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October 5, 2021

Mr. Panjini Balaraju
Washington State Department of Ecology
Toxics Cleanup Program Southwest Regional Office
300 Desmond Drive
Lacey, WA 98503

Subject: Quarterly Progress Report – Fourth Quarter 2020
D Street Petroleum Site, Tacoma, Washington
CONSENT DECREE 91-2-2012-1

Dear Mr. Balaraju:

AECOM submits the following progress report for the D Street Petroleum Site located at 520 East D Street in Tacoma, Washington (the Site). This report is being submitted to the Washington State Department of Ecology (Ecology) on behalf of the D Street Potentially Liable Persons (PLP) Group: ExxonMobil Refining and Supply/Environmental Services (ExxonMobil, formerly Mobil), Shell Oil Company (Shell), and Chevron Environmental Management Company (Chevron EMC), in accordance with Consent Decree No. 91-2-2012-1. The Phillips 66 Company (formerly ConocoPhillips) transferred control of its allocated share of the D Street PLP Group to Chevron EMC, effective April 1, 2011.

A groundwater sampling and monitored natural attenuation program was implemented after the remedial system at the Site was turned off in October 2006. Groundwater monitoring is conducted in accordance with the Sampling and Analysis Plan for Groundwater Performance Monitoring Program and Work Plan for Well Installation/Decommissioning Activities, dated September 2011. This progress report covers the environmental monitoring data collected during the fourth quarter (October 1, 2020 through December 31, 2020). An evaluation of the fourth quarter 2020 data and natural attenuation processes will be presented in the 2021 Annual Progress Report, which is completed following the third quarter (September) 2021 monitoring event.

1.0 Site Description

The Site is an approximately 17-acre former Shell property located at 520 East D Street in Tacoma, Pierce County, Washington (Figure 1). The Site is located on a peninsula in Commencement Bay and is bounded to the west by the Thea Foss Waterway; to the north by various industrial properties, East 3rd Street, and Commencement Bay; to the east by East F Street and the Middle Waterway; and to the south by various industrial properties and 11th Street.

The Site includes an active bulk petroleum storage and distribution area currently occupied by Phillips 66 Company. Previous operators of the petroleum storage and distribution area include Mobil, British Petroleum (BP), Unocal/76 Products, and Tosco. The south and southwest end of the Site is owned and utilized by Globe Machine Manufacturing, a manufacturer of industrial machines. The east and northeast end of the Site is vacant and owned by Targa Resources with the exception of the northeastern-most area which is occupied by a pump station owned by Olympic Pipeline Company. These areas along with the groundwater monitoring well network and other site features are presented in Figure 2.

2.0 Summary of Sampling Activities Conducted During the Reporting Period

The fourth quarter 2020 monitoring event included the following groundwater sampling activities conducted on December 14th and December 15th, 2020:

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- Water Level and Free Product Gauging
  - AECOM personnel gauged water levels and free product, where present, in 27 upper sand unit monitoring wells, 5 sentinel wells, 4 surface water compliance monitoring wells, and 4 lower sand unit monitoring wells. Measurable free product was not observed in the monitoring wells gauged during this event.
  - The depths to groundwater and the calculated groundwater elevations based on the December 2020 measurements are presented in Table 1. Groundwater elevation contour maps are not provided due to high variability in the groundwater elevation data caused by tidal influences and other factors.
  - The predominant groundwater flow direction within the upper and lower sand units has historically been toward the southwest (toward the Thea Foss Waterway). Groundwater and tidal influence studies conducted in 2011 indicate a more diminished flow pattern toward the Thea Foss Waterway.
- Groundwater/Surface Water Compliance Sampling
  - Groundwater and surface water compliance samples were collected from 16 groundwater monitoring wells during this event:
    - Ten upper sand unit groundwater monitoring wells (B-25, B-31, B-34, E-22, FW-5R, FW-14, HC-111, RW-5R, RW-8, and T-2). Wells E-22, FW-5R, FW-14, and T-2 also serve as sentinel wells.
    - Two lower sand unit groundwater monitoring wells (DMW-2 and FW-13)
    - Four surface water compliance monitoring wells (RR-1, RR-2, RR-4, and RR-5)
  - DMW-4 was scheduled to be sampled during the fourth quarter 2020 monitoring event; however, the well was unable to be accessed due to continuous water infiltration to the well monument. Surface water was completely removed from the well monument at least five times, but surface water continued to infiltrate the well monument and exceed the height of the top of the well casing.
  - The wells were purged and sampled following low-flow sampling methodology. An in-line (i.e., flow-thru cell) multi-parameter water quality measurement device was used to continuously monitor pH, temperature, conductivity, oxidation-reduction potential (ORP), dissolved oxygen (DO), and turbidity. Representative water samples were collected when parameters stabilized over three recording intervals (three to five minutes each).
- Analytical Procedures
  - The groundwater and surface water compliance samples were submitted under proper chain-of-custody protocol to Eurofins TestAmerica of Spokane, Washington. The laboratory analytical report and chain-of-custody are provided in Appendix A.
  - The following methods were used to analyze the samples identified above:
    - Benzene, toluene, ethylbenzene, and xylenes (BTEX) by U.S. Environmental Protection Agency (EPA) Method 8260D
    - Gasoline-range total petroleum hydrocarbons (TPH-G) by Northwest total petroleum hydrocarbons Method NWTPH-Gx
    - Diesel-range total petroleum hydrocarbons (TPH-D) and total petroleum hydrocarbons in the heavy oil range (TPH-O) by Northwest total petroleum hydrocarbons Method NWTPH-Dx
    - Naphthalene, 1-methylnapthalene, and 2-methylnaphthalene by EPA Method 8270E selected ion monitoring (SIM)
- Purge water generated during this event was placed in a 55-gallon drum stored at the Site. The contents of the drum will be removed for disposal prior to the next quarterly groundwater monitoring event.

3.0 Summary of Data Validation Completed for Period Sampling Event

A data validation review was completed for the fourth quarter 2020 analytical data. The data was reviewed based on the EPA Contract Laboratory Program's *National Functional Guidelines for Organic Superfund Methods Data Review* dated January 2017 and standard laboratory quality control criteria.

The completeness of the analytical data for this groundwater monitoring event is 100%. The data qualifiers assigned by the laboratory are shown on the laboratory reports. 1-Methylnaphthalene was detected in the method blank associated with extraction batch 30049 at a concentration between the method detection limit (MDL) and the reporting limit. In extraction batch 30049, FW-14 also reported a concentration of 1-methylnaphthalene between the MDL and the reporting limit; therefore, the result was qualified as not detected and flagged 'U' at the reporting limit. Sample results and associated data qualifiers are presented in Table 2 and Appendix B: Table 1. The completed data review memorandum for this quarterly sampling event is provided in Appendix B.

4.0 Summary of Analytical Results for Period Sampling Event

This section provides a summary of the groundwater monitoring results from this event. Table 2 summarizes analytical results for groundwater monitoring wells sampled during the fourth quarter 2020. A copy of the laboratory analytical report is presented in Appendix A. Site-specific Surface Water Cleanup Standards and Groundwater Cleanup Standards were established by Ecology and D Street PLP Group representatives (effective September 3, 1991), as written in Appendix B of Consent Decree No. 91-2-2012-1. The cleanup standards were established for the following specific contaminants: benzene, toluene, and ethylbenzene. Cleanup standards were not established for total xylenes, TPH-G, TPH-D, or TPH-O.

- Benzene was detected in five upper sand unit wells (B-25, B-31, B-34, HC-111, and RW-5R) and two sentinel wells (E-22 and FW-5R). One well (B-25) was in exceedance of the groundwater cleanup standard of 0.16 milligrams per liter (mg/L). Three of the wells (B-34, HC-111, and RW-5R) were in exceedance of the surface water cleanup standard of 0.04 mg/L but did not exceed the groundwater cleanup standard. Benzene concentrations in the upper sand unit and resulting isocontours from this event are presented on Figure 3.
- Toluene was detected in five of the upper sand unit wells (B-25, B-31, B-34, HC-111, and RW-5R) and one sentinel well (FW-5R). None of the toluene detections exceeded the surface water cleanup standard of 5 mg/L or the groundwater cleanup standard of 20 mg/L. Toluene was not detected in the surface water compliance wells or the lower sand unit wells sampled during this event.
- Ethylbenzene was detected in five upper sand unit wells (B-25, B-31, B-34, HC-111, and RW-5R) and two sentinel well (E-22 and FW-5R). None of the ethylbenzene detections exceeded the surface water cleanup standard of 0.43 mg/L or the groundwater cleanup standard of 1.7 mg/L. Ethylbenzene was not detected in the surface water compliance wells or the lower sand unit wells sampled during this event.
- Total xylenes were detected in five upper sand unit wells (B-25, B-31, B-34, HC-111, and RW-5R). Total xylenes were not detected in the sentinel wells, surface water compliance wells, or lower sand unit wells sampled during this event. There are no cleanup standards for total xylenes for the Site.
- TPH-G was detected in six upper sand unit wells (B-25, B-31, B-34, HC-111, RW-5R, and RW-8), three sentinel wells (E-22, FW-5R, and T-2), two surface water compliance well (RR-1 and RR-5), and one lower sand unit well (FW-13). There are no cleanup standards for TPH-G for the Site. TPH-G concentrations in the upper sand unit and resulting isocontours from this event are presented on Figure 4.
- TPH-D was detected in six upper sand unit wells (B-25, B-31, B-34, HC-111, RW-5R, and RW-8), three sentinel wells (E-22, FW-5R, and T-2), two surface water compliance wells (RR-1 and RR-5), and two lower sand unit wells (DMW-2 and FW-13). There are no cleanup standards for TPH-D for

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the Site. TPH-D concentrations in the upper sand unit and resulting isocontours from this event are presented on Figure 5.

- TPH-O was detected in six upper sand unit wells (B-25, B-31, B-34, HC-111, RW-5R, and RW-8), two sentinel wells (FW-5R and T-2), and one lower sand unit well (DMW-2). There are no cleanup standards for TPH-O for the Site.
- Naphthalene was analyzed in three select wells (FW-5R, FW-14, and RR-2) during this quarterly sampling event. Naphthalene was detected in one sentinel well (FW-5R). There are no cleanup standards for naphthalene for the Site.

5.0 Summary of Field and Natural Attenuation Results for Period Sampling Event

Table 3 summarizes the field parameters for the groundwater monitoring wells sampled during this quarterly monitoring event. An evaluation of the natural attenuation processes occurring at the Site will be presented in the 2021 Annual Progress Report, which is completed following the third quarter (September) 2021 sampling event.

6.0 Discussion of Upper Sand Unit Shoreline Data

There were no exceedances of site groundwater or surface water cleanup standards in the sentinel wells (E-22, FW-5R, FW-14, and T-2) sampled during this event. TPH-G and TPH-D were detected in three sentinel wells (E-22, FW-5R, and T-2), and TPH-O was detected in two sentinel wells (FW-5R and T-2). Benzene and ethylbenzene were detected in sentinel wells E-22 and FW-5R. Toluene and naphthalene were detected in sentinel well FW-5R. Total xylenes was not detected in any of the sentinel wells sampled during this event.

There were no exceedances of site groundwater or surface water cleanup standards in the surface water compliance wells (RR-1, RR-2, RR-4, and RR-5) sampled during this event. TPH-G and TPH-D were detected in two surface water compliance wells (RR-1 and RR-5). TPH-O, benzene, ethylbenzene, toluene, total xylenes, and naphthalene were not detected in the surface water compliance wells sampled during this event. Further evaluation of this area will be provided in the 2021 Annual Progress Report.

7.0. Discussion of Lower Sand Unit Data

Well DMW-4 was unable to be sampled during the December 2020 sampling event due to continuous water infiltration into the well monument. There were no exceedances of site groundwater or surface water cleanup standards in the lower sand unit wells (DMW-2 and FW-13). TPH-G was detected in lower sand unit well FW-13; TPH-D was detected in DMW-2 and FW-13; and TPH-O was detected in lower sand unit well DMW-2. Benzene, ethylbenzene, toluene, and total xylenes were not detected in any of the lower sand unit wells sampled during this event.

8.0 Status of Recent and Upcoming Deliverables

- The 2020 Annual Progress Report was submitted in August 31, 2021.
- The First Quarter 2021 Progress Report is anticipated to be submitted in September 2021.

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If you have any questions regarding this progress report, please call me at (503) 948-7224.

Sincerely,

AECOM

Rebecca Digiustino
Geologist/ Technical Manager

Renee Knecht
Senior Geologist/Project Manager

cc: Andrea Wing – Shell Oil Company (electronic only)
Marla Madden – ExxonMobil (electronic only)
Rich Solomon – Phillips 66 (electronic only)

ATTACHMENTS:

Figure 1 – Vicinity Map
Figure 2 – Site Map
Figure 3 – Benzene Concentrations in Groundwater (Upper Sand Unit), December 2020
Figure 4 – TPH-G Concentrations in Groundwater (Upper Sand Unit), December 2020
Figure 5 – TPH-D Concentrations in Groundwater (Upper Sand Unit), December 2020

Table 1 – Groundwater Elevation Data, Fourth Quarter 2020
Table 2 – Summary of Groundwater Analytical Results, Fourth Quarter 2020
Table 3 – Summary of Field Parameters, Fourth Quarter 2020

Appendix A – Laboratory Analytical Data
Appendix B – Data Review

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FIGURES

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0 2,000 4,000 Feet

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VICINITY MAP

D STREET PETROLEUM SITE
TACOMA, WASHINGTON

FIGURE 1

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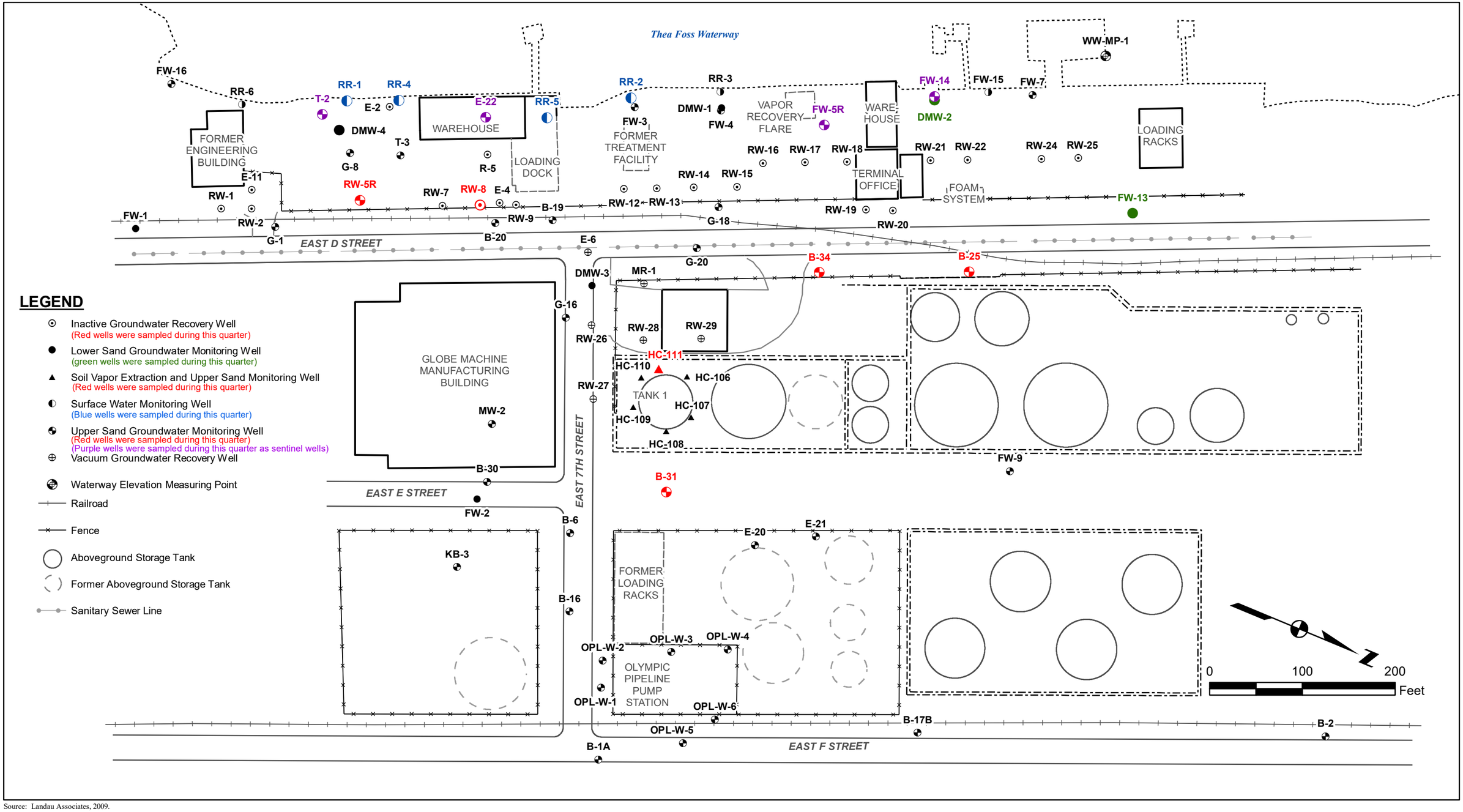

Source: Landau Associates, 2009.
Maul Foster & Alongi, Inc. 2002.
USGS, 2009.
URS, 2014.

