SoundEarth Strategies, Inc.
2811 Fairview Avenue East, Suite 2000
Seattle, Washington 98102

December 30, 2016

FOURTH QUARTER 2016
GROUNDWATER MONITORING REPORT

Tesoro Refining and Marketing Company, Former Bulk Fuel Facility
West Fir Street
Mount Vernon, Washington

EXECUTIVE SUMMARY

SoundEarth Strategies, Inc. (SoundEarth) conducted quarterly groundwater monitoring at the above-listed address (the Property) on October 11, 2016 (Figure 1). The monitoring event was performed to evaluate the environmental quality, flow direction, and gradient of groundwater beneath the Property and to eventually demonstrate compliance with the Washington State Model Toxics Control Act (MTCA) Method A cleanup levels.

Groundwater elevations typically decreased by 0.5 to 1.5 feet relative to the Third Quarter 2016 monitoring event. Groundwater collected from wells MW05, MW18, MW20, and MW22 contained gasoline- and diesel-range petroleum hydrocarbons (GRPH and DRPH, respectively) at concentrations exceeding the applicable MTCA Method A cleanup levels. GRPH and DRPH concentrations in groundwater samples collected from monitoring wells MW05, MW18, MW20, and MW22 generally stayed the same relative to the Third Quarter 2016 monitoring event.

BACKGROUND

The site is a vacant lot that was historically used as a bulk fuel storage facility. The site is adjacent to Tesoro No. 62159, a retail gasoline station that received a No Further Action determination from the Washington State Department of Ecology in April 2013. Additional background information and historical investigations for the Property are described in previous reports and summarized in Attachment A.

FIELD ACTIVITIES

The following field activities were performed by SoundEarth on October 11, 2016:

- Measuring depth to groundwater in on-Property monitoring wells MW04 through MW06 and MW15 through MW22, and in off-Property wells MW-12, MW-13, and MW-15, located on the east-adjoining Tesoro retail gasoline station.
- Collecting and submitting groundwater samples from the 11 on-Property wells (MW04 through MW06 and MW15 through MW22) for laboratory analysis and collecting a single duplicate sample from monitoring well MW20 for quality assurance/quality control (QA/QC) purposes.

Additionally, monitoring wells MW04 through MW06 and MW15 through MW22, and off-Property wells MW-12, MW-13, and MW-15, located on the east-adjoining Tesoro retail gasoline station, were resurveyed on November 22, 2016. Top of monitoring well casing elevations were surveyed relative to a

manhole located in the sidewalk to the southwest of the Property with an assumed elevation of 100.00 feet.

Field methods are summarized in Attachment B. Field forms are provided in Attachment C.

GROUNDWATER MONITORING RESULTS

The groundwater monitoring results for Fourth Quarter 2016 are summarized below.

Groundwater Elevations and Flow Direction

Groundwater levels measured from the 11 on-Property wells and 3 off-Property wells on October 11, 2016, ranged from 10.95 (well MW06) to 13.29 feet (well MW05) below the top of the well casings (Table 1). Using these measurements and the top of casing elevations from the survey conducted on November 22, the groundwater elevations were calculated and contoured, as shown in Figure 2, which indicate a groundwater flow direction to the northwest with a gradient of 0.02 feet per foot from monitoring well MW06 to well MW16. The flow direction and gradient are consistent with historical groundwater flow direction trends at the Property. Groundwater elevations were typically 0.5 to 1.5 feet lower than when they were measured during the Third Quarter 2016 monitoring event.

Groundwater Laboratory Analysis

Groundwater samples were analyzed for GRPH by Northwest Total Petroleum Hydrocarbon (NWTPH) Method NWTPH-Gx; DRPH and oil-range petroleum hydrocarbons (ORPH) by Method NWTPH-Dx; and benzene, toluene, ethylbenzene, and total xylenes (BTEX) and naphthalene by U.S. Environment Protection Agency (EPA) Method 8260C.

Groundwater collected from wells MW05, MW18, MW20, and MW22 contained GRPH and DRPH concentrations exceeding the applicable MTCA Method A cleanup levels. Wells MW18, MW20, and MW22 are located adjacent to the former bulk fuel storage area on the Property, and well MW05 is located downgradient (Figure 2). Concentrations of total petroleum hydrocarbons and/or naphthalene in groundwater have exceeded the applicable cleanup levels in monitoring wells MW05, MW18, MW20, and MW22 for multiple years. Analytical results for Fourth Quarter 2016 are tabulated below.

Well ID	Location	Analytical Results (micrograms per liter)							
		GRPH	DRPH	ORPH	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene
MW04	Crossgradient	<50	150	<250	<2.0	<2.0	<3.0	<5.0	<2.0
MW05	Downgradient	**2,200**	**1,100**	<260	<2.0	<2.0	<3.0	<5.0	2.7
MW06	Upgradient	<50	330	350	<2.0	<2.0	<3.0	<5.0	<2.0
MW15	Downgradient	<50	290	<260	<2.0	<2.0	<3.0	<5.0	<2.0
MW16	Downgradient	<50	150	<250	<2.0	<2.0	<3.0	<5.0	<2.0
MW17	Source Area	<50	<110	<260	<2.0	<2.0	<3.0	<5.0	<2.0
MW18	Source Area	**4,200**	**1,400**	<260	<2.0	<2.0	73	150	35
MW19	Crossgradient	<50	230	<260	<2.0	<2.0	<3.0	<5.0	<2.0
MW20	Source Area	**3,900**	**2,200**	330	<2.0	<2.0	35	14	82
MW21	Crossgradient	78	140	<260	<2.0	<2.0	<3.0	<5.0	<2.0
MW22	Source Area	**2,900**	**1,200**	<260	2.8	<2.0	3.6	3.2	5.3
MTCA Cleanup Levels		**800**	**500**	**500**	**5**	**1,000**	**700**	**1,000**	**160**

