.45	48.14	312.31
MW-19	11/7/2018 16:33	58.0	43-58	2	356.61	44.15	312.46
MW-20	11/7/2018 14:32	113.1	103-113	2	416.61	104.98	311.63
MW-21	11/7/2018 14:11	109.8	95-110	2	412.85	100.93	311.92
MW-22	11/7/2018 9:37	95.0	80-95	2	393.31	81.22	312.09
MW-23	11/7/2018 11:56	57.5	42.5-57.5	2	354.94	42.52	312.42
PORT-MW-B ^a	11/7/2018 12:28	99.0	79-99	2	400.00	87.91	312.09

Notes:

- Not measured or not available
- feet bgs Feet below ground surface
- feet bmp Feet below measuring point
- feet msl Feet above mean sea level
- TOC Top of casing inside PVC well
- ^a Well not surveyed, elevation estimated.

Table 2: November 2018 Groundwater Field Parameters and Analytical Data, Sea-Tac Development Site, Seatac, Washington

Sample Location ID	Date/Time Sampled	Field Parameters								Analytical Data											
		TOC Elevation (feet msl)	Depth to Water (feet btoc)	Groundwater Elevation (feet msl)	pH (standard units)	Temperature (°C)	Conductivity (µmhos/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	NWTPH-Gasoline (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	EDB (ethylene dibromide) (µg/L) ^f	N-hexane (µg/L)	Naphthalene (µg/L)	NWTPH-Diesel (mg/L)	NWTPH-Motor Oil (mg/L)	NWTPH-Diesel (mg/L) Acid-Silica Gel Clean-up ^p	NWTPH-Motor Oil (mg/L) Acid-Silica Gel Clean-up ^p
MW-06	11/7/2018 8:45:00 AM	369.7	57.4	312.3	6.35	13.6	188	8.74	0.42	<0.10	<0.20	<0.20	<0.20	<0.40	<0.01	<0.20	<0.50	<0.10	<0.20	-	-
MW-07	11/8/2018 10:00:00 AM	358.7	46.3	312.4	6.67	14.7	220	0.29	1.60	1.4	0.73	0.29	0.78	1.6	<0.01	0.42	4.0	0.74	<0.20	-	-
MW-09	11/7/2018 2:55:00 PM	362.1	49.9	312.3	6.28	13.8	203	0.32	0.25	<0.10	<0.20	<0.20	<0.20	<0.40	<0.01	<0.20	<0.50	0.28	<0.20	-	-
MW-12	11/8/2018 11:10:00 AM	364.8	52.6	312.3	7.98	14.7	354	0.36	6.60	3.6	26	2.5	24	25	<0.01	48 J+	17	<0.10	<0.20	<0.10	<0.20
MW-13	11/7/2018 4:10:00 PM	365.4	53.2	312.3	7.10	13.6	141	1.00	0.64	<0.10	<0.20	<0.20	<0.20	<0.40	<0.01	<0.20	<0.50	<0.10	<0.20	-	-
MW-15	11/7/2018 11:30:00 AM	364.7	52.4	312.3	7.18	14.0	290	2.49	-	0.82	0.48	0.19 J	1.8	0.24 J	-	-	-	1.0	<0.20	-	-
MW-17A	11/8/2018 2:30:00 PM	394.0	82.5	311.5	6.48	12.3	116	8.20	3.35	<0.10	<0.20	<0.20	<0.20	<0.40	<0.01	<0.20	<0.50	<0.10	<0.20	-	-
MW-18 ^b	11/7/2018 5:20:00 PM	360.5	48.1	312.3	6.82	15.1	506	0.17	2.50	1.5	6.6	1.1	24	2.8	<0.01	<0.20	7.0	3.3	<0.20	-	-
MW-19	11/8/2018 9:00:00 AM	356.6	44.2	312.5	7.00	13.6	314	0.33	0.72	<0.10	<0.20	<0.20	<0.20	<0.40	<0.01	<0.20	<0.50	<0.10	<0.20	-	-
MW-20	11/8/2018 1:30:00 PM	416.6	105.0	311.6	6.89	13.2	144	7.83	1.07	<0.10	<0.20	<0.20	<0.20	<0.40	<0.01	<0.20	<0.50	<0.10	<0.20	-	-
MW-21	11/8/2018 12:25:00 PM	412.9	100.9	311.9	6.47	13.0	127	8.75	0.64	<0.10	<0.20	<0.20	<0.20	<0.40	<0.01	<0.20	<0.50	<0.10	<0.20	-	-
MW-22	11/7/2018 10:20:00 AM	393.3	81.2	312.1	6.97	13.4	171	3.92	1.78	8.6	2.3	2.2	198	407	<0.01	4.0	228	1.8 J	0.20 UJ	-	-
MW-22 Duplicate	11/7/2018 10:30:00 AM	-	-	-	-	-	-	-	-	8.3	2.4	2.2	200	417	<0.01	4.1	225	1.6	<0.20	-	-
MW-23	11/7/2018 12:05:00 PM	354.9	42.5	312.4	6.80	13.2	185	4.68	-	<0.10	<0.20	<0.20	<0.20	<0.40	-	-	-	2.3 J	13 J	-	-
PORT-MW-B	11/7/2018 1:10:00 PM	400.0	87.9	312.1	6.80	13.1	103	4.92	1.29	<0.10	<0.20	<0.20	<0.20	<0.40	<0.01	<0.20	<0.50	<0.10	<0.20	-	-
Clean-up Level		MTCA Method A for Groundwater (unrestricted landuse)								0.8 ^d /1.0 ^e	5 ^g	1000 ^g	700 ^g	1000 ^h	0.01 ^h	NSA	160	0.5	0.5	0.5	0.5
		MTCA Method B for Groundwater (unrestricted landuse)								NSA	5 ⁱ	640	800	1600	0.022	480	160	NSA	NSA	NSA	NSA

- Notes:
- feet bgs

Feet below ground surface

-

Not measured or not available
- feet bmp

Feet below measuring point

Result exceeds Clean-up Level (CUL)
- feet msl

Feet above mean sea level

mg/L

Milligrams per liter
- ^a

Well not surveyed, elevation estimated.

µg/L

Micrograms per liter
- ^b

IAS system not in operation.

NTU

Nephelometric Turbidity Unit
- ^c

Water levels collected at various times prior to sampling (see Table 1). Date/time is sampling time.

µmhos/cm

Micromhos per centimeter
- ^d

When benzene is present.

<

Analyte not detected above the reporting limit shown
- ^e

When benzene is not present.

MTCA

Model Toxics Control Act
- ^f

Reported at Method Detection Limit (MDL). The MDL is greater than the MTCA CULs.

MCL

Maximum Containment Level
- ^g

Inclusive of 40 CFR 141.61 Federal Law for drinking water MCLs

NSA

No Standard Available
- ^h

Value is more protective than Federal MCLs.

TOC

Top of casing inside PVC well
- ⁱ

MTCA 173-340-705(5): Adjustments to cleanup levels based on applicable laws.

°C

Degrees Celsius
- ^j

Top of pump is above water level - not measured.

J

The constituent was positively identified and detected; however, the concentration reported is an estimated value because the result is less than the quantitation limit or quality control criteria were not met.
- ^k

Well not sampled, attempted to sample with bailer

UJ

The constituent was analyzed for, but was not detected above the reported sample quantitation limit; however, the value reported is an estimated value because the result is less than the quantitation limit or quality control criteria were not met.
- ^m

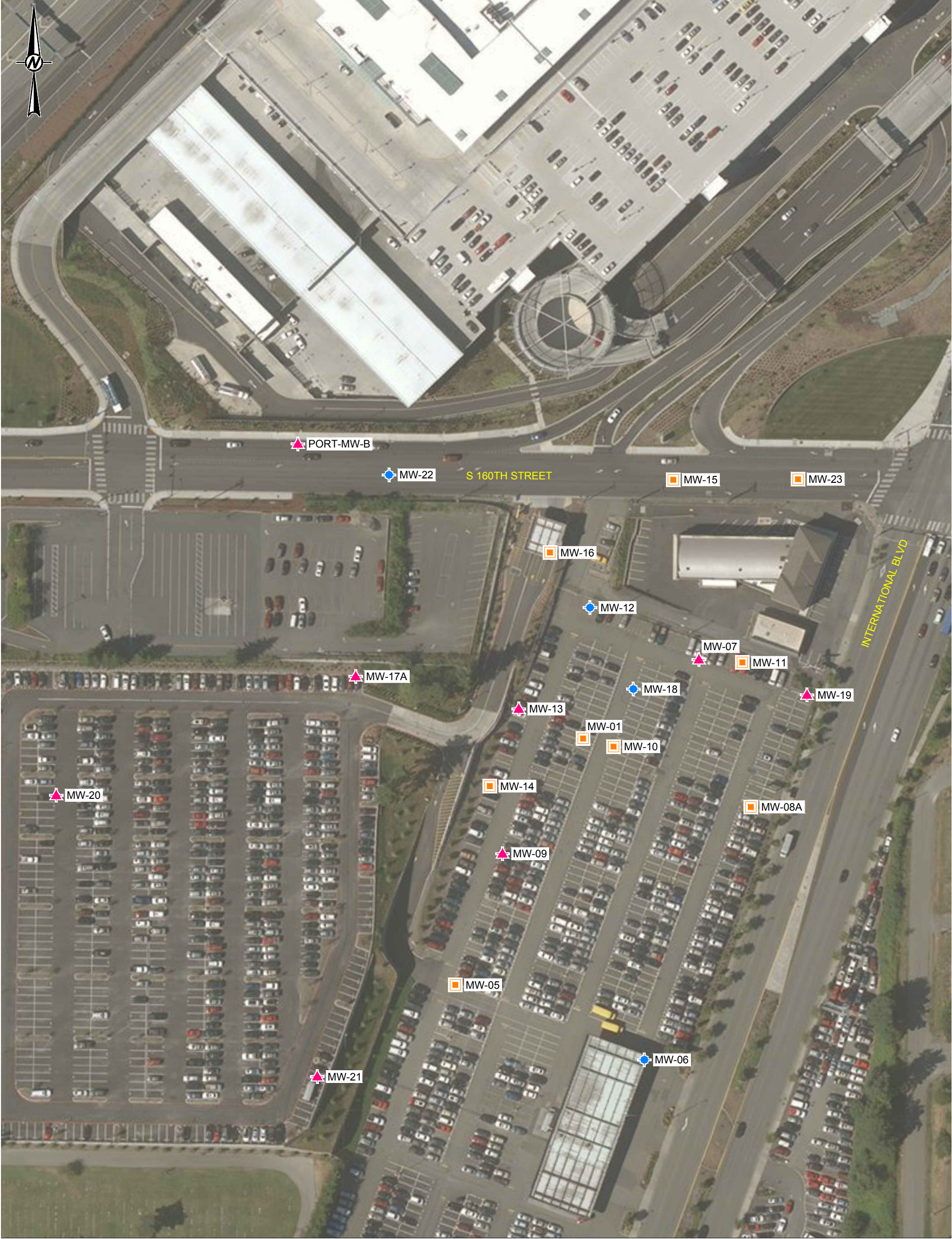
Well sampled with bailer, no field parameters collected

J+

The constituent was positively identified and detected; however, the concentration reported is an estimated value because the result may be biased high.
- ⁿ

Well sampled with bailer with field parameters collected

Figures



LEGEND

MW-14

MW-09

MW-01

MONITORING WELL - GROUNDWATER ELEVATIONS MEASURED

MONITORING WELL - COMPLIANCE

MONITORING WELL - NATURAL ATTENUATION

NOTES

1. MONITORING WELL LOCATIONS ARE APPROXIMATE.

REFERENCE

IMAGE COURTESY OF USGS EARTHSTAR GEOGRAPHICS

CLIENT
RIDDELL-WILLIAMS

CONSULTANT



YYYY-MM-DD	2014-04-01
PREPARED	REDMOND
DESIGN	JL
REVIEW	DM
APPROVED	

PROJECT
SEATAC DEVELOPMENT SITE
MASTER PARK LOT C

TITLE
GROUNDWATER MONITORING LOCATIONS

PROJECT No. 073-93368x06.09A

U+0000

Rev.
B

FIGURE
1

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D 11in

APPENDIX A

**Sample Integrity Data Sheets
(SIDS)**

SAMPLE INTEGRITY DATA SHEET

Plant/Site Master Park Lot C Project No. 073-93368-06.09A
 Site Location SeaTac, WA Sample ID MPLOT-C-MW-6-110718
 Sampling Location At end of sample tubing
Low Flow Sampling
 Technical Procedure Reference(s) App E – Compliance Monitoring Plant Plan (Golder, Nov 2011)
 Type of Sampler QED Controller and Bladder Pump – Dedicated Tubing
 Date 11/7/18 Time 0835
 Media Water Station MW-6
 Sample Type: grab time composite space composite
 Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)
 Static Water Level: 57.4 Free Product Thickness: —
 Date & Time of Measurement: 11/7/18 @ 0749
 Measurements are in feet below top of well casing.
 Sample Intake Point: 60 ft below top of well casing
 Sample Description clear

 Field Measurements on Sample (pH, conductivity, etc.) _____
 See Field Parameters Sheet _____

<u>Aliquot Amount</u>	<u>Analysis</u>	<u>Container</u>	<u>Preservative</u>
(5) 40 mL	NWTPH-gasoline & BTEX	VOA vial	HCl
<u>2 40 mL</u>	EDB (ethylene dibromide)		
	N-hexane		
	Naphthalene		
(2) 500 mL	NWTPH-Dx	Amber Glass	none

Sampler (signature) [Signature] Date 11/7/18
 Supervisor (signature) [Signature] Date 14 Jan 2019

Time Collect Sample 0835[illegible]

Comments:

PID: 0.0 ppm

Water level fluctuation with pump cycle:

Sampler's Initials LM

SAMPLE INTEGRITY DATA SHEET

Plant/Site Master Park Lot C Project No. 073-93368-06.09A
 Site Location SeaTac, WA Sample ID MPL0TC-MW-7- 110818
 Sampling Location At end of sample tubing MPL0TC-FB-
Low Flow Sampling MW-47-110818
 Technical Procedure Reference(s) App E – Compliance Monitoring Plant Plan (Golder, Nov 2011)
 Type of Sampler QED Controller and Bladder Pump – Dedicated Tubing
 Date 11/08/2018 Time 0945 / 1000
 Media Water Station MW-7
 Sample Type: grab time composite space composite
 Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)
 Static Water Level: 410.37 Free Product Thickness: _____
 Date & Time of Measurement: 09:10 11/08/2018
 Measurements are in feet below top of well casing. _____
 Sample Intake Point: 52 ft below top of well casing
 Sample Description slight TPH odor

Field Measurements on Sample (pH, conductivity, etc.) _____
 See Field Parameters Sheet _____

<u>Aliquot Amount</u>	<u>Analysis</u>	<u>Container</u>	<u>Preservative</u>
(5) 40 mL	NWTPH-gasoline & BTEX	VOA vial	HCl
<u>2-40mL</u>	EDB (ethylene dibromide)		
	N-hexane		
	Naphthalene		
(2) 500 mL	NWTPH-Dx	Amber Glass	none

Sampler (signature) [Signature] Date 11/5/18
 Supervisor (signature) [Signature] Date 14 Jan '19

FB@0945

[illegible]

Nitrogen Tank: 110 psi
Throttle: 40 psi
Cycle ID: 50
CPM: 2
Purge Rate: 260 mL/min
PID: 0.0 ppm

Sampler's Initials

SAMPLE INTEGRITY DATA SHEET

Plant/Site Master Park Lot C Project No. 073-93368-06.09A
 Site Location SeaTac, WA Sample ID MPL0TC-MW-9- 110718
 Sampling Location At end of sample tubing
Low Flow Sampling
 Technical Procedure Reference(s) App E – Compliance Monitoring Plant Plan (Golder, Nov 2011)
 Type of Sampler QED Controller and Bladder Pump – Dedicated Tubing
 Date 11/7/18 Time 1455
 Media Water Station MW-9
 Sample Type: grab time composite space composite
 Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)
 Static Water Level: 49.86 Free Product Thickness: _____
 Date & Time of Measurement: 1415 @ 11/7/18
 Measurements are in feet below top of well casing.
 Sample Intake Point: 54 ft below top of well casing
 Sample Description Clear
Boiled water Fall
 Field Measurements on Sample (pH, conductivity, etc.) _____
 See Field Parameters Sheet

<u>Aliquot Amount</u>	<u>Analysis</u>	<u>Container</u>	<u>Preservative</u>
(5) 40 mL	NWTPH-gasoline & BTEX	VOA vial	HCl
<u>2-46</u>	EDB (ethylene dibromide)		
	N-hexane		
	Naphthalene		
(2) 500 mL	NWTPH-Dx	Amber Glass	none

Sampler (signature) [Signature] Date 11/7/18
 Supervisor (signature) [Signature] Date 14 Jan '19

FIELD PARAMETERS SHEET

Well ID MW-9
Date 11/7/18
Time Begin Purge 1417
Time Collect Sample 1455

[illegible]**Comments:**

Nitrogen Tank: 110 psi
 Throttle: 60 psi
 Cycle ID: 5
 CPM: 2
 Purge Rate: 2.50 mL/min
 PID: 0.0 ppm

Water level fluctuation with pump cycle:

Sampler's Initials

SAMPLE INTEGRITY DATA SHEET

Plant/Site Master Park Lot C Project No. 073-93368-06.09A
 Site Location SeaTac, WA Sample ID MPLOT-C-MW-12-110818
 Sampling Location At end of sample tubing
Low Flow Sampling
 Technical Procedure Reference(s) App E - Compliance Monitoring Plant Plan (Golder, Nov 2011)
 Type of Sampler QED Controller and Bladder Pump - Dedicated Tubing
 Date 11/8/18 Time 1110
 Media Water Station MW-12
 Sample Type: grab time composite space composite
 Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)
 Static Water Level: 52.60 Free Product Thickness: _____
 Date & Time of Measurement: 1018 11/8/18
 Measurements are in feet below top of well casing.
 Sample Intake Point: 59 ft below top of well casing
 Sample Description clear

 Field Measurements on Sample (pH, conductivity, etc.) _____
 See Field Parameters Sheet

<u>Aliquot Amount</u>	<u>Analysis</u>	<u>Container</u>	<u>Preservative</u>
(5) 40 mL	NWTPH-gasoline & BTEX	VOA vial	HCl
	EDB (ethylene dibromide)		
	N-hexane		
	Naphthalene		
(2) 500 mL	NWTPH-Dx	Amber Glass	none
(2) 500 mL	NWTPH-Dx w/ Acid-Silica Gel Cleanup	Amber Glass	none

Sampler (signature) [Signature] Date 11/8/18
 Supervisor (signature) [Signature] Date 14 Jan '19

FIELD PARAMETERS SHEET

Well ID MW-12
Date 11/8/18
Time Begin Purge 1028
Time Collect Sample 1110

[illegible]

Notes issue

Comments:

Nitrogen Tank: 110 psi
Throttle: 70 psi
Cycle ID: 50
CPM: 2
Purge Rate: 260 mL/min
PID: 0.0 ppm

Water level fluctuation with pump cycle:

Sampler's Initials

SAMPLE INTEGRITY DATA SHEET

Plant/Site Master Park Lot C Project No. 073-93368-06.09A

Site Location SeaTac, WA Sample ID MPLOT-C-MW-13-110718

Sampling Location At end of sample tubing

Low Flow Sampling

Technical Procedure Reference(s) App E – Compliance Monitoring Plant Plan (Golder, Nov 2011)

Type of Sampler QED Controller and Bladder Pump – Dedicated Tubing

Date 11/7/18 Time 1610

Media Water Station MW-13

Sample Type: grab time composite space composite

Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)

Static Water Level: 53.16 Free Product Thickness:

Date & Time of Measurement: 1531 11/7/18

Measurements are in feet below top of well casing.