SITE MAP

D STREET PETROLEUM SITE
TACOMA, WASHINGTON

FIGURE 2

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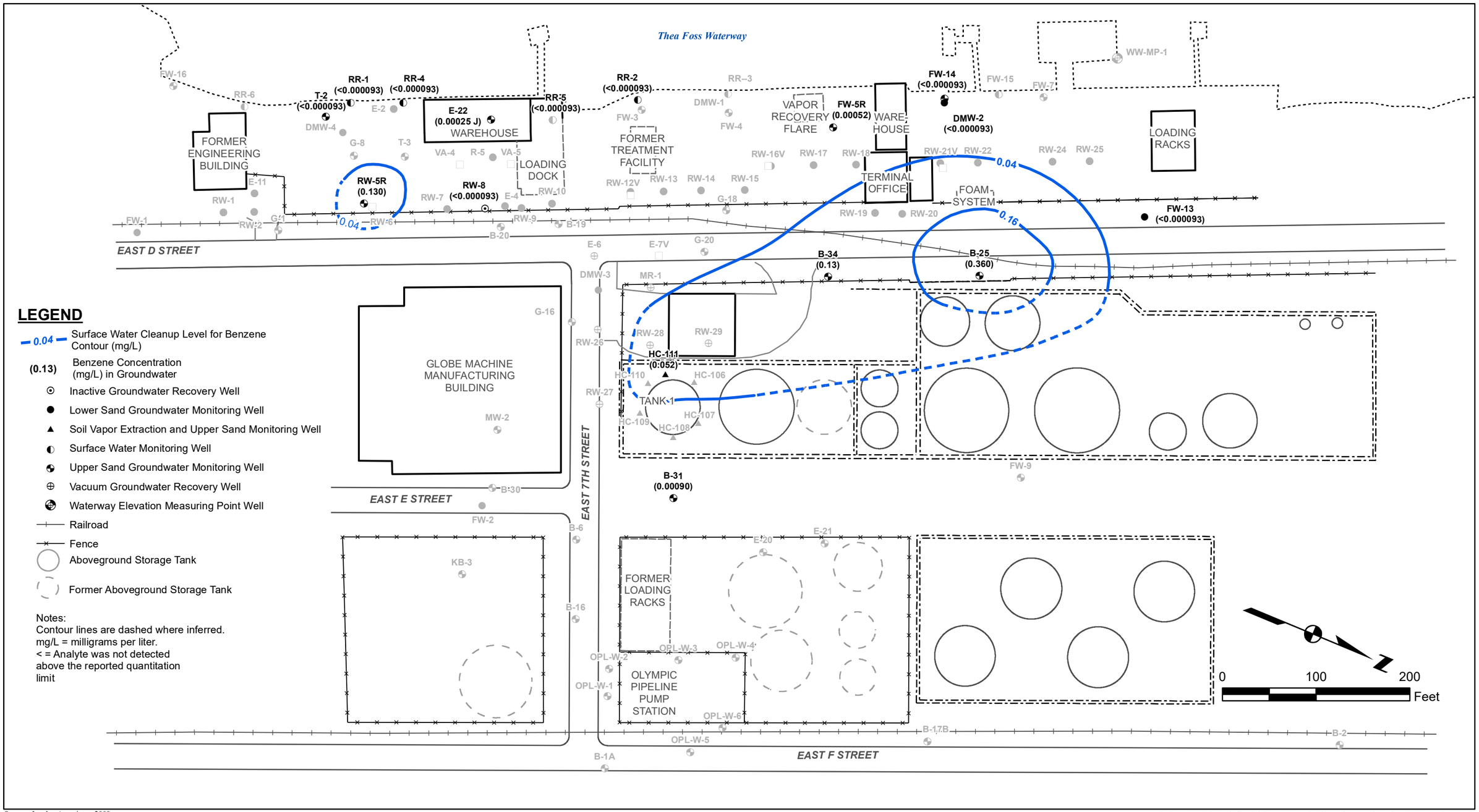

LEGEND

- 0.04 — Surface Water Cleanup Level for Benzene Contour (mg/L)
- (0.13) Benzene Concentration (mg/L) in Groundwater
- Inactive Groundwater Recovery Well
- Lower Sand Groundwater Monitoring Well
- Soil Vapor Extraction and Upper Sand Monitoring Well
- Surface Water Monitoring Well
- Upper Sand Groundwater Monitoring Well
- Vacuum Groundwater Recovery Well
- Waterway Elevation Measuring Point Well
- Railroad
- Fence
- Aboveground Storage Tank
- Former Aboveground Storage Tank

Notes:
Contour lines are dashed where inferred.
mg/L = milligrams per liter.
< = Analyte was not detected above the reported quantitation limit

Source: Landau Associates, 2009.
Maul Foster & Alongi, Inc. 2002.
USGS, 2009.

BENZENE CONCENTRATIONS IN GROUNDWATER (UPPER SAND UNIT), DECEMBER 2020

D STREET PETROLEUM SITE
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FIGURE 3

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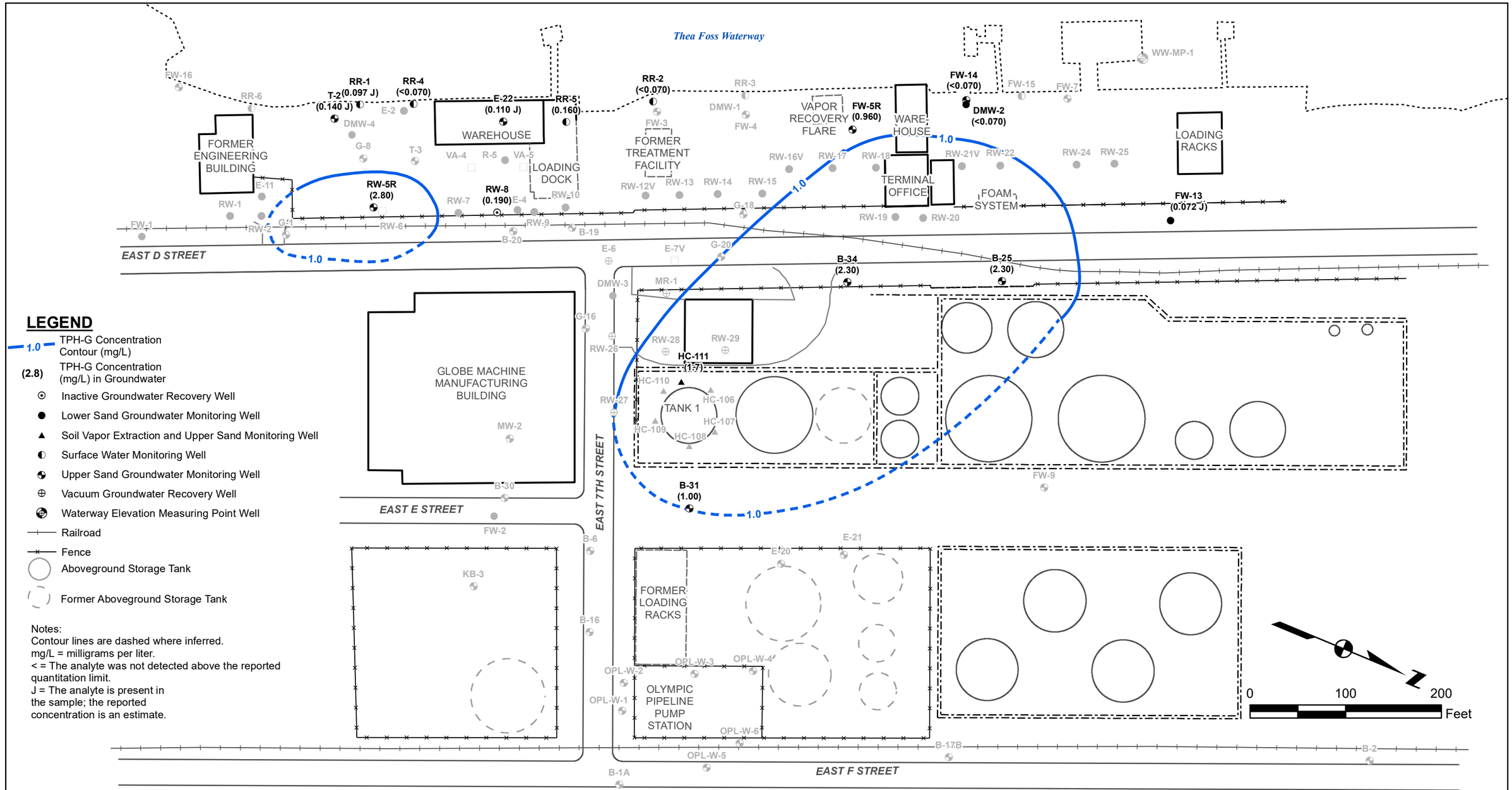

LEGEND

- 1.0 — TPH-G Concentration Contour (mg/L)
- (2.8) TPH-G Concentration (mg/L) in Groundwater
- Inactive Groundwater Recovery Well
- Lower Sand Groundwater Monitoring Well
- Soil Vapor Extraction and Upper Sand Monitoring Well
- Surface Water Monitoring Well
- Upper Sand Groundwater Monitoring Well
- Vacuum Groundwater Recovery Well
- Waterway Elevation Measuring Point Well
- Railroad
- Fence
- Aboveground Storage Tank
- Former Aboveground Storage Tank

Notes:
Contour lines are dashed where inferred.
mg/L = milligrams per liter.
< = The analyte was not detected above the reported quantitation limit.
J = The analyte is present in the sample; the reported concentration is an estimate.

Source: Landau Associates, 2009.
Maul Foster & Alongi, Inc. 2002.
USGS, 2009.

TPH-G CONCENTRATIONS IN GROUNDWATER (UPPER SAND UNIT), DECEMBER 2020

D STREET PETROLEUM SITE
TACOMA, WASHINGTON

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FIGURE 4

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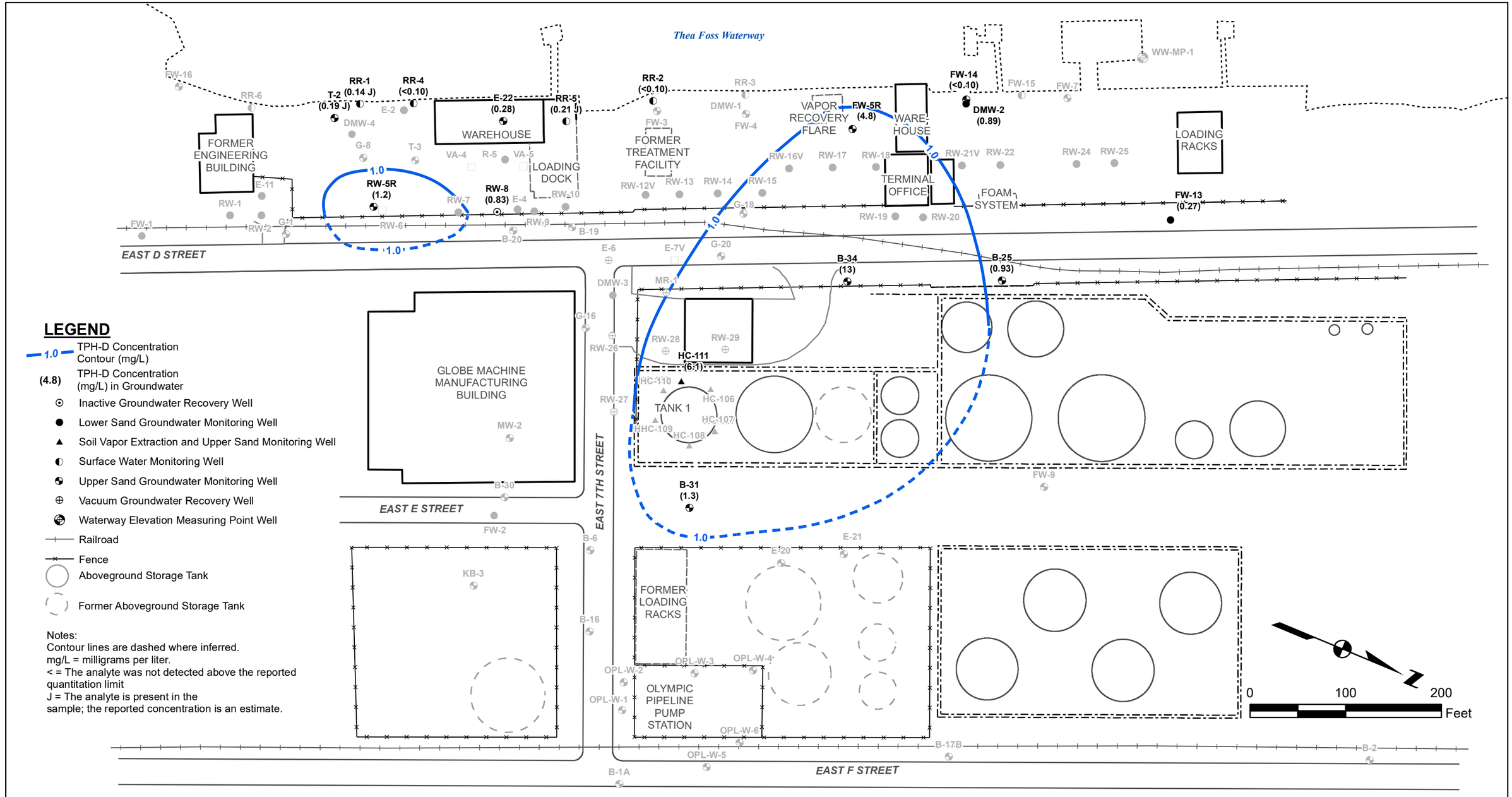

LEGEND

- 1.0 — TPH-D Concentration Contour (mg/L)
- (4.8) TPH-D Concentration (mg/L) in Groundwater
- Inactive Groundwater Recovery Well
- Lower Sand Groundwater Monitoring Well
- Soil Vapor Extraction and Upper Sand Monitoring Well
- Surface Water Monitoring Well
- Upper Sand Groundwater Monitoring Well
- Vacuum Groundwater Recovery Well
- Waterway Elevation Measuring Point Well
- Railroad
- Fence
- Aboveground Storage Tank
- Former Aboveground Storage Tank

Notes:
Contour lines are dashed where inferred.
mg/L = milligrams per liter.
< = The analyte was not detected above the reported quantitation limit
J = The analyte is present in the sample; the reported concentration is an estimate.

Source: Landau Associates, 2009.
Maul Foster & Alongi, Inc. 2002.
USGS, 2009.

TPH-D CONCENTRATIONS IN GROUNDWATER (UPPER SAND UNIT), DECEMBER 2020

D STREET PETROLEUM SITE
TACOMA, WASHINGTON

FIGURE 5

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TABLES

Table 1
Groundwater Elevation Data
Fourth Quarter 2020
D Street Petroleum Site

Well ID	Well Elevation (ft) (a)	Date	Depth to Groundwater (ft)	Apparent Product Thickness (ft)	Groundwater Elevation (ft)	
Upper Sand Unit						
B-1A	14.15	NR	NR	NR	NR	
B-2	13.78	NR	NR	NR	NR	Located in street
B-6	14.25	NR	NR	NR	NR	Located in street
B-16	14.40	NR	NR	NR	NR	Located in street
B-17B	14.16	12/14/2020	6.91	--	7.25	
B-19	13.31	12/15/2020	6.76	--	6.55	
B-20	13.48	12/14/2020	5.09*	--	8.39	*well had obstruction at this depth
B-25	13.96	12/14/2020	7.39	--	6.57	
B-30	14.46	12/14/2020	7.80	--	6.66	
B-31	14.46	12/14/2020	NR	NR	NR	
B-34	14.36	12/14/2020	7.85	--	6.51	
E-4	12.09	NR	NR	NR	NR	Vault lid stuck
E-6	12.14	NR	NR	NR	NR	Located in street
E-20	NS	12/14/2020	6.73	--	NR	
E-21	14.13	12/14/2020	7.11	--	7.02	
FW-16	12.35	12/14/2020	3.72	--	8.63	
G-1	13.43 (b)	12/14/2020	7.39	--	6.04	
G-8	13.25	NR	NR	NR	NR	Truck in loading rack
G-16	13.23	12/14/2020	6.90	--	6.33	
G-18	13.54	NR	NR	NR	NR	Under water
G-20	13.11	NR	NR	NR	NR	Located in street
HC-108	15.30	12/14/2020	8.68	--	6.62	
HC-111	14.62	12/14/2020	8.62	--	6.00	
MR-1	14.26	NR	NR	NR	NR	
R-5	11.69	NR	NR	NR	NR	Inaccessible
RW-1	12.94	12/14/2020	5.89	--	7.05	
RW-2	12.76	12/14/2020	5.73	--	7.03	
RW-5R	13.76	12/14/2020	7.45	--	6.31	
RW-7	12.46	NR	NR	--	NR	Inaccessible
RW-8	12.71	12/15/2020	6.32	--	6.39	
RW-9	12.59	12/14/2020	5.43	--	7.16	
RW-12	13.21	12/14/2020	6.51	--	6.70	
RW-13	13.94	12/14/2020	7.40	--	6.54	
RW-14	13.52	12/14/2020	6.82	--	6.70	
RW-15	13.15	12/14/2020	6.53	--	6.62	
RW-17	12.29	12/14/2020	5.72	--	6.57	
RW-19	12.97	12/14/2020	6.61	--	6.36	
RW-20	12.80	12/14/2020	6.42	NR	NR	Car parked on top
RW-22	12.72	NR	NR	NR	NR	Slip cap stuck on (glued)
RW-24	13.63	NR	NR	NR	NR	
RW-26	11.93	NR	NR	NR	NR	Submerged
RW-28	14.62	NR	NR	NR	NR	Loading rack occupied
RW-29	13.83	NR	NR	NR	NR	Loading rack occupied
T-3	13.03	12/15/2020	6.48	--	6.55	
Upper Sand Unit - Sentinel						
E-22	16.74	NR	NR	NR	NR	
FW-3	14.11 (b)	12/14/2020	6.91	--	7.20	
FW-4	14.21	12/14/2020	7.40	--	6.81	
FW-5R	12.78	12/14/2020	6.31	--	6.47	
FW-14	13.17	12/14/2020	6.27	--	6.90	
T-2	11.62	12/14/2020	4.95	--	6.67	

Table 1
Groundwater Elevation Data
Fourth Quarter 2020
D Street Petroleum Site

Well ID	Well Elevation (ft) (a)	Date	Depth to Groundwater (ft)	Apparent Product Thickness (ft)	Groundwater Elevation (ft)	
Lower Sand Unit						
FW-1	13.63	12/14/2020	5.64	--	7.99	Car parked on top
FW-2	14.32	NR	NR	NR	NR	Located in street
FW-13	13.13	12/14/2020	5.03	--	8.10	
DMW-1	13.72	12/15/2020	5.68	--	8.04	
DMW-2	12.97	12/14/2020	4.52	--	8.45	
DMW-3	12.83	NR	NR	NR	NR	
DMW-4	11.72	NR	NR	NR	NR	Water infiltration
Upper Sand Unit - Surface Water Compliance						
RR-1	14.79 (b)	12/15/2020	7.69	--	7.10	
RR-2	15.71 (b)	12/14/2020	9.17	--	6.54	
RR-3	15.78 (b)	NR	NR	NR	NR	
RR-4	13.19 (c)	NR	NR	NR	NR	
RR-5	16.53	12/14/2020	9.80	--	6.73	
RR-6	11.31	12/14/2020	3.22	--	8.09	
FW-15	NS	NR	NR	NR	NR	

Notes
Groundwater elevations corrected for free product using following equation, if applicable:
Well Elevation - Depth to Groundwater + (Apparent Product Thickness x 0.80)
ID = Identification
NS = No survey data provided or available
NR = Not recorded
-- = Product was not detected
(a) Top of casing elevation, October 2013, based on NAVD 88, unless otherwise noted
(b) Top of casing elevation, March 2011, based on NAVD 88
(c) Top of casing elevation, October 2011, based on NAVD 88
ft = Feet