NOTES:
Red denotes concentration exceeds MTCA cleanup level.
< = not detected above the laboratory reporting limit
DRPH = diesel-range petroleum hydrocarbons
GRPH = gas-range petroleum hydrocarbons
ORPH = oil-range petroleum hydrocarbons
MTCA = Washington State Model Toxics Control Act

SoundEarth performed a QA/QC review of the analytical results, which included a review of accuracy and precision of the data supplied by the laboratory and calculation of the relative percent difference for the field duplicate collected from well MW20. The relative percent differences for all analytes were within acceptable limits. The surrogate recoveries for GRPH were reported to be out of limits from the groundwater samples from wells MW05 and MW22. Based on the review of laboratory quality control data and calculation of the relative percent differences, the analytical results reported for the groundwater samples and field duplicate are considered usable to meet the objectives of the monitoring event.

Historical depth-to-groundwater measurements and analytical results are summarized in the attached Table 1. Groundwater analytical results for the past four monitoring events are summarized on Figure 2. A copy of the laboratory analytical report is provided as Attachment D.

CONCLUSIONS

Results from the Fourth Quarter 2016 monitoring event indicate that concentrations of petroleum hydrocarbons generally decreased in groundwater samples analyzed from wells MW05, MW18, MW19, MW20, MW21, and MW22 relative to the last four quarters. Concentrations of petroleum hydrocarbons have remained consistently below the applicable cleanup levels in groundwater samples analyzed from wells MW04, MW06, MW15, MW16, and MW17.

RECOMMENDATIONS

SoundEarth will conduct a groundwater monitoring event during First Quarter 2017 to evaluate the environmental quality, flow direction, and gradient of groundwater beneath the Property. The results of this field event will be included in the First Quarter Groundwater Monitoring Report.

CLOSING

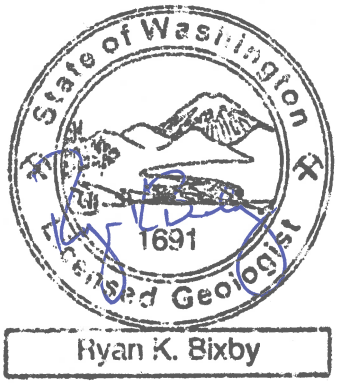
SoundEarth appreciates the opportunity to work with you on this project. Please contact Rob Roberts at 206-245-1184 if you have any questions or require additional information.

Respectfully,

SoundEarth Strategies, Inc.

Liz Forbes, LG
Project Geologist

Ryan K. Bixby, LG
President



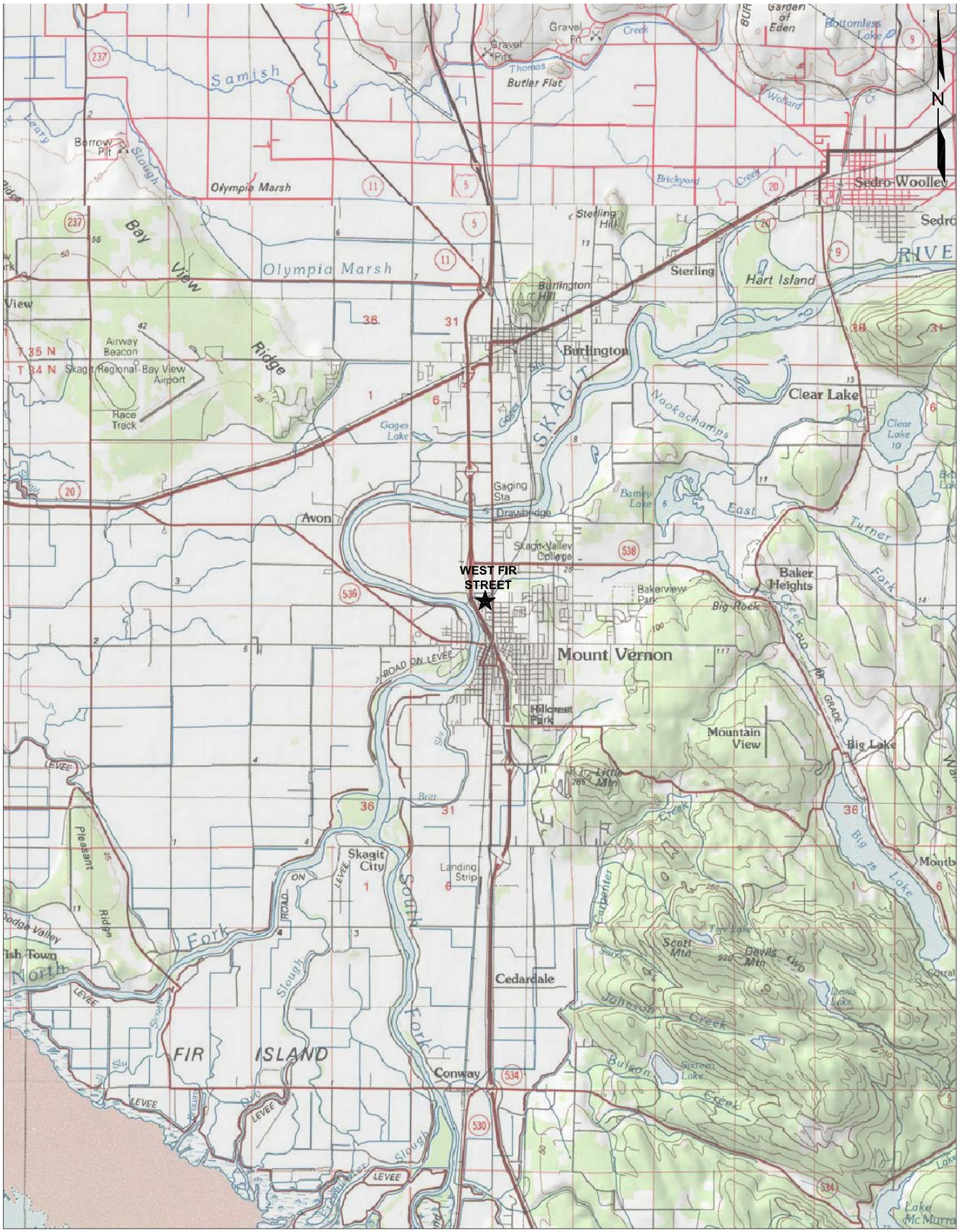
Attachments: Figure 1, Property Location Map
Figure 2, Groundwater Contour Map and Analytical Results (October 11, 2016)
Table 1, Summary of Groundwater Data
A, Site Background
B, Field Methods
C, Field Forms
D, Laboratory Analytical Report
TestAmerica Laboratories, Inc. #580-63267-1