Sample Intake Point: 60 ft below top of well casing

Sample Description clear

Field Measurements on Sample (pH, conductivity, etc.)

See Field Parameters Sheet

<u>Aliquot Amount</u>	<u>Analysis</u>	<u>Container</u>	<u>Preservative</u>
(5) 40 mL	NWTPH-gasoline & BTEX	VOA vial	HCl
<u>2-40mL</u>	EDB (ethylene dibromide)		
	N-hexane		
	Naphthalene		
(2) 500 mL	NWTPH-Dx	Amber Glass	none

Sampler (signature) [Signature] Date 11/7/18

Supervisor (signature) [Signature] Date 14 Jan '19

FIELD PARAMETERS SHEET

Well ID MW-13
 Date 11/7/18
 Time Begin Purge 1532
 Time Collect Sample 1610

Water Level feet bmp	Time	Volume Purged	pH	Conductivity (uS/cm)	Temp. (°C)	DO (mg/L)	Turbidity (NTU)
53.17	1542		7.08	138	13.66	1.17	1.82
53.23	1547		7.08	137	13.67	1.10	1.16
53.18	1552		7.09	137	13.67	1.15	0.88
53.18	1557		7.09	138	13.65	1.10	0.79
53.20	1602		7.10	140	13.65	1.03	0.80
53.19	1607		7.10	141	13.64	1.00	0.69

Comments:

Nitrogen Tank: 100 psi
 Throttle: 50 psi
 Cycle ID: 50
 CPM: 2
 Purge Rate: 300 mL/min
 PID: 0.1 ppm Background 0.1ppm

Water level fluctuation with pump cycle:

Sampler's Initials gm

SAMPLE INTEGRITY DATA SHEET

Plant/Site Master Park Lot C Project No. 073-93368-06.09A
 Site Location SeaTac, WA Sample ID MPLOT-C-MW-15-11/7/18
 Sampling Location At end of sample tubing
Low Flow Sampling
 Technical Procedure Reference(s) App E – Compliance Monitoring Plant Plan (Golder, Nov 2011)
 Type of Sampler QED Controller and Bladder Pump – Dedicated Tubing
 Date 11/7/18 Time 1130
 Media Water Station MW-15
 Sample Type: grab time composite space composite
 Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)
 Static Water Level: 52.39 Free Product Thickness:
 Date & Time of Measurement: 1046
 Measurements are in feet below top of well casing.
 Sample Intake Point: Base
 Sample Description cloudy TPH Odor

 Field Measurements on Sample (pH, conductivity, etc.) _____
 See Field Parameters Sheet

<u>Aliquot Amount</u>	<u>Analysis</u>	<u>Container</u>	<u>Preservative</u>
(5) 40 mL	NWTPH-gasoline & BTEX	VOA vial	HCl
	EDB (ethylene dibromide)		
	N-hexane		
	<u>Naphthalene</u>		
(2) 500 mL	NWTPH-Dx	Amber Glass	none

Sampler (signature) [Signature] Date 11/7/18
 Supervisor (signature) [Signature] Date 14 Jan '19

FIELD PARAMETERS SHEET

Well ID MPL01C-MW-15
Date 11/07/2016
Time Begin Purge _____
Time Collect Sample 1130

[illegible]**Comments:**

Nitrogen Tank: _____ psi
Throttle: _____ psi
Cycle ID: _____
CPM: _____
Purge Rate: _____ mL
PID: 0.1 _____ ppm

X Sample collected in Baite
Baited 3x prior to sampling

Background 0.1ppm

Water level fluctuation with pump cycle:

Sampler's Initials_____

SAMPLE INTEGRITY DATA SHEET

Plant/Site Master Park Lot C Project No. 073-93368-06.09A

Site Location SeaTac, WA Sample ID MPLOTG-MW-17A-110818

Sampling Location At end of sample tubing MS/MS

Low Flow Sampling

Technical Procedure Reference(s) App E – Compliance Monitoring Plant Plan (Golder, Nov 2011)

Type of Sampler QED Controller and Bladder Pump – Dedicated Tubing

Date 11/8/18 Time 1430

Media Water Station MW-17A

Sample Type: grab time composite space composite

Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)

Static Water Level: 82.40 Free Product Thickness:

Date & Time of Measurement: 1351 on 11/8/18

Measurements are in feet below top of well casing.

Sample Intake Point: 90 ft below top of well casing

Sample Description clear

Field Measurements on Sample (pH, conductivity, etc.)

See Field Parameters Sheet

<u>Aliquot Amount</u>	<u>Analysis</u>	<u>Container</u>	<u>Preservative</u>
3x (5) 40 mL	NWTPH-gasoline & BTEX	VOA vial	HCl
3x 2-4mL	EDB (ethylene dibromide)		
	N-hexane		
	Naphthalene		
3x(2) 500 mL	NWTPH-Dx	Amber Glass	none

Sampler (signature) [Signature] Date 11/8/18

Supervisor (signature) [Signature] Date 14 Jan '19

FIELD PARAMETERS SHEET

Well ID MW-17A
Date 11/08/2018
Time Begin Purge 1353
Time Collect Sample 1430

[illegible]**Comments:**

Nitrogen Tank: 110 psi
Throttle: 60 psi
Cycle ID: 50
CPM: 2
Purge Rate: 2600 mL/min
PID: 0.0 ppm

Water level fluctuation with pump cycle:

Sampler's Initials

SAMPLE INTEGRITY DATA SHEET

Plant/Site Master Park Lot C Project No. 073-93368-06.09A
 Site Location SeaTac, WA Sample ID MPLOT-C-MW-18-11/7/18
 Sampling Location At end of sample tubing
Low Flow Sampling
 Technical Procedure Reference(s) App E - Compliance Monitoring Plant Plan (Golder, Nov 2011)
 Type of Sampler QED Controller and Bladder Pump - Dedicated Tubing
 Date 11/7/18 Time 1720
 Media Water Station MW-18
 Sample Type: grab time composite space composite
 Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)
 Static Water Level: 48.14 Free Product Thickness:
 Date & Time of Measurement: 1641 on 11/7/18
 Measurements are in feet below top of well casing.
 Sample Intake Point: 54 ft below top of well casing
 Sample Description clear

 Field Measurements on Sample (pH, conductivity, etc.) _____
 See Field Parameters Sheet _____

<u>Aliquot Amount</u>	<u>Analysis</u>	<u>Container</u>	<u>Preservative</u>
(5) 40 mL	NWTPH-gasoline & BTEX	VOA vial	HCl
<u>2-40mL</u>	EDB (ethylene dibromide)		
	N-hexane		
	Naphthalene		
(2) 500 mL	NWTPH-Dx	Amber Glass	none

Sampler (signature) [Signature] Date 11/7/18
 Supervisor (signature) [Signature] Date 14 Jan '19

FIELD PARAMETERS SHEET

Well ID MW-18
 Date 11/7/15
 Time Begin Purge 1643
 Time Collect Sample 1720

Water Level feet bmp	Time	Volume Purged	pH	Conductivity (uS/cm)	Temp. (°C)	DO (mg/L)	Turbidity (NTU)
48.31	1653	1	6.78	542	15.13	0.42	7.50
48.31	1658	1	6.79	535	15.16	0.24	7.85 ST
48.31	1703	1	6.79	529	15.14	0.22	3.41
48.31	1708	1	6.80	521	15.14	0.20	3.98
48.33	1713	1	6.81	514	15.14	0.19	5.12
48.34	1718	1	6.82	506	15.10	0.17	2.50

5.07

Comments:

Nitrogen Tank: 100 psi
 Throttle: 40 psi
 Cycle ID: 510
 CPM: 2
 Purge Rate: 26.1 mL/min
 PID: 0.1 ppm w/Background 0.1

Water level fluctuation with pump cycle:

Sampler's Initials JM

SAMPLE INTEGRITY DATA SHEET

Plant/Site Master Park Lot C Project No. 073-93368-06.09A
 Site Location SeaTac, WA Sample ID MPLOT-C-MW-19-110818
 Sampling Location At end of sample tubing
Low Flow Sampling
 Technical Procedure Reference(s) App E – Compliance Monitoring Plant Plan (Golder, Nov 2011)
 Type of Sampler QED Controller and Bladder Pump – Dedicated Tubing
 Date 11/8/18 Time 0900
 Media Water Station MW-19
 Sample Type: grab time composite space composite
 Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)
Static Water Level: 44.16 Free Product Thickness: _____
Date & Time of Measurement: 0814 11/8/18
Measurements are in feet below top of well casing.
Sample Intake Point: 50 ft below top of well casing
 Sample Description clear

 Field Measurements on Sample (pH, conductivity, etc.) _____
See Field Parameters Sheet

<u>Aliquot Amount</u>	<u>Analysis</u>	<u>Container</u>	<u>Preservative</u>
(5) 40 mL	NWTPH-gasoline & BTEX	VOA vial	HCl
<u>2-40 mL</u>	EDB (ethylene dibromide)		
	N-hexane		
	Naphthalene		
(2) 500 mL	NWTPH-Dx	Amber Glass	none

Sampler (signature) [Signature] Date 11/8/18
 Supervisor (signature) [Signature] Date 14 Jan '19

FIELD PARAMETERS SHEET

Well ID MW-19
Date 11/8/15
Time Begin Purge 0815
Time Collect Sample 0900

[illegible]**Comments:**

Nitrogen Tank: 100 psi
Throttle: 50 psi
Cycle ID: 50
CPM: 2
Purge Rate: 300 mL/min
PID: 0.0 ppm

Water level fluctuation with pump cycle:

Sampler's Initials

SAMPLE INTEGRITY DATA SHEET

Plant/Site Master Park Lot C Project No. 073-93368-06.09A
 Site Location SeaTac, WA Sample ID MPL0TC-MW-20-110818
 Sampling Location At end of sample tubing
Low Flow Sampling
 Technical Procedure Reference(s) App E – Compliance Monitoring Plant Plan (Golder, Nov 2011)
 Type of Sampler QED Controller and Bladder Pump – Dedicated Tubing
 Date 11/8/18 Time 1330
 Media Water Station MW-20
 Sample Type: grab time composite space composite
 Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)
 Static Water Level: 1014.85 Free Product Thickness: _____
 Date & Time of Measurement: 1250 11/8/18
 Measurements are in feet below top of well casing.
 Sample Intake Point: 111 ft below top of well casing
 Sample Description Clear

 Field Measurements on Sample (pH, conductivity, etc.) _____
 See Field Parameters Sheet _____

<u>Aliquot Amount</u>	<u>Analysis</u>	<u>Container</u>	<u>Preservative</u>
(5) 40 mL	NWTPH-gasoline & BTEX	VOA vial	HCl
<u>2-40mL</u>	EDB (ethylene dibromide)		
	N-hexane		
	Naphthalene		
(2) 500 mL	NWTPH-Dx	Amber Glass	none

Sampler (signature) [Signature] Date 11/8/18
 Supervisor (signature) [Signature] Date 14 Jan '19

FIELD PARAMETERS SHEET

Well ID MW-20
Date 11/08/2016
Time Begin Purge 1252
Time Collect Sample 1330

[illegible]**Comments:**

Nitrogen Tank: 110 psi
Throttle: 70 psi
Cycle ID: 50
CPM: 0
Purge Rate: 280 mL/min
PID: 0.0 ppm

Water level fluctuation with pump cycle:

Sampler's Initials

SAMPLE INTEGRITY DATA SHEET

Plant/Site Master Park Lot C Project No. 073-93368-06.09A

Site Location SeaTac, WA Sample ID MPLOT-C-MW-21-11/08/18

Sampling Location At end of sample tubing

Low Flow Sampling

Technical Procedure Reference(s) App E - Compliance Monitoring Plant Plan (Golder, Nov 2011)

Type of Sampler QED Controller and Bladder Pump - Dedicated Tubing

Date 11/08/2018 Time 1225

Media Water Station MW-21

Sample Type: grab time composite space composite

Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)

Static Water Level: 100.88 Free Product Thickness:

Date & Time of Measurement: 1147 11/08/2018

Measurements are in feet below top of well casing.

Sample Intake Point: 107 ft below top of well casing

Sample Description Clear No odor

Field Measurements on Sample (pH, conductivity, etc.)

See Field Parameters Sheet

<u>Aliquot Amount</u>	<u>Analysis</u>	<u>Container</u>	<u>Preservative</u>
(5) 40 mL	NWTPH-gasoline & BTEX	VOA vial	HCl
<u>2-40mL</u>	EDB (ethylene dibromide)		
	N-hexane		
	Naphthalene		
(2) 500 mL	NWTPH-Dx	Amber Glass	none

Sampler (signature) [Signature] Date 11/8/18

Supervisor (signature) [Signature] Date 14 Jan '19

FIELD PARAMETERS SHEET

Well ID MW-21
Date 11/08/2017
Time Begin Purge 1149
Time Collect Sample 1225

[illegible]**Comments:**

Nitrogen Tank: 110 psi
Throttle: 60 psi
Cycle ID: 60
CPM: 2
Purge Rate: 240 mL/min
PID: 0.0 ppm

Water level fluctuation with pump cycle:

Sampler's Initials

SAMPLE INTEGRITY DATA SHEET

Plant/Site Master Park Lot C Project No. 073-93368-06.09A

Site Location SeaTac, WA Sample ID MPL0TC-MW-22-110718

Sampling Location At end of sample tubing ~~MPL0TC-MW-22-DUP-~~

Low Flow Sampling MPL0TC-MW-22-110718

Technical Procedure Reference(s) App E - Compliance Monitoring Plant Plan (Golder, Nov 2011)

Type of Sampler QED Controller and Bladder Pump - Dedicated Tubing

Date 11-07-2018 Time 1020/1030

Media Water Station MW-22

Sample Type: grab time composite space composite

Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)

Static Water Level: 81.22 Free Product Thickness:

Date & Time of Measurement: 0937 on 11/7/18

Measurements are in feet below top of well casing.

Sample Intake Point: 89 ft below top of well casing

Sample Description Be. Vol unit (11)

Field Measurements on Sample (pH, conductivity, etc.)

See Field Parameters Sheet

Aliquot Amount	Analysis	Container	Preservative
9 x 2) 40 mL	NWTPH-gasoline & BTEX	VOA vial	HCl
	EDB (ethylene dibromide)		
	N-hexane		
	Naphthalene		
(2) 500 mL	NWTPH-Dx	Amber Glass	none

Sampler (signature) [Signature]

Date 11/7/18

Supervisor (signature) [Signature]

Date 14 Jan '19

Date 11/7/18

Time Begin Purge 0941

Time Collect Sample 1020/1030

Comments:

Nitrogen Tank:	<u>110</u>	psi
Throttle:	<u>60</u>	psi
Cycle ID:	<u>50</u>	
CPM:	<u>2</u>	
Purge Rate:	<u>250</u>	mL/min
PID:	<u>0.0</u>	ppm

Water level fluctuation with pump cycle:

Golder Associates

SAMPLE INTEGRITY DATA SHEET

Plant/Site Master Park Lot C

Project No. 073-93368-06.09A

Site Location SeaTac, WA

Sample ID MPL0TC-MW-23-110718

Sampling Location At end of sample tubing

Low Flow Sampling

Technical Procedure Reference(s) App E – Compliance Monitoring Plant Plan (Golder, Nov 2011)

Type of Sampler QED Controller and Bladder Pump – Dedicated Tubing

Date 11/07/2018

Time 1205

Media Water

Station ML-23

Sample Type: grab time composite space composite

Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)

Static Water Level: 42.52 Free Product Thickness:

Date & Time of Measurement: 11:56 11/07/2018

Measurements are in feet below top of well casing.

Sample Intake Point: Sampled w/ Bailer

Sample Description CLAY

Field Measurements on Sample (pH, conductivity, etc.) _____

See Field Parameters Sheet

<u>Aliquot Amount</u>	<u>Analysis</u>	<u>Container</u>	<u>Preservative</u>
(5) 40 mL	NWTPH-gasoline & BTEX	VOA vial	HCl
	EDB (ethylene dibromide)		
	N-hexane		
	Naphthalene		
(2) 500 mL	NWTPH-Dx	Amber Glass	none

Sampler (signature) [Signature]

Date 11/7/18

Supervisor (signature) [Signature]

Date 14 Jan '19

FIELD PARAMETERS SHEET

Well ID MPLOTG-MW-23
Date 11/07/2018
Time Begin Purge _____
Time Collect Sample 1205

[illegible]**Comments:**

Nitrogen Tank: _____ psi
 Throttle: _____ psi
 Cycle ID: _____
 CPM: _____
 Purge Rate: _____ mL/min
 PID: 0.1 ppm

Sampled w/ Baile
 Bailed 3x before Sampling
 Background 0.1ppm

Water level fluctuation with pump cycle:

Sampler's Initials

SAMPLE INTEGRITY DATA SHEET

Plant/Site Master Park Lot C **Project No.** 073-93368-06.09A

Site Location SeaTac, WA Sample ID PORT-MW-B-10714

Sampling Location At end of sample tubing

Low Flow Sampling

Technical Procedure Reference(s) App E – Compliance Monitoring Plant Plan (Golder, Nov 2011)

Type of Sampler QED Controller and Bladder Pump – Dedicated Tubing

Date 11/07/2018 **Time** 1310

Media Water Station PORT-MW-B

Sample Type: grab time composite space composite

Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)

Static Water Level: 87.91 **Free Product Thickness:**

Date & Time of Measurement: 12:28 11/07/2018

Measurements are in feet below top of well casing.