Table 2
Summary of Groundwater Analytical Results
Fourth Quarter 2020
D Street Petroleum Site

	Analyte:	TPH-G		TPH-D		TPH-O		Benzene		Ethylbenzene		Toluene		Xylenes (total)		Naphthalene		2-Methylnaphthalene		1-Methylnaphthalene	
Surface Water Cleanup Standards:		---		---		---		0.04		0.43		5		---		---		---		---	
Groundwater Cleanup Standards:		---		---		---		0.16		1.7		20		---		---		---		---	
Sample ID	**Date Collected**																				
Upper Sand Unit	B-25	12/14/2020	2.3		0.93		0.12	J	**0.360**		0.0019		0.0028		0.0043		--		--		--	
	B-31	12/15/2020	1.00		1.3		0.15	J	0.00090		0.0130		0.0035		0.0130		--		--		--	
	B-34	12/14/2020	2.3		13		0.77		**0.13**		0.010		0.0040		0.0014	J	--		--		--	
	B-34-DUP	12/14/2020	2.3		14		0.83		**0.14**		0.011		0.0042		0.0014	J	--		--		--	
	HC-111	12/14/2020	1.7		6.1		0.59		**0.052**		0.0031		0.0032		0.0033		--		--		--	
	RW-5R	12/14/2020	2.8		1.2		0.21	J	**0.130**		0.029		0.0011		0.0020	J	--		--		--	
	RW-8	12/15/2020	0.190		0.83		0.23	J	0.000093	U	0.00020	U	0.00031	U	0.00044	U	--		--		--	
Upper Sand Unit - Sentinel	E-22	12/15/2020	0.110	J	0.28		0.12	U	0.00025	J	0.0250		0.00031	U	0.00044	U	--		--		--	
	FW-5R	12/14/2020	0.960		4.8		0.30	J	0.00052		0.00034	J	0.00042	J	0.00044	U	0.0019		0.55		0.370	B
	FW-14	12/14/2020	0.070	U	0.10	U	0.11	U	0.000093	U	0.00020	U	0.00031	U	0.00044	U	0.000049	U	0.000051	J	0.000028	JB
	T-2	12/14/2020	0.140	J	0.19	J	0.17	J	0.000093	U	0.00020	U	0.00031	U	0.00044	U	--		--		--	
Upper Sand Unit - Surface Water Compliance	RR-1	12/15/2020	0.097	J	0.14	J	0.13	U	0.000093	U	0.00020	U	0.00031	U	0.00044	U	--		--		--	
	RR-2	12/14/2020	0.070	U	0.10	U	0.11	U	0.000093	U	0.00020	U	0.00031	U	0.00044	U	0.000049	U	0.000041	U	0.000021	U
	RR-4	12/15/2020	0.070	U	0.10	U	0.11	U	0.000093	U	0.00020	U	0.00031	U	0.00044	U	--		--		--	
	RR-5	12/14/2020	0.160		0.21	J	0.13	U	0.000093	U	0.00020	U	0.00031	U	0.00044	U	--		--		--	
Lower Sand Unit	DMW-2	12/14/2020	0.070	U	0.89		0.19	J	0.000093	U	0.00020	U	0.00031	U	0.00044	U	--		--		--	
	DMW-4	12/15/2020	--		--		--		--		--		--		--		--		--		--	
	FW-13	12/15/2020	0.072	J	0.27		0.13	U	0.000093	U	0.00020	U	0.00031	U	0.00044	U	--		--		--	
	FW-13-DUP	12/15/2020	0.070	U	0.22	J	0.13	U	0.000093	U	0.00020	U	0.00031	U	0.00044	U	--		--		--	

Notes:
All results in milligrams per liter (mg/L).
-- = Not analyzed.
B = Compound was found in the blank and sample
ID = Identification
J = The analyte is present in the sample; the reported concentration is an estimate.
TPH = Total Petroleum Hydrocarbons
TPH-D = Total Petroleum Hydrocarbons as Diesel range
TPH-G = Total Petroleum Hydrocarbons as Gasoline range
TPH-O = Total Petroleum Hydrocarbons as Oil range
U = Not detected above the reported quantitation limit
Bold indicates an exceedance of surface water cleanup levels.
Bold indicates an exceedance of groundwater cleanup levels.
DMW-4 was unable to be sampled due to water infiltration during the December 2020 sampling event.
Site-Specific Surface Cleanup Level, Consent Decree No. 91-2-2012-1, effective 9/3/91
Site-Specific Groundwater Cleanup Level, Consent Decree No. 91-2-2012-1, effective 9/3/91

Table 3
Summary of Field Parameters
Fourth Quarter 2020
D Street Petroleum Site

	Sample ID	Date Collected	Temperature (°C)	pH	Conductivity (mS/cm)	Oxidation Reduction Potential (mV)	Turbidity (NTU)	Dissolved Oxygen (mg/L)
Upper Sand Unit	B-25	12/14/2020	14.65	6.74	0.454	-107	6.3	0.00
	B-31	12/15/2020	11.57	6.75	0.570	-12	7.0	0.00
	B-34	12/14/2020	15.92	6.57	1.48	-125	1.9	4.25
	HC-111	12/14/2020	12.81	6.26	0.730	46	3.7	0.00
	RW-5R	12/14/2020	13.82	6.68	2.92	-95	5.6	0.00
	RW-8	12/15/2020	12.45	7.25	1.70	-157	9.7	0.00
Upper Sand Unit - Sentinel	E-22	12/15/2020	13.73	8.10	8.32	-297	23.7	0.00
	FW-5R	12/14/2020	15.84	7.05	1.05	-82	7.2	0.19
	FW-14	12/14/2020	10.48	7.11	40.5	23	0.0	3.55
	T-2	12/14/2020	14.43	6.42	29.3	-94	9.9	0.00
Upper Sand Unit - Surface Water Compliance	RR-1	12/15/2020	10.31	6.78	35.5	-306	0.0	0.62
	RR-2	12/15/2020	9.60	7.02	36.4	74	0.0	4.77
	RR-4	12/15/2020	7.52	7.36	38.1	-63	0.0	5.38
	RR-5	12/14/2020	12.58	6.32	14.5	-273	0.0	0.48
Lower Sand Unit	DMW-2	12/14/2020	12.60	7.51	14.4	-134	6.9	0.00
	DMW-4	12/15/2020	--	--	--	--	--	--
	FW-13	12/15/2020	12.66	7.22	0.733	-162	0.5	0.00

Notes:

°C = degrees Celsius

mg/L = milligrams per liter

mS/m = millisiemens per meter

mV = millivolts

NTU = nephelometric turbidity units

ID = Identification

Field parameters (pH, conductivity, dissolved oxygen, temperature, and Oxygen Reduction Potential) are measured during well purging. Final stabilized parameters are shown in the table above.

DMW-4 was unable to be sampled due to water infiltration during the December 2020 sampling event.

APPENDIX A
Laboratory Analytical Data

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins TestAmerica, Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

Laboratory Job ID: 590-14368-1
Client Project/Site: Tacoma D St Terminal-Phillips 66

For:
AECOM
111 SW Columbia Street, Suite 1500
Portland, Oregon 97201

Attn: Mr. Tyler Hemry

Randee Arrington

Authorized for release by:
12/22/2020 10:17:40 AM

Randee Arrington, Project Manager II
(509)924-9200
Randee.Arrington@Eurofinset.com

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Case Narrative

Client: AECOM
Job ID: 590-14368-1
Project/Site: Tacoma D St Terminal-Phillips 66

Job ID: 590-14368-1

Laboratory: Eurofins TestAmerica, Spokane

Narrative

Receipt
The samples were received on 12/16/2020 12:54 PM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.3º C.

GC/MS VOA
Method NWTPH-Gx: Insufficient sample volume was available to perform a sample duplicate (DUP) associated with analytical batch 590-30017.

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

GC/MS Semi VOA
Method 8270E SIM: The method blank for preparation batch 590-30049 and analytical batch 590-30048 contained 1-Methylnaphthalene above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

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

GC Semi VOA
Method NWTPH-Dx: Detected hydrocarbons in the diesel range appear to be due to gasoline overlap in the following sample: B-25 (590-14368-11).

Method NWTPH-Dx: Detected hydrocarbons in the diesel range appear to be due to gasoline overlap as well as heavily weathered diesel in the following samples: HC-111 (590-14368-2), B-34 (590-14368-6), B-34-DUP (590-14368-7) and RW-5R (590-14368-9).

Method NWTPH-Dx: Detected hydrocarbons in the diesel range appear to be due to heavily weathered diesel in the following samples: T-2 (590-14368-1), RR-5 (590-14368-3) and DMW-2 (590-14368-10).

Method NWTPH-Dx: Detected hydrocarbons in the diesel range appear to be due to weathered diesel in the following sample: FW-5R (590-14368-5).

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

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

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

Sample Summary

Client: AECOM
Job ID: 590-14368-1
Project/Site: Tacoma D St Terminal-Phillips 66

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
590-14368-1	T-2	Water	12/14/20 10:32	12/15/20 16:16	
590-14368-2	HC-111	Water	12/14/20 11:00	12/15/20 16:16	
590-14368-3	RR-5	Water	12/14/20 12:06	12/15/20 16:16	
590-14368-4	RR-2	Water	12/14/20 12:10	12/15/20 16:16	
590-14368-5	FW-5R	Water	12/14/20 13:35	12/15/20 16:16	
590-14368-6	B-34	Water	12/14/20 14:03	12/15/20 16:16	
590-14368-7	B-34-DUP	Water	12/14/20 14:03	12/15/20 16:16	
590-14368-8	FW-14	Water	12/14/20 14:45	12/15/20 16:16	
590-14368-9	RW-5R	Water	12/14/20 15:18	12/15/20 16:16	
590-14368-10	DMW-2	Water	12/14/20 15:40	12/15/20 16:16	
590-14368-11	B-25	Water	12/14/20 14:35	12/15/20 16:16	
590-14368-12	Trip Blank	Water	12/14/20 00:00	12/15/20 16:16	

Method Summary

Client: AECOM
Job ID: 590-14368-1
Project/Site: Tacoma D St Terminal-Phillips 66

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

Protocol References:

NWTPH = Northwest Total Petroleum Hydrocarbon

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

Laboratory References:

TAL SPK = Eurofins TestAmerica, Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Detection Summary

Client: AECOM
Job ID: 590-14368-1
Project/Site: Tacoma D St Terminal-Phillips 66

Client Sample ID: T-2 — Lab Sample ID: 590-14368-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Gasoline	140	J	150	70	ug/L	1		NWTPH-Gx	Total/NA
Diesel Range Organics (DRO) (C10-C25)	0.19	J	0.25	0.11	mg/L	1		NWTPH-Dx	Total/NA
Residual Range Organics (RRO) (C25-C36)	0.17	J	0.41	0.12	mg/L	1		NWTPH-Dx	Total/NA

Client Sample ID: HC-111 — Lab Sample ID: 590-14368-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	52		0.40	0.093	ug/L	1		8260D	Total/NA
Ethylbenzene	31		1.0	0.20	ug/L	1		8260D	Total/NA
m,p-Xylene	2.8		2.0	0.28	ug/L	1		8260D	Total/NA
o-Xylene	0.42	J	1.0	0.16	ug/L	1		8260D	Total/NA
Toluene	3.2		1.0	0.31	ug/L	1		8260D	Total/NA
Xylenes, Total	3.3		3.0	0.44	ug/L	1		8260D	Total/NA
Gasoline	1700		150	70	ug/L	1		NWTPH-Gx	Total/NA
Diesel Range Organics (DRO) (C10-C25)	6.1		0.22	0.10	mg/L	1		NWTPH-Dx	Total/NA
Residual Range Organics (RRO) (C25-C36)	0.59		0.37	0.11	mg/L	1		NWTPH-Dx	Total/NA

Client Sample ID: RR-5 — Lab Sample ID: 590-14368-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Gasoline	160		150	70	ug/L	1		NWTPH-Gx	Total/NA
Diesel Range Organics (DRO) (C10-C25)	0.21	J	0.26	0.12	mg/L	1		NWTPH-Dx	Total/NA

Client Sample ID: RR-2 — Lab Sample ID: 590-14368-4

No Detections.

Client Sample ID: FW-5R — Lab Sample ID: 590-14368-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.52		0.40	0.093	ug/L	1		8260D	Total/NA
Ethylbenzene	0.34	J	1.0	0.20	ug/L	1		8260D	Total/NA
Toluene	0.42	J	1.0	0.31	ug/L	1		8260D	Total/NA
Gasoline	960		150	70	ug/L	1		NWTPH-Gx	Total/NA
Naphthalene	1.9		0.086	0.051	ug/L	1		8270E SIM	Total/NA
2-Methylnaphthalene	550		8.6	4.2	ug/L	100		8270E SIM	Total/NA
1-Methylnaphthalene	370	B	8.6	2.2	ug/L	100		8270E SIM	Total/NA
Diesel Range Organics (DRO) (C10-C25)	4.8		0.23	0.10	mg/L	1		NWTPH-Dx	Total/NA
Residual Range Organics (RRO) (C25-C36)	0.30	J	0.38	0.11	mg/L	1		NWTPH-Dx	Total/NA

Client Sample ID: B-34 — Lab Sample ID: 590-14368-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	130		40	9.3	ug/L	100		8260D	Total/NA
Ethylbenzene	10		1.0	0.20	ug/L	1		8260D	Total/NA
m,p-Xylene	0.85	J	2.0	0.28	ug/L	1		8260D	Total/NA
o-Xylene	0.50	J	1.0	0.16	ug/L	1		8260D	Total/NA
Toluene	4.0		1.0	0.31	ug/L	1		8260D	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Spokane

Detection Summary

Client: AECOM
Project/Site: Tacoma D St Terminal-Phillips 66

Job ID: 590-14368-1

Client Sample ID: B-34 (Continued) — Lab Sample ID: 590-14368-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Xylenes, Total	1.4	J	3.0	0.44	ug/L	1		8260D	Total/NA
Gasoline	2300		150	70	ug/L	1		NWTPH-Gx	Total/NA
Diesel Range Organics (DRO) (C10-C25)	13		0.25	0.12	mg/L	1		NWTPH-Dx	Total/NA
Residual Range Organics (RRO) (C25-C36)	0.77		0.42	0.13	mg/L	1		NWTPH-Dx	Total/NA

Client Sample ID: B-34-DUP — Lab Sample ID: 590-14368-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	140		4.0	0.93	ug/L	10		8260D	Total/NA
Ethylbenzene	11		1.0	0.20	ug/L	1		8260D	Total/NA
m,p-Xylene	0.92	J	2.0	0.28	ug/L	1		8260D	Total/NA
o-Xylene	0.48	J	1.0	0.16	ug/L	1		8260D	Total/NA
Toluene	4.2		1.0	0.31	ug/L	1		8260D	Total/NA
Xylenes, Total	1.4	J	3.0	0.44	ug/L	1		8260D	Total/NA
Gasoline	2300		150	70	ug/L	1		NWTPH-Gx	Total/NA
Diesel Range Organics (DRO) (C10-C25)	14		0.27	0.12	mg/L	1		NWTPH-Dx	Total/NA
Residual Range Organics (RRO) (C25-C36)	0.83		0.45	0.14	mg/L	1		NWTPH-Dx	Total/NA

Client Sample ID: FW-14 — Lab Sample ID: 590-14368-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Methylnaphthalene	0.051	J	0.083	0.041	ug/L	1		8270E SIM	Total/NA
1-Methylnaphthalene	0.028	J B	0.083	0.021	ug/L	1		8270E SIM	Total/NA

Client Sample ID: RW-5R — Lab Sample ID: 590-14368-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	130		4.0	0.93	ug/L	10		8260D	Total/NA
Ethylbenzene	29	F1	1.0	0.20	ug/L	1		8260D	Total/NA
m,p-Xylene	0.82	J	2.0	0.28	ug/L	1		8260D	Total/NA
o-Xylene	1.2		1.0	0.16	ug/L	1		8260D	Total/NA
Toluene	1.1		1.0	0.31	ug/L	1		8260D	Total/NA
Xylenes, Total	2.0	J	3.0	0.44	ug/L	1		8260D	Total/NA
Gasoline	2800	F1	150	70	ug/L	1		NWTPH-Gx	Total/NA
Diesel Range Organics (DRO) (C10-C25)	1.2		0.26	0.12	mg/L	1		NWTPH-Dx	Total/NA
Residual Range Organics (RRO) (C25-C36)	0.21	J	0.43	0.13	mg/L	1		NWTPH-Dx	Total/NA

Client Sample ID: DMW-2 — Lab Sample ID: 590-14368-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics (DRO) (C10-C25)	0.89		0.22	0.10	mg/L	1		NWTPH-Dx	Total/NA
Residual Range Organics (RRO) (C25-C36)	0.19	J	0.37	0.11	mg/L	1		NWTPH-Dx	Total/NA

Client Sample ID: B-25 — Lab Sample ID: 590-14368-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	360		2.0	0.47	ug/L	5		8260D	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: AECOM
Job ID: 590-14368-1
Project/Site: Tacoma D St Terminal-Phillips 66

Client Sample ID: B-25 (Continued) — Lab Sample ID: 590-14368-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ethylbenzene	1.9		1.0	0.20	ug/L	1		8260D	Total/NA
m,p-Xylene	3.9		2.0	0.28	ug/L	1		8260D	Total/NA
o-Xylene	0.36	J	1.0	0.16	ug/L	1		8260D	Total/NA
Toluene	2.8		1.0	0.31	ug/L	1		8260D	Total/NA
Xylenes, Total	4.3		3.0	0.44	ug/L	1		8260D	Total/NA
Gasoline	2300		750	350	ug/L	5		NWTPH-Gx	Total/NA
Diesel Range Organics (DRO) (C10-C25)	0.93		0.23	0.10	mg/L	1		NWTPH-Dx	Total/NA
Residual Range Organics (RRO) (C25-C36)	0.12	J	0.38	0.11	mg/L	1		NWTPH-Dx	Total/NA

Client Sample ID: Trip Blank — Lab Sample ID: 590-14368-12

No Detections.

This Detection Summary does not include radiochemical test results.