cc: Ms. Heather Vick, Washington State Department of Ecology, NWRO
Mr. Ron Myro, MYOB, LLC

CJT/CER:dnm/hsb

FIGURES

P:\0271 TESORO\0271-018 BULK FUEL FACILITY - MOUNT VERNON\TECHNICAL\CAD\FIGURE 1\0271-018_FIG1_F.DWG



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DATE:	06/15/10
DRAWN BY:	NAC
CHECKED BY:	RKB
CAD FILE:	0271-018_FIG1

PROJECT NAME:	FORMER BULK FUEL FACILITY
PROJECT NUMBER:	0271-018
STREET ADDRESS:	WEST FIR STREET
CITY, STATE:	MOUNT VERNON, WASHINGTON

FIGURE 1
PROPERTY LOCATION MAP

SOUNDENVIRONMENTAL.COM

12/20/2016

P:\0271 TESORO\0271-018 BULK FUEL FACILITY - MOUNT VERNON\TECHNICAL\CAD\20160401\0271-18 2016Q4 GW.DWG

LEGEND

- MW22 — MONITORING WELL
- FORMER BULK FUEL FACILITY BOUNDARY
- PARCEL BOUNDARY
- C — CABLE LINE
- OHP — OVERHEAD POWER LINE
- W — WATER LINE
- SS — SEWER LINE
- SW — STORMWATER LINE
- GROUNDWATER FLOW DIRECTION (OCTOBER 11, 2016)
- 0.25-FOOT INTERVAL GROUNDWATER CONTOUR
- (85.54') — GROUNDWATER ELEVATION
- RED — REPORTED CONCENTRATION EXCEEDS MTCA METHOD A CLEANUP LEVELS FOR GROUNDWATER
- MTCA — WASHINGTON STATE MODEL TOXICS CONTROL ACT
- DRPH — DIESEL-RANGE PETROLEUM HYDROCARBONS
- GRPH — GASOLINE-RANGE PETROLEUM HYDROCARBONS
- ORPH — OIL-RANGE PETROLEUM HYDROCARBONS
- < — NOT DETECTED AT A CONCENTRATION EXCEEDING THE LABORATORY REPORTING LIMIT

MTCA Method A CULs	Analytical Results (micrograms per liter)			
	GRPH	DRPH	ORPH	Benzene
	800	500	500	5

Well ID	Sample Date	Analytical Results (micrograms per liter)			
		GRPH	DRPH	ORPH	Benzene
MW16	01/25/16	<50	290	320	<2.0
	04/21/16	<50	300	480	<2.0
	07/27/16	<50	110	<260	<2.0
	10/11/16	<50	150	<250	<2.0

Well ID	Sample Date	Analytical Results (micrograms per liter)			
		GRPH	DRPH	ORPH	Benzene
MW05	01/25/16	1,500	2,000	270	<2.0
	04/21/16	2,100	3,000	620	2.1
	07/28/16	2,000	1,800	<260	<2.0
	10/11/16	2,200	1,100	<260	<2.0

Well ID	Sample Date	Analytical Results (micrograms per liter)			
		GRPH	DRPH	ORPH	Benzene
MW15	01/25/16	<50	<110	<250	<2.0
	04/21/16	<50	110	<260	<2.0
	07/27/16	<50	<120	<260	<2.0
	10/11/16	<50	290	<260	<2.0

Well ID	Sample Date	Analytical Results (micrograms per liter)			
		GRPH	DRPH	ORPH	Benzene
MW20	01/25/16	23,000	8,300	610	<2.0
	04/21/16	18,000	7,500	930	<2.0
	07/28/16	9,500	3,500	300	<2.0
	10/11/16	3,900	2,200	330	<2.0

Well ID	Sample Date	Analytical Results (micrograms per liter)			
		GRPH	DRPH	ORPH	Benzene
MW04	01/25/16	93	140	<260	<2.0
	04/21/16	110	150	<250	<2.0
	07/27/16	78	130	<280	<2.0
	10/11/16	<50	150	<250	<2.0

Well ID	Sample Date	Analytical Results (micrograms per liter)			
		GRPH	DRPH	ORPH	Benzene
MW19	01/25/16	<50	390	520	<2.0
	04/21/16	<50	560	730	<2.0
	07/28/16	<50	210	<260	<2.0
	10/11/16	<50	230	<260	<2.0