Sample Intake Point: 89 ft below top of well casing

Sample Description 1/2

Field Measurements on Sample (pH, conductivity, etc.) _____

See Field Parameters Sheet

<u>Aliquot Amount</u>	<u>Analysis</u>	<u>Container</u>	<u>Preservative</u>
(5) 40 mL	NWTPH-gasoline & BTEX	VOA vial	HCl
2-40 mL	EDB (ethylene dibromide)		
	N-hexane		
	Naphthalene		
(2) 500 mL	NWTPH-Dx	Amber Glass	none

Sampler (signature) [Signature] **Date** 11/7/18

Supervisor (signature) [Signature] Date 14 Jan '19

FIELD PARAMETERS SHEET

Well ID PORT-MW-B

Date 11/07/2018

Time Begin Purge 1232Time Collect Sample 1310[illegible]**Comments:**

Nitrogen Tank: 116 psi

Throttle: 70 psi

Cycle ID: 50

CPM: 2

Purge Rate: 270 mL/min

PID: 0.1 ppm

Water level fluctuation with pump cycle:

Sampler's Initials

APPENDIX B

Data Tables and Trend Graphs

DATA TABLES

Table B-1: Summary of Groundwater Sampling Results - Well MW-06
Sea-Tac Development Site, Seatac WA

Date Sampled ^b	Field Parameters								Analytical Data									
	TOC Elevation (feet msl)	Depth to Water (feet btoc)	Groundwater Elevation (feet msl)	pH (standard units)	Temperature (°C)	Conductivity (µmhos/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	NWTPH-Gasoline (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	EDB (ethylene dibromide) (µg/L) ^f	N-hexane (µg/L)	Naphthalene (µg/L)	NWTPH-Diesel (mg/L)	NWTPH-Motor Oil (mg/L)
19-Mar-10	369.68	60.03	309.65	5.96	13.5	409	0.87	3.75	< 0.10	< 1.0	< 1.0	< 1.0	< 1.0	< 0.0096	< 1.0	< 5.0	-	-
11-Feb-14	369.68	59.03	310.65	6.13	12.1	139	0.91	16.4	< 0.10	< 0.25	< 0.25	< 0.25	< 0.50	< 0.08	< 0.20	< 0.50	< 0.10	< 0.20
28-May-14	369.68	-	-	6.14	14.3	454	1.03	3.71	< 0.10	< 0.25	< 0.25	< 0.25	< 0.50	< 0.07	< 0.20 UJ	< 0.50	< 0.10	< 0.20
10-Sep-14	369.68	-	-	6.27	15.9	312	1.52	11.8	< 0.10	< 0.25	< 0.25	< 0.25	< 0.50	< 0.07	< 0.20	< 0.50	< 0.10	< 0.20
3-Dec-14	369.68	-	-	6.27	13.6	314	2.14	6.75	< 0.10	< 0.25	< 0.25	< 0.25	< 0.50	< 0.07	< 0.20	< 0.50	< 0.10	< 0.20
17-Jun-15	369.68	-	-	6.32	14.9	331	3.96	0.75	< 0.25	< 0.20	< 0.20	< 0.20	< 0.40	< 0.07	< 0.20	< 0.50	< 0.10	< 0.20
3-Dec-15	369.68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3-May-16	369.68	61.41	308.27	6.36	13.9	396	10.59	-	< 0.10	< 0.20	< 0.20	< 0.20	< 0.40	< 0.20	0.19 J	< 0.50	< 0.10	< 0.20
15-Nov-16	369.68	59.51	310.17	6.34	13.7	352	7.42	418	0.11	< 0.20	< 0.20	< 0.20	< 0.40	< 0.20	0.1 J	< 0.50	0.17	< 0.20
2-May-17	369.68	59.31	310.37	6.16	14.0	238	7.17	1.21	< 0.10	< 0.20	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.50	< 0.10	< 0.20
14-Nov-17	369.68	58.35	311.33	6.39	12.7	325	9.01	*	< 0.10	< 0.20	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.50	< 0.10	< 0.20
16-Jan-18	369.68	57.78	311.90	6.13	13.1	244	8.81	0.6	< 0.10	< 0.20	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.50	< 0.10	< 0.20
9-Mar-18	369.68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15-May-18	369.68	57.22	312.46	5.94	13.8	200	8.76	0.15	< 0.10	< 0.20	< 0.20	< 0.20	< 0.40	< 0.01	< 0.20	< 0.50	< 0.10	< 0.20
7-Nov-18	369.68	57.41	312.27	6.35	13.6	188	8.74	0.42	< 0.10	< 0.20	< 0.20	< 0.20	< 0.40	< 0.01	< 0.20	< 0.50	< 0.10	< 0.20
Clean-up Level	MTCA Method A for Groundwater (unrestricted landuse)								0.8 ^g /1.0 ^g	5 ^g	1000 ^g	700 ^g	1000 ^h	0.01 ^h	NSA	160	0.5	0.5
	MTCA Method B for Groundwater (unrestricted landuse)								NSA	5 ⁱ	640	800	1600	0.022	480	160	NSA	NSA

Notes:

- feet bgs Feet below ground surface
 feet bmp Feet below measuring point
 feet msl Feet above mean sea level
^a Well not surveyed, elevation estimated.
^b IAS system not in operation.
^c Water levels collected at various times prior to sampling (see Table 1). Date/time is sampling time.
^d When benzene is present.
^e When benzene is not present.
^f Reported at Method Detection Limit (MDL). The MDL is greater than the MTCA CULs.
^g Inclusive of 40 CFR 141.61 Federal Law for drinking water MCLs
^h Value is more protective than Federal MCLs.
ⁱ MTCA 173-340-705(5): Adjustments to cleanup levels based on applicable laws.

- Not measured or not available
 Result exceeds Clean-up Level (CUL)
 mg/L Milligrams per liter
 µg/L Micrograms per liter
 NTU Nephelometric Turbidity Unit
 µmhos/cm Micromhos per centimeter
 < Analyte not detected above the reporting limit shown
 MTCA Model Toxics Control Act
 MCL Maximum Containment Level
 NSA No Standard Available
 TOC Top of casing inside PVC well
 °C Degrees Celsius

Table B-1: Summary of Groundwater Sampling Results - Well MW-06
Sea-Tac Development Site, Seatac WA

	Field Parameters								Analytical Data									
Date Sampled ^b	TOC Elevation (feet msl)	Depth to Water (feet btoc)	Groundwater Elevation (feet msl)	pH (standard units)	Temperature (°C)	Conductivity (µmhos/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	NWTPH-Gasoline (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	EDB (ethylene dibromide) (µg/L) ^f	N-hexane (µg/L)	Naphthalene (µg/L)	NWTPH-Diesel (mg/L)	NWTPH-Motor Oil (mg/L)

Turbidity meter malfunction, no
reading

J

The constituent was positively identified and detected; however, the concentration reported is an estimated value because the result is less than the quantitation limit or quality control criteria were not met.

UJ

The constituent was analyzed for, but was not detected above the reported sample quantitation limit; however, the value reported is an estimated value because the result is less than the quantitation limit or quality control criteria were not met.

Table B-2: Summary of Groundwater Sampling Results - Well MW-07
Sea-Tac Development Site, Seatac WA

	Field Parameters								Analytical Data									
Date Sampled ^{b,c}	TOC Elevation (feet msl)	Depth to Water (feet btoc)	Groundwater Elevation (feet msl)	pH (standard units)	Temperature (°C)	Conductivity (µmhos/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	NWTPH-Gasoline (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	EDB (ethylene dibromide) (µg/L) ^f	N-hexane (µg/L)	Naphthalene (µg/L)	NWTPH-Diesel (mg/L)	NWTPH-Motor Oil (mg/L)
18-Mar-10	358.70	48.69	310.01	6.61	13.3	354	1.41	5.18	26	230	1,100	360	4,630	0.010	160	210	-	-
13-Feb-14	358.69	47.72	310.97	6.56	14.3	131	0.35	3.87	29	25	110	180	2,022	< 3.8	190	220	11 J	< 0.20
29-May-14	358.69	47.65	311.04	6.65	16.4	379	0.13	2.84	27	14	80	190	1,811	< 1.5	140	210 B	11 J	< 0.20
11-Sep-14	358.69	47.95	310.74	6.73	16.5	373	0.35	2.28	36	17	81	260	2,110	< 0.028	280	300 B J	11	0.41 J
4-Dec-14	358.69	47.95	310.74	6.70	15.7	333	0.20	2.95	26	21	66	200	1,507	< 0.07	170	180	11 J	0.32 J
18-Jun-15	358.69	48.01	310.68	6.64	16.1	371	0.25	1.57	15 J	6.4	28 J	110 J	533 J	< 0.07	93 J	96 J	5.4	0.24 J
3-Dec-15	358.69	49.96	308.73	6.44	15.9	526	0.14	2.91	23	77	1,200	270	1,550	< 1.5	160	69	4.9 J	< 0.20
4-May-16	358.69	49.05	309.64	6.68	16.0	640	1.02	4.57	12	30	500	170	970	<0.20	150	68 J	6.5 J	0.30 J
16-Nov-16	358.69	48.50	310.19	6.54	15.9	411	1.39	3.95	8.3	4.3	9.5	40	85	<0.20	11 J	37	2.4	<0.20
3-May-17	358.69	48.13	310.56	6.38	16.2	188	1.33	3.78	2.9	1.8	0.46	14	21	<0.20	1.9	32	1.4	0.20
14-Nov-17	358.69	47.15	311.54	6.39	15.1	278	0.98	*	2.2	0.70	0.42	1.1	5.9	<0.20	0.3	11	1.6	0.44
18-Jan-18	358.69	46.75	311.94	6.21	14.7	270	0.23	2.15	1.9	1.0	0.67	2.04 J+	7.3 J+	<0.20	0.5	10	1.5	<0.20
9-Mar-18	358.69	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16-May-18	358.69	46.10	312.59	6.15	15.2	248	0.25	2.25	1.8	0.41	0.35	1	3	<0.01	<0.20	6.1	0.78	<0.20
8-Nov-18	358.69	46.32	312.37	6.67	14.7	220	0.29	1.60	1.4	0.73	0.29	0.78	1.6	<0.01	0.42	4.0	0.74	<0.20
Clean-up Level	MTCA Method A for Groundwater (unrestricted landuse)								0.8 ^d /1.0 ^e	5 ^g	1000 ^g	700 ^g	1000 ^h	0.01 ^h	NSA	160	0.5	0.5
	MTCA Method B for Groundwater (unrestricted landuse)								NSA	5 ⁱ	640	800	1600	0.022	480	160	NSA	NSA

Notes:

feet bgs	Feet below ground surface
feet bmp	Feet below measuring point
feet msl	Feet above mean sea level
^a	Well not surveyed, elevation estimated.
^b	IAS system not in operation.
^c	Water levels collected at various times prior to sampling (see Table 1). Date/time is sampling time.
^d	When benzene is present.
^e	When benzene is not present.
^f	Reported at Method Detection Limit (MDL). The MDL is greater than the MTCA CULs.
^g	Inclusive of 40 CFR 141.61 Federal Law for drinking water MCLs
^h	Value is more protective than Federal MCLs.
ⁱ	MTCA 173-340-705(5): Adjustments to cleanup levels based on applicable laws.

-	Not measured or not available
Result exceeds Clean-up Level (CUL)	
mg/L	Milligrams per liter
µg/L	Micrograms per liter
NTU	Nephelometric Turbidity Unit
µmhos/cm	Micromhos per centimeter
<	Analyte not detected above the reporting limit shown
MTCA	Model Toxics Control Act
MCL	Maximum Containment Level
NSA	No Standard Available
TOC	Top of casing inside PVC well
°C	Degrees Celsius

**Table B-2: Summary of Groundwater Sampling Results - Well MW-07
Sea-Tac Development Site, Seatac WA**

	Field Parameters								Analytical Data									
Date Sampled ^{b,c}	TOC Elevation (feet msl)	Depth to Water (feet btoc)	Groundwater Elevation (feet msl)	pH (standard units)	Temperature (°C)	Conductivity (µmhos/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	NWTPH-Gasoline (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	EDB (ethylene dibromide) (µg/L) ^f	N-hexane (µg/L)	Naphthalene (µg/L)	NWTPH-Diesel (mg/L)	NWTPH-Motor Oil (mg/L)

^a Turbidity meter malfunction, no reading

J

The constituent was positively identified and detected; however, the concentration reported is an estimated value because the result is less than the quantitation limit or quality control criteria were not met.

B

Analyte detected in an associated Method Blank at a concentration greater than one-half of laboratory's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.

Table B-3: Summary of Groundwater Sampling Results - Well MW-09
Sea-Tac Development Site, Seatac WA

	Field Parameters								Analytical Data									
Date Sampled ^{b,c}	TOC Elevation (feet msl)	Depth to Water (feet btoc)	Groundwater Elevation (feet msl)	pH (standard units)	Temperature (°C)	Conductivity (µmhos/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	NWTPH-Gasoline (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	EDB (ethylene dibromide) (µg/L) ^f	N-hexane (µg/L)	Naphthalene (µg/L)	NWTPH-Diesel (mg/L)	NWTPH-Motor Oil (mg/L)
19-Mar-10	362.14	52.30	309.84	6.19	14.2	294	0.13	7.18	16	170	65	400	1,434	0.016	100	160	-	-
12-Feb-14	362.13	51.45	310.68	6.49	12.6	99.5	0.28	3.10	7.5	30	8.1	150	98	< 0.08	16	120	1.6 J	< 0.20
29-May-14	362.13	51.41	310.72	6.44	15.0	295	0.14	1.01	7.8	32	9.4	170	112	< 0.37	5.60	92 B	2.3 J	< 0.20
10-Sep-14	362.13	-	-	6.49	15.7	310	0.20	3.85	5.6	17	4.6	100	47.2	< 0.010*	< 0.20	74	2.8	< 0.20
3-Dec-14	362.13	51.68	310.45	6.47	13.6	307	0.18	2.37	4.1	14	2.8	76	8.8	< 0.07	< 0.20	44	1.9	< 0.20
17-Jun-15	362.13	51.67	310.46	6.48	15.1	331	0.18	0.75	1.7	7.2	1.3	40	1.6	< 0.07	< 0.20	18	1.5	< 0.20
3-Dec-15	362.13	-	-	6.37	14.1	477	0.96	3.91	2.2 J	8.4	1.5 J+	73	1.45 J+	< 0.07	< 0.20	5.7	1.0 J	< 0.20
3-May-16	362.13	-	-	6.51	18.3	221	4.68	1.08	<0.10	0.15 J	<0.20	0.71	<0.40	<0.20	<0.20	<0.50	0.22 J	<0.20
15-Nov-16	362.13	52.15	309.98	5.94	14.5	234	1.41	0.80	<0.10	0.23	0.23	0.56	0.32	<0.20	<0.20	<0.50	0.20	<0.20
3-May-17	362.13	-	-	5.94	15.5	165	3.09	1.43	<0.10	0.23	0.05 J	0.42	<0.40	<0.20	<0.20	<0.50	0.28	<0.20
14-Nov-17	362.13	50.74	311.39	5.98	13.9	211	2.14	*	<0.10	<0.20	<0.20	<0.20	<0.40	<0.20	<0.20	<0.50	0.22	<0.20
16-Jan-18	362.13	50.33	311.80	5.94	13.6	202	1.10	1.02	<0.10	<0.20	<0.20	<0.20	<0.40	<0.20	<0.20	<0.50	0.26	<0.20
9-Mar-18	362.13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15-May-18	362.13	49.68	312.45	5.86	15.0	193	0.67	0.61	<0.10	0.20	<0.20	<0.20	<0.40	<0.01	<0.20	<0.50	0.34	<0.20
7-Nov-18	362.13	49.86	312.27	6.28	13.8	203	0.32	0.25	<0.10	<0.20	<0.20	<0.20	<0.40	<0.01	<0.20	<0.50	0.28	<0.20
Clean-up Level	MTCA Method A for Groundwater (unrestricted landuse)								0.8 ^d /1.0 ^e	5 ^g	1000 ^g	700 ^g	1000 ^h	0.01 ^h	NSA	160	0.5	0.5
	MTCA Method B for Groundwater (unrestricted landuse)								NSA	5 ⁱ	640	800	1600	0.022	480	160	NSA	NSA

Notes:

- feet bgs Feet below ground surface
 feet bmp Feet below measuring point
 feet msl Feet above mean sea level
^a Well not surveyed, elevation estimated.
^b IAS system not in operation.
^c Water levels collected at various times prior to sampling (see Table 1). Date/time is sampling time.
^d When benzene is present.
^e When benzene is not present.
^f Reported at Method Detection Limit (MDL). The MDL is greater than the MTCA CULs.
^g Inclusive of 40 CFR 141.61 Federal Law for drinking water MCLs
^h Value is more protective than Federal MCLs.
ⁱ MTCA 173-340-705(5): Adjustments to cleanup levels based on applicable laws.

- Not measured or not available
 Result exceeds Clean-up Level (CUL)
 mg/L Milligrams per liter
 µg/L Micrograms per liter
 NTU Nephelometric Turbidity Unit
 µmhos/cm Micromhos per centimeter
 < Analyte not detected above the reporting limit shown
 MTCA Model Toxics Control Act
 MCL Maximum Containment Level
 NSA No Standard Available
 TOC Top of casing inside PVC well
 °C Degrees Celsius

Table B-3: Summary of Groundwater Sampling Results - Well MW-09
Sea-Tac Development Site, Seatac WA

	Field Parameters								Analytical Data									
Date Sampled ^{b,c}	TOC Elevation (feet msl)	Depth to Water (feet btoc)	Groundwater Elevation (feet msl)	pH (standard units)	Temperature (°C)	Conductivity (umhos/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	NWTPH-Gasoline (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	EDB (ethylene dibromide) (µg/L) ^f	N-hexane (µg/L)	Naphthalene (µg/L)	NWTPH-Diesel (mg/L)	NWTPH-Motor Oil (mg/L)

* Turbidity meter malfunction, no reading

J

The constituent was positively identified and detected; however, the concentration reported is an estimated value because the result is less than the quantitation limit or quality control criteria were not

* Reported at the Limit of Quantitation (LOQ). The LOQ is less than MTCA CULs.

J+

The constituent was positively identified and detected; however, the concentration reported is an estimated value because the result may be biased high.

B

Analyte detected in an associated Method Blank at a concentration greater than one-half of laboratory's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.