Client: AECOM
Project/Site: Tacoma D St Terminal-Phillips 66

Job ID: 590-14368-1

Client Sample ID: T-2

Lab Sample ID: 590-14368-1
Date Collected: 12/14/20 10:32
Matrix: Water
Date Received: 12/15/20 16:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.093	ug/L			12/16/20 19:24	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/16/20 19:24	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/16/20 19:24	1
o-Xylene	ND		1.0	0.16	ug/L			12/16/20 19:24	1
Toluene	ND		1.0	0.31	ug/L			12/16/20 19:24	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/16/20 19:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*80 - 120*		*12/16/20 19:24*	*1*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*		*12/16/20 19:24*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*		*12/16/20 19:24*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*12/16/20 19:24*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**140**	**J**	150	70	ug/L			12/16/20 19:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*68.7 - 141*		*12/16/20 19:24*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	**0.19**	**J**	0.25	0.11	mg/L		12/16/20 12:33	12/17/20 13:36	1
Residual Range Organics (RRO) (C25-C36)	**0.17**	**J**	0.41	0.12	mg/L		12/16/20 12:33	12/17/20 13:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*87*		*50 - 150*	*12/16/20 12:33*	*12/17/20 13:36*	*1*
n-Triacontane-d62	*89*		*50 - 150*	*12/16/20 12:33*	*12/17/20 13:36*	*1*

Client Sample ID: HC-111

Lab Sample ID: 590-14368-2
Date Collected: 12/14/20 11:00
Matrix: Water
Date Received: 12/15/20 16:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**52**		0.40	0.093	ug/L			12/16/20 19:45	1
Ethylbenzene	**31**		1.0	0.20	ug/L			12/16/20 19:45	1
m,p-Xylene	**2.8**		2.0	0.28	ug/L			12/16/20 19:45	1
o-Xylene	**0.42**	**J**	1.0	0.16	ug/L			12/16/20 19:45	1
Toluene	**3.2**		1.0	0.31	ug/L			12/16/20 19:45	1
Xylenes, Total	**3.3**		3.0	0.44	ug/L			12/16/20 19:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*80 - 120*		*12/16/20 19:45*	*1*
4-Bromofluorobenzene (Surr)	*92*		*80 - 120*		*12/16/20 19:45*	*1*
Dibromofluoromethane (Surr)	*97*		*80 - 120*		*12/16/20 19:45*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*12/16/20 19:45*	*1*

Client Sample ID: HC-111
Lab Sample ID: 590-14368-2
Date Collected: 12/14/20 11:00
Matrix: Water
Date Received: 12/15/20 16:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	1700		150	70	ug/L			12/16/20 19:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*68.7 - 141*		*12/16/20 19:45*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	6.1		0.22	0.10	mg/L		12/16/20 12:33	12/17/20 13:56	1
Residual Range Organics (RRO) (C25-C36)	0.59		0.37	0.11	mg/L		12/16/20 12:33	12/17/20 13:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*106*		*50 - 150*	*12/16/20 12:33*	*12/17/20 13:56*	*1*
n-Triacontane-d62	*102*		*50 - 150*	*12/16/20 12:33*	*12/17/20 13:56*	*1*

Client Sample ID: RR-5
Lab Sample ID: 590-14368-3
Date Collected: 12/14/20 12:06
Matrix: Water
Date Received: 12/15/20 16:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.093	ug/L			12/16/20 20:06	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/16/20 20:06	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/16/20 20:06	1
o-Xylene	ND		1.0	0.16	ug/L			12/16/20 20:06	1
Toluene	ND		1.0	0.31	ug/L			12/16/20 20:06	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/16/20 20:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*80 - 120*		*12/16/20 20:06*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*12/16/20 20:06*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*		*12/16/20 20:06*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*12/16/20 20:06*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	160		150	70	ug/L			12/16/20 20:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*68.7 - 141*		*12/16/20 20:06*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	0.21	J	0.26	0.12	mg/L		12/16/20 12:33	12/17/20 14:16	1
Residual Range Organics (RRO) (C25-C36)	ND		0.44	0.13	mg/L		12/16/20 12:33	12/17/20 14:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*85*		*50 - 150*	*12/16/20 12:33*	*12/17/20 14:16*	*1*
n-Triacontane-d62	*90*		*50 - 150*	*12/16/20 12:33*	*12/17/20 14:16*	*1*

Client Sample ID: RR-2
Lab Sample ID: 590-14368-4
Date Collected: 12/14/20 12:10
Matrix: Water
Date Received: 12/15/20 16:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.093	ug/L			12/16/20 20:26	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/16/20 20:26	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/16/20 20:26	1
o-Xylene	ND		1.0	0.16	ug/L			12/16/20 20:26	1
Toluene	ND		1.0	0.31	ug/L			12/16/20 20:26	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/16/20 20:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*80 - 120*		*12/16/20 20:26*	*1*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*		*12/16/20 20:26*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*		*12/16/20 20:26*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*12/16/20 20:26*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150	70	ug/L			12/16/20 20:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*68.7 - 141*		*12/16/20 20:26*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.083	0.049	ug/L		12/18/20 12:05	12/18/20 13:46	1
2-Methylnaphthalene	ND		0.083	0.041	ug/L		12/18/20 12:05	12/18/20 13:46	1
1-Methylnaphthalene	ND		0.083	0.021	ug/L		12/18/20 12:05	12/18/20 13:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*79*		*29 - 121*	*12/18/20 12:05*	*12/18/20 13:46*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.23	0.10	mg/L		12/16/20 12:33	12/17/20 14:57	1
Residual Range Organics (RRO) (C25-C36)	ND		0.38	0.11	mg/L		12/16/20 12:33	12/17/20 14:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*92*		*50 - 150*	*12/16/20 12:33*	*12/17/20 14:57*	*1*
n-Triacontane-d62	*97*		*50 - 150*	*12/16/20 12:33*	*12/17/20 14:57*	*1*

Client Sample ID: FW-5R
Lab Sample ID: 590-14368-5
Date Collected: 12/14/20 13:35
Matrix: Water
Date Received: 12/15/20 16:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.52**		0.40	0.093	ug/L			12/16/20 21:08	1
Ethylbenzene	**0.34**	**J**	1.0	0.20	ug/L			12/16/20 21:08	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/16/20 21:08	1
o-Xylene	ND		1.0	0.16	ug/L			12/16/20 21:08	1
Toluene	**0.42**	**J**	1.0	0.31	ug/L			12/16/20 21:08	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/16/20 21:08	1

Client Sample ID: FW-5R
Lab Sample ID: 590-14368-5
Date Collected: 12/14/20 13:35
Matrix: Water
Date Received: 12/15/20 16:16

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*80 - 120*		*12/16/20 21:08*	*1*
4-Bromofluorobenzene (Surr)	*90*		*80 - 120*		*12/16/20 21:08*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*		*12/16/20 21:08*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*12/16/20 21:08*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**960**		150	70	ug/L			12/16/20 21:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*68.7 - 141*		*12/16/20 21:08*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	**1.9**		0.086	0.051	ug/L		12/18/20 12:05	12/18/20 14:09	1
2-Methylnaphthalene	**550**		8.6	4.2	ug/L		12/18/20 12:05	12/18/20 15:01	100
1-Methylnaphthalene	**370**	**B**	8.6	2.2	ug/L		12/18/20 12:05	12/18/20 15:01	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*59*		*29 - 121*	*12/18/20 12:05*	*12/18/20 14:09*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	**4.8**		0.23	0.10	mg/L		12/16/20 12:33	12/17/20 15:17	1
Residual Range Organics (RRO) (C25-C36)	**0.30**	**J**	0.38	0.11	mg/L		12/16/20 12:33	12/17/20 15:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*124*		*50 - 150*	*12/16/20 12:33*	*12/17/20 15:17*	*1*
n-Triacontane-d62	*108*		*50 - 150*	*12/16/20 12:33*	*12/17/20 15:17*	*1*

Client Sample ID: B-34
Lab Sample ID: 590-14368-6
Date Collected: 12/14/20 14:03
Matrix: Water
Date Received: 12/15/20 16:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**130**		40	9.3	ug/L			12/17/20 18:06	100
Ethylbenzene	**10**		1.0	0.20	ug/L			12/16/20 21:29	1
m,p-Xylene	**0.85**	**J**	2.0	0.28	ug/L			12/16/20 21:29	1
o-Xylene	**0.50**	**J**	1.0	0.16	ug/L			12/16/20 21:29	1
Toluene	**4.0**		1.0	0.31	ug/L			12/16/20 21:29	1
Xylenes, Total	**1.4**	**J**	3.0	0.44	ug/L			12/16/20 21:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*80 - 120*		*12/16/20 21:29*	*1*
1,2-Dichloroethane-d4 (Surr)	*97*		*80 - 120*		*12/17/20 18:06*	*100*
4-Bromofluorobenzene (Surr)	*90*		*80 - 120*		*12/16/20 21:29*	*1*
Dibromofluoromethane (Surr)	*94*		*80 - 120*		*12/16/20 21:29*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*		*12/17/20 18:06*	*100*
Toluene-d8 (Surr)	*94*		*80 - 120*		*12/16/20 21:29*	*1*

Client Sample ID: B-34

Lab Sample ID: 590-14368-6

Date Collected: 12/14/20 14:03

Matrix: Water

Date Received: 12/15/20 16:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	2300		150	70	ug/L			12/16/20 21:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*68.7 - 141*		*12/16/20 21:29*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	13		0.25	0.12	mg/L		12/16/20 12:33	12/17/20 15:37	1
Residual Range Organics (RRO) (C25-C36)	0.77		0.42	0.13	mg/L		12/16/20 12:33	12/17/20 15:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*96*		*50 - 150*	*12/16/20 12:33*	*12/17/20 15:37*	*1*
n-Triacontane-d62	*100*		*50 - 150*	*12/16/20 12:33*	*12/17/20 15:37*	*1*

Client Sample ID: B-34-DUP

Lab Sample ID: 590-14368-7

Date Collected: 12/14/20 14:03

Matrix: Water

Date Received: 12/15/20 16:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	140		4.0	0.93	ug/L			12/17/20 18:27	10
Ethylbenzene	11		1.0	0.20	ug/L			12/16/20 21:49	1
m,p-Xylene	0.92	J	2.0	0.28	ug/L			12/16/20 21:49	1
o-Xylene	0.48	J	1.0	0.16	ug/L			12/16/20 21:49	1
Toluene	4.2		1.0	0.31	ug/L			12/16/20 21:49	1
Xylenes, Total	1.4	J	3.0	0.44	ug/L			12/16/20 21:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*80 - 120*		*12/16/20 21:49*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*80 - 120*		*12/17/20 18:27*	*10*
4-Bromofluorobenzene (Surr)	*89*		*80 - 120*		*12/16/20 21:49*	*1*
Dibromofluoromethane (Surr)	*94*		*80 - 120*		*12/16/20 21:49*	*1*
Dibromofluoromethane (Surr)	*107*		*80 - 120*		*12/17/20 18:27*	*10*
Toluene-d8 (Surr)	*99*		*80 - 120*		*12/16/20 21:49*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	2300		150	70	ug/L			12/16/20 21:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*68.7 - 141*		*12/16/20 21:49*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	14		0.27	0.12	mg/L		12/16/20 12:33	12/17/20 15:57	1
Residual Range Organics (RRO) (C25-C36)	0.83		0.45	0.14	mg/L		12/16/20 12:33	12/17/20 15:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*101*		*50 - 150*	*12/16/20 12:33*	*12/17/20 15:57*	*1*

Client Sample ID: B-34-DUP
Lab Sample ID: 590-14368-7
Date Collected: 12/14/20 14:03
Matrix: Water
Date Received: 12/15/20 16:16

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Triacontane-d62	*104*		*50 - 150*	*12/16/20 12:33*	*12/17/20 15:57*	*1*

Client Sample ID: FW-14
Lab Sample ID: 590-14368-8
Date Collected: 12/14/20 14:45
Matrix: Water
Date Received: 12/15/20 16:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.093	ug/L			12/16/20 22:10	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/16/20 22:10	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/16/20 22:10	1
o-Xylene	ND		1.0	0.16	ug/L			12/16/20 22:10	1
Toluene	ND		1.0	0.31	ug/L			12/16/20 22:10	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/16/20 22:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*80 - 120*		*12/16/20 22:10*	*1*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*		*12/16/20 22:10*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*		*12/16/20 22:10*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*12/16/20 22:10*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150	70	ug/L			12/16/20 22:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*68.7 - 141*		*12/16/20 22:10*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.083	0.049	ug/L		12/18/20 12:05	12/18/20 14:32	1
2-Methylnaphthalene	**0.051**	**J**	0.083	0.041	ug/L		12/18/20 12:05	12/18/20 14:32	1
1-Methylnaphthalene	**0.028**	**J B**	0.083	0.021	ug/L		12/18/20 12:05	12/18/20 14:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*80*		*29 - 121*	*12/18/20 12:05*	*12/18/20 14:32*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.22	0.10	mg/L		12/16/20 12:33	12/17/20 16:17	1
Residual Range Organics (RRO) (C25-C36)	ND		0.37	0.11	mg/L		12/16/20 12:33	12/17/20 16:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*98*		*50 - 150*	*12/16/20 12:33*	*12/17/20 16:17*	*1*
n-Triacontane-d62	*106*		*50 - 150*	*12/16/20 12:33*	*12/17/20 16:17*	*1*

Client Sample ID: RW-5R
Lab Sample ID: 590-14368-9
Date Collected: 12/14/20 15:18
Matrix: Water
Date Received: 12/15/20 16:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	130		4.0	0.93	ug/L			12/17/20 19:08	10
Ethylbenzene	29	F1	1.0	0.20	ug/L			12/16/20 22:30	1
m,p-Xylene	0.82	J	2.0	0.28	ug/L			12/16/20 22:30	1
o-Xylene	1.2		1.0	0.16	ug/L			12/16/20 22:30	1
Toluene	1.1		1.0	0.31	ug/L			12/16/20 22:30	1
Xylenes, Total	2.0	J	3.0	0.44	ug/L			12/16/20 22:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*90*		*80 - 120*		*12/16/20 22:30*	*1*
1,2-Dichloroethane-d4 (Surr)	*95*		*80 - 120*		*12/17/20 19:08*	*10*
4-Bromofluorobenzene (Surr)	*89*		*80 - 120*		*12/16/20 22:30*	*1*
Dibromofluoromethane (Surr)	*96*		*80 - 120*		*12/16/20 22:30*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*		*12/17/20 19:08*	*10*
Toluene-d8 (Surr)	*98*		*80 - 120*		*12/16/20 22:30*	*1*
Toluene-d8 (Surr)	*110*		*80 - 120*		*12/17/20 19:08*	*10*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	2800	F1	150	70	ug/L			12/16/20 22:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*68.7 - 141*		*12/16/20 22:30*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	1.2		0.26	0.12	mg/L		12/16/20 12:33	12/17/20 16:38	1
Residual Range Organics (RRO) (C25-C36)	0.21	J	0.43	0.13	mg/L		12/16/20 12:33	12/17/20 16:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*81*		*50 - 150*	*12/16/20 12:33*	*12/17/20 16:38*	*1*
n-Triacontane-d62	*86*		*50 - 150*	*12/16/20 12:33*	*12/17/20 16:38*	*1*

Client Sample ID: DMW-2
Lab Sample ID: 590-14368-10
Date Collected: 12/14/20 15:40
Matrix: Water
Date Received: 12/15/20 16:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.093	ug/L			12/17/20 00:14	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/17/20 00:14	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/17/20 00:14	1
o-Xylene	ND		1.0	0.16	ug/L			12/17/20 00:14	1
Toluene	ND		1.0	0.31	ug/L			12/17/20 00:14	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/17/20 00:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*80 - 120*		*12/17/20 00:14*	*1*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*		*12/17/20 00:14*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*		*12/17/20 00:14*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*		*12/17/20 00:14*	*1*

Client: AECOM
Job ID: 590-14368-1
Project/Site: Tacoma D St Terminal-Phillips 66

Client Sample ID: DMW-2
Lab Sample ID: 590-14368-10
Date Collected: 12/14/20 15:40
Matrix: Water
Date Received: 12/15/20 16:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150	70	ug/L			12/17/20 00:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*68.7 - 141*		*12/17/20 00:14*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	**0.89**		0.22	0.10	mg/L		12/16/20 12:33	12/17/20 17:38	1
Residual Range Organics (RRO) (C25-C36)	**0.19**	**J**	0.37	0.11	mg/L		12/16/20 12:33	12/17/20 17:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*88*		*50 - 150*	*12/16/20 12:33*	*12/17/20 17:38*	*1*
n-Triacontane-d62	*92*		*50 - 150*	*12/16/20 12:33*	*12/17/20 17:38*	*1*

Client Sample ID: B-25
Lab Sample ID: 590-14368-11
Date Collected: 12/14/20 14:35
Matrix: Water
Date Received: 12/15/20 16:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**360**		2.0	0.47	ug/L			12/17/20 20:31	5
Ethylbenzene	**1.9**		1.0	0.20	ug/L			12/17/20 00:55	1
m,p-Xylene	**3.9**		2.0	0.28	ug/L			12/17/20 00:55	1
o-Xylene	**0.36**	**J**	1.0	0.16	ug/L			12/17/20 00:55	1
Toluene	**2.8**		1.0	0.31	ug/L			12/17/20 00:55	1
Xylenes, Total	**4.3**		3.0	0.44	ug/L			12/17/20 00:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*89*		*80 - 120*		*12/17/20 00:55*	*1*
1,2-Dichloroethane-d4 (Surr)	*96*		*80 - 120*		*12/17/20 20:31*	*5*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*		*12/17/20 00:55*	*1*
Dibromofluoromethane (Surr)	*89*		*80 - 120*		*12/17/20 00:55*	*1*
Dibromofluoromethane (Surr)	*109*		*80 - 120*		*12/17/20 20:31*	*5*
Toluene-d8 (Surr)	*98*		*80 - 120*		*12/17/20 00:55*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*		*12/17/20 20:31*	*5*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**2300**		750	350	ug/L			12/17/20 20:31	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*68.7 - 141*		*12/17/20 20:31*	*5*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	**0.93**		0.23	0.10	mg/L		12/16/20 12:33	12/17/20 17:58	1
Residual Range Organics (RRO) (C25-C36)	**0.12**	**J**	0.38	0.11	mg/L		12/16/20 12:33	12/17/20 17:58	1

Client Sample ID: B-25
Lab Sample ID: 590-14368-11
Date Collected: 12/14/20 14:35
Matrix: Water
Date Received: 12/15/20 16:16

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	*93*		*50 - 150*	*12/16/20 12:33*	*12/17/20 17:58*	*1*
n-Triacontane-d62	*99*		*50 - 150*	*12/16/20 12:33*	*12/17/20 17:58*	*1*