Well ID	Sample Date	Analytical Results (micrograms per liter)			
		GRPH	DRPH	ORPH	Benzene
MW06	01/25/16	<50	<110	<260	<2.0
	04/21/16	<50	150	<250	<2.0
	07/27/16	<50	360	<270	<2.0
	10/11/16	<50	330	350	<2.0

Well ID	Sample Date	Analytical Results (micrograms per liter)			
		GRPH	DRPH	ORPH	Benzene
MW22	01/25/16	3,500	2,400	<250	8.0
	04/21/16	3,100	2,400	350	5.1
	07/28/16	2,700	1,500	<280	3.3
	10/11/16	2,900	1,200	<260	2.8

Well ID	Sample Date	Analytical Results (micrograms per liter)			
		GRPH	DRPH	ORPH	Benzene
MW21	01/25/16	95	670	<250	<2.0
	04/21/16	170	1,000	410	<2.0
	07/28/16	120	190	<270	<2.0
	10/11/16	78	140	<260	<2.0

Well ID	Sample Date	Analytical Results (micrograms per liter)			
		GRPH	DRPH	ORPH	Benzene
MW18	01/25/16	22,000	4,600	<260	<2.0
	04/21/16	16,000	4,900	610	<2.0
	07/28/16	2,600	1,100	<290	<2.0
	10/11/16	4,200	1,400	<260	<2.0

Well ID	Sample Date	Analytical Results (micrograms per liter)			
		GRPH	DRPH	ORPH	Benzene
MW17	01/25/16	<50	120	<260	<2.0
	04/21/16	<50	<110	<250	<2.0
	07/27/16	<50	<110	<260	<2.0
	10/11/16	<50	<110	<260	<2.0

MW16 (85.63')
MW15 (85.87')
MW04 (86.18')
MW20 (85.92')
MW05 (85.54')
MW22 (86.01')
MW19 (86.21')
MW18 (86.29')
MW15 (87.53')
MW21 (86.98')
MW17 (87.23')
MW06 (87.88')
MW12 (86.91')
MW13 (86.78')
MW08
MW09

86.00'
86.50'
87.00'
87.50'

CONVENIENCE STORE BUILDING
FORMER BUILDINGS
SIDEWALK
PLANTER
DRIVEWAY
BURLINGTON NORTHERN SANTA FE TRACKS
12,000-GALLON
19,500-GALLON
24,000-GALLON
FORMER ABOVEGROUND STORAGE TANKS
WEST FIR STREET
N

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DATE: 12/19/16
DRAWN BY: CD
CHECKED BY: EBF
CAD FILE: 0271-018_2016Q4_GW

PROJECT NAME: FORMER BULK FUEL FACILITY
PROJECT NUMBER: 0271-018
STREET ADDRESS: WEST FIR STREET
CITY, STATE: MOUNT VERNON, WASHINGTON

REGION:

0 5 10 20 40
APPROXIMATE SCALE IN FEET

FIGURE 2
GROUNDWATER CONTOUR MAP AND ANALYTICAL RESULTS (OCTOBER 11, 2016)

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TABLE

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Table 1
Summary of Groundwater Data
Former Bulk Fuel Facility
West Fir Street
Mount Vernon, Washington