Table B-4: Summary of Groundwater Sampling Results - Well MW-12
Sea-Tac Development Site, Seatac WA

	Field Parameters								Analytical Data											
Date Sampled ^{b,c}	TOC Elevation (feet msl)	Depth to Water (feet btoc)	Groundwater Elevation (feet msl)	pH (standard units)	Temperature (°C)	Conductivity (µmhos/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	NWTPH-Gasoline (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	EDB (ethylene dibromide) (µg/L) ^f	N-hexane (µg/L)	Naphthalene (µg/L)	NWTPH-Diesel (mg/L) ¹	NWTPH-Motor Oil (mg/L)	NWTPH-Diesel (mg/L) Acid-Silica Gel Clean-up ²	NWTPH-Motor Oil (mg/L) Acid-Silica Gel Clean-up ²
15-Mar-10	364.88	54.99	309.89	6.38	14.5	472	0.03	40.8	36	230	2,400	1,300	5,140	0.16	210	520	-	-	-	-
13-Feb-14	364.83	55.02	309.81	7.76	14.1	125	10.50	3.43	8.6	79	410	79	970	< 3.8	< 10	25	1.1 J	< 0.20	-	-
29-May-14	364.83	51.58	313.25	7.87	16.7	252	11.77	5.99	0.12	2.0	4.3	1.6	4.2	< 0.07	< 0.20	< 0.50	0.34 J	< 0.20	-	-
11-Sep-14	364.83	54.87	309.96	8.04	18.1	255	11.80	38.8	0.11	2.5	2.6	1.5	5.3	< 0.010*	0.78	0.53 B J+	0.35	< 0.20	-	-
4-Dec-14	364.83	54.87	309.96	8.04	15.1	258	11.51	153	< 0.10	< 0.25	< 0.25	0.73	6.0	< 0.07	0.18 J	0.68	0.20	< 0.20	-	-
18-Jun-15	364.83	-	-	8.09	16.3	208	9.90	2.44	< 0.25	< 0.20	< 0.20	0.10 J	2.1	< 0.07	0.26	< 0.50	0.45	< 0.20	-	-
3-Dec-15	364.83	56.74	308.09	-	-	-	-	-	< 0.25	< 0.20	< 0.20	< 0.20	< 0.40	< 0.07	< 0.20	< 0.50	0.29	< 0.20	-	-
4-May-16	364.83	55.53	309.30	7.68	15.1	226	7.72	3.48	< 0.10	< 0.20	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.50	0.18 J	< 0.20	-	-
16-Nov-16	364.83	55.20	309.63	7.84	14.9	199	8.45	13.4	< 0.10	< 0.20	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.50	0.16	< 0.20	-	-
3-May-17	364.83	59.02	305.81	7.53	15.9	80	8.01	4.96	< 0.10	< 0.20	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.50	0.89	< 0.215	-	-
15-Nov-17	364.83	53.37	311.46	7.69	14.9	301	0.99	18.9	2.2	1.8	18	11	113	< 0.20	29	33	1.0	0.30	< 0.10	< 0.20
18-Jan-18	364.83	53.13	311.70	7.29	14.4	314	0.35	30.1	2.2	1.7	12	26	90	< 0.20	29	30	1.6	< 0.20	< 0.10	< 0.20
9-Mar-18	364.83	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16-May-18	364.83	52.31	312.52	7.06	15.3	374	0.27	3.0	2.8	17	2.1	24	43	< 0.01	26	19	2.9	< 0.20	< 0.10	< 0.20
8-Nov-18	364.83	52.55	312.28	7.98	14.7	354	0.36	6.6	3.6	26	2.5	24	25	< 0.01	48 J+	17	< 0.10	< 0.20	< 0.10	< 0.20
Clean-up Level	MTCA Method A for Groundwater (unrestricted landuse)								0.8 ^d /1.0 ^e	5 ^g	1000 ^g	700 ^g	1000 ^h	0.01 ^h	NSA	160	0.5	0.5	0.5	0.5
	MTCA Method B for Groundwater (unrestricted landuse)								NSA	5 ⁱ	640	800	1600	0.022	480	160	NSA	NSA	NSA	NSA

Notes:

- feet bgs Feet below ground surface
 feet bmp Feet below measuring point
 feet msl Feet above mean sea level
^a Well not surveyed, elevation estimated.
^b IAS system not in operation.
^c Water levels collected at various times prior to sampling (see Table 1). Date/time is sampling time.
^d When benzene is present.
^e When benzene is not present.
^f Reported at Method Detection Limit (MDL). The MDL is greater than the MTCA CULs.
^g Inclusive of 40 CFR 141.61 Federal Law for drinking water MCLs
^h Value is more protective than Federal MCLs.
ⁱ MTCA 173-340-705(5): Adjustments to cleanup levels based on applicable laws.
¹ The MW-12 diesel detection at 0.89 µg/L from the 3-May-17 sample event was noted by the laboratory analyst as likely non-fuel organics in the diesel range and did not match the diesel

- Not measured or not available
 Result exceeds Clean-up Level (CUL)
 mg/L Milligrams per liter
 µg/L Micrograms per liter
 NTU Nephelometric Turbidity Unit
 µmhos/cm Micromhos per centimeter
 < Analyte not detected above the reporting limit shown
 MTCA Model Toxics Control Act
 MCL Maximum Containment Level
 NSA No Standard Available
 TOC Top of casing inside PVC well
 °C Degrees Celsius
 J The constituent was positively identified and detected; however, the concentration reported is an estimated value because the result is less than the quantitation limit or quality control criteria were not met.

**Table B-4: Summary of Groundwater Sampling Results - Well MW-12
Sea-Tac Development Site, Seatac WA**

	Field Parameters								Analytical Data											
Date Sampled ^{b,c}	TOC Elevation (feet msl)	Depth to Water (feet btoc)	Groundwater Elevation (feet msl)	pH (standard units)	Temperature (°C)	Conductivity (µmhos/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	NWTPH-Gasoline (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	EDB (ethylene dibromide) (µg/L) ^f	N-hexane (µg/L)	Naphthalene (µg/L)	NWTPH-Diesel (mg/L) ¹	NWTPH-Motor Oil (mg/L)	NWTPH-Diesel (mg/L) Acid-Silica Gel Clean-up ²	NWTPH-Motor Oil (mg/L) Acid-Silica Gel Clean-up ²

² Acid-Silica Gel Clean-up was applied to prior to analysis.

J+

The constituent was positively identified and detected; however, the concentration reported is an estimated value because the result may be biased high.

* Reported at the Limit of Quantitation (LOQ). The LOQ is less than MTCA CULs.

B

Analyte detected in an associated Method Blank at a concentration greater than one-half of laboratory's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.

Table B-5: Summary of Groundwater Sampling Results - Well MW-13
Sea-Tac Development Site, Seatac WA

	Field Parameters								Analytical Data									
Date Sampled ^{b,c}	TOC Elevation (feet msl)	Depth to Water (feet btoc)	Groundwater Elevation (feet msl)	pH (standard units)	Temperature (°C)	Conductivity (µmhos/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	NWTPH-Gasoline (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	EDB (ethylene dibromide) (µg/L) ^f	N-hexane (µg/L)	Naphthalene (µg/L)	NWTPH-Diesel (mg/L)	NWTPH-Motor Oil (mg/L)
19-Mar-10	365.42	55.66	309.76	6.28	12.8	271	0.16	72.1	33	14	230	890	4,500	0.029	130	410	-	-
12-Feb-14	365.42	54.35	311.07	6.57	13.2	73.3	1.41	4.28	14	< 0.25	3.9	240	2,070	< 0.08	< 0.20	33	1.4 J	< 0.20
29-May-14	365.42	55.62	309.80	6.84	14.7	182	10.59	4.24	0.14	< 0.25	< 0.25	0.85	19	< 0.07	0.11 J	< 0.50	0.32	< 0.20
10-Sep-14	365.42	54.86	310.56	7.06	14.9	137	11.06	2.41	< 0.10	< 0.25	< 0.25	< 0.25	< 0.50	< 0.010*	< 0.20	< 0.50	0.29	< 0.20
4-Dec-14	365.42	54.86	310.56	7.06	13.9	163	10.10	2.32	< 0.10	< 0.25	< 0.25	< 0.25	< 0.50	< 0.07	< 0.20	< 0.50	0.31	< 0.20
18-Jun-15	365.42	54.70	310.72	7.13	14.7	174	10.71	1.32	< 0.25	< 0.20	< 0.20	< 0.20	< 0.40	< 0.07	< 0.20	0.61	0.27	< 0.20
2-Dec-15	365.42	56.43	308.99	7.27	14.2	164	10.20	0.90	< 0.25	< 0.20	< 0.20	0.23	1.10 J+	< 0.07	< 0.20	< 0.50	0.26	< 0.20
3-May-16	365.42	56.30	309.12	7.79	15.8	194	14.18	1.14	<0.10	<0.20	<0.20	<0.20	0.44	<0.20	<0.20	<0.50	0.12 J	<0.20
15-Nov-16	365.42	55.81	309.61	7.25	14.1	195	10.64	0.73	<0.10	<0.20	<0.20	<0.20	0.46	<0.20	<0.20	<0.50	0.19	<0.20
3-May-17	365.42	55.14	310.28	7.03	14.5	116	10.71	1.45	<0.10	<0.20	<0.20	<0.20	<0.40	<0.20	<0.20	<0.50	0.18	<0.20
14-Nov-17	365.42	54.05	311.37	6.75	13.6	136	1.72	*	<0.10	<0.20	<0.20	<0.20	<0.40	<0.20	<0.20	<0.50	0.13	<0.20
16-Jan-18	365.42	53.62	311.80	6.93	13.4	159	0.85	2.02	<0.10	<0.20	<0.20	<0.20	<0.40	<0.20	<0.20	<0.50	<0.10	<0.20
9-Mar-18	365.42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15-May-18	365.42	52.96	312.46	6.43	14.1	120	1.87	1.14	<0.10	<0.20	<0.20	<0.20	<0.40	<0.01	<0.20	<0.50	<0.10	<0.20
7-Nov-18	365.42	53.16	312.26	7.10	13.6	141	1.00	0.64	<0.10	<0.20	<0.20	<0.20	<0.40	<0.01	<0.20	<0.50	<0.10	<0.20
Clean-up Level	MTCA Method A for Groundwater (unrestricted landuse)								0.8 ^d /1.0 ^e	5 ^g	1000 ^g	700 ^g	1000 ^h	0.01 ^h	NSA	160	0.5	0.5
	MTCA Method B for Groundwater (unrestricted landuse)								NSA	5 ⁱ	640	800	1600	0.022	480	160	NSA	NSA

Notes:

- feet bgs Feet below ground surface
 feet bmp Feet below measuring point
 feet msl Feet above mean sea level
^a Well not surveyed, elevation estimated.
^b IAS system not in operation.
^c Water levels collected at various times prior to sampling (see Table 1). Date/time is sampling time.
^d When benzene is present.
^e When benzene is not present.
^f Reported at Method Detection Limit (MDL). The MDL is greater than the MTCA CULs.
^g Inclusive of 40 CFR 141.61 Federal Law for drinking water MCLs
^h Value is more protective than Federal MCLs.
ⁱ MTCA 173-340-705(5): Adjustments to cleanup levels based on applicable laws.

- Not measured or not available
 Result exceeds Clean-up Level (CUL)
 mg/L Milligrams per liter
 µg/L Micrograms per liter
 NTU Nephelometric Turbidity Unit
 µmhos/cm Micromhos per centimeter
 < Analyte not detected above the reporting limit shown
 MTCA Model Toxics Control Act
 MCL Maximum Containment Level
 NSA No Standard Available
 TOC Top of casing inside PVC well
 °C Degrees Celsius

**Table B-5: Summary of Groundwater Sampling Results - Well MW-13
Sea-Tac Development Site, Seatac WA**

	Field Parameters								Analytical Data									
Date Sampled ^{b,c}	TOC Elevation (feet msl)	Depth to Water (feet btoc)	Groundwater Elevation (feet msl)	pH (standard units)	Temperature (°C)	Conductivity (µmhos/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	NWTPH-Gasoline (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	EDB (ethylene dibromide) (µg/L) ^f	N-hexane (µg/L)	Naphthalene (µg/L)	NWTPH-Diesel (mg/L)	NWTPH-Motor Oil (mg/L)

* Turbidity meter malfunction, no reading

J

The constituent was positively identified and detected; however, the concentration reported is an estimated value because the result is less than the quantitation limit or quality control criteria were not

* Reported at the Limit of Quantitation (LOQ). The LOQ is less than MTCA CULs.

J+

The constituent was positively identified and detected; however, the concentration reported is an estimated value because the result may be biased high.

Table B-6: Summary of Groundwater Sampling Results - Well MW-17A
Sea-Tac Development Site, Seatac WA

Date Sampled ^{b,c}	Field Parameters								Analytical Data									
	TOC Elevation (feet msl)	Depth to Water (feet btoc)	Groundwater Elevation (feet msl)	pH (standard units)	Temperature (°C)	Conductivity (µmhos/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	NWTPH-Gasoline (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	EDB (ethylene dibromide) (µg/L) ^f	N-hexane (µg/L)	Naphthalene (µg/L)	NWTPH-Diesel (mg/L)	NWTPH-Motor Oil (mg/L)
17-Mar-10	385.81	76.29	309.52	6.51	9.3	145	0.52	142	1.70	< 1.0	< 1.0	4.0	27	< 0.0095	< 1.0	63	-	-
11-Feb-14	394.00	83.80	310.20	6.36	11.3	82.5	1.06	137	< 0.10	< 0.25	< 0.25	< 0.25	< 0.50	< 0.08	< 0.20	0.74	< 0.10	< 0.20
29-May-14	394.00	84.00	310.00	6.22	12.2	175	2.06	39.7	< 0.10	0.25	< 0.25	< 0.25	< 0.50	< 0.07	< 0.20	0.62 J+	< 0.10	< 0.20
10-Sep-14	394.00	84.18	309.82	6.28	12.4	162	1.42	18.8	< 0.10	< 0.25	< 0.25	< 0.25	< 0.50	< 0.07	< 0.20	0.64 J	< 0.10	< 0.20
5-Dec-14	394.00	84.18	309.82	6.42	11.7	167	1.09	31.8	< 0.10 UJ	0.54 J	< 0.25 UJ	< 0.25 UJ	0.63 J	< 0.07	< 0.20 UJ	2.8	< 0.10	< 0.20
17-Jun-15	394.00	84.16	309.84	6.29	12.9	158	3.13	29.6	< 0.25	< 0.20	< 0.20	< 0.20	< 0.40	< 0.07	< 0.20	< 0.50	< 0.10	< 0.20
18-Dec-15	394.00	85.95	308.05	6.57	11.8	127	0.20	23.7	0.05 J	0.75	< 0.20	0.08 J	< 0.40	< 0.07	< 0.20	0.98 J	< 0.10	< 0.20
3-May-16	394.00	85.21	308.79	6.51	13.1	132	4.60	8.41	< 0.10	0.33	< 0.20	< 0.20	< 0.40	< 0.20	0.11 J	0.71 J	< 0.10	< 0.20
15-Nov-16	394.00	84.57	309.43	6.46	12.6	122	3.76	10.2	< 0.10	0.14 J	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.50	< 0.10	< 0.20
3-May-17	394.00	84.24	309.76	6.08	12.4	76	7.25	7.57	< 0.10	< 0.20	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.50	< 0.10	< 0.20
15-Nov-17	394.00	83.17	310.83	6.62	12.1	105	7.05	*	< 0.10	< 0.20	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	0.54	< 0.10	< 0.20
16-Jan-18	394.00	82.95	311.05	6.27	12.0	111	8.55	4.2	< 0.10	< 0.20	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.50	< 0.10	< 0.20
9-Mar-18	394.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15-May-18	394.00	82.21	311.79	6.14	12.9	106	8.57	1.4	< 0.10	< 0.20	< 0.20	< 0.20	< 0.40	< 0.01	< 0.20	< 0.50	< 0.10	< 0.20
8-Nov-18	394.00	82.49	311.51	6.48	12.3	116	8.20	3.35	< 0.10	< 0.20	< 0.20	< 0.20	< 0.40	< 0.01	< 0.20	< 0.50	< 0.10	< 0.20
Clean-up Level	MTCA Method A for Groundwater (unrestricted landuse)								0.8 ^d /1.0 ^e	5 ^g	1000 ^g	700 ^g	1000 ^h	0.01 ^h	NSA	160	0.5	0.5
	MTCA Method B for Groundwater (unrestricted landuse)								NSA	5 ⁱ	640	800	1600	0.022	480	160	NSA	NSA

Notes:

- feet bgs Feet below ground surface
 feet bmp Feet below measuring point
 feet msl Feet above mean sea level
^a Well not surveyed, elevation estimated.
^b IAS system not in operation.
^c Water levels collected at various times prior to sampling (see Table 1). Date/time is sampling time.
^d When benzene is present.
^e When benzene is not present.
^f Reported at Method Detection Limit (MDL). The MDL is greater than the MTCA CULs.
^g Inclusive of 40 CFR 141.61 Federal Law for drinking water MCLs
^h Value is more protective than Federal MCLs.
ⁱ MTCA 173-340-705(5): Adjustments to cleanup levels based on applicable laws.

- Not measured or not available
 Result exceeds Clean-up Level (CUL)
 mg/L Milligrams per liter
 µg/L Micrograms per liter
 NTU Nephelometric Turbidity Unit
 µmhos/cm Micromhos per centimeter
 < Analyte not detected above the reporting limit shown
 MTCA Model Toxics Control Act
 MCL Maximum Containment Level
 NSA No Standard Available
 TOC Top of casing inside PVC well
 °C Degrees Celsius

**Table B-6: Summary of Groundwater Sampling Results - Well MW-17A
Sea-Tac Development Site, Seatac WA**

	Field Parameters								Analytical Data									
Date Sampled ^{b,c}	TOC Elevation (feet msl)	Depth to Water (feet btoc)	Groundwater Elevation (feet msl)	pH (standard units)	Temperature (°C)	Conductivity (µmhos/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	NWTPH-Gasoline (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	EDB (ethylene dibromide) (µg/L) ^f	N-hexane (µg/L)	Naphthalene (µg/L)	NWTPH-Diesel (mg/L)	NWTPH-Motor Oil (mg/L)

^a Turbidity meter malfunction, no reading

J

The constituent was positively identified and detected; however, the concentration reported is an estimated value because the result is less than the quantitation limit or quality control criteria were not met.

UJ

The constituent was analyzed for, but was not detected above the reported sample quantitation limit; however, the value reported is an estimated value because the result is less than the quantitation limit or quality control criteria were not met.

J+

The constituent was positively identified and detected; however, the concentration reported is an estimated value because the result may be biased high.

**Table B-7: Summary of Groundwater Sampling Results - Well MW-18
Sea-Tac Development Site, Seatac WA**

	Field Parameters								Analytical Data									
Date Sampled ^{b,c}	TOC Elevation (feet msl)	Depth to Water (feet btoc)	Groundwater Elevation (feet msl)	pH (standard units)	Temperature (°C)	Conductivity (µmhos/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	NWTPH-Gasoline (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	EDB (ethylene dibromide) (µg/L) ^f	N-hexane (µg/L)	Naphthalene (µg/L)	NWTPH-Diesel (mg/L)	NWTPH-Motor Oil (mg/L)
18-Mar-10	360.45	50.58	309.87	6.69	14.2	586	0.11	5.39	52	2,600	6,000	1,700	6,690	2.5	350	420	-	-
12-Feb-14	360.45	49.01	311.44	7.62	13.8	175	8.11	2.89	1.0	27	13	17	91	< 0.08	1.1	4.0	0.77 J	<0.20
29-May-14	360.45	49.75	310.70	7.98	15.2	369	10.60	7.95	0.14	6.6	1.5	4.7	9.2	< 0.07	0.64	0.84 J+	0.33 J	<0.20
11-Sep-14	360.45	49.83	310.62	8.23	15.2	498	11.23	13.1	< 0.10	0.72	0.27	0.40	0.72	< 0.010*	< 0.20	< 0.50	0.14	< 0.20
4-Dec-14	360.45	49.83	310.62	7.84	14.4	470	10.78	81.6	< 0.10	0.69	< 0.25	0.63	0.93	< 0.07	0.10 J	< 0.50	0.24	< 0.20
18-Jun-15	360.45	49.51	310.94	8.05	15.2	515	10.89	49.6	< 0.25	0.67	0.54	0.24	1.1	< 0.07	< 0.20	< 0.50	0.38	< 0.20
3-Dec-15	360.45	-	-	8.28	14.8	455	10.21	14.6	< 0.25	0.57	4.8	0.34	9.8	< 0.07	0.25	0.67	0.13	< 0.20
4-May-16	360.45	51.12	309.33	7.27	14.8	513	4.53	4.77	0.22	8.0	5.5	8.2	29	<0.20	1.5	1.5 J	0.37 J	<0.20
16-Nov-16	360.45	50.63	309.82	7.55	15.0	503	6.97	2.44	0.12	3.6	1.2	2.1	9.0	<0.20	0.39	<0.50	0.48	<0.20
3-May-17	360.45	50.12	310.33	7.19	15.6	313	4.54	3.57	0.28	6.9	3.1	6.8	21	<0.20	1.4	2.7	0.29	0.30
14-Nov-17	360.45	49.00	311.45	6.78	15.2	454	0.71	*	1.3	3.6	1.6	7.4	8.7	<0.20	0.33	<0.50	4.4	0.43
16-Jan-18	360.45	48.62	311.83	6.12	14.4	22.7	6.23	18.1	<0.10	<0.20	<0.20	<0.20	<0.40	<0.20	<0.20	<0.50	<0.10	<0.20
9-Mar-18	360.45	48.35	312.10	6.69	14.4	479	0.28	1.9	1.9	-	-	-	-	-	-	-	4.66	<0.20
16-May-18	360.45	47.94	312.51	6.42	15.2	405	0.21	1.4	1.5	6.2	2.2	20	19	<0.01	1.3	5.1	2.9	<0.20
7-Nov-18	360.45	48.14	312.31	6.82	15.1	506	0.17	2.50	1.5	6.6	1.1	24	2.8	<0.01	<0.20	7.0	3.3	<0.20
Clean-up Level	MTCA Method A for Groundwater (unrestricted landuse)								0.8 ^d /1.0 ^e	5 ^g	1000 ^g	700 ^g	1000 ^h	0.01 ^h	NSA	160	0.5	0.5
	MTCA Method B for Groundwater (unrestricted landuse)								NSA	5 ⁱ	640	800	1600	0.022	480	160	NSA	NSA

Notes:

- feet bgs Feet below ground surface
 feet bmp Feet below measuring point
 feet msl Feet above mean sea level
^a Well not surveyed, elevation estimated.
^b IAS system not in operation.
^c Water levels collected at various times prior to sampling (see Table 1). Date/time is sampling time.
^d When benzene is present.
^e When benzene is not present.
^f Reported at Method Detection Limit (MDL). The MDL is greater than the MTCA CULs.
^g Inclusive of 40 CFR 141.61 Federal Law for drinking water MCLs
^h Value is more protective than Federal MCLs.
ⁱ MTCA 173-340-705(5): Adjustments to cleanup levels based on applicable laws.