Client Sample ID: Trip Blank
Lab Sample ID: 590-14368-12
Date Collected: 12/14/20 00:00
Matrix: Water
Date Received: 12/15/20 16:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.093	ug/L			12/17/20 01:16	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/17/20 01:16	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/17/20 01:16	1
o-Xylene	ND		1.0	0.16	ug/L			12/17/20 01:16	1
Toluene	ND		1.0	0.31	ug/L			12/17/20 01:16	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/17/20 01:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*96*		*80 - 120*		*12/17/20 01:16*	*1*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*		*12/17/20 01:16*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 120*		*12/17/20 01:16*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*12/17/20 01:16*	*1*

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

Lab Sample ID: MB 590-30018/6
Matrix: Water
Analysis Batch: 30018

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.093	ug/L			12/16/20 17:20	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/16/20 17:20	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/16/20 17:20	1
o-Xylene	ND		1.0	0.16	ug/L			12/16/20 17:20	1
Toluene	ND		1.0	0.31	ug/L			12/16/20 17:20	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/16/20 17:20	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*80 - 120*		*12/16/20 17:20*	*1*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*		*12/16/20 17:20*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*		*12/16/20 17:20*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*12/16/20 17:20*	*1*

Lab Sample ID: LCS 590-30018/1003
Matrix: Water
Analysis Batch: 30018

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			10.0	10.8		ug/L		108	80 - 126		
Ethylbenzene			10.0	11.2		ug/L		112	80 - 128		
m,p-Xylene			10.0	11.1		ug/L		111	80 - 127		
o-Xylene			10.0	11.2		ug/L		112	80 - 126		
Toluene			10.0	10.6		ug/L		106	80 - 129		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*102*		*80 - 120*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*
Dibromofluoromethane (Surr)	*101*		*80 - 120*
Toluene-d8 (Surr)	*99*		*80 - 120*

Lab Sample ID: 590-14368-9 MS
Matrix: Water
Analysis Batch: 30018

Client Sample ID: RW-5R
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Ethylbenzene	29	F1	10.0	40.4		ug/L		119	80 - 128		
m,p-Xylene	0.82	J	10.0	12.0		ug/L		112	80 - 127		
o-Xylene	1.2		10.0	12.7		ug/L		115	80 - 126		
Toluene	1.1		10.0	12.8		ug/L		117	80 - 129		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*90*		*80 - 120*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*
Dibromofluoromethane (Surr)	*89*		*80 - 120*
Toluene-d8 (Surr)	*99*		*80 - 120*

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

Lab Sample ID: 590-14368-9 MSD
Matrix: Water
Analysis Batch: 30018

Client Sample ID: RW-5R
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylbenzene	29	F1	10.0	43.3	F1	ug/L		148	80 - 128	7	18
m,p-Xylene	0.82	J	10.0	12.1		ug/L		113	80 - 127	1	18
o-Xylene	1.2		10.0	12.8		ug/L		116	80 - 126	1	17
Toluene	1.1		10.0	12.9		ug/L		118	80 - 129	1	18

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*96*		*80 - 120*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*
Dibromofluoromethane (Surr)	*96*		*80 - 120*
Toluene-d8 (Surr)	*101*		*80 - 120*

Lab Sample ID: MB 590-30026/9
Matrix: Water
Analysis Batch: 30026

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.093	ug/L			12/17/20 13:55	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/17/20 13:55	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/17/20 13:55	1
o-Xylene	ND		1.0	0.16	ug/L			12/17/20 13:55	1
Toluene	ND		1.0	0.31	ug/L			12/17/20 13:55	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/17/20 13:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*80 - 120*		*12/17/20 13:55*	*1*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*12/17/20 13:55*	*1*
Dibromofluoromethane (Surr)	*107*		*80 - 120*		*12/17/20 13:55*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*		*12/17/20 13:55*	*1*

Lab Sample ID: LCS 590-30026/1007
Matrix: Water
Analysis Batch: 30026

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	10.0	11.1		ug/L		111	80 - 126

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*102*		*80 - 120*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*
Dibromofluoromethane (Surr)	*100*		*80 - 120*
Toluene-d8 (Surr)	*101*		*80 - 120*

Lab Sample ID: 590-14368-9 MS
Matrix: Water
Analysis Batch: 30026

Client Sample ID: RW-5R
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	130		100	241		ug/L		111	80 - 126

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

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	103		80 - 120
Dibromofluoromethane (Surr)	104		80 - 120

Lab Sample ID: 590-14368-9 MSD — **Client Sample ID: RW-5R**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 30026

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	130		100	244		ug/L		114	80 - 126	1	18

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	104		80 - 120
Dibromofluoromethane (Surr)	100		80 - 120
Toluene-d8 (Surr)	109		80 - 120

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

Lab Sample ID: MB 590-30017/6 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 30017

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150	70	ug/L			12/16/20 17:20	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		68.7 - 141		12/16/20 17:20	1

Lab Sample ID: LCS 590-30017/1005 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 30017

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline			1000	1040		ug/L		104	80 - 120		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	95		68.7 - 141

Lab Sample ID: LCSD 590-30017/1016 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 30017

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline			1000	1130		ug/L		113	80 - 120	8	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	100		68.7 - 141

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

Lab Sample ID: 590-14368-9 MS
Matrix: Water
Analysis Batch: 30017

Client Sample ID: RW-5R
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline	2800	F1	1000	3710		ug/L		88	55.6 - 126		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*68.7 - 141*

Lab Sample ID: 590-14368-9 MSD
Matrix: Water
Analysis Batch: 30017

Client Sample ID: RW-5R
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline	2800	F1	1000	3820		ug/L		99	55.6 - 126	3	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*68.7 - 141*

Lab Sample ID: MB 590-30025/9
Matrix: Water
Analysis Batch: 30025

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150	70	ug/L			12/17/20 13:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*68.7 - 141*		*12/17/20 13:55*	*1*

Lab Sample ID: LCS 590-30025/1005
Matrix: Water
Analysis Batch: 30025

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline			1000	1120		ug/L		112	80 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*68.7 - 141*

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

Lab Sample ID: MB 590-30049/1-A
Matrix: Water
Analysis Batch: 30048

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30049

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.090	0.053	ug/L		12/18/20 12:05	12/18/20 12:37	1
2-Methylnaphthalene	ND		0.090	0.044	ug/L		12/18/20 12:05	12/18/20 12:37	1
1-Methylnaphthalene	0.0295	J	0.090	0.023	ug/L		12/18/20 12:05	12/18/20 12:37	1

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

Lab Sample ID: MB 590-30049/1-A
Matrix: Water
Analysis Batch: 30048

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30049

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*72*		*29 - 121*	*12/18/20 12:05*	*12/18/20 12:37*	*1*

Lab Sample ID: LCS 590-30049/2-A
Matrix: Water
Analysis Batch: 30048

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 30049

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Naphthalene	1.60	1.19		ug/L		74	52 - 120
2-Methylnaphthalene	1.60	1.15		ug/L		72	44 - 120
1-Methylnaphthalene	1.60	1.12		ug/L		70	49 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Nitrobenzene-d5	*76*		*29 - 121*

Lab Sample ID: LCSD 590-30049/3-A
Matrix: Water
Analysis Batch: 30048

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 30049

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Naphthalene	1.60	1.13		ug/L		70	52 - 120	6	21
2-Methylnaphthalene	1.60	1.10		ug/L		69	44 - 120	5	16
1-Methylnaphthalene	1.60	1.08		ug/L		67	49 - 120	3	14

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Nitrobenzene-d5	*75*		*29 - 121*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 590-30014/1-A
Matrix: Water
Analysis Batch: 30021

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30014

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.24	0.11	mg/L		12/16/20 12:33	12/17/20 11:15	1
Residual Range Organics (RRO) (C25-C36)	ND		0.40	0.12	mg/L		12/16/20 12:33	12/17/20 11:15	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*77*		*50 - 150*	*12/16/20 12:33*	*12/17/20 11:15*	*1*
n-Triacontane-d62	*81*		*50 - 150*	*12/16/20 12:33*	*12/17/20 11:15*	*1*

Lab Sample ID: LCS 590-30014/2-A
Matrix: Water
Analysis Batch: 30021

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 30014

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics (DRO) (C10-C25)	1.60	1.32		mg/L		83	50 - 150

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

Lab Sample ID: LCS 590-30014/2-A
Matrix: Water
Analysis Batch: 30021

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 30014

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Residual Range Organics (RRO) (C25-C36)			1.60	1.41		mg/L		88	50 - 150		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*93*		*50 - 150*
n-Triacontane-d62	*96*		*50 - 150*

Lab Sample ID: LCSD 590-30014/3-A
Matrix: Water
Analysis Batch: 30021

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 30014

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics (DRO) (C10-C25)			1.60	1.33		mg/L		83	50 - 150	1	25
Residual Range Organics (RRO) (C25-C36)			1.60	1.42		mg/L		89	50 - 150	0	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl	*92*		*50 - 150*
n-Triacontane-d62	*93*		*50 - 150*

Lab Sample ID: 590-14368-9 MS
Matrix: Water
Analysis Batch: 30021

Client Sample ID: RW-5R
Prep Type: Total/NA
Prep Batch: 30014

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics (DRO) (C10-C25)	1.2		1.85	2.63		mg/L		80	54.5 - 136		
Residual Range Organics (RRO) (C25-C36)	0.21	J	1.85	1.77		mg/L		84	50 - 150		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
o-Terphenyl	*89*		*50 - 150*
n-Triacontane-d62	*89*		*50 - 150*

Lab Sample ID: 590-14368-9 MSD
Matrix: Water
Analysis Batch: 30021

Client Sample ID: RW-5R
Prep Type: Total/NA
Prep Batch: 30014

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics (DRO) (C10-C25)	1.2		1.73	2.83		mg/L		96	54.5 - 136	7	32.5
Residual Range Organics (RRO) (C25-C36)	0.21	J	1.73	1.72		mg/L		87	50 - 150	3	25

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
o-Terphenyl	*89*		*50 - 150*
n-Triacontane-d62	*93*		*50 - 150*

QC Association Summary

Client: AECOM
Job ID: 590-14368-1
Project/Site: Tacoma D St Terminal-Phillips 66

GC/MS VOA

Analysis Batch: 30017

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
590-14368-1	T-2	Total/NA	Water	NWTPH-Gx	
590-14368-2	HC-111	Total/NA	Water	NWTPH-Gx	
590-14368-3	RR-5	Total/NA	Water	NWTPH-Gx	
590-14368-4	RR-2	Total/NA	Water	NWTPH-Gx	
590-14368-5	FW-5R	Total/NA	Water	NWTPH-Gx	
590-14368-6	B-34	Total/NA	Water	NWTPH-Gx	
590-14368-7	B-34-DUP	Total/NA	Water	NWTPH-Gx	
590-14368-8	FW-14	Total/NA	Water	NWTPH-Gx	
590-14368-9	RW-5R	Total/NA	Water	NWTPH-Gx	
590-14368-10	DMW-2	Total/NA	Water	NWTPH-Gx	
MB 590-30017/6	Method Blank	Total/NA	Water	NWTPH-Gx	
LCS 590-30017/1005	Lab Control Sample	Total/NA	Water	NWTPH-Gx	
LCSD 590-30017/1016	Lab Control Sample Dup	Total/NA	Water	NWTPH-Gx	
590-14368-9 MS	RW-5R	Total/NA	Water	NWTPH-Gx	
590-14368-9 MSD	RW-5R	Total/NA	Water	NWTPH-Gx	

Analysis Batch: 30018

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
590-14368-1	T-2	Total/NA	Water	8260D	
590-14368-2	HC-111	Total/NA	Water	8260D	
590-14368-3	RR-5	Total/NA	Water	8260D	
590-14368-4	RR-2	Total/NA	Water	8260D	
590-14368-5	FW-5R	Total/NA	Water	8260D	
590-14368-6	B-34	Total/NA	Water	8260D	
590-14368-7	B-34-DUP	Total/NA	Water	8260D	
590-14368-8	FW-14	Total/NA	Water	8260D	
590-14368-9	RW-5R	Total/NA	Water	8260D	
590-14368-10	DMW-2	Total/NA	Water	8260D	
590-14368-11	B-25	Total/NA	Water	8260D	
590-14368-12	Trip Blank	Total/NA	Water	8260D	
MB 590-30018/6	Method Blank	Total/NA	Water	8260D	
LCS 590-30018/1003	Lab Control Sample	Total/NA	Water	8260D	
590-14368-9 MS	RW-5R	Total/NA	Water	8260D	
590-14368-9 MSD	RW-5R	Total/NA	Water	8260D	

Analysis Batch: 30025

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
590-14368-11	B-25	Total/NA	Water	NWTPH-Gx	
MB 590-30025/9	Method Blank	Total/NA	Water	NWTPH-Gx	
LCS 590-30025/1005	Lab Control Sample	Total/NA	Water	NWTPH-Gx	

Analysis Batch: 30026

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
590-14368-6	B-34	Total/NA	Water	8260D	
590-14368-7	B-34-DUP	Total/NA	Water	8260D	
590-14368-9	RW-5R	Total/NA	Water	8260D	
590-14368-11	B-25	Total/NA	Water	8260D	
MB 590-30026/9	Method Blank	Total/NA	Water	8260D	
LCS 590-30026/1007	Lab Control Sample	Total/NA	Water	8260D	
590-14368-9 MS	RW-5R	Total/NA	Water	8260D	
590-14368-9 MSD	RW-5R	Total/NA	Water	8260D	

QC Association Summary

Client: AECOM
Job ID: 590-14368-1
Project/Site: Tacoma D St Terminal-Phillips 66

GC/MS Semi VOA

Analysis Batch: 30048

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
590-14368-4	RR-2	Total/NA	Water	8270E SIM	30049
590-14368-5	FW-5R	Total/NA	Water	8270E SIM	30049
590-14368-5	FW-5R	Total/NA	Water	8270E SIM	30049
590-14368-8	FW-14	Total/NA	Water	8270E SIM	30049
MB 590-30049/1-A	Method Blank	Total/NA	Water	8270E SIM	30049
LCS 590-30049/2-A	Lab Control Sample	Total/NA	Water	8270E SIM	30049
LCSD 590-30049/3-A	Lab Control Sample Dup	Total/NA	Water	8270E SIM	30049

Prep Batch: 30049

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
590-14368-4	RR-2	Total/NA	Water	3510C	
590-14368-5	FW-5R	Total/NA	Water	3510C	
590-14368-8	FW-14	Total/NA	Water	3510C	
MB 590-30049/1-A	Method Blank	Total/NA	Water	3510C	
LCS 590-30049/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 590-30049/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

GC Semi VOA

Prep Batch: 30014

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
590-14368-1	T-2	Total/NA	Water	3510C	
590-14368-2	HC-111	Total/NA	Water	3510C	
590-14368-3	RR-5	Total/NA	Water	3510C	
590-14368-4	RR-2	Total/NA	Water	3510C	
590-14368-5	FW-5R	Total/NA	Water	3510C	
590-14368-6	B-34	Total/NA	Water	3510C	
590-14368-7	B-34-DUP	Total/NA	Water	3510C	
590-14368-8	FW-14	Total/NA	Water	3510C	
590-14368-9	RW-5R	Total/NA	Water	3510C	
590-14368-10	DMW-2	Total/NA	Water	3510C	
590-14368-11	B-25	Total/NA	Water	3510C	
MB 590-30014/1-A	Method Blank	Total/NA	Water	3510C	
LCS 590-30014/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 590-30014/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
590-14368-9 MS	RW-5R	Total/NA	Water	3510C	
590-14368-9 MSD	RW-5R	Total/NA	Water	3510C	

Analysis Batch: 30021

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
590-14368-1	T-2	Total/NA	Water	NWTPH-Dx	30014
590-14368-2	HC-111	Total/NA	Water	NWTPH-Dx	30014
590-14368-3	RR-5	Total/NA	Water	NWTPH-Dx	30014
590-14368-4	RR-2	Total/NA	Water	NWTPH-Dx	30014
590-14368-5	FW-5R	Total/NA	Water	NWTPH-Dx	30014
590-14368-6	B-34	Total/NA	Water	NWTPH-Dx	30014
590-14368-7	B-34-DUP	Total/NA	Water	NWTPH-Dx	30014
590-14368-8	FW-14	Total/NA	Water	NWTPH-Dx	30014
590-14368-9	RW-5R	Total/NA	Water	NWTPH-Dx	30014
590-14368-10	DMW-2	Total/NA	Water	NWTPH-Dx	30014
590-14368-11	B-25	Total/NA	Water	NWTPH-Dx	30014

GC Semi VOA (Continued)

Analysis Batch: 30021 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 590-30014/1-A	Method Blank	Total/NA	Water	NWTPH-Dx	30014
LCS 590-30014/2-A	Lab Control Sample	Total/NA	Water	NWTPH-Dx	30014
LCSD 590-30014/3-A	Lab Control Sample Dup	Total/NA	Water	NWTPH-Dx	30014
590-14368-9 MS	RW-5R	Total/NA	Water	NWTPH-Dx	30014
590-14368-9 MSD	RW-5R	Total/NA	Water	NWTPH-Dx	30014

Lab Chronicle

Client: AECOM
Job ID: 590-14368-1
Project/Site: Tacoma D St Terminal-Phillips 66

Client Sample ID: T-2
Lab Sample ID: 590-14368-1
Date Collected: 12/14/20 10:32
Matrix: Water
Date Received: 12/15/20 16:16

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	30018	12/16/20 19:24	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	30017	12/16/20 19:24	JSP	TAL SPK
Total/NA	Prep	3510C			243.9 mL	2 mL	30014	12/16/20 12:33	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			30021	12/17/20 13:36	NMI	TAL SPK

Client Sample ID: HC-111
Lab Sample ID: 590-14368-2
Date Collected: 12/14/20 11:00
Matrix: Water
Date Received: 12/15/20 16:16

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	30018	12/16/20 19:45	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	30017	12/16/20 19:45	JSP	TAL SPK
Total/NA	Prep	3510C			267.5 mL	2 mL	30014	12/16/20 12:33	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			30021	12/17/20 13:56	NMI	TAL SPK

Client Sample ID: RR-5
Lab Sample ID: 590-14368-3
Date Collected: 12/14/20 12:06
Matrix: Water
Date Received: 12/15/20 16:16

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	30018	12/16/20 20:06	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	30017	12/16/20 20:06	JSP	TAL SPK
Total/NA	Prep	3510C			229.6 mL	2 mL	30014	12/16/20 12:33	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			30021	12/17/20 14:16	NMI	TAL SPK

Client Sample ID: RR-2
Lab Sample ID: 590-14368-4
Date Collected: 12/14/20 12:10
Matrix: Water
Date Received: 12/15/20 16:16