Well ID	Sample Date	Depth to Groundwater[1] (feet)	Groundwater Elevation[2] (feet)	Analytical Results (micrograms per liter) GRPH[3]	DRPH[4]	ORPH[4]	Benzene[5]	Toluene[5]	Ethylbenzene[5]	Total Xylenes[5]	Naphthalene[5]
MW04	11/17/05	8.90	89.81	<50.0	420	<500	<0.5	<0.5	<0.5	<1	--
TOC: 98.71 feet	01/24/06	7.44	91.27	<50.0	510 Q6	<476	<0.5	<0.5	<0.5	<1	<1
	06/09/06	9.32	89.39	60.6	361 Q6	<505	<0.5	<0.5	<0.5	<1	<5
	09/18/06	9.95	88.76	73.6	<236	<472	<0.5	<0.5	<0.5	<1	<5
	12/21/06	7.47	91.24	<50.0	<236	<472	<0.5	<0.5	<0.5	<3	<5
	03/27/07	6.99	91.72	79.1	<245	<490	<0.5	<0.5	<0.5	1.22	<5
	05/25/07	9.90	88.81	101	<250	<500	<0.5	<0.5	0.769	1.13	<5
	09/06/07	11.02	87.69	72.8	<238	<476	<0.5	<0.5	<0.5	1.62	<5
	12/05/07	9.41	89.30	83.2	<238	<476	<0.5	<0.5	<0.5	<1	--
	03/07/08	8.89	89.82	55.6	<236	<472	<0.5	<0.5	<0.5	1.04	<5
	06/13/08	8.19	90.52	62.0	<243	<485	<0.5	<0.5	<0.5	<1	<5
	09/10/08	8.59	90.12	58.2	<236	<472	<0.5	<0.5	<0.5	<3	<5 J
	12/30/08	7.26	91.45	<50.0	<248	<495	<0.5	<0.5	<0.5	<1	--
	03/11/09	9.33	89.38	61.9	<243	<485	<0.5	<0.5	<0.5	<3	<5
	06/17/09	9.51	89.20	<80.0	<263	<526	<1	<1	<1	<3	<1
	09/09/09	11.55	87.16	<50	<238	<476	<1	<1	<1	<3	<1
	12/16/09	7.85	90.86	<50	150 Y	420	<1	<1	<1	<3	<1 H
	03/10/10	9.05	89.66	<50	<120	<250	<1	<1	<1	<3	<1
	06/08/10	8.08	90.63	550	290 Y	350 Y	<1	<1	<1	<3	<1
	09/08/10	10.60	88.11	51	290 Y	260 Y	<1	<1	<1	<3	<1
	12/16/10	7.69	91.02	<50 H	250 Y	490 Y	<1 H	<1 H	<1 H	<3 H	<1 H
	03/09/11	7.24	91.47	83	<120	<240	<1	<1	<1	<3	<1
	06/16/11	8.34	90.37	54	180 Y	280 Y	<1	<1	<1	<3	<1
	08/30/11	9.84	88.87	<50	200 Y	<240	<0.2	<0.5	<0.5	<1	<2
	12/09/11	8.69	90.02	<50	170 Y	<250	<1	<1	<1	<3	<1
	03/29/12	7.42	91.29	100	240 Y	320 Y	<1	<1	<1	<3	<1
	06/28/12	7.94	90.77	77	150 Y	250 Y	<1	<1	<1	<2	--
	08/16/12	9.37	89.34	58	<120	<240	<1	<1	<1	<3	<1
	11/20/12	8.58	90.13	<50	240 Y	250 Y	<1	<1	<1	<3	<1
	02/15/13	7.70	91.01	100	220 Y	320 Y	<1.0	<1.0	<1.0	<3.0	<1.0
	05/23/13	8.71	90.00	52	180 Y	<250	<1.0	<1.0	<1.0	<3.0	<1.0
	08/08/13	10.21	88.50	68	<130	<260	<1.0	<1.0	<1.0	<3.0	<1.0
	11/12/13	9.57	89.14	55	180 Y	<250 Y	<1.0	<1.0	<1.0	<3.0	<1.0
	02/04/14	7.76	90.95	63	120 Y	<240	<1.0	<1.0	<1.0	<3.0	<1.0*
	05/05/14	7.47	91.24	<50	<120	<250	<1.0	<1.0	<1.0	<3.0	<3.0
	07/21/14	9.93	88.78	67	<120	<250	<2.0 J,B	<2.0 J,B	<2.0	<6.0	<3.0
	10/14/14	10.28	88.43	50	170 Y	<250	<1.0	<1.0	<1.0	<3.0	<3.0
	03/02/15	7.97	90.74	<100	140 Z	<240	<2.0	<2.0 ^	<3.0 ^	<3.0	<2.0
	05/26/15	9.76	88.95	<250 H*^	<210	<480	<2.0	<2.0 ^	<3.0	<3.0	<3.0
	08/19/15	12.12	86.59	<100	160	<260*	<1.0	<1.0	<1.0	<3.0	--
	11/03/15	10.81	87.90	<50	120	<250	<2.0 H	<2.0 H	<3.0 H	<5.0 H*	<2.0 H
	01/25/16	7.61	91.10	93 H*	140	<260	<2.0	<2.0	<3.0	<5.0	<2.0
	04/21/16	8.42	90.29	110	150	<250	<2.0	<2.0	<3.0	<5.0	<2.0
	07/27/16	10.22	88.49	78	130	<280	<2.0	<2.0	<3.0	<5.0	<2.0
TOC: 97.87 feet	10/11/16	11.69	86.18	<50	150	<250	<2.0	<2.0	<3.0	<5.0	<2.0
MW05	11/17/05	10.59	89.11	**1,690**	**1,180**	<568	**11.3**	3.34	<0.5	13.2	--
TOC: 99.70 feet	01/24/06	9.05	90.65	**1,270**	**1,130** D-06	<485	**45.2**	4.02	0.634	8.99	1.66
	06/09/06	10.92	88.78	**1,870**	**1,410**	<521	**75.3**	8.75	7.32	16.5	<5
	09/18/06	12.11	87.59	**1,310**	**709**	<476	**43.3**	15.2	2.64	25.4	<25
	12/21/06	9.44	90.26	**1,800**	**2,160**	**985**	**79.4**	6.51	1.74	21.3	<5
	03/27/07	8.65	91.05	**1,300**	**1,990** Q4, Q10	**529** Q4	**67.7**	4.68	12.3	15	<5
	05/25/07	10.78	88.92	**1,760**	**1,110** Q10	<500	**74.1**	9.50	16.4	27.7	22.4
	09/06/07	12.44	87.26	**1,590**	**1,100** Q5	<481	**16.9**	7.51	8.17	26.5	24.9
	12/05/07	11.06	88.64	**1,710**	**1,360**	<476	**26.8**	5.01	1.98	20.8	--
	03/07/08	10.57	89.13	**1,730**	**3,200** Q4	**595** Q4	**72.3**	7.66	2.34	23	27
	06/13/08	9.74	89.96	**1,920**	**1,890** Q11	<490	**75.6**	11.5	10	30.3	32.7
	09/10/08	10.61	89.09	**2,090**	**1,110** Q5	<490	**42.3**	9.90	11	25.9	<5 J
	12/30/08	8.71	90.99	**1,390**	**1,730** Q12	<556	**34.7**	6.85	3.33	25.8	--
MTCA Method A Cleanup Level for Groundwater[6]				**1,000/800**[7]	**500**	**500**	**5**	**1,000**	**700**	**1,000**	**160**

SoundEarth Strategies

Table 1
Summary of Groundwater Data
Former Bulk Fuel Facility
West Fir Street
Mount Vernon, Washington