- Not measured or not available
 Result exceeds Clean-up Level (CUL)
 mg/L Milligrams per liter
 µg/L Micrograms per liter
 NTU Nephelometric Turbidity Unit
 µmhos/cm Micromhos per centimeter
 < Analyte not detected above the reporting limit shown
 MTCA Model Toxics Control Act
 MCL Maximum Containment Level
 NSA No Standard Available
 TOC Top of casing inside PVC well
 °C Degrees Celsius

**Table B-7: Summary of Groundwater Sampling Results - Well MW-18
Sea-Tac Development Site, Seatac WA**

	Field Parameters								Analytical Data									
Date Sampled ^{b,c}	TOC Elevation (feet msl)	Depth to Water (feet btoc)	Groundwater Elevation (feet msl)	pH (standard units)	Temperature (°C)	Conductivity (µmhos/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	NWTPH-Gasoline (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	EDB (ethylene dibromide) (µg/L) ^f	N-hexane (µg/L)	Naphthalene (µg/L)	NWTPH-Diesel (mg/L)	NWTPH-Motor Oil (mg/L)

* Turbidity meter malfunction, no reading

J

The constituent was positively identified and detected; however, the concentration reported is an estimated value because the result is less than the quantitation limit or quality control criteria were not

* Reported at the Limit of Quantitation (LOQ). The LOQ is less than MTCA CULs.

J+

The constituent was positively identified and detected; however, the concentration reported is an estimated value because the result may be biased high.

Table B-8: Summary of Groundwater Sampling Results - Well MW-19
Sea-Tac Development Site, Seatac WA

Date Sampled ^{b,c}	Field Parameters								Analytical Data									
	TOC Elevation (feet msl)	Depth to Water (feet btoc)	Groundwater Elevation (feet msl)	pH (standard units)	Temperature (°C)	Conductivity (µmhos/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	NWTPH-Gasoline (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	EDB (ethylene dibromide) (µg/L) ^f	N-hexane (µg/L)	Naphthalene (µg/L)	NWTPH-Diesel (mg/L)	NWTPH-Motor Oil (mg/L)
18-Mar-10	356.61	46.60	310.01	7.04	12.5	275	0.07	84.0	1.3	8.9	1.8	43	6.0	< 0.0096	2.8	< 5.0	-	-
11-Feb-14	356.61	45.46	311.15	6.98	12.7	105	0.15	3.20	< 0.10	< 0.25	< 0.25	< 0.25	< 0.50	< 0.08	4.3	< 0.50	< 0.10	< 0.20
29-May-14	356.61	45.74	310.87	6.96	13.7	290	0.04	0.42	< 0.10	< 0.25	0.40	< 0.25	0.58	< 0.07	0.30	< 0.50	< 0.10	< 0.20
10-Sep-14	356.61	45.73	310.88	6.93	14.5	379	0.16	0.30	< 0.10	< 0.25	< 0.25	< 0.25	< 0.50	< 0.07	< 0.20	< 0.50	< 0.10	< 0.20
3-Dec-14	356.61	45.73	310.88	6.82	13.3	380	0.20	0.86	< 0.10	< 0.25	< 0.25	< 0.25	< 0.50	< 0.07	< 0.20	< 0.50	< 0.10	< 0.20
17-Jun-15	356.61	45.94	310.67	6.75	14.3	400	0.26	0.86	< 0.25	< 0.20	< 0.20	< 0.20	< 0.40	< 0.07	< 0.20	< 0.50	< 0.10	< 0.20
2-Dec-15	356.61	47.72	308.89	6.87	13.6	530	0.09	2.60	< 0.25	< 0.20	< 0.20	< 0.20	< 0.40	< 0.07	< 0.20	< 0.50	< 0.10	< 0.20
3-May-16	356.61	46.81	309.80	6.79	15.2	390	0.87	1.23	< 0.10	< 0.20	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.50	< 0.10	< 0.20
15-Nov-16	356.61	46.15	310.46	6.88	14.1	586	0.37	0.81	< 0.10	< 0.20	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.50	< 0.10	< 0.20
2-May-17	356.61	45.90	310.71	6.46	13.9	268	2.04	0.36	< 0.10	< 0.20	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.50	< 0.106	< 0.213
14-Nov-17	356.61	45.04	311.57	6.73	13.7	456	0.98	0.79	< 0.10	< 0.20	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.50	< 0.10	< 0.20
16-Jan-18	356.61	44.57	312.04	6.79	13.5	414	0.20	0.64	< 0.10	< 0.20	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.50	< 0.10	< 0.20
9-Mar-18	356.61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15-May-18	356.61	43.92	312.69	6.47	14.6	305	0.34	0.49	< 0.10	< 0.20	< 0.20	< 0.20	< 0.40	< 0.01	< 0.20	< 0.50	< 0.10	< 0.20
8-Nov-18	356.61	44.15	312.46	7.00	13.6	314	0.33	0.72	< 0.10	< 0.20	< 0.20	< 0.20	< 0.40	< 0.01	< 0.20	< 0.50	< 0.10	< 0.20
Clean-up Level	MTCA Method A for Groundwater (unrestricted landuse)								0.8 ^d /1.0 ^e	5 ^g	1000 ^g	700 ^g	1000 ^h	0.01 ^h	NSA	160	0.5	0.5
	MTCA Method B for Groundwater (unrestricted landuse)								NSA	5 ⁱ	640	800	1600	0.022	480	160	NSA	NSA

Notes:

feet bgs	Feet below ground surface
feet bmp	Feet below measuring point
feet msl	Feet above mean sea level
^a	Well not surveyed, elevation estimated.
^b	IAS system not in operation.
^c	Water levels collected at various times prior to sampling (see Table 1). Date/time is sampling time.
^d	When benzene is present.
^e	When benzene is not present.
^f	Reported at Method Detection Limit (MDL). The MDL is greater than the MTCA CULs.
^g	Inclusive of 40 CFR 141.61 Federal Law for drinking water MCLs
^h	Value is more protective than Federal MCLs.
ⁱ	MTCA 173-340-705(5): Adjustments to cleanup levels based on applicable laws.

-	Not measured or not available
Result exceeds Clean-up Level (CUL)	
mg/L	Milligrams per liter
µg/L	Micrograms per liter
NTU	Nephelometric Turbidity Unit
µmhos/cm	Micromhos per centimeter
<	Analyte not detected above the reporting limit shown
MTCA	Model Toxics Control Act
MCL	Maximum Containment Level
NSA	No Standard Available
TOC	Top of casing inside PVC well
°C	Degrees Celsius

Table B-9: Summary of Groundwater Sampling Results - Well MW-20
Sea-Tac Development Site, Seatac WA

	Field Parameters								Analytical Data									
Date Sampled ^{b,c}	TOC Elevation (feet msl)	Depth to Water (feet btoc)	Groundwater Elevation (feet msl)	pH (standard units)	Temperature (°C)	Conductivity (µmhos/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	NWTPH-Gasoline (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	EDB (ethylene dibromide) (µg/L) ^f	N-hexane (µg/L)	Naphthalene (µg/L)	NWTPH-Diesel (mg/L)	NWTPH-Motor Oil (mg/L)
17-Mar-10	430.98	121.79	309.19	6.63	10.8	359	4.82	4.37	< 0.10	< 1.0	< 1.0	< 1.0	< 1.0	< 0.0095	< 1.0	< 5.0	-	-
20-Mar-14	416.61	106.13	310.48	6.74	11.4	377	7.82	3.32	< 0.10	< 0.25	< 0.25	< 0.25	< 0.50	< 0.07	< 0.20	< 0.50 UJ	< 0.10	< 0.20
29-May-14	416.61	106.66	309.95	6.73	12.3	257	6.37	0.82	< 0.10	< 0.25	< 0.25	< 0.25	< 0.50	< 0.07	< 0.20	< 0.50	< 0.10	< 0.20
10-Sep-14	416.61	106.53	310.08	6.83	13.2	355	7.55	0.69	< 0.10	< 0.25	< 0.25	< 0.25	< 0.50	< 0.07	< 0.20	< 0.50	< 0.10	< 0.20
3-Dec-14	416.61	106.53	310.08	6.79	12.4	355	7.67	1.30	< 0.10	< 0.25	< 0.25	< 0.25	< 0.50	< 0.07	< 0.20	< 0.50	< 0.10	< 0.20
17-Jun-15	416.61	106.68	309.93	6.77	13.3	350	7.41	1.06	< 0.25	< 0.20	< 0.20	< 0.20	< 0.40	< 0.07	< 0.20	< 0.50	< 0.10	< 0.20
3-Dec-15	416.61	108.61	308.00	7.66	12.4	290	6.76	4.28	< 0.25	< 0.20	< 0.20	< 0.20	< 0.40	< 0.07	< 0.20	< 0.50	< 0.10	< 0.20
3-May-16	416.61	107.56	309.05	6.58	13.3	138	5.31	3.55	<0.10	<0.20	<0.20	<0.20	<0.40	<0.20	<0.20	<0.50	<0.10	<0.20
15-Nov-16	416.61	106.97	309.64	6.75	13.0	241	7.12	0.41	<0.10	<0.20	<0.20	<0.20	<0.40	<0.20	<0.20	<0.50	<0.10	<0.20
3-May-17	416.61	106.66	309.95	6.63	12.8	118	8.97	1.35	<0.10	<0.20	<0.20	<0.20	<0.40	<0.20	<0.20	<0.50	<0.10	<0.20
14-Nov-17	416.61	105.76	310.85	6.60	12.7	192	9.06	1.76	<0.10	<0.20	<0.20	<0.20	<0.40	<0.20	<0.20	<0.50	<0.10	<0.20
16-Jan-18	416.61	105.48	311.13	6.67	12.8	165	9.46	0.66	<0.10	<0.20	<0.20	<0.20	<0.40	<0.20	<0.20	<0.50	<0.10	<0.20
9-Mar-18	416.61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15-May-18	416.61	104.65	311.96	6.31	13.0	119	9.63	0.48	<0.10	<0.20	<0.20	<0.20	<0.40	<0.01	<0.20	<0.50	<0.10	<0.20
8-Nov-18	416.61	104.98	311.63	6.89	13.2	144	7.83	1.07	<0.10	<0.20	<0.20	<0.20	<0.40	<0.01	<0.20	<0.50	<0.10	<0.20
Clean-up Level	MTCA Method A for Groundwater (unrestricted landuse)								0.8 ^d /1.0 ^e	5 ^g	1000 ^g	700 ^g	1000 ^h	0.01 ^h	NSA	160	0.5	0.5
	MTCA Method B for Groundwater (unrestricted landuse)								NSA	5 ⁱ	640	800	1600	0.022	480	160	NSA	NSA

Notes:

feet bgs	Feet below ground surface
feet bmp	Feet below measuring point
feet msl	Feet above mean sea level
^a	Well not surveyed, elevation estimated.
^b	IAS system not in operation.
^c	Water levels collected at various times prior to sampling (see Table 1). Date/time is sampling time.
^d	When benzene is present.
^e	When benzene is not present.
^f	Reported at Method Detection Limit (MDL). The MDL is greater than the MTCA CULs.
^g	Inclusive of 40 CFR 141.61 Federal Law for drinking water MCLs
^h	Value is more protective than Federal MCLs.
ⁱ	MTCA 173-340-705(5): Adjustments to cleanup levels based on applicable laws.

-	Not measured or not available
	Result exceeds Clean-up Level (CUL)
mg/L	Milligrams per liter
µg/L	Micrograms per liter
NTU	Nephelometric Turbidity Unit
µmhos/cm	Micromhos per centimeter
<	Analyte not detected above the reporting limit shown
MTCA	Model Toxics Control Act
MCL	Maximum Containment Level
NSA	No Standard Available
TOC	Top of casing inside PVC well
°C	Degrees Celsius
UJ	The constituent was analyzed for, but was not detected above the reported sample quantitation limit; however, the value reported is an estimated value because the result is less than the quantitation limit or quality control criteria were not met.

Table B-10: Summary of Groundwater Sampling Results - Well MW-21
Sea-Tac Development Site, Seatac WA

Date Sampled ^{b,c}	Field Parameters								Analytical Data									
	TOC Elevation (feet msl)	Depth to Water (feet btoc)	Groundwater Elevation (feet msl)	pH (standard units)	Temperature (°C)	Conductivity (µmhos/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	NWTPH-Gasoline (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	EDB (ethylene dibromide) (µg/L) ^f	N-hexane (µg/L)	Naphthalene (µg/L)	NWTPH-Diesel (mg/L)	NWTPH-Motor Oil (mg/L)
17-Mar-10	390.79	81.26	309.53	5.97	11.5	257	3.21	5.13	< 0.10	< 1.0	< 1.0	< 1.0	< 1.0	< 0.0096	< 1.0	< 5.0	-	-
11-Feb-14	412.85	102.34	310.51	6.09	11.9	110	6.31	11.2	< 0.10	< 0.25	< 0.25	< 0.25	< 0.50	< 0.08	< 0.20	< 0.50	< 0.10	< 0.20
29-May-14	412.85	102.61	310.24	6.15	12.5	277	6.28	1.71	< 0.10	< 0.25	< 0.25	< 0.25	< 0.50	< 0.07	< 0.20	< 0.50	< 0.10	< 0.20
10-Sep-14	412.85	102.66	310.19	6.15	13.5	283	6.25	1.95	< 0.10	< 0.25	< 0.25	< 0.25	< 0.50	< 0.07	< 0.20	< 0.50	< 0.10	< 0.20
3-Dec-14	412.85	102.66	310.19	6.20	12.3	304	5.54	13.1	< 0.10	< 0.25	< 0.25	< 0.25	< 0.50	< 0.07	< 0.20	< 0.50	< 0.10	< 0.20
17-Jun-15	412.85	102.81	310.04	6.12	13.5	326	6.12	1.98	< 0.25	< 0.20	< 0.20	< 0.20	< 0.40	< 0.07	< 0.20	< 0.50	< 0.10	< 0.20
3-Dec-15	412.85	104.70	308.15	5.17	12.6	341	6.21	1.39	< 0.25	< 0.20	< 0.20	< 0.20	< 0.40	< 0.07	< 0.20	< 0.50	< 0.10	< 0.20
3-May-16	412.85	104.40	308.45	6.28	13.7	315	9.30	3.86	<0.10	<0.20	<0.20	<0.20	<0.40	<0.20	<0.20	<0.50	<0.10	<0.20
15-Nov-16	412.85	102.97	309.88	6.30	13.4	290	6.29	4.51	<0.10	<0.20	<0.20	<0.20	<0.40	<0.20	<0.20	<0.50	<0.10	<0.20
3-May-17	412.85	102.68	310.17	6.08	13.0	134	7.33	1.12	<0.10	<0.20	<0.20	<0.20	<0.40	<0.20	<0.20	<0.50	<0.109	<0.217
14-Nov-17	412.85	101.84	311.01	6.21	12.9	165	8.39	1.76	<0.10	<0.20	<0.20	<0.20	<0.40	<0.20	<0.20	<0.50	<0.10	<0.20
16-Jan-18	412.85	101.45	311.40	6.19	12.9	157	8.61	1.33	<0.10	<0.20	<0.20	<0.20	<0.40	<0.20	<0.20	<0.50	<0.10	<0.20
9-Mar-18	412.85	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15-May-18	412.85	100.66	312.19	6.00	13.1	116	8.91	0.59	<0.10	<0.20	<0.20	<0.20	<0.40	<0.01	<0.20	<0.50	<0.10	<0.20
8-Nov-18	412.85	100.93	311.92	6.47	13.0	127	8.75	0.64	<0.10	<0.20	<0.20	<0.20	<0.40	<0.01	<0.20	<0.50	<0.10	<0.20
Clean-up Level	MTCA Method A for Groundwater (unrestricted landuse)								0.8 ^d /1.0 ^e	5 ^g	1000 ^g	700 ^g	1000 ^h	0.01 ^h	NSA	160	0.5	0.5
	MTCA Method B for Groundwater (unrestricted landuse)								NSA	5 ⁱ	640	800	1600	0.022	480	160	NSA	NSA

Notes:

feet bgs	Feet below ground surface
feet bmp	Feet below measuring point
feet msl	Feet above mean sea level
^a	Well not surveyed, elevation estimated.
^b	IAS system not in operation.
^c	Water levels collected at various times prior to sampling (see Table 1). Date/time is sampling time.
^d	When benzene is present.
^e	When benzene is not present.
^f	Reported at Method Detection Limit (MDL). The MDL is greater than the MTCA CULs.
^g	Inclusive of 40 CFR 141.61 Federal Law for drinking water MCLs
^h	Value is more protective than Federal MCLs.
ⁱ	MTCA 173-340-705(5): Adjustments to cleanup levels based on applicable laws.