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	30018	12/16/20 20:26	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	30017	12/16/20 20:26	JSP	TAL SPK
Total/NA	Prep	3510C			270.7 mL	2 mL	30049	12/18/20 12:05	NMI	TAL SPK
Total/NA	Analysis	8270E SIM		1			30048	12/18/20 13:46	NMI	TAL SPK
Total/NA	Prep	3510C			264.2 mL	2 mL	30014	12/16/20 12:33	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			30021	12/17/20 14:57	NMI	TAL SPK

Client Sample ID: FW-5R
Lab Sample ID: 590-14368-5
Date Collected: 12/14/20 13:35
Matrix: Water
Date Received: 12/15/20 16:16

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	30018	12/16/20 21:08	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	30017	12/16/20 21:08	JSP	TAL SPK

Lab Chronicle

Client: AECOM
Job ID: 590-14368-1
Project/Site: Tacoma D St Terminal-Phillips 66

Client Sample ID: FW-5R
Lab Sample ID: 590-14368-5
Date Collected: 12/14/20 13:35
Matrix: Water
Date Received: 12/15/20 16:16

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			261.7 mL	2 mL	30049	12/18/20 12:05	NMI	TAL SPK
Total/NA	Analysis	8270E SIM		1			30048	12/18/20 14:09	NMI	TAL SPK
Total/NA	Prep	3510C			261.7 mL	2 mL	30049	12/18/20 12:05	NMI	TAL SPK
Total/NA	Analysis	8270E SIM		100			30048	12/18/20 15:01	NMI	TAL SPK
Total/NA	Prep	3510C			265.4 mL	2 mL	30014	12/16/20 12:33	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			30021	12/17/20 15:17	NMI	TAL SPK

Client Sample ID: B-34
Lab Sample ID: 590-14368-6
Date Collected: 12/14/20 14:03
Matrix: Water
Date Received: 12/15/20 16:16

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	30018	12/16/20 21:29	JSP	TAL SPK
Total/NA	Analysis	8260D		100	43 mL	43 mL	30026	12/17/20 18:06	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	30017	12/16/20 21:29	JSP	TAL SPK
Total/NA	Prep	3510C			235.3 mL	2 mL	30014	12/16/20 12:33	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			30021	12/17/20 15:37	NMI	TAL SPK

Client Sample ID: B-34-DUP
Lab Sample ID: 590-14368-7
Date Collected: 12/14/20 14:03
Matrix: Water
Date Received: 12/15/20 16:16

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	30018	12/16/20 21:49	JSP	TAL SPK
Total/NA	Analysis	8260D		10	43 mL	43 mL	30026	12/17/20 18:27	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	30017	12/16/20 21:49	JSP	TAL SPK
Total/NA	Prep	3510C			221.4 mL	2 mL	30014	12/16/20 12:33	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			30021	12/17/20 15:57	NMI	TAL SPK

Client Sample ID: FW-14
Lab Sample ID: 590-14368-8
Date Collected: 12/14/20 14:45
Matrix: Water
Date Received: 12/15/20 16:16

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	30018	12/16/20 22:10	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	30017	12/16/20 22:10	JSP	TAL SPK
Total/NA	Prep	3510C			269.9 mL	2 mL	30049	12/18/20 12:05	NMI	TAL SPK
Total/NA	Analysis	8270E SIM		1			30048	12/18/20 14:32	NMI	TAL SPK
Total/NA	Prep	3510C			266.8 mL	2 mL	30014	12/16/20 12:33	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			30021	12/17/20 16:17	NMI	TAL SPK

Lab Chronicle

Client: AECOM
Job ID: 590-14368-1
Project/Site: Tacoma D St Terminal-Phillips 66

Client Sample ID: RW-5R
Lab Sample ID: 590-14368-9
Date Collected: 12/14/20 15:18
Matrix: Water
Date Received: 12/15/20 16:16

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	30018	12/16/20 22:30	JSP	TAL SPK
Total/NA	Analysis	8260D		10	43 mL	43 mL	30026	12/17/20 19:08	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	30017	12/16/20 22:30	JSP	TAL SPK
Total/NA	Prep	3510C			234.6 mL	2 mL	30014	12/16/20 12:33	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			30021	12/17/20 16:38	NMI	TAL SPK

Client Sample ID: DMW-2
Lab Sample ID: 590-14368-10
Date Collected: 12/14/20 15:40
Matrix: Water
Date Received: 12/15/20 16:16

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	30018	12/17/20 00:14	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	30017	12/17/20 00:14	JSP	TAL SPK
Total/NA	Prep	3510C			267.4 mL	2 mL	30014	12/16/20 12:33	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			30021	12/17/20 17:38	NMI	TAL SPK

Client Sample ID: B-25
Lab Sample ID: 590-14368-11
Date Collected: 12/14/20 14:35
Matrix: Water
Date Received: 12/15/20 16:16

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	30018	12/17/20 00:55	JSP	TAL SPK
Total/NA	Analysis	8260D		5	43 mL	43 mL	30026	12/17/20 20:31	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		5	43 mL	43 mL	30025	12/17/20 20:31	JSP	TAL SPK
Total/NA	Prep	3510C			265.7 mL	2 mL	30014	12/16/20 12:33	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			30021	12/17/20 17:58	NMI	TAL SPK

Client Sample ID: Trip Blank
Lab Sample ID: 590-14368-12
Date Collected: 12/14/20 00:00
Matrix: Water
Date Received: 12/15/20 16:16

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	30018	12/17/20 01:16	JSP	TAL SPK

Laboratory References:
TAL SPK = Eurofins TestAmerica, Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Definitions/Glossary

Client: AECOM
Job ID: 590-14368-1
Project/Site: Tacoma D St Terminal-Phillips 66

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

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

Glossary

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

Accreditation/Certification Summary

Client: AECOM
Job ID: 590-14368-1
Project/Site: Tacoma D St Terminal-Phillips 66

Laboratory: Eurofins TestAmerica, Spokane

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Washington	State	C569	01-06-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
NWTPH-Dx	3510C	Water	Residual Range Organics (RRO) (C25-C36)

Shell Oil Products US Chain Of Custody Record

AECOM

12/22/2020

LAB (LOCATION)
☐ ACCUTEST (_____)
☐ CALSCIENCE (_____)
☑ TESTAMERICA (SPOKANE)
☐ Other (_____)
Lab Vendor # Dropdown

Please Check Appropriate Box:
☐ SGW FDG ☐ PIPELINE ☐ RETAIL
☐ CHEMICALS ☐ CONSULTANT ☐ LUBES
☐ TRANSPORTATION ☐ OTHER

Print Bill To Contact Name: Tyler Hemry
PO #
PlaNet Site or Project ID
GSAP Project ID
☐ CHECK IF NO INCIDENT # APPLIES
DATE: 12/14/2020
PAGE: 1 of 2

SAMPLING COMPANY: AECOM
LOG CODE:
SITE ADDRESS: Street and City: 520 E D Street, Tacoma
State: WA
AECOM Project / Task Number: 60626737
ADDRESS: 111 SW Columbia St Suite 1500 Portland, OR
EDF DELIVERABLE TO (Name, Company, Office Location):
PHONE NO:
E-MAIL:
AECOM Ofhw ID:
PROJECT CONTACT (Hardcopy or PDF Report to): TYLER HEMRY
SAMPLER NAME(S) (Print):
LAB USE ONLY
TELEPHONE: (360) 931-5383
FAX:
Bill To Contact E-MAIL: TYLER.HEMRY@AECOM.COM

TURNAROUND TIME (CALENDAR DAYS):
☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:

DELIVERABLES: ☐ LEVEL 1 ☐ LEVEL 2 ☐ LEVEL 3 ☐ LEVEL 4 ☐ OTHER (SPECIFY)

TEMPERATURE ON RECEIPT C° Cooler #1 Cooler #2 Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :
☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☐ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS
UNIT COST: B260B; NWTPH-Gx; NWTPH-Dx; 8270 SIM
NON-UNIT COST

FIELD NOTES:
TEMPERATURE ON RECEIPT C°
Container PID Readings or Laboratory Notes

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	B260B	NWTPH-Gx	NWTPH-Dx	8270 SIM
	T-2	12/14	10:32	W	3				X³	3	X	X	X	
	HC-111		11:00		3					3	X	X	X	
	RR-5		12:06		3					3	X	X	X	
	RR-2		12:10		3			2		5	X	X	X	X
	FW-5R		13:35		3			2		5	X	X	X	X
	B-34		14:03		3					3	X	X	X	
	B-34-DUP		14:03		3					3	X	X	X	
	FW-14		14:45		3			2		5	X	X	X	X
	RW-5R		15:18		3					3	X	X	X	
	RW-5R-MS		15:18		3					3	X	X	X	

590-14368 Chain of Custody

Therm. ID: IR6 Cor: 0.0° Unc: 0.4°
Cooler Dsc: Lg Blue
Packing: bub
Cust. Seal: Yes ___ No XX
Blue Ice, (Wet), Dry, None
FedEx: ___
UPS: ___
Lab Cour: ___
Other: Client

Relinquished by: (Signature)	Received by: (Signature)	Date	Time
Nam Cem Aecom	Tom Blankenship	12/14/20	1440
	Kinberly	12/15/2020	1410
	Mariadoce	12/16/20	12:54

Version: 14Dec15

2-1-22.3°

Shell Oil Products US Chain Of Custody Record

AECOM

12/22/2020

LAB (LOCATION)
☐ ACCUTEST (_____)
☐ CALSCIENCE (_____)
☑ TESTAMERICA (SPOKANE)
☐ Other (_____)
Lab Vendor # Dropdown

Please Check Appropriate Box:
☐ GW FDG ☐ PIPELINE ☐ RETAIL
☐ CHEMICALS ☐ CONSULTANT ☐ LUBES
☐ TRANSPORTATION ☐ OTHER _____

Print Bill To Contact Name: Tyler Hemry
PO #:
PlaNet Site or Project ID:
GSAP Project ID:
☐ CHECK IF NO INCIDENT # APPLIES
DATE: 12/14/2020
PAGE: 2 of 2

SAMPLING COMPANY: AECOM
LOG CODE:
ADDRESS: 111 SW Columbia Street Suite 1500 Portland, OR
PROJECT CONTACT (Hardcopy or PDF Report to): Tyler Hemry
TELEPHONE: (360) 931-5820 FAX:
Bill To Contact E-MAIL: TYLER.HEMRY@AECOM.COM

SITE ADDRESS: Street and City: 520 E D Street Tacoma
State: WA
AECOM Project / Task Number: 60626737
EDF DELIVERABLE TO (Name, Company, Office Location):
PHONE NO:
E-MAIL:
AECOM Other ID:
SAMPLER NAME(S) (Print):
LAB USE ONLY

TURNAROUND TIME (CALENDAR DAYS):
☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:

DELIVERABLES: ☐ LEVEL 1 ☐ LEVEL 2 ☐ LEVEL 3 ☐ LEVEL 4 ☐ OTHER (SPECIFY) _____

TEMPERATURE ON RECEIPT C°: Cooler #1 Cooler #2 Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :
☐ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☐ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	UNIT COST: 8260B	NWTPH-GX	NWTPH-DX	8270 SIM D	NON-UNIT COST	FIELD NOTES: Container PID Readings or Laboratory Notes
	RW-5R-MSD	12/14	15:18	W	3					3	X	X	X			
	DMW-2	12/14	15:40	↓	3					3	X	X	X			
	B-25	12/14	14:35	↓	3					3	X	X	X			
	TRIP Blank	-	-		2					2	X					

TEMPERATURE ON RECEIPT C°

Relinquished by: (Signature)	Received by: (Signature)	Date	Time
[signature] Aecom	Tom Blankenship	12/14/20	1440
	Kim Rose	12/15/2020	1400
	Mandarade	12/16/20	12:54

Version: 14Dec15

2.1 → 2.3°

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Shell Oil Products US Chain Of Custody Record

AECOM

LAB (LOCATION)
☐ ACCUTEST ( )
☐ ALSCIENCE ( )
☑ TESTAMERICA (SPOKANE)
☐ Other ( )
Lab Vendor # Dropdown

Please Check Appropriate Box:
☐ SGW FDG ☐ PIPELINE ☐ RETAIL
☐ CHEMICALS ☐ CONSULTANT ☐ LUBES
☐ TRANSPORTATION ☐ OTHER

Print Bill To Contact Name: Tyler Hemry
PO #:
PlaNet Site or Project ID:
GSAP Project ID:
☐ CHECK IF NO INCIDENT # APPLIES
DATE: 12/14/2020
PAGE: 1 of 2

SAMPLING COMPANY: AECOM
LOG CODE:
SITE ADDRESS: Street and City: 520 E D Street, Tacoma
State: WA
AECOM Project / Task Number: 60626737
ADDRESS: 111 SW Columbia St Suite 1500 Portland, OR
EDF DELIVERABLE TO (Name, Company, Office Location):
PHONE NO:
E-MAIL:
AECOM Other ID:
PROJECT CONTACT (Hardcopy or PDF Report to): TYLER HEMRY
SAMPLER NAME(S) (Print):
LAB USE ONLY
TELEPHONE: (360) 931-5383
FAX:
Bill To Contact E-MAIL: TYLER.HEMRY@AECOM.COM

TURNAROUND TIME (CALENDAR DAYS):
☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND
☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:
DELIVERABLES: ☐ LEVEL 1 ☐ LEVEL 2 ☐ LEVEL 3 ☐ LEVEL 4 ☐ OTHER (SPECIFY)
TEMPERATURE ON RECEIPT C°: Cooler #1 Cooler #2 Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :
☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☐ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS
UNIT COST: 8260B; NWTPH-Gx; NWTPH-Dx; 8270 SIM
NON-UNIT COST:
FIELD NOTES:
TEMPERATURE ON RECEIPT C°
Container PID Readings or Laboratory Notes

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.
	T-2	12/14	10:32	W	3				X	3
	HC-111		11:00		3					3
	RR-5		12:06		3					3
	RR-2		12:10		3			2		5
	FW-5R		13:35		3			2		5
	B-34		14:03		3					3
	B-34-DUP		14:03		3					3
	FW-14		14:45		3			2		5
	RW-5R		15:18		3					3
	RW-5R-MS		15:18		3					3

590-14368 Chain of Custody

Therm. ID: IR6 Cor: 2.0° Unc: 2.4°
Cooler Dsc: Lg Blue
Packing: bub
Cust. Seal: Yes No
Blue Ice, Wet, Dry, None
FedEx:
UPS:
Lab Cour:
Other: Ultra

Relinquished by: (Signature)	Received by: (Signature)	Date	Time
Nina Cen Aecom	Tom Blankenship	12/14/20	1446
		12/15/2020	1410
	Marvin Todd	12/16/20	12:54

Version: 14Dec15

2-1 → 2.3°

Shell Oil Products US Chain Of Custody Record

AECOM

LAB (LOCATION)
☐ ACCUTEST ( )
☐ CALSCIENCE ( )
☒ TESTAMERICA (SPOKANE)
☐ Other ( )
Lab Vendor # Dropdown

Please Check Appropriate Box:
☐ SGW FDG ☐ PIPELINE ☐ RETAIL
☐ CHEMICALS ☐ CONSULTANT ☐ LUBES
☐ TRANSPORTATION ☐ OTHER

Print Bill To Contact Name: Tyler Hemry
PO #:
PlaNet Site or Project ID:
GSAP Project ID:
☐ CHECK IF NO INCIDENT # APPLIES
DATE: 12/14/2020
PAGE: 2 of 2

SAMPLING COMPANY: AECOM
LOG CODE:
SITE ADDRESS: Street and City: 520 E D Street, Tacoma
State: WA
AECOM Project / Task Number: 60626737
ADDRESS: 111 SW Columbia Street Suite 1500 Portland, OR
EDF DELIVERABLE TO (Name, Company, Office Location):
PHONE NO:
E-MAIL:
AECOM Other ID:
PROJECT CONTACT (Hardcopy or PDF Report to): Tyler Hemry
TELEPHONE: (360) 931-5201
FAX:
Bill To Contact E-MAIL: TYLER.HEMRY@AECOM.com
SAMPLER NAME(S) (Print):
LAB USE ONLY

TURNAROUND TIME (CALENDAR DAYS):
☒ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:

DELIVERABLES: ☐ LEVEL 1 ☐ LEVEL 2 ☐ LEVEL 3 ☐ LEVEL 4 ☐ OTHER (SPECIFY)

TEMPERATURE ON RECEIPT C° Cooler #1 Cooler #2 Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :
☐ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☐ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS

UNIT COST				NON-UNIT COST	FIELD NOTES:
8260 B	NWTPH-GX	NWTPH-Dx	8270 SIM D		TEMPERATURE ON RECEIPT C°

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	8260 B	NWTPH-GX	NWTPH-Dx	8270 SIM D	Container PID Readings or Laboratory Notes
	RW-5R-MSD	12/14	15:18	W	3					3	X	X	X		
	DMW-2	12/14	15:40		3					3	X	X	X		
	B-25	12/14	14:35	↓	3					3	X	X	X		
	TRIP BLANK	–	–		2					2	X				

Relinquished by: (Signature)	Received by: (Signature)	Date	Time
[signature] AECOM	Tom Blankinship	12/14/20	1440
	Kim Rose	12/15/2020	1400
	Mandarae	12/16/20	12:54

Version: 14Dec15

2.1 → 2.3°

12/22/2020

Login Sample Receipt Checklist

Client: AECOM

Job Number: 590-14368-1

Login Number: 14368
List Number: 1
Creator: O'Toole, Maria C

List Source: Eurofins TestAmerica, Spokane

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	1525592
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Not present
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	No analysis requiring residual chlorine check assigned.

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins TestAmerica, Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

Laboratory Job ID: 590-14369-1
Client Project/Site: Tacoma D St Terminal-Phillips 66

For:
AECOM
111 SW Columbia Street, Suite 1500
Portland, Oregon 97201

Attn: Mr. Tyler Hemry

Randee Arrington

Authorized for release by:
12/22/2020 10:14:58 AM

Randee Arrington, Project Manager II
(509)924-9200
Randee.Arrington@Eurofinset.com

Table of Contents

Case Narrative

Client: AECOM
Job ID: 590-14369-1
Project/Site: Tacoma D St Terminal-Phillips 66

Job ID: 590-14369-1

Laboratory: Eurofins TestAmerica, Spokane

Narrative

Receipt
The samples were received on 12/16/2020 12:28 PM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.2º C.

Receipt Exceptions

The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): FW-13 (590-14369-1). The container labels for the 250ml glass amber container and one voa vial list FW-15, while the COC lists FW-13. The sample was logged in according to the COC.