Well ID	Sample Date	Depth to Groundwater[1] (feet)	Groundwater Elevation[2] (feet)	Analytical Results (micrograms per liter) GRPH[3]	DRPH[4]	ORPH[4]	Benzene[5]	Toluene[5]	Ethylbenzene[5]	Total Xylenes[5]	Naphthalene[5]
MW05	03/12/09	10.97	88.73	2,700	4,210 Q5	912 Q7	55.9	8.30	4.24	28.7	<5
(continued)	06/18/09	11.09	88.61	1,570	1,430	<500	43	8.0	3.4	26.3	1.2
TOC: 99.70 feet	09/09/09	13.05	86.65	2,000	722	<472	2.9	7.0	1.1	25.1	<1
	12/17/09	9.33	90.37	950	2,100 Y	1,100	13	1.5	<1	5.5	<1
	03/10/10	10.65	89.05	1,600	2,700 Y	470 Y	57	6.5	5.2	15	1.2
	06/08/10	9.65	90.05	2,000	2,400 Y	470 Y	43	8.7	14	23	1.8
	09/09/10	12.12	87.58	1,600	2,100 Y	<240	17	7.5	11	22	1.8
	12/16/10	9.16	90.54	760	850 Y	<240	7.8	2.1	1.5	7.8	2.8
	03/10/11	8.80	90.90	650	1,900 Y	310 Y	9.8	2.0	1.6	5.3	<1
	06/16/11	9.90	89.80	1,600	3,100 Y	730 Y	31	5.4	10	12.5	<1
	08/30/11	11.35	88.35	1,700	2,200 Y	630 Y	17.6	6.72	12.1	18.8	<4
	12/08/11	10.33	89.37	1,600	1,800 Y	290	6.0	4.7	4.6	17.5	1.7
	03/30/12	8.96	90.74	460	2,200 Y	1,000 Y	5.4	1.8	<1.0	4.3	<1
	06/29/12	9.43	90.27	1,600	2,700 Y	730 Y	20	4.5	2.6	10.8	--
	08/16/12	10.90	88.80	1,900	2,500 Y	890 Y	16	6.6	3.6	18.7	<1
	11/21/12	10.16	89.54	87	240 Y	<250	<1	<1	<1	<3	<1
	02/15/13	9.31	90.39	350	2,200 Y	1,100 Y	5.5	1.6	<1.0	3.5	<1.0
	05/24/13	10.30	89.40	1,500	3,400 Y	770 Y	15	3.4	5.8	10.2	1.1
	08/09/13	11.87	87.83	1,200	1,700 Y	500 Y	5.5	5.2	8.0	14.3	1.1
	11/13/13	11.23	88.47	2,200	1,600 Y	290 Y	6.6	3.6	2.0	13.3	1.4
	02/04/14	9.34	90.36	310	570 Y	<240	1.1	<1.0	<1.0	<3.0	<1.0
	05/06/14	9.03	90.67	360	720 Y	<270	1.9	<1.0	<1.0	<3.0	<3.0
	07/22/14	11.44	88.26	1,800	1,800 Y	340 Y	7.1 B	4.8 B	3.7	9.0	<6.0
	10/15/14	12.12	87.58	480	420 Y	<240	<1.0	<1.0	<1.0	<3.0	<3.0
	03/03/15	9.56	90.14	1,100	2,200 B,Y	720 Y	2.8	<2.0 ^	<3.0 ^	3.4	<2.0
	05/27/15	11.51	88.19	2,200 H	2,100 Y	<480	2.6	<10 H	<3.0	5.3	<2.0
	08/19/15	13.63	86.07	2,000	620	<290*	<1.0*	2.3	<1.0	5.6	--
	11/03/15	12.40	87.30	1,300	1,100	<260	<2.0 H	<2.0 H	<3.0 H	<5.0 H*	<2.0 H
	01/25/16	9.18	90.52	1,500 H*	2,000	270	<2.0 H*	<2.0 H*	<3.0 H*	<5.0 H*	<2.0 H*
	04/21/16	10.09	89.61	2,100	3,000	620	2.1	2.5	<3.0	<5.0	<2.0
	07/28/16	11.90	87.80	2,000	1,800	<260	<2.0	2.4	<3.0	3.2	<2.0
TOC: 98.83 feet	10/11/16	13.29	85.54	2,200	1,100	<260	<2.0	<2.0	<3.0	<5.0	2.7
MW06	11/17/05	9.20	90.43	<50	516	<495	<0.5	<0.5	<0.5	<1	--
TOC: 99.63 feet	01/24/06	8.03	91.60	<50	972 Q6	522	<0.5	<0.5	<0.5	<1	<1
	06/09/06	9.71	89.92	<50	1,070 Q6	1,220 D-06	<0.5	<0.5	<0.5	<1	<5
	09/18/06	10.00	89.92	<50	283 Q6	<476	<0.5	<0.5	<0.5	<1	<5
	12/21/06	8.05	91.58	<50	550 Q6	598	<0.5	<0.5	<0.5	<3	<5
	03/27/07	7.54	92.09	<50	480 Q3	549	<0.5	<0.5	<0.5	<1	<5
	05/25/07	9.22	90.41	<50	<250	<500	<0.5	<0.5	<0.5	<1	<5
	09/05/07	10.95	88.68	<50	500 Q6	603	<0.5	<0.5	<0.5	<1	<5
	12/05/07	9.77	89.86	<50	683 Q6	918	<0.5	<0.5	<0.5	<1	--
	03/07/08	9.40	90.23	<50	757 Q6	985 Q9	<0.5	<0.5	<0.5	<1	<5
	06/13/08	8.79	90.84	<50	645 Q6	905	<0.5	<0.5	<0.5	<1	<5
	09/10/08	9.21	90.42	<50	<240	<481	<0.5	<0.5	<0.5	<3	<5 J
	12/30/08	7.74	91.89	<50	<243	<485	<0.5	<0.5	<0.5	<1	--
	03/12/09	9.78	89.85	<50	665 Q6	920 Q1	<0.5	<0.5	<0.5	<3	<5
	06/18/09	9.94	89.69	<80	<263	<526	<1	<1	<1	<3	<1
	09/09/09	11.00	88.63	<50	<240	<481	<1	<1	<1	<3	<1
	12/16/09	8.42	91.21	<50	500 Y	940	<1	<1	<1	<3	<1 H
	03/10/10	9.43	90.20	<50	510 Y	1,100 Y	<1	<1	<1	<3	<1
	06/07/10	8.62	91.01	<50	1,200 Y	2,200 Y	<1	<1	<1	<3	<1
	09/09/10	10.52	89.11	92	1,100 Y	1,700 Y	<1	<1	<1	<3	<1
	12/17/10	8.24	91.39	<50	900 Y	2,000 Y	<1	<1	<1	<3	<1
	03/09/11	7.78	91.85	<50	720 Y	1,200 Y	<1	<1	<1	<3	<1
	06/16/11	8.88	90.75	<50	780 Y	1,200 Y	<1	<1	<1	<3	<1
	08/30/11	10.05	89.58	<50	520 Y	690 Y	<0.2	<0.5	<0.5	<1	<2
	12/09/11	9.17	90.46	<50	520 Y	1,100 Y	<1	<1	<1	<3	<1
	03/30/12	7.97	91.66	<50	780 Y	1,600 Y	<1	<1	<1	<3	<1
	06/28/12	8.55	91.08	<50	500 Y	920 Y	<1	<1	<1	<3	--
	08/16/12	9.76	89.87	<50	490 Y	1,200 Y	<1	<1	<1	<3	<1
	11/21/12	8.81	90.82	<50	680 Y	1,400 Y	<1	<1	<1	<3	<1
MTCA Method A Cleanup Level for Groundwater[6]				**1,000/800[7]**	**500**	**500**	**5**	**1,000**	**700**	**1,000**	**160**