-	Not measured or not available
Result exceeds Clean-up Level (CUL)	
mg/L	Milligrams per liter
µg/L	Micrograms per liter
NTU	Nephelometric Turbidity Unit
µmhos/cm	Micromhos per centimeter
<	Analyte not detected above the reporting limit shown
MTCA	Model Toxics Control Act
MCL	Maximum Containment Level
NSA	No Standard Available
TOC	Top of casing inside PVC well
°C	Degrees Celsius

Table B-11: Summary of Groundwater Sampling Results - Well MW-22
Sea-Tac Development Site, Seatac WA

	Field Parameters								Analytical Data									
Date Sampled ^{b,c}	TOC Elevation (feet msl)	Depth to Water (feet btoc)	Groundwater Elevation (feet msl)	pH (standard units)	Temperature (°C)	Conductivity (µmhos/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	NWTPH-Gasoline (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	EDB (ethylene dibromide) (µg/L) ^f	N-hexane (µg/L)	Naphthalene (µg/L)	NWTPH-Diesel (mg/L)	NWTPH-Motor Oil (mg/L)
16-Mar-10	393.31	83.63	309.68	6.65	12.5	586	0.25	82.0	15	23	74	1,400	2,420	< 0.0095	15	380	-	-
20-Mar-14	393.31	82.93	310.38	6.68	12.2	381	0.87	64.8	17	5.7	12	990	1,503	< 0.07	7.8	400 J	1.2 J	< 0.20
28-May-14	393.31	82.72	310.59	6.73	13.2	383	0.30	2.26	18	3.9	9.7	940	1,900	< 0.07	8.6	420 B	1.7 J	< 0.20
12-Sep-14	393.31	82.98	310.33	6.81	13.7	423	0.29	1.03	16	4.8	9.3	690	1,103	< 1.5	9.8	460 B J	1.1 J	< 0.20
5-Dec-14	393.31	82.98	310.33	6.81	12.8	378	0.26	3.71	16	8.7	11	740	1,103	< 1.5	7.2	380	0.86 J	< 0.20
25-Jun-15	393.31	82.95	310.36	6.82	13.6	354	0.52	3.34	19	5.9	7.4	750	1,402	< 0.74	4.7	310	1.0 J	< 0.20
2-Dec-15	393.31	84.83	308.48	6.87	13.0	325	0.25	3.42	19	4.4	6.2	840	1,503	< 1.5	3.0 J	240	1.5 J	< 0.20
4-May-16	393.31	83.85	309.46	6.84	13.3	294	0.39	3.61	15	3.8	5.0	780	1,403	<0.20	8.6	470 Q	2.8 J	<0.20
16-Nov-16	393.31	83.43	309.88	6.89	13.1	246	1.00	5.50	11	4.0	3.9	631	882	<0.20	5.9 J+	438	1.9	<0.20
2-May-17	393.31	82.95	310.36	6.67	13.3	172	0.41	1.87	13	4.2	4.4	651	960	<0.20	5.7	389	2.8	<0.222
15-Nov-17	393.31	81.93	311.38	7.09	13.1	215	1.72	3.72	11	4.2	3.3	481	583	<2.0	5.4	326	2.4	<0.20
18-Jan-18	393.31	81.43	311.88	6.67	12.9	196	0.81	3.08	17	4.9	3.9	530	731	<2.0	7.9	349	2.9	<0.20
9-Mar-18	393.31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16-May-18	393.31	80.92	312.39	6.41	13.5	172	3.39	2.94	12	3.0	2.4	340	630	<0.01	4.82	268	2.0	<0.20
7-Nov-18	393.31	81.22	312.09	6.97	13.4	171	3.92	1.78	8.6	2.3	2.2	198	407	<0.01	4.0	228	1.8 J	0.20 UJ
Clean-up Level	MTCA Method A for Groundwater (unrestricted landuse)								0.8 ^d /1.0 ^e	5 ^g	1000 ^g	700 ^g	1000 ^h	0.01 ^h	NSA	160	0.5	0.5
	MTCA Method B for Groundwater (unrestricted landuse)								NSA	5 ⁱ	640	800	1600	0.022	480	160	NSA	NSA

Notes:

- feet bgs Feet below ground surface
 feet bmp Feet below measuring point
 feet msl Feet above mean sea level
^a Well not surveyed, elevation estimated.
^b IAS system not in operation.
^c Water levels collected at various times prior to sampling (see Table 1). Date/time is sampling time.
^d When benzene is present.
^e When benzene is not present.
^f Reported at Method Detection Limit (MDL). The MDL is greater than the MTCA CULs.
^g Inclusive of 40 CFR 141.61 Federal Law for drinking water MCLs
^h Value is more protective than Federal MCLs.
ⁱ MTCA 173-340-705(5): Adjustments to cleanup levels based on applicable laws.

- Not measured or not available
 Result exceeds Clean-up Level (CUL)
 mg/L Milligrams per liter
 µg/L Micrograms per liter
 NTU Nephelometric Turbidity Unit
 µmhos/cm Micromhos per centimeter
 < Analyte not detected above the reporting limit shown
 MTCA Model Toxics Control Act
 MCL Maximum Containment Level
 NSA No Standard Available
 TOC Top of casing inside PVC well
 °C Degrees Celsius

Table B-11: Summary of Groundwater Sampling Results - Well MW-22
Sea-Tac Development Site, Seatac WA

	Field Parameters								Analytical Data									
Date Sampled ^{b,c}	TOC Elevation (feet msl)	Depth to Water (feet btoc)	Groundwater Elevation (feet msl)	pH (standard units)	Temperature (°C)	Conductivity (µmhos/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	NWTPH-Gasoline (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	EDB (ethylene dibromide) (µg/L) ^f	N-hexane (µg/L)	Naphthalene (µg/L)	NWTPH-Diesel (mg/L)	NWTPH-Motor Oil (mg/L)

J The constituent was positively identified and detected; however, the concentration reported is an estimated value because the result is less than the quantitation limit or quality control criteria were not met.

J+ The constituent was positively identified and detected; however, the concentration reported is an estimated value because the result may be biased high.

B Analyte detected in an associated Method Blank at a concentration greater than one-half of laboratory's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.

UJ The constituent was analyzed for, but was not detected above the reported sample quantitation limit; however, the value reported is an estimated value because the result is less than the quantitation limit or quality control criteria were not met.

**Table B-12: Summary of Groundwater Sampling Results - Well PORT-MW-B
Sea-Tac Development Site, Seatac WA**

Date Sampled ^{b,c}	Field Parameters								Analytical Data									
	TOC Elevation (feet msl)	Depth to Water (feet btoc)	Groundwater Elevation (feet msl)	pH (standard units)	Temperature (°C)	Conductivity (µmhos/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	NWTPH-Gasoline (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	EDB (ethylene dibromide) (µg/L) ^f	N-hexane (µg/L)	Naphthalene (µg/L)	NWTPH-Diesel (mg/L)	NWTPH-Motor Oil (mg/L)
3-Aug-11	400.00	-	-	-	-	-	-	-	0.20	1.3	< 1.0	13	3.4	< 0.01	< 1.0	13	0.28	< 0.25
20-Mar-14	400.00	89.70	310.30	6.55	12.3	267	6.16	—	< 0.10	< 0.25	< 0.25	< 0.25	< 0.50	< 0.07	< 0.20	< 0.50 UJ	< 0.10	< 0.20
28-May-14	400.00	89.50	310.50	6.50	14.2	317	4.63	98.3	< 0.10	< 0.25	< 0.25	< 0.25	< 0.50	< 0.07	< 0.20	< 0.50	< 0.10	< 0.20
12-Sep-14	400.00	89.71	310.29	6.56	14.0	266	3.56	6.18	< 0.10	< 0.25	< 0.25	1.1	1.9	< 0.07	< 0.20	< 0.50	< 0.10	< 0.20
5-Dec-14	400.00	89.71	310.29	6.57	12.6	265	4.07	84.1	0.11	< 0.25	< 0.25	1.1	1.0	< 0.07	< 0.20	< 0.50	< 0.10	< 0.20
25-Jun-15	400.00	89.67	310.33	6.51	14.3	290	3.80	4.2	< 0.25	< 0.20	< 0.20	< 0.20	< 0.40	< 0.07	< 0.20	< 0.50	< 0.10	< 0.20
2-Dec-15	400.00	91.61	308.39	6.56	13.0	267	2.34	1.8	< 0.25	< 0.20	< 0.20	0.26	0.40 J+	< 0.07	< 0.20	2.3 J+	< 0.10	0.49
4-May-16	400.00	90.55	309.45	6.72	13.2	219	2.59	7.4	< 0.10	0.08 J	< 0.20	0.74	0.50	< 0.20	< 0.20	0.83 J	< 0.10	< 0.20
16-Nov-16	400.00	90.31	309.69	6.70	13.1	192	3.97	11.7	< 0.10	0.03 J	< 0.20	0.04 J	< 0.40	< 0.20	< 0.20	< 0.50	< 0.10	< 0.20
2-May-17	400.00	89.65	310.35	6.54	12.9	107	3.85	2.6	< 0.10	0.21	< 0.20	1.2	< 0.40	< 0.20	< 0.20	1.4	< 0.10	< 0.20
15-Nov-17	400.00	88.67	311.33	6.78	13.0	199	5.09	2.4	< 0.10	< 0.20	< 0.20	0.36	< 0.40	< 0.20	< 0.20	< 0.50	< 0.10	< 0.20
18-Jan-18	400.00	88.17	311.83	6.82	12.6	173	1.39	3.4	0.15	0.47	< 0.20	2.7	< 0.40	< 0.20	< 0.20	3.2	0.17	< 0.20
9-Mar-18	400.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16-May-18	400.00	87.64	312.36	6.40	13.8	103	3.36	2.4	< 0.10	< 0.20	< 0.20	< 0.20	< 0.40	< 0.01	< 0.20	< 0.50	< 0.10	< 0.20
7-Nov-18	400.00	87.91	312.09	6.80	13.1	103	4.92	1.29	< 0.10	< 0.20	< 0.20	< 0.20	< 0.40	< 0.01	< 0.20	< 0.50	< 0.10	< 0.20
Clean-up Level	MTCA Method A for Groundwater (unrestricted landuse)								0.8 ^d /1.0 ^e	5 ^g	1000 ^g	700 ^g	1000 ^h	0.01 ^h	NSA	160	0.5	0.5
	MTCA Method B for Groundwater (unrestricted landuse)								NSA	5 ⁱ	640	800	1600	0.022	480	160	NSA	NSA

Notes:

feet bgs	Feet below ground surface
feet bmp	Feet below measuring point
feet msl	Feet above mean sea level
^a	Well not surveyed, elevation estimated.
^b	IAS system not in operation.
^c	Water levels collected at various times prior to sampling (see Table 1). Date/time is sampling time.
^d	When benzene is present.
^e	When benzene is not present.
^f	Reported at Method Detection Limit (MDL). The MDL is greater than the MTCA CULs.
^g	Inclusive of 40 CFR 141.61 Federal Law for drinking water MCLs
^h	Value is more protective than Federal MCLs.
ⁱ	MTCA 173-340-705(5): Adjustments to cleanup levels based on applicable laws.

-	Not measured or not available
Result exceeds Clean-up Level (CUL)	
mg/L	Milligrams per liter
µg/L	Micrograms per liter
NTU	Nephelometric Turbidity Unit
µmhos/cm	Micromhos per centimeter
<	Analyte not detected above the reporting limit shown
MTCA	Model Toxics Control Act
MCL	Maximum Containment Level
NSA	No Standard Available
TOC	Top of casing inside PVC well
°C	Degrees Celsius

**Table B-12: Summary of Groundwater Sampling Results - Well PORT-MW-B
Sea-Tac Development Site, Seatac WA**

	Field Parameters								Analytical Data									
Date Sampled ^{b,c}	TOC Elevation (feet msl)	Depth to Water (feet btoc)	Groundwater Elevation (feet msl)	pH (standard units)	Temperature (°C)	Conductivity (µmhos/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	NWTPH-Gasoline (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	EDB (ethylene dibromide) (µg/L) ^f	N-hexane (µg/L)	Naphthalene (µg/L)	NWTPH-Diesel (mg/L)	NWTPH-Motor Oil (mg/L)

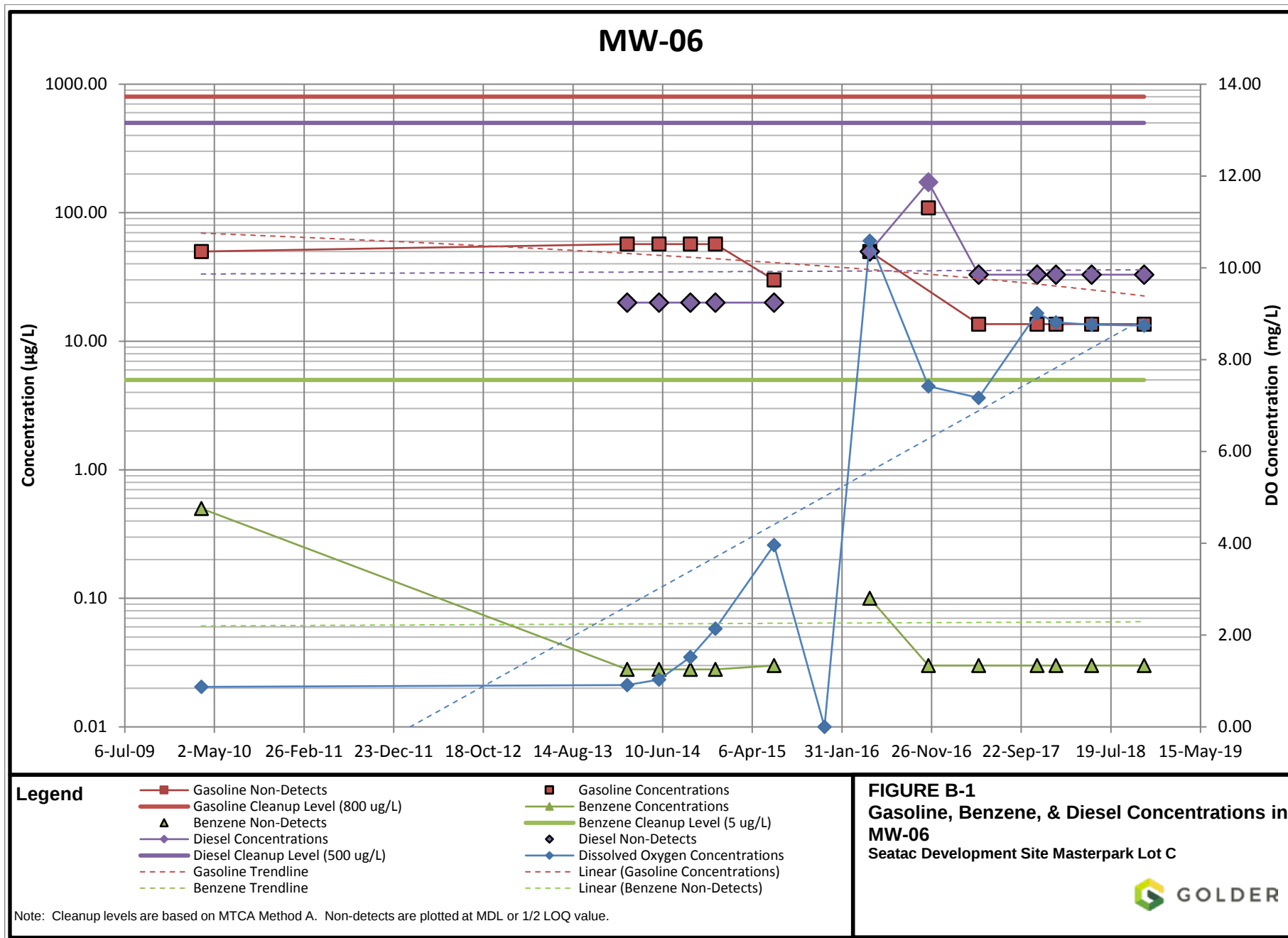
^j Turbidity out of range. Well was purged using a bailer.

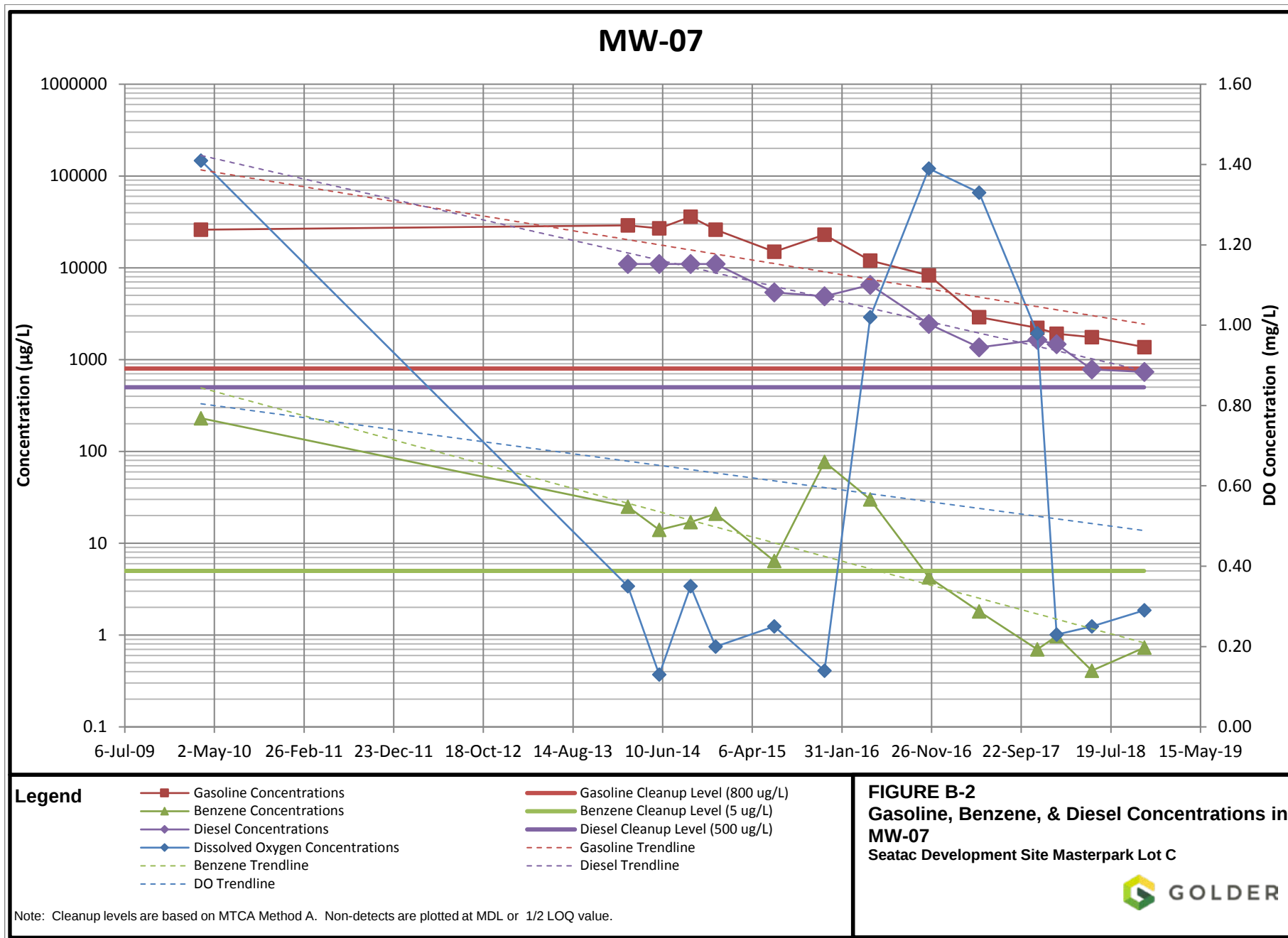
^J The constituent was positively identified and detected; however, the concentration reported is an estimated value because the result is less than the quantitation limit or quality control criteria were not met.