The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): FW-13-DUP (590-14369-2). The container label for the 250ml glass amber container lists FW-15-Dup, while the COC lists FW-13-Dup. The sample was logged in according to the COC.

GC/MS VOA
Method 8260D: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 590-30022.

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

GC Semi VOA
Method NWTPH-Dx: Detected hydrocarbons in the diesel range appear to be due to heavily weathered diesel in the following samples: FW-13 (590-14369-1), FW-13-DUP (590-14369-2), E-22 (590-14369-4) and RR-1 (590-14369-6).

Method NWTPH-Dx: Detected hydrocarbons in the diesel range appear to be due to gasoline overlap as well as heavily weathered diesel in the following samples: B-31 (590-14369-3) and RW-8 (590-14369-5).

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

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

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

Sample Summary

Client: AECOM
Project/Site: Tacoma D St Terminal-Phillips 66

Job ID: 590-14369-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
590-14369-1	FW-13	Water	12/15/20 09:13	12/16/20 12:28	
590-14369-2	FW-13-DUP	Water	12/15/20 09:13	12/16/20 12:28	
590-14369-3	B-31	Water	12/15/20 09:20	12/16/20 12:28	
590-14369-4	E-22	Water	12/15/20 10:55	12/16/20 12:28	
590-14369-5	RW-8	Water	12/15/20 10:59	12/16/20 12:28	
590-14369-6	RR-1	Water	12/15/20 12:09	12/16/20 12:28	
590-14369-7	RR-4	Water	12/15/20 12:15	12/16/20 12:28	
590-14369-8	Trip Blank	Water	12/15/20 00:00	12/16/20 12:28	

Method Summary

Client: AECOM
Job ID: 590-14369-1
Project/Site: Tacoma D St Terminal-Phillips 66

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	TAL SPK
NWTPH-Gx	Northwest - Volatile Petroleum Products (GC/MS)	NWTPH	TAL SPK
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	TAL SPK
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL SPK
5030C	Purge and Trap	SW846	TAL SPK

Protocol References:

NWTPH = Northwest Total Petroleum Hydrocarbon

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

Laboratory References:

TAL SPK = Eurofins TestAmerica, Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Detection Summary

Client: AECOM
Job ID: 590-14369-1
Project/Site: Tacoma D St Terminal-Phillips 66

Client Sample ID: FW-13 — Lab Sample ID: 590-14369-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Gasoline	72	J	150	70	ug/L	1		NWTPH-Gx	Total/NA
Diesel Range Organics (DRO) (C10-C25)	0.27		0.27	0.12	mg/L	1		NWTPH-Dx	Total/NA

Client Sample ID: FW-13-DUP — Lab Sample ID: 590-14369-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics (DRO) (C10-C25)	0.22	J	0.26	0.12	mg/L	1		NWTPH-Dx	Total/NA

Client Sample ID: B-31 — Lab Sample ID: 590-14369-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.90		0.40	0.093	ug/L	1		8260D	Total/NA
Ethylbenzene	13		1.0	0.20	ug/L	1		8260D	Total/NA
m,p-Xylene	12		2.0	0.28	ug/L	1		8260D	Total/NA
o-Xylene	1.1		1.0	0.16	ug/L	1		8260D	Total/NA
Toluene	3.5		1.0	0.31	ug/L	1		8260D	Total/NA
Xylenes, Total	13		3.0	0.44	ug/L	1		8260D	Total/NA
Gasoline	1000		150	70	ug/L	1		NWTPH-Gx	Total/NA
Diesel Range Organics (DRO) (C10-C25)	1.3		0.23	0.11	mg/L	1		NWTPH-Dx	Total/NA
Residual Range Organics (RRO) (C25-C36)	0.15	J	0.39	0.12	mg/L	1		NWTPH-Dx	Total/NA

Client Sample ID: E-22 — Lab Sample ID: 590-14369-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.25	J	0.40	0.093	ug/L	1		8260D	Total/NA
Ethylbenzene	25		1.0	0.20	ug/L	1		8260D	Total/NA
m,p-Xylene	0.35	J	2.0	0.28	ug/L	1		8260D	Total/NA
Gasoline	110	J	150	70	ug/L	1		NWTPH-Gx	Total/NA
Diesel Range Organics (DRO) (C10-C25)	0.28		0.23	0.11	mg/L	1		NWTPH-Dx	Total/NA

Client Sample ID: RW-8 — Lab Sample ID: 590-14369-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Gasoline	190		150	70	ug/L	1		NWTPH-Gx	Total/NA
Diesel Range Organics (DRO) (C10-C25)	0.83		0.26	0.12	mg/L	1		NWTPH-Dx	Total/NA
Residual Range Organics (RRO) (C25-C36)	0.23	J	0.43	0.13	mg/L	1		NWTPH-Dx	Total/NA

Client Sample ID: RR-1 — Lab Sample ID: 590-14369-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Gasoline	97	J	150	70	ug/L	1		NWTPH-Gx	Total/NA
Diesel Range Organics (DRO) (C10-C25)	0.14	J	0.26	0.12	mg/L	1		NWTPH-Dx	Total/NA

Client Sample ID: RR-4 — Lab Sample ID: 590-14369-7

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Spokane

Detection Summary

Client: AECOM
Job ID: 590-14369-1
Project/Site: Tacoma D St Terminal-Phillips 66

Client Sample ID: Trip Blank
Lab Sample ID: 590-14369-8

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: FW-13
Lab Sample ID: 590-14369-1
Date Collected: 12/15/20 09:13
Matrix: Water
Date Received: 12/16/20 12:28

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.093	ug/L			12/17/20 17:56	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/17/20 17:56	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/17/20 17:56	1
o-Xylene	ND		1.0	0.16	ug/L			12/17/20 17:56	1
Toluene	ND		1.0	0.31	ug/L			12/17/20 17:56	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/17/20 17:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*80 - 120*		*12/17/20 17:56*	*1*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*		*12/17/20 17:56*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 120*		*12/17/20 17:56*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*12/17/20 17:56*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**72**	**J**	150	70	ug/L			12/17/20 17:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*68.7 - 141*		*12/17/20 17:56*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	**0.27**		0.27	0.12	mg/L		12/21/20 10:53	12/21/20 14:07	1
Residual Range Organics (RRO) (C25-C36)	ND		0.44	0.13	mg/L		12/21/20 10:53	12/21/20 14:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*108*		*50 - 150*	*12/21/20 10:53*	*12/21/20 14:07*	*1*
n-Triacontane-d62	*114*		*50 - 150*	*12/21/20 10:53*	*12/21/20 14:07*	*1*

Client Sample ID: FW-13-DUP
Lab Sample ID: 590-14369-2
Date Collected: 12/15/20 09:13
Matrix: Water
Date Received: 12/16/20 12:28

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.093	ug/L			12/17/20 18:18	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/17/20 18:18	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/17/20 18:18	1
o-Xylene	ND		1.0	0.16	ug/L			12/17/20 18:18	1
Toluene	ND		1.0	0.31	ug/L			12/17/20 18:18	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/17/20 18:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*80 - 120*		*12/17/20 18:18*	*1*
4-Bromofluorobenzene (Surr)	*107*		*80 - 120*		*12/17/20 18:18*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 120*		*12/17/20 18:18*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*12/17/20 18:18*	*1*

Client Sample ID: FW-13-DUP
Lab Sample ID: 590-14369-2
Date Collected: 12/15/20 09:13
Matrix: Water
Date Received: 12/16/20 12:28

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150	70	ug/L			12/17/20 18:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*68.7 - 141*		*12/17/20 18:18*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	**0.22**	**J**	0.26	0.12	mg/L		12/21/20 10:53	12/21/20 14:28	1
Residual Range Organics (RRO) (C25-C36)	ND		0.43	0.13	mg/L		12/21/20 10:53	12/21/20 14:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*87*		*50 - 150*	*12/21/20 10:53*	*12/21/20 14:28*	*1*
n-Triacontane-d62	*94*		*50 - 150*	*12/21/20 10:53*	*12/21/20 14:28*	*1*

Client Sample ID: B-31
Lab Sample ID: 590-14369-3
Date Collected: 12/15/20 09:20
Matrix: Water
Date Received: 12/16/20 12:28

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.90**		0.40	0.093	ug/L			12/17/20 18:39	1
Ethylbenzene	**13**		1.0	0.20	ug/L			12/17/20 18:39	1
m,p-Xylene	**12**		2.0	0.28	ug/L			12/17/20 18:39	1
o-Xylene	**1.1**		1.0	0.16	ug/L			12/17/20 18:39	1
Toluene	**3.5**		1.0	0.31	ug/L			12/17/20 18:39	1
Xylenes, Total	**13**		3.0	0.44	ug/L			12/17/20 18:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*80 - 120*		*12/17/20 18:39*	*1*
4-Bromofluorobenzene (Surr)	*107*		*80 - 120*		*12/17/20 18:39*	*1*
Dibromofluoromethane (Surr)	*87*		*80 - 120*		*12/17/20 18:39*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*12/17/20 18:39*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**1000**		150	70	ug/L			12/17/20 18:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*68.7 - 141*		*12/17/20 18:39*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	**1.3**		0.23	0.11	mg/L		12/21/20 10:53	12/21/20 14:48	1
Residual Range Organics (RRO) (C25-C36)	**0.15**	**J**	0.39	0.12	mg/L		12/21/20 10:53	12/21/20 14:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*95*		*50 - 150*	*12/21/20 10:53*	*12/21/20 14:48*	*1*
n-Triacontane-d62	*102*		*50 - 150*	*12/21/20 10:53*	*12/21/20 14:48*	*1*

Client Sample ID: E-22
Lab Sample ID: 590-14369-4
Date Collected: 12/15/20 10:55
Matrix: Water
Date Received: 12/16/20 12:28

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.25**	**J**	0.40	0.093	ug/L			12/17/20 19:01	1
Ethylbenzene	**25**		1.0	0.20	ug/L			12/17/20 19:01	1
m,p-Xylene	**0.35**	**J**	2.0	0.28	ug/L			12/17/20 19:01	1
o-Xylene	ND		1.0	0.16	ug/L			12/17/20 19:01	1
Toluene	ND		1.0	0.31	ug/L			12/17/20 19:01	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/17/20 19:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*80 - 120*		*12/17/20 19:01*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*12/17/20 19:01*	*1*
Dibromofluoromethane (Surr)	*94*		*80 - 120*		*12/17/20 19:01*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*12/17/20 19:01*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**110**	**J**	150	70	ug/L			12/17/20 19:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*68.7 - 141*		*12/17/20 19:01*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	**0.28**		0.23	0.11	mg/L		12/21/20 10:53	12/21/20 15:09	1
Residual Range Organics (RRO) (C25-C36)	ND		0.39	0.12	mg/L		12/21/20 10:53	12/21/20 15:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*88*		*50 - 150*	*12/21/20 10:53*	*12/21/20 15:09*	*1*
n-Triacontane-d62	*93*		*50 - 150*	*12/21/20 10:53*	*12/21/20 15:09*	*1*

Client Sample ID: RW-8
Lab Sample ID: 590-14369-5
Date Collected: 12/15/20 10:59
Matrix: Water
Date Received: 12/16/20 12:28

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.093	ug/L			12/17/20 19:22	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/17/20 19:22	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/17/20 19:22	1
o-Xylene	ND		1.0	0.16	ug/L			12/17/20 19:22	1
Toluene	ND		1.0	0.31	ug/L			12/17/20 19:22	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/17/20 19:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*80 - 120*		*12/17/20 19:22*	*1*
4-Bromofluorobenzene (Surr)	*108*		*80 - 120*		*12/17/20 19:22*	*1*
Dibromofluoromethane (Surr)	*97*		*80 - 120*		*12/17/20 19:22*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*12/17/20 19:22*	*1*

Client Sample ID: RW-8
Lab Sample ID: 590-14369-5
Date Collected: 12/15/20 10:59
Matrix: Water
Date Received: 12/16/20 12:28

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**190**		150	70	ug/L			12/17/20 19:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*68.7 - 141*		*12/17/20 19:22*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	**0.83**		0.26	0.12	mg/L		12/21/20 10:53	12/21/20 15:29	1
Residual Range Organics (RRO) (C25-C36)	**0.23**	**J**	0.43	0.13	mg/L		12/21/20 10:53	12/21/20 15:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*80*		*50 - 150*	*12/21/20 10:53*	*12/21/20 15:29*	*1*
n-Triacontane-d62	*87*		*50 - 150*	*12/21/20 10:53*	*12/21/20 15:29*	*1*

Client Sample ID: RR-1
Lab Sample ID: 590-14369-6
Date Collected: 12/15/20 12:09
Matrix: Water
Date Received: 12/16/20 12:28

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.093	ug/L			12/17/20 19:44	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/17/20 19:44	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/17/20 19:44	1
o-Xylene	ND		1.0	0.16	ug/L			12/17/20 19:44	1
Toluene	ND		1.0	0.31	ug/L			12/17/20 19:44	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/17/20 19:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*80 - 120*		*12/17/20 19:44*	*1*
4-Bromofluorobenzene (Surr)	*108*		*80 - 120*		*12/17/20 19:44*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 120*		*12/17/20 19:44*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*		*12/17/20 19:44*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**97**	**J**	150	70	ug/L			12/17/20 19:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*68.7 - 141*		*12/17/20 19:44*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	**0.14**	**J**	0.26	0.12	mg/L		12/21/20 10:53	12/21/20 15:49	1
Residual Range Organics (RRO) (C25-C36)	ND		0.43	0.13	mg/L		12/21/20 10:53	12/21/20 15:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*96*		*50 - 150*	*12/21/20 10:53*	*12/21/20 15:49*	*1*
n-Triacontane-d62	*101*		*50 - 150*	*12/21/20 10:53*	*12/21/20 15:49*	*1*

Client Sample ID: RR-4
Lab Sample ID: 590-14369-7
Date Collected: 12/15/20 12:15
Matrix: Water
Date Received: 12/16/20 12:28

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.093	ug/L			12/17/20 20:05	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/17/20 20:05	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/17/20 20:05	1
o-Xylene	ND		1.0	0.16	ug/L			12/17/20 20:05	1
Toluene	ND		1.0	0.31	ug/L			12/17/20 20:05	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/17/20 20:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*80 - 120*		*12/17/20 20:05*	*1*
4-Bromofluorobenzene (Surr)	*108*		*80 - 120*		*12/17/20 20:05*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 120*		*12/17/20 20:05*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*12/17/20 20:05*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150	70	ug/L			12/17/20 20:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*68.7 - 141*		*12/17/20 20:05*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.22	0.10	mg/L		12/21/20 10:53	12/21/20 16:09	1
Residual Range Organics (RRO) (C25-C36)	ND		0.37	0.11	mg/L		12/21/20 10:53	12/21/20 16:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*99*		*50 - 150*	*12/21/20 10:53*	*12/21/20 16:09*	*1*
n-Triacontane-d62	*105*		*50 - 150*	*12/21/20 10:53*	*12/21/20 16:09*	*1*

Client Sample ID: Trip Blank
Lab Sample ID: 590-14369-8
Date Collected: 12/15/20 00:00
Matrix: Water
Date Received: 12/16/20 12:28

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.093	ug/L			12/17/20 20:49	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/17/20 20:49	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/17/20 20:49	1
o-Xylene	ND		1.0	0.16	ug/L			12/17/20 20:49	1
Toluene	ND		1.0	0.31	ug/L			12/17/20 20:49	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/17/20 20:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*80 - 120*		*12/17/20 20:49*	*1*
4-Bromofluorobenzene (Surr)	*111*		*80 - 120*		*12/17/20 20:49*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*		*12/17/20 20:49*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*12/17/20 20:49*	*1*

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

Lab Sample ID: MB 590-30022/6
Matrix: Water
Analysis Batch: 30022

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.093	ug/L			12/17/20 12:53	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/17/20 12:53	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/17/20 12:53	1
o-Xylene	ND		1.0	0.16	ug/L			12/17/20 12:53	1
Toluene	ND		1.0	0.31	ug/L			12/17/20 12:53	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/17/20 12:53	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*80 - 120*		*12/17/20 12:53*	*1*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*		*12/17/20 12:53*	*1*
Dibromofluoromethane (Surr)	*94*		*80 - 120*		*12/17/20 12:53*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*		*12/17/20 12:53*	*1*

Lab Sample ID: LCS 590-30022/1003
Matrix: Water
Analysis Batch: 30022

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	10.0	9.69		ug/L		97	80 - 126
Ethylbenzene	10.0	10.0		ug/L		100	80 - 128
m,p-Xylene	10.0	10.3		ug/L		103	80 - 127
o-Xylene	10.0	9.63		ug/L		96	80 - 126
Toluene	10.0	10.2		ug/L		102	80 - 129

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*92*		*80 - 120*
4-Bromofluorobenzene (Surr)	*109*		*80 - 120*
Dibromofluoromethane (Surr)	*91*		*80 - 120*
Toluene-d8 (Surr)	*102*		*80 - 120*

Lab Sample ID: LCSD 590-30022/4
Matrix: Water
Analysis Batch: 30022

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	10.0	10.4		ug/L		104	80 - 126	7	18
Ethylbenzene	10.0	11.1		ug/L		111	80 - 128	10	18
m,p-Xylene	10.0	11.2		ug/L		112	80 - 127	8	18
o-Xylene	10.0	10.6		ug/L		106	80 - 126	10	17
Toluene	10.0	11.3		ug/L		113	80 - 129	10	18

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*94*		*80 - 120*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*
Dibromofluoromethane (Surr)	*91*		*80 - 120*
Toluene-d8 (Surr)	*103*		*80 - 120*

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

Lab Sample ID: MB 590-30023/6
Matrix: Water
Analysis Batch: 30023

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150	70	ug/L			12/17/20 12:53	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*68.7 - 141*		*12/17/20 12:53*	*1*

Lab Sample ID: LCS 590-30023/1005
Matrix: Water
Analysis Batch: 30023

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline			1000	887		ug/L		89	80 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*68.7 - 141*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 590-30059/1-A
Matrix: Water
Analysis Batch: 30055

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30059

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.24	0.11	mg/L		12/21/20 10:53	12/21/20 12:26	1
Residual Range Organics (RRO) (C25-C36)	ND		0.40	0.12	mg/L		12/21/20 10:53	12/21/20 12:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*86*		*50 - 150*	*12/21/20 10:53*	*12/21/20 12:26*	*1*
n-Triacontane-d62	*91*		*50 - 150*	*12/21/20 10:53*	*12/21/20 12:26*	*1*