SoundEarth Strategies

Table 1
Summary of Groundwater Data
Former Bulk Fuel Facility
West Fir Street
Mount Vernon, Washington

Well ID	Sample Date	Depth to Groundwater[1] (feet)	Groundwater Elevation[2] (feet)	Analytical Results (micrograms per liter) GRPH[3]	DRPH[4]	ORPH[4]	Benzene[5]	Toluene[5]	Ethylbenzene[5]	Total Xylenes[5]	Naphthalene[5]
MW06	02/14/13	8.21	91.42	<50	720[Y]	1,700[Y]	<1.0	<1.0	<1.0	<3	<1.0
(continued)	05/23/13	9.20	90.43	<50	620[Y]	970[Y]	<1.0	<1.0	<1.0	<3.0	<1.0
TOC: 99.63 feet	08/08/13	10.25	89.38	52	420[Y]	840[Y]	<1.0	<1.0	<1.0	<3.0	<1.0
	11/13/13	9.70	89.93	<50	360[Y]	720[Y]	<1.0	<1.0	<1.0	<3.0	<1.0
	02/03/14	8.29	91.34	<50	<120	<240	<1.0	<1.0	<1.0	<3.0	<1.0
	05/05/14	7.95	91.68	<50	<130	<260	<1.0	<1.0	<1.0	<3.0	<3.0
	07/21/14	10.17	89.46	<50	450[Y]	500[Y]	<2.0	<2.0	<2.0	<6.0	<6.0
	10/14/14	9.61	90.02	<50	190[Y]	<240	<1.0	<1.0	<1.0	<3.0	<3.0
	03/02/15	8.51	91.12	<100	<120	<240	<2.0	<2.0[^]	<3.0[^]	<3.0	<2.0
	05/26/15	9.97	89.66	<50[^]	440[Y]	620[Y]	<2.0	<2.0[^]	<3.0	<3.0	<2.0
	08/19/15	10.78	88.85	<100	280	400*	<1.0*	<1.0	<1.0	<3.0	--
	11/03/15	9.69	89.94	<50	140	<250	<2.0[H]	<2.0[H]	<3.0[H]	<5.0[H*]	<2.0[H]
	01/25/16	8.10	91.53	<50[H*]	<110	<260	<2.0	<2.0	<3.0	<5.0	<2.0
	04/21/16	8.93	90.70	<50	150	<250	<2.0	<2.0	<3.0	<5.0	<2.0
	07/27/16	10.41	89.22	<50	360	<270	<2.0	<2.0	<3.0	<5.0	<2.0
TOC: 98.83 feet	10/11/16	10.95	87.88	<50	330	350	<2.0	<2.0	<3.0	<5.0	<2.0
MW07	11/17/05	8.54	91.35	<50.0	272[D-06]	<472	<0.5	<0.5	<0.5	<1	--
TOC: 99.89 feet	01/24/06	7.50	92.39	<50.0	<245	<490	<0.5	<0.5	<0.5	<1	<1
	Discontinued sampling										
MW08	11/17/05	8.38	91.75	<50.0	291[D-06]	<472	--	<0.5	<0.5	<1	--
TOC: 100.13 feet	01/24/06	8.00	92.13	<50.0	<248	<495	<0.5	<0.5	<0.5	<1	<1
	Discontinued sampling										
MW09	11/17/05	9.47	90.76	<50.0	314[D-06]	<472	<0.5	<0.5	<0.5	<1	--
TOC: 100.23 feet	01/24/06	9.14	91.09	<50.0	<243	<485	<0.5	<0.5	<0.5	<1	<1
	Discontinued sampling										
MW10	11/17/05	8.88	89.83	<50.0	<269	<538	<0.5	<0.5	<0.5	<1	--
TOC: 98.71 feet	01/24/06	8.40	90.31	<50.0	<245	<490	<0.5	<0.5	<0.5	<1	<1
	Discontinued sampling										
MW15	06/09/06	9.81	89.00	<50.0	557[Q6]	560[D-06]	<0.5	<0.5	<0.5	<1	<5
TOC: 98.81 feet	09/18/06	10.73	88.08	<50.0	<236	<472	<0.5	<0.5	<0.5	<1	<5
	12/21/06	8.17	90.64	<50.0	257[Q6]	523	<0.5	<0.5	<0.5	<3	<5
	03/27/07	7.37	91.44	<50.0	<243	<485	<0.	<0.5	<0.5	<1	<5
	05/25/07	9.50	89.31	<50.0	<250	<500	<0.5	<0.5	<0.5	<1	<5
	09/06/07	11.42	87.39	<50.0	<243	<485	<0.5	<0.5	<0.5	<1	<5
	12/05/07	9.91	88.90	<50.0	<240	<481	<0.5	<0.5	<0.5	<1	--
	03/07/08	9.39	89.42	<50.0	<236	<472	<0.5	<0.5	<0.5	<1	<5
	06/13/08	8.62	90.19	<50.0	<243	<485	<0.5	<0.5	<0.5	<1	<5
	09/10/08	9.30	89.51	<50.0	<238	<476	<0.5	<0.5	<0.5	<3	<5[J]
	12/30/08	7.76	91.05	<50.0	<236	<472	<0.5	<0.5	<0.5	<1	--
	03/11/09	9.79	89.02	<50.0	<236	<472	<0.5	<0.5	<0.5	<3	<5
	06/17/09	9.95	88.86	<80.0	<243	<485	<1	<1	<1	<3	<1
	09/09/09	11.92	86.89	<50	<238	<476	<1	<1	<1	<3	<1
	12/16/09	8.27	90.54	<50	240[Y]	680	<1	<1	<1	<3	<1[H]
	03/10/10	9.53	89.28	<50	190[Y]	270[Y]	<1	<1	<1	<3	<1
	06/08/10	8.58	90.23	<50	440[Y]	530[Y]	<1	<1	<1	<3	<1
	09/08/10	11.11	87.70	<50	380[Y]	520[Y]	<1	<1	<1	<3	<1
	12/16/10	8.09	90.72	<50[H]	160[Y]	410[Y]	<1[H]	<1[H]	<1[H]	<3[H]	<1[H]
	03/09/11	7.70	91.11	<50	210[Y]	300[Y]	<1	<1	<1	<3	<1
	06/16/11	8.78	90.03	<50	280[Y]	510[Y]	<1	<1	<1	<3	<1
	08/30/11	10.24	88.57	<50	180[Y]	240[Y]	<0.2	<0.5	<0.5	<1	<2
	12/08/11	9.21	89.60	<50	180[Y]	<250^	<1	<1	<1	<3	<1
	03/29/12	7.85	90.96	<50	390[Y]	800[Y]	<1	<1	<1	<3	<1
	06/28/12	8.35	90.46	<50	140[Y]	270[Y]	<1	<1	<1	<3	--
	08/17/12	9.73	89.08	<50	<120	<240	<1	<1	<1	<3	<1
	11/20/12	8.89	89.92	<50	330[Y]	550[Y]	<1	<1	<1	<3	<1
	02/15/13	8.14	90.67	<50	270[Y]	570[Y]	<1.0	<1.0	<1.0	<3.0	<1.0
	05/24/13	9.15	89.66	<50	180[Y]	240[Y]	<1.0	<1.0	<1.0	<3.0	<1.0
	08/08/13	10.63	88.18	<50	<130	<260	<1.0	<1.0	<1.0	<3.0	<1.0
	11/12/13	10.04	88.77	<50	200[Y]	250[Y]	<1.0	<1.0	<1.0	<3.0	<1.0
MTCA Method A Cleanup Level for Groundwater[6]				**1,000/800[7]**	**500**	**500**	**5**	**1,000**	**700**	**1,000**	**160**