^{UJ} The constituent was analyzed for, but was not detected above the reported sample quantitation limit; however, the value reported is an estimated value because the result is less than the quantitation limit or quality control criteria were

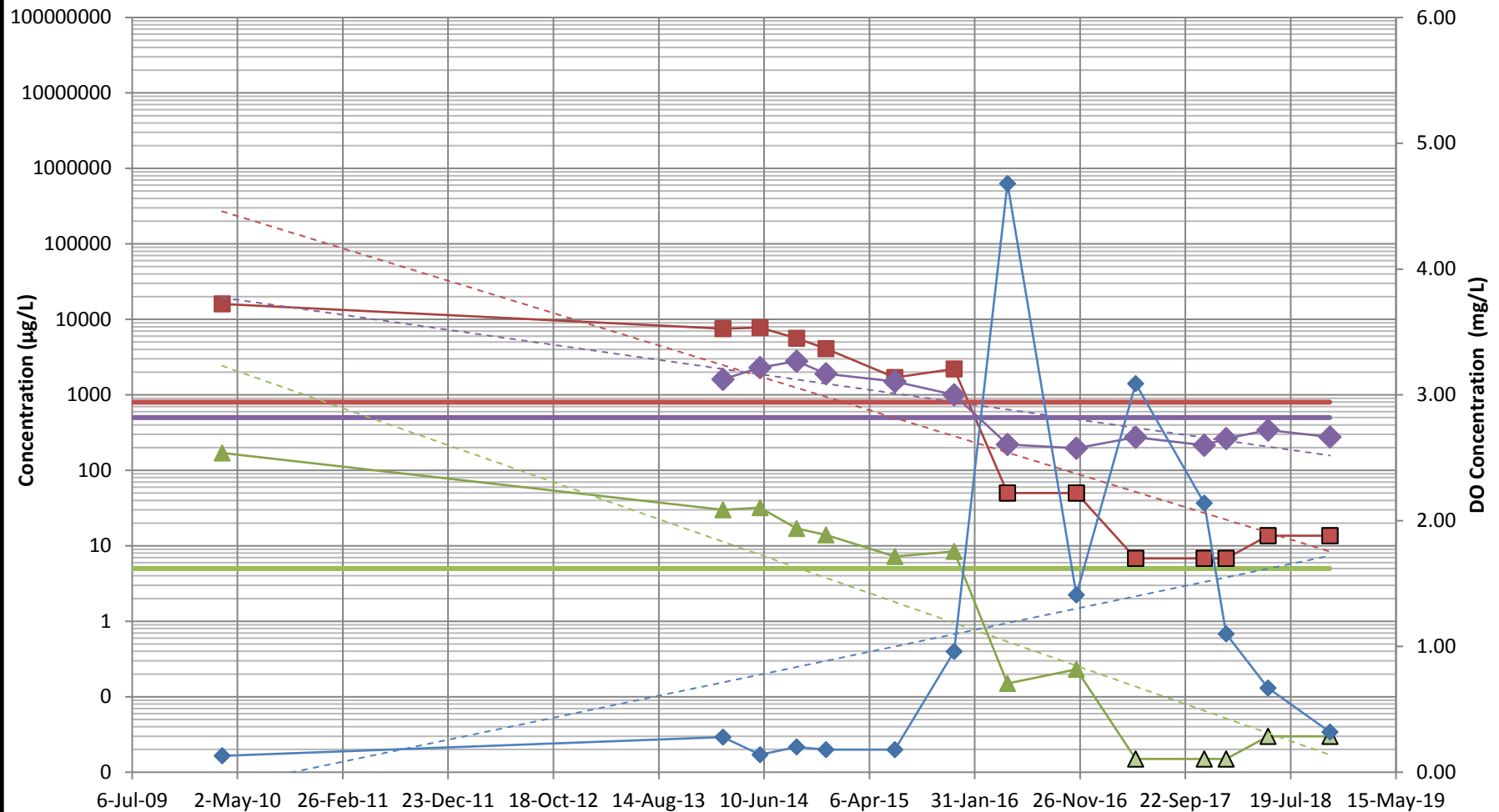
^{J+} The constituent was positively identified and detected; however, the concentration reported is an estimated value because the result may be biased high.

TREND GRAPHS





MW-09



Legend

- Gasoline Concentrations
- Gasoline Cleanup Level (800 µg/L)
- ▲ Benzene Non-Detects
- ◆— Diesel Concentrations
- ◆— Dissolved Oxygen Concentrations
- Benzene Trendline
- DO Trendline
- Gasoline Non-Detects
- ▲— Benzene Concentrations
- Benzene Cleanup Level (5 µg/L)
- ◆— Diesel Cleanup Level (500 µg/L)
- Gasoline Trendline
- Diesel Trendline

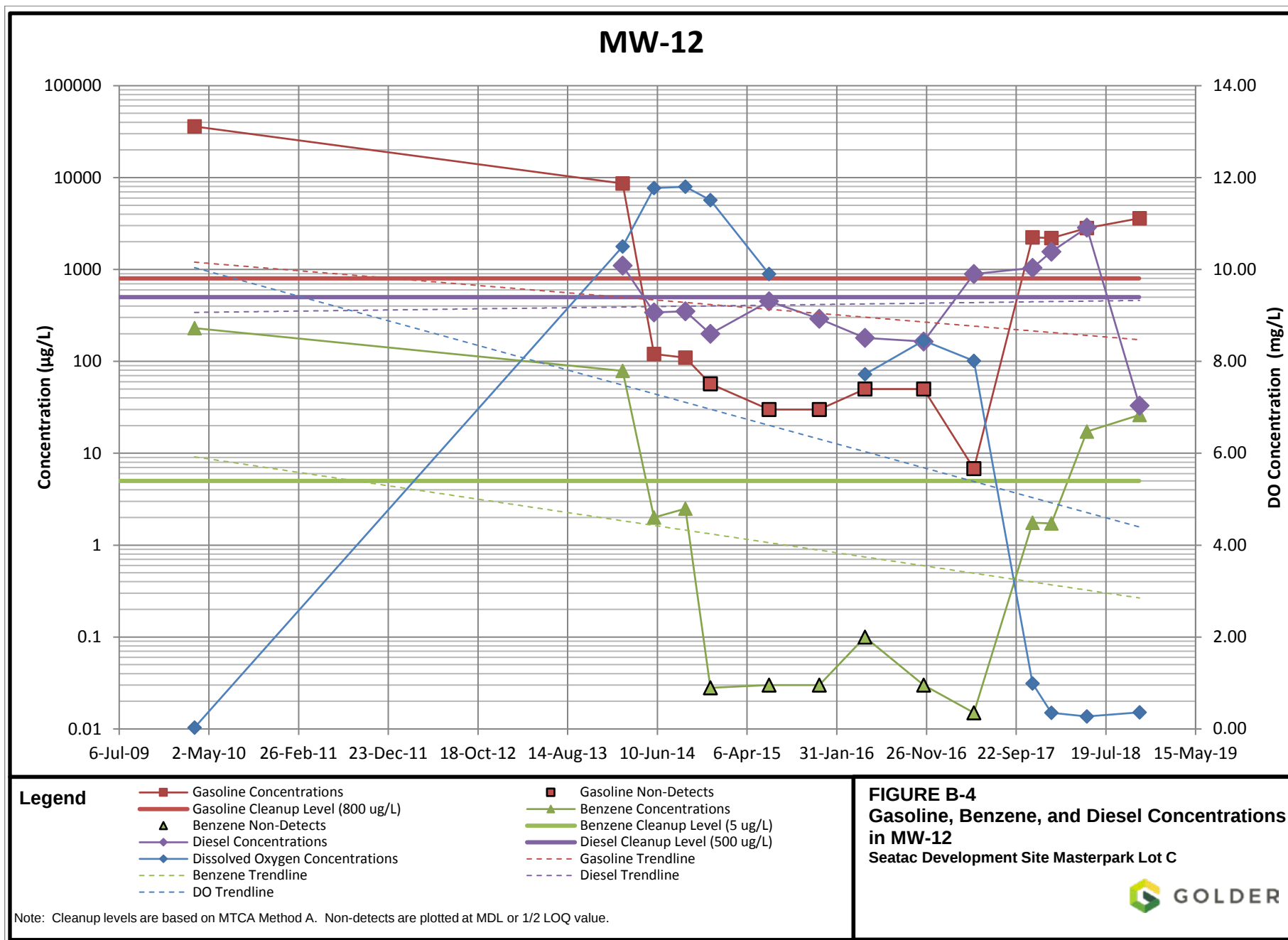
Note: Cleanup levels are based on MTCA Method A. Non-detects are plotted at MDL or 1/2 LOQ value.

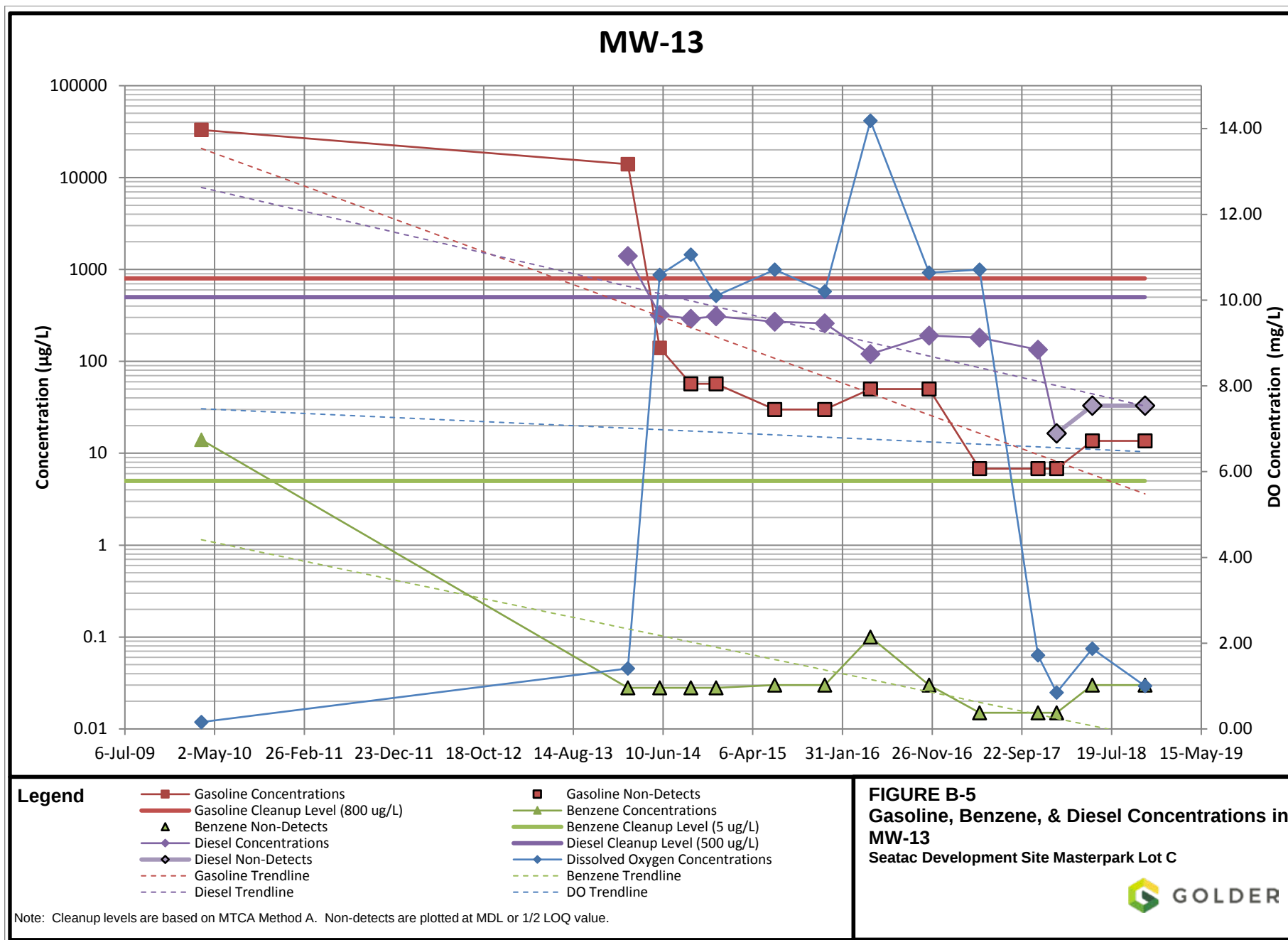
FIGURE B-3

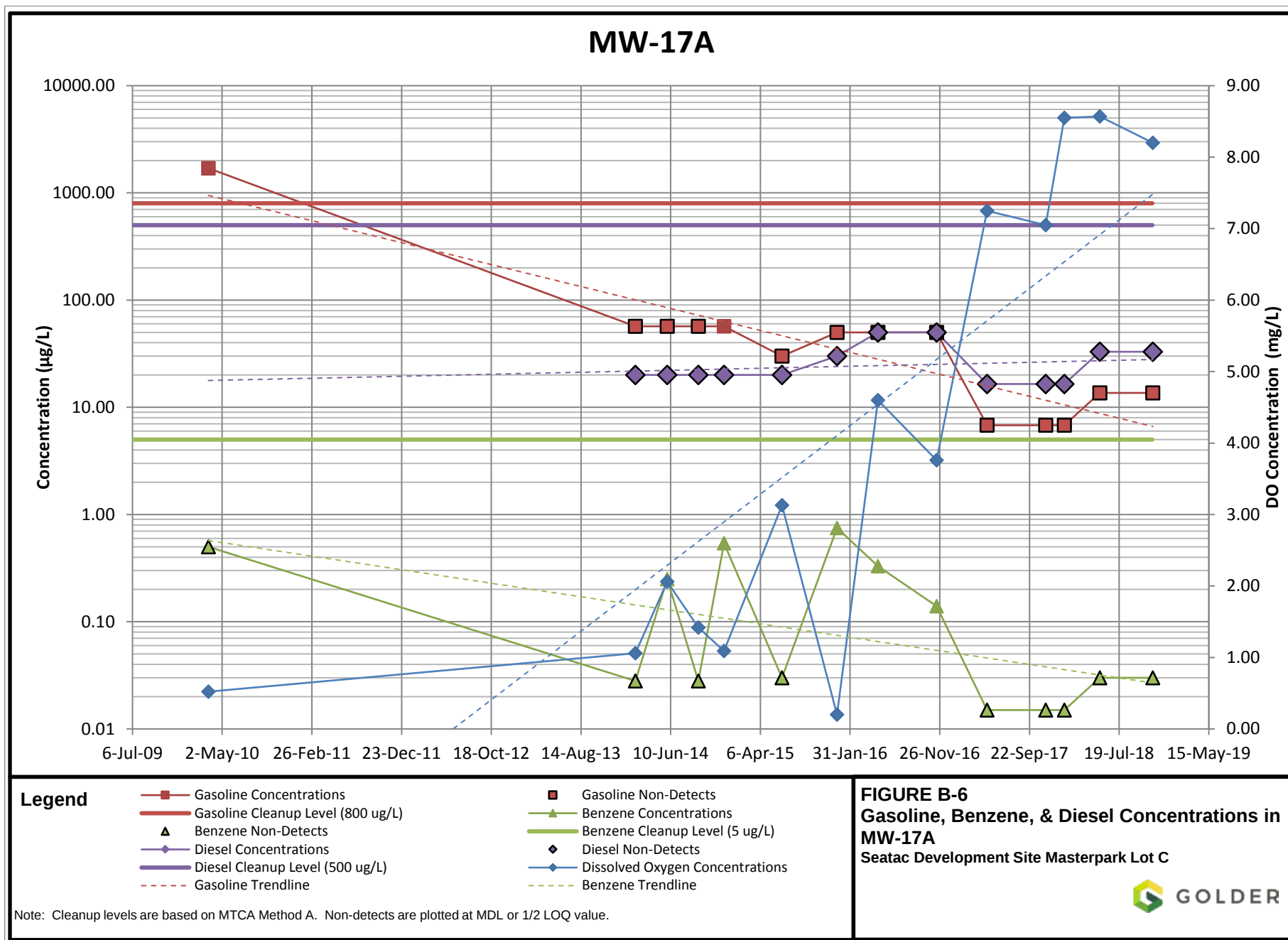
Gasoline, Benzene, & Diesel Concentrations in MW-09

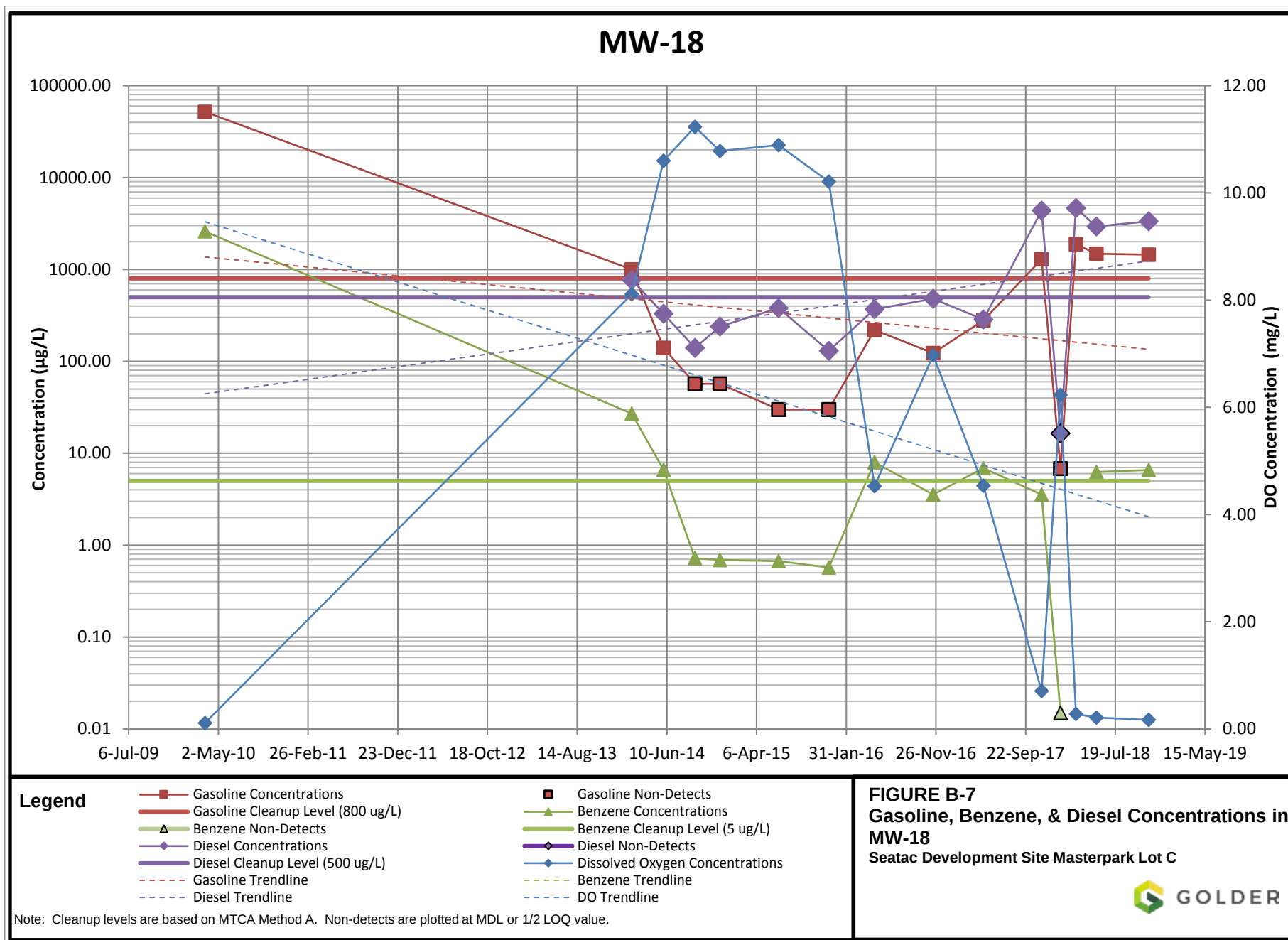
Seatac Development Site Masterpark Lot C