Lab Sample ID: LCS 590-30059/2-A
Matrix: Water
Analysis Batch: 30055

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 30059

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics (DRO) (C10-C25)			1.60	1.31		mg/L		82	50 - 150		
Residual Range Organics (RRO) (C25-C36)			1.60	1.40		mg/L		87	50 - 150		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*100*		*50 - 150*
n-Triacontane-d62	*105*		*50 - 150*

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

Lab Sample ID: LCSD 590-30059/3-A
Matrix: Water
Analysis Batch: 30055

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 30059

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics (DRO) (C10-C25)			1.60	1.28		mg/L		80	50 - 150	2	25
Residual Range Organics (RRO) (C25-C36)			1.60	1.36		mg/L		85	50 - 150	3	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl	*94*		*50 - 150*
n-Triacontane-d62	*97*		*50 - 150*

QC Association Summary

Client: AECOM
Job ID: 590-14369-1
Project/Site: Tacoma D St Terminal-Phillips 66

GC/MS VOA

Analysis Batch: 30022

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
590-14369-1	FW-13	Total/NA	Water	8260D	
590-14369-2	FW-13-DUP	Total/NA	Water	8260D	
590-14369-3	B-31	Total/NA	Water	8260D	
590-14369-4	E-22	Total/NA	Water	8260D	
590-14369-5	RW-8	Total/NA	Water	8260D	
590-14369-6	RR-1	Total/NA	Water	8260D	
590-14369-7	RR-4	Total/NA	Water	8260D	
590-14369-8	Trip Blank	Total/NA	Water	8260D	
MB 590-30022/6	Method Blank	Total/NA	Water	8260D	
LCS 590-30022/1003	Lab Control Sample	Total/NA	Water	8260D	
LCSD 590-30022/4	Lab Control Sample Dup	Total/NA	Water	8260D	

Analysis Batch: 30023

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
590-14369-1	FW-13	Total/NA	Water	NWTPH-Gx	
590-14369-2	FW-13-DUP	Total/NA	Water	NWTPH-Gx	
590-14369-3	B-31	Total/NA	Water	NWTPH-Gx	
590-14369-4	E-22	Total/NA	Water	NWTPH-Gx	
590-14369-5	RW-8	Total/NA	Water	NWTPH-Gx	
590-14369-6	RR-1	Total/NA	Water	NWTPH-Gx	
590-14369-7	RR-4	Total/NA	Water	NWTPH-Gx	
MB 590-30023/6	Method Blank	Total/NA	Water	NWTPH-Gx	
LCS 590-30023/1005	Lab Control Sample	Total/NA	Water	NWTPH-Gx	

GC Semi VOA

Analysis Batch: 30055

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
590-14369-1	FW-13	Total/NA	Water	NWTPH-Dx	30059
590-14369-2	FW-13-DUP	Total/NA	Water	NWTPH-Dx	30059
590-14369-3	B-31	Total/NA	Water	NWTPH-Dx	30059
590-14369-4	E-22	Total/NA	Water	NWTPH-Dx	30059
590-14369-5	RW-8	Total/NA	Water	NWTPH-Dx	30059
590-14369-6	RR-1	Total/NA	Water	NWTPH-Dx	30059
590-14369-7	RR-4	Total/NA	Water	NWTPH-Dx	30059
MB 590-30059/1-A	Method Blank	Total/NA	Water	NWTPH-Dx	30059
LCS 590-30059/2-A	Lab Control Sample	Total/NA	Water	NWTPH-Dx	30059
LCSD 590-30059/3-A	Lab Control Sample Dup	Total/NA	Water	NWTPH-Dx	30059

Prep Batch: 30059

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
590-14369-1	FW-13	Total/NA	Water	3510C	
590-14369-2	FW-13-DUP	Total/NA	Water	3510C	
590-14369-3	B-31	Total/NA	Water	3510C	
590-14369-4	E-22	Total/NA	Water	3510C	
590-14369-5	RW-8	Total/NA	Water	3510C	
590-14369-6	RR-1	Total/NA	Water	3510C	
590-14369-7	RR-4	Total/NA	Water	3510C	
MB 590-30059/1-A	Method Blank	Total/NA	Water	3510C	
LCS 590-30059/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 590-30059/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Lab Chronicle

Client: AECOM
Job ID: 590-14369-1
Project/Site: Tacoma D St Terminal-Phillips 66

Client Sample ID: FW-13
Lab Sample ID: 590-14369-1
Date Collected: 12/15/20 09:13
Matrix: Water
Date Received: 12/16/20 12:28

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	30022	12/17/20 17:56	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	30023	12/17/20 17:56	JSP	TAL SPK
Total/NA	Prep	3510C			225.3 mL	2 mL	30059	12/21/20 10:53	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			30055	12/21/20 14:07	NMI	TAL SPK

Client Sample ID: FW-13-DUP
Lab Sample ID: 590-14369-2
Date Collected: 12/15/20 09:13
Matrix: Water
Date Received: 12/16/20 12:28

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	30022	12/17/20 18:18	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	30023	12/17/20 18:18	JSP	TAL SPK
Total/NA	Prep	3510C			229.9 mL	2 mL	30059	12/21/20 10:53	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			30055	12/21/20 14:28	NMI	TAL SPK

Client Sample ID: B-31
Lab Sample ID: 590-14369-3
Date Collected: 12/15/20 09:20
Matrix: Water
Date Received: 12/16/20 12:28

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	30022	12/17/20 18:39	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	30023	12/17/20 18:39	JSP	TAL SPK
Total/NA	Prep	3510C			258 mL	2 mL	30059	12/21/20 10:53	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			30055	12/21/20 14:48	NMI	TAL SPK

Client Sample ID: E-22
Lab Sample ID: 590-14369-4
Date Collected: 12/15/20 10:55
Matrix: Water
Date Received: 12/16/20 12:28

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	30022	12/17/20 19:01	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	30023	12/17/20 19:01	JSP	TAL SPK
Total/NA	Prep	3510C			259 mL	2 mL	30059	12/21/20 10:53	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			30055	12/21/20 15:09	NMI	TAL SPK

Client Sample ID: RW-8
Lab Sample ID: 590-14369-5
Date Collected: 12/15/20 10:59
Matrix: Water
Date Received: 12/16/20 12:28

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	30022	12/17/20 19:22	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	30023	12/17/20 19:22	JSP	TAL SPK
Total/NA	Prep	3510C			232 mL	2 mL	30059	12/21/20 10:53	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			30055	12/21/20 15:29	NMI	TAL SPK

Lab Chronicle

Client: AECOM
Job ID: 590-14369-1
Project/Site: Tacoma D St Terminal-Phillips 66

Client Sample ID: RR-1
Lab Sample ID: 590-14369-6
Date Collected: 12/15/20 12:09
Matrix: Water
Date Received: 12/16/20 12:28

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	30022	12/17/20 19:44	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	30023	12/17/20 19:44	JSP	TAL SPK
Total/NA	Prep	3510C			230.4 mL	2 mL	30059	12/21/20 10:53	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			30055	12/21/20 15:49	NMI	TAL SPK

Client Sample ID: RR-4
Lab Sample ID: 590-14369-7
Date Collected: 12/15/20 12:15
Matrix: Water
Date Received: 12/16/20 12:28

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	30022	12/17/20 20:05	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	30023	12/17/20 20:05	JSP	TAL SPK
Total/NA	Prep	3510C			268.2 mL	2 mL	30059	12/21/20 10:53	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			30055	12/21/20 16:09	NMI	TAL SPK

Client Sample ID: Trip Blank
Lab Sample ID: 590-14369-8
Date Collected: 12/15/20 00:00
Matrix: Water
Date Received: 12/16/20 12:28

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	30022	12/17/20 20:49	JSP	TAL SPK

Laboratory References:
TAL SPK = Eurofins TestAmerica, Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Definitions/Glossary

Client: AECOM
Job ID: 590-14369-1
Project/Site: Tacoma D St Terminal-Phillips 66

Qualifiers

GC/MS VOA

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

GC Semi VOA

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

Glossary

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

Accreditation/Certification Summary

Client: AECOM
Job ID: 590-14369-1
Project/Site: Tacoma D St Terminal-Phillips 66

Laboratory: Eurofins TestAmerica, Spokane

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Washington	State	C569	01-06-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
NWTPH-Dx	3510C	Water	Residual Range Organics (RRO) (C25-C36)

TestAmerica Spokane
11922 E. 1st Ave.

Spokane, WA 99206
phone 509.924.9200 fax

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

12/22/2020

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: ~~Craig Riley~~ Tyler Henry	Site Contact: Mark Tauscher	Date: 12/15/2020	COC No:
AECOM	Tel/Fax: 503-478-2766	Lab Contact: Randee Arrington	Carrier:	1 of 1 COCs
111 SW Columbia, Suite 1500	**Analysis Turnaround Time**			Sampler:
Portland, Oregon 97201	☐ CALENDAR DAYS ☑ WORKING DAYS			**For Lab Use Only:**
503-222-7200 Phone	TAT if different from Below _____			Walk-in Client:
Email: craig.riley@aecom.com	☑ 2 weeks			Lab Sampling:
Project Name: D Street Terminal Tacoma, WA	☐ 1 week			
Site: P66 Terminal	☐ 2 days			Job / SDG No.:
P O # 60483190	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	8260B BTEX	NWTPH-Gx	NWTPH-Dx	300.0 Sulfate	300.0 Nitrate (48 Hr. Hold Time)	6020 Dissolved Lead and Mn- Lab Fi	310.1 Alkalinity	6020 Total Lead	Naphalenes SIMPAH8270	Sample Specific Notes:
FW-13	12/15/20	09:13	G	W	3	N	N	X	X	X							
FW-13-DUP	12/15/20	09:13	G	W	3	N	N	X	X	X							
B-31	12/15/20	09:20	G	W	3	N	N	X	X	X							
E-22	12/15/20	10:55	G	W	3	N	N	X	X	X							
RW-8	12/15/20	10:59	G	W	3	N	N	X	X	X							
RR-1	12/15/20	12:09	G	W	3	N	N	X	X	X							
RR-4	12/15/20	12:15	G	W	3	N	N	X	X	X							
Trip blank	—	—	—	W	1	N	N	X									

590-14369 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments: Please Contact ~~Craig Riley~~ with questions
Tyler Henry

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: 2.0 Corr'd: 2.2 Therm ID No.: IR004

Relinquished by:	Company: AECOM	Date/Time: 14:30 12/15	Received by:	Company: TASEA	Date/Time: 12-15-20 1432
Relinquished by:	Company: EJA	Date/Time: 12/16/2020 1455	Received by: Maria Woode	Company: TASEA	Date/Time: 12/16/20 12:29
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Form No. CA-C-WI-002, Rev. 4.2, dated 04/02/2013

Login Sample Receipt Checklist

Client: AECOM

Job Number: 590-14369-1

Login Number: 14369
List Number: 1
Creator: O'Toole, Maria C

List Source: Eurofins TestAmerica, Spokane

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	484344
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Not present
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

APPENDIX B
Data Review

AECOM
1111 3rd Ave
Suite 1600
Seattle, WA 98101
www.aecom.com

206 438 2700 tel
866 495 5288 fax

Memorandum

To	Renee Knecht, Project Manager	Info	FINAL
Subject	Summary Data Quality Review Phillips 66 – D Street Terminal, Tacoma Washington 2020 Fourth Quarter Groundwater Sampling		
From	Lucy Panteleeff, Chemist Jennifer B. Garner, Chemist		
Date	May 4, 2021		

The summary data quality review of 18 groundwater samples and 2 trip blanks collected on December 14 and December 15, 2020, has been completed. The samples were analyzed at TestAmerica Laboratories, Incorporated (TA) located in Spokane, Washington for benzene, toluene, ethylbenzene, and total xylenes (BTEX) by EPA Method 8260D; total petroleum hydrocarbons (TPHs) by Washington State Department of Ecology (Ecology) Methods NWTPH-Gx (gasoline-range TPH) and NWTPH-Dx (diesel-range and residual-range TPH); and/or naphthalenes by EPA Method 8270E modified by selected ion monitoring (SIM). The laboratory provided a summary report containing sample results and associated quality assurance (QA) and quality control (QC) data for all samples. The following samples are associated with TA laboratory groups 590-14368-1 and 590-14369-1:

Sample ID	Laboratory Group	Laboratory ID	Requested Analyses
T-2	590-14368-1	590-14368-1	BTEX, TPH-Gx, TPH-Dx
HC-111		590-14368-2	BTEX, TPH-Gx, TPH-Dx
RR-5		590-14368-3	BTEX, TPH-Gx, TPH-Dx
RR-2		590-14368-4	BTEX, TPH-Gx, TPH-Dx, Naphthalenes
FW-5R		590-14368-5	BTEX, TPH-Gx, TPH-Dx, Naphthalenes
B-34		590-14368-6	BTEX, TPH-Gx, TPH-Dx
B-34-DUP (Field duplicate of B-34)		590-14368-7	BTEX, TPH-Gx, TPH-Dx
FW-14		590-14368-8	BTEX, TPH-Gx, TPH-Dx, Naphthalenes
RW-5R		590-14368-9	BTEX, TPH-Gx, TPH-Dx
DMW-2		590-14368-10	BTEX, TPH-Gx, TPH-Dx
B-25		590-14368-11	BTEX, TPH-Gx, TPH-Dx
Trip Blank		590-14368-12	BTEX
FW-13	590-14369-1	590-14369-1	BTEX, TPH-Gx, TPH-Dx
FW-13-DUP (Field duplicate of FW-13)		590-14369-2	BTEX, TPH-Gx, TPH-Dx
B-31		590-14369-3	BTEX, TPH-Gx, TPH-Dx
E-22		590-14369-4	BTEX, TPH-Gx, TPH-Dx
RW-8		590-14369-5	BTEX, TPH-Gx, TPH-Dx
RR-1		590-14369-6	BTEX, TPH-Gx, TPH-Dx
RR-4		590-14369-7	BTEX, TPH-Gx, TPH-Dx
Trip Blank		590-14369-8	BTEX

AECOM

Summary Data Quality Review
Phillips 66 - D Street Terminal, Tacoma, Washington
2020 Fourth Quarter Groundwater Sampling
Laboratory Groups: 590-14368-1 and 590-14369-1

Data were evaluated based on validation criteria established in the *National Functional Guidelines for Organic Superfund Methods Data Review*, dated January 2017, as applied to the reported methodology.

The following data components were reviewed during the limited data validation procedure for compliance with method specific or laboratory control charted criteria where appropriate: chain of custody forms, holding times, field/method/trip/instrument blanks, surrogate recoveries, matrix spike/matrix spike duplicate recoveries, laboratory and field duplicate results, laboratory control sample/laboratory control sample duplicate recoveries, reporting limits, and electronic data deliverables.

A summary of qualifiers that may be assigned to results in this laboratory group are included in Table 1. Qualifiers that may be assigned to results include:

- U - The analyte was analyzed for but was not detected above the reported sample quantitation limit.
- J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R - The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.
- DNR - Do Not Report. Another result is available that is more reliable or appropriate.

Sample Receipt

Upon receipt by the laboratory, the sample jar information was compared to the chain-of-custody (COC) and the cooler temperatures were recorded. The coolers were received at temperatures within the EPA recommended temperature limits of greater than 0°C and less than or equal to 6°C. The laboratory noted that some containers for FW-13 and FW-13-DUP were labeled FW-15 and FW-15-DUP. The laboratory logged these samples as identified on the COC.

Organic Analyses

Samples were analyzed for BTEX, TPHs, and/or naphthalenes by the methods identified in the introduction of this report.

1. Holding Times – Acceptable

2. Blanks – Acceptable except as noted below:

   Naphthalenes by EPA Method 8270D-SIM – 1-Methylnaphthalene (0.0295 ug/L) was detected in the method blank associated with extraction batch 30049 at a concentration between the method detection limit (MDL) and the reporting limit. 1-Methylnaphthalene was reported at a concentration between the MDL and the reporting limit in FW-14; therefore, the

result for 1-methylnaphthalene in FW-14 was qualified as not detected and flagged 'U' at the reporting limit.

3. Surrogates – Acceptable

4. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) – Acceptable

5. Matrix Spike/Matrix Spike Duplicate (MS/MSD) – Acceptable except as noted below:

   BTEX by Method 8260D – An MS/MSD was performed using RW-5R. The percent recovery for ethylbenzene in the MSD (148%) exceeded the control limits of 80-128%. The percent recovery for ethylbenzene in the MS and the relative percent difference (RPD) for the MS/MSD pair were acceptable; therefore, data were not qualified for ethylbenzene based on the elevated MSD recovery.

   Gasoline-range TPH by NWTPH-Gx – An MS/MSD was performed using RW-5R. Results were acceptable.

   NWTPH-Dx – An MS/MSD was performed using RW-5R. Results were acceptable.

   Naphthalenes by EPA Method 8270E-SIM – An MS/MSD was not performed in association with this analysis. Precision and accuracy were assessed using the LCS/LCSD results.

6. Field Duplicate (applicable to BTEX and TPH analyses only) – Acceptable

   General – Field duplicates were submitted for B-34 and FW-13 and identified as B-34-DUP FW-13-DUP, respectively. Results reported at concentrations greater than five times the reporting limits were comparable.

7. Reporting Limits – Acceptable except as noted below:

   General – One or more results were flagged 'J' by the laboratory to indicate a concentration that was less than the reporting limit, but above the method detection limit (MDL). Laboratory 'J'-flagged results are considered estimated. As the result is between the MDL and the reporting limit, there is a greater level of uncertainty associated with the numerical result.

8. Other Items of Note:

   Diesel-range TPH by NWTPH-Dx – The laboratory noted the following:

   - Detected hydrocarbons in the diesel range appear to be due to heavily weathered diesel in T-2, RR-5, DMW-2, FW-13, FW-13-DUP, E-22, RR-1.
   - Detected hydrocarbons in the diesel range appear to be due to gasoline overlap in B-25.
   - Detected hydrocarbons in the diesel range appear to be due to weathered diesel in FW-5R.

- Detected hydrocarbons diesel range appear to be due to gasoline overlap as well as heavily weathered diesel in HC-111, B-34, B-34-DUP, RW-5R, B-31, and RW-8.

Overall Assessment of Data

The data reported in this laboratory group, as qualified, are considered to be usable for meeting project objectives. The completeness for TestAmerica laboratory groups 590-14368-1 and 590-14369-1 is 100%.

Table 1 - Summary of Qualified Data

Sample ID	Laboratory ID	Analyte	Laboratory Result	Units	Final Result	Reason
FW-14	590-14368-8	1-Methylnaphthalene	0.028 J	ug/L	0.083 U	Method Blank Contamination

Notes:
J – estimated value
ug/L – microgram per liter
U – not detected above reporting limit shown