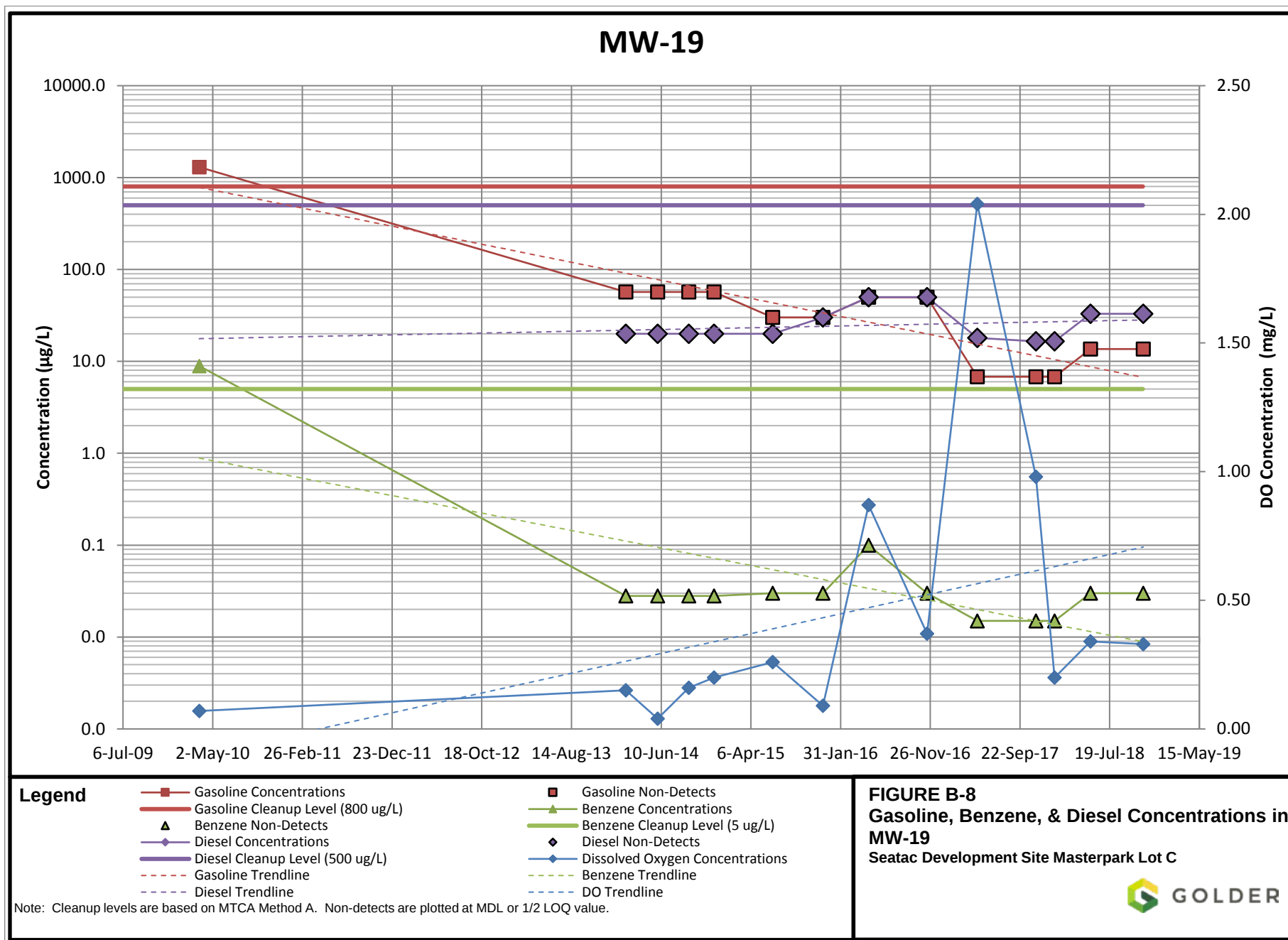


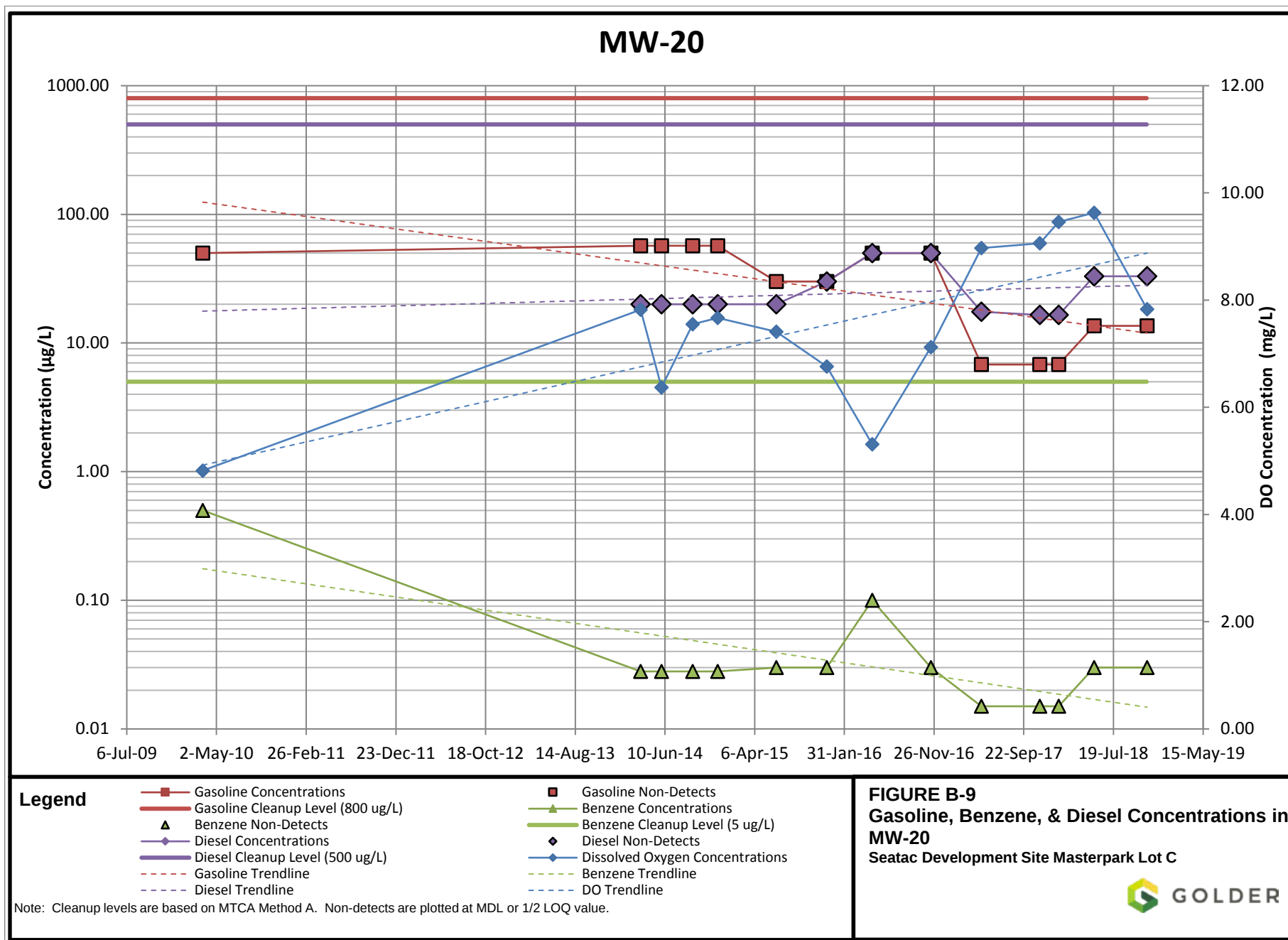


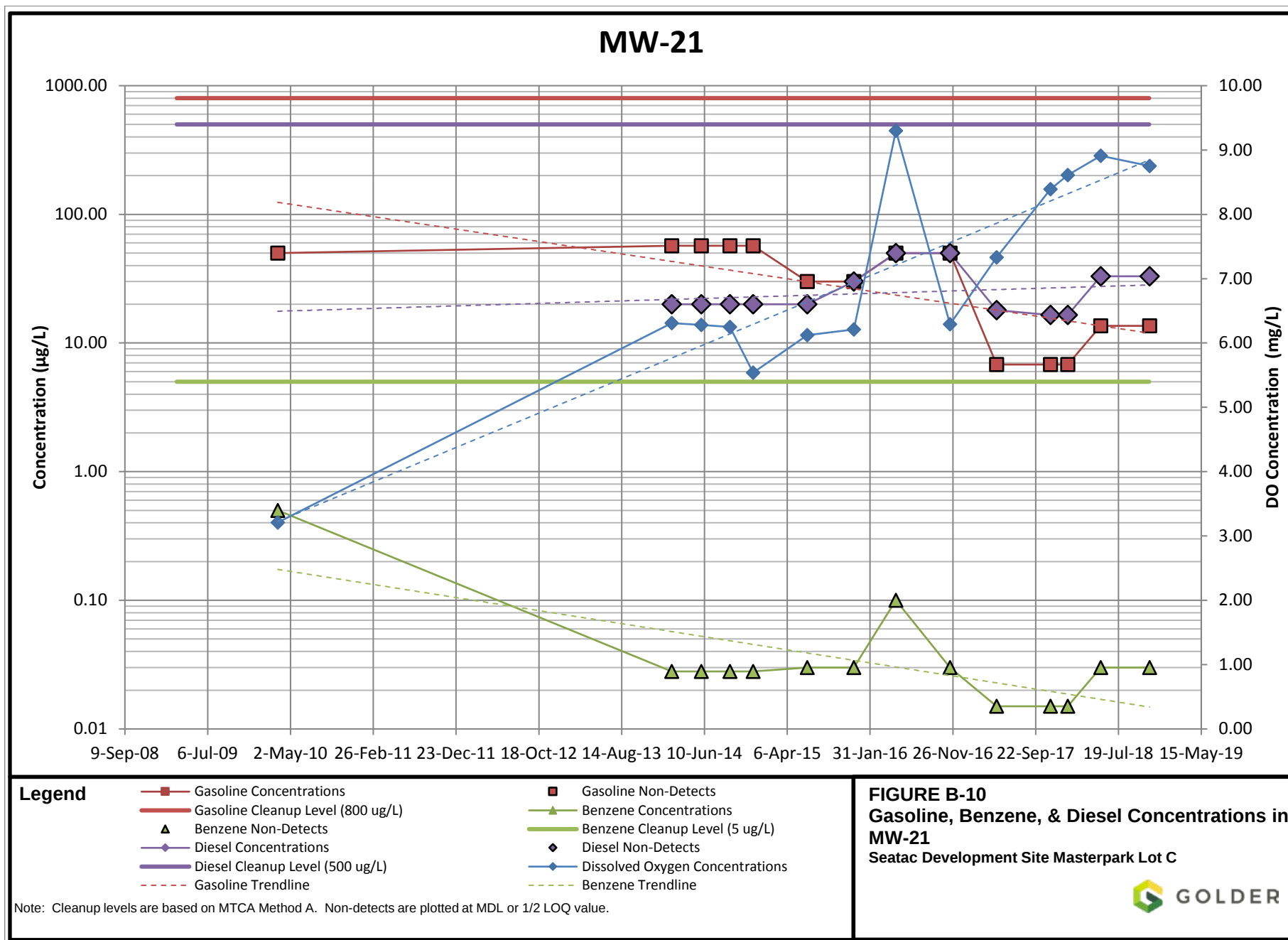


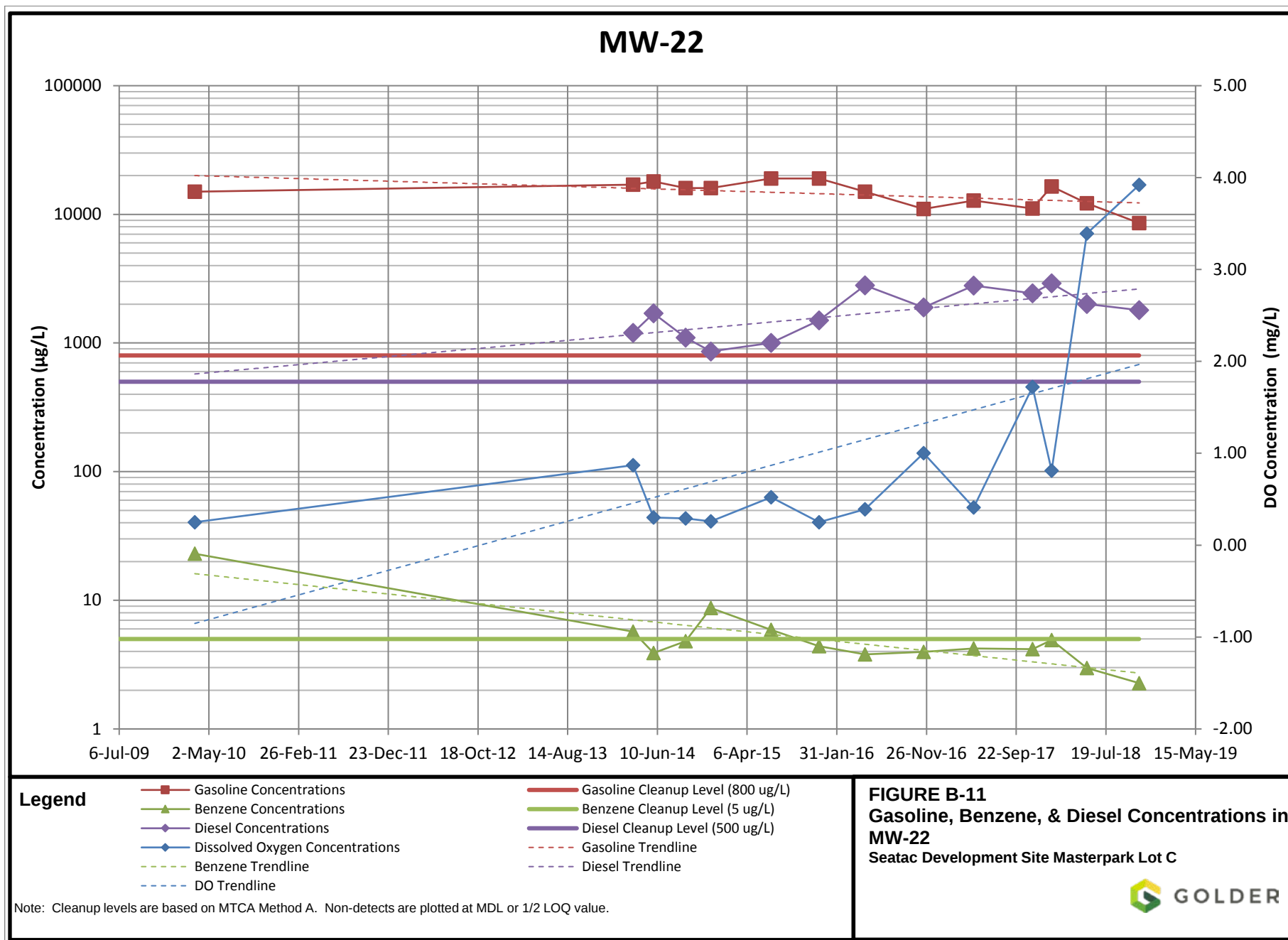


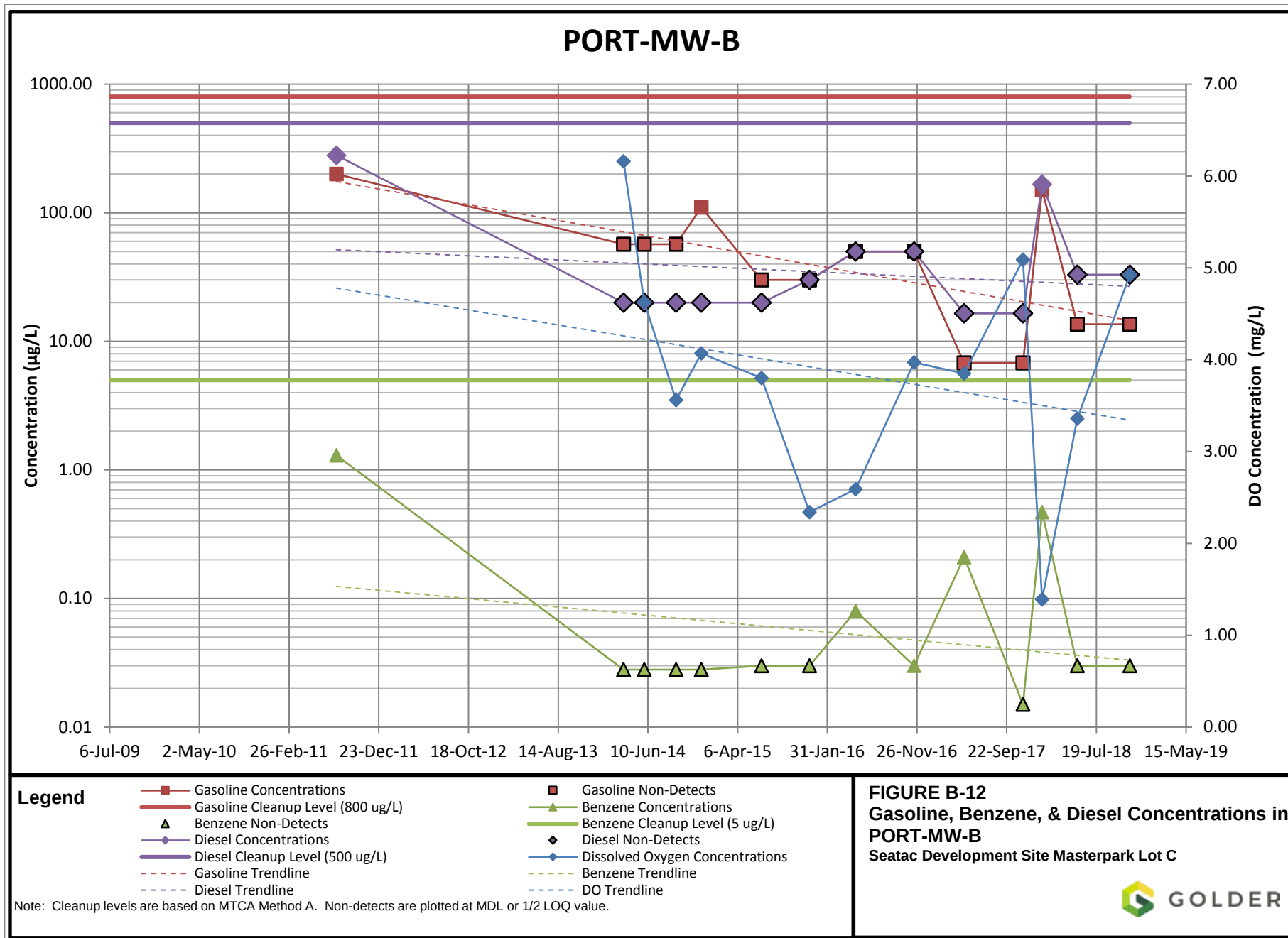














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