SoundEarth Strategies

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Summary of Groundwater Data
Former Bulk Fuel Facility
West Fir Street
Mount Vernon, Washington

Well ID	Sample Date	Depth to Groundwater[1] (feet)	Groundwater Elevation[2] (feet)	Analytical Results (micrograms per liter) GRPH[3]	DRPH[4]	ORPH[4]	Benzene[5]	Toluene[5]	Ethylbenzene[5]	Total Xylenes[5]	Naphthalene[5]
MW15	02/04/14	8.23	90.58	<50	<120	<240	<1.0	<1.0	<1.0	<3.0	<1.0
(continued)	05/05/14	8.31	90.50	<50	<120	<250	<1.0	<1.0	<1.0	<3.0	<3.0
TOC: 98.81 feet	07/21/14	10.33	88.48	<50	<120	<250	<2.0[J,B]	<2.0[J,B]	<2.0[J]	<6.0	<6.0
	10/14/14	10.84	87.97	<50	180[Y]	<240	<1.0	<1.0	<1.0	<3.0	<3.0
	03/02/15	8.43	90.38	<100	<120	240	<2.0	<2.0[^]	<3.0[^]	<3.0	<2.0
	05/26/15	10.26	88.55	<50[^]	<210	<480	<2.0	<2.0[^]	<3.0	<3.0	<2.0
	08/19/15	12.51	86.30	<100	200	<280*	<1.0*	<1.0	<1.0	<3.0	--
	11/03/15	11.28	87.53	<50	210	<250	<2.0[H]	<2.0[H]	<3.0[H]	<5.0[H*]	<2.0[H]
	01/25/16	8.03	90.78	<50[H*]	<110	<250	<2.0	<2.0	<3.0	<5.0	<2.0
	04/21/16	8.88	89.93	<50	110	<260	<2.0	<2.0	<3.0	<5.0	<2.0
	07/27/16	10.70	88.11	<50	<120	<260	<2.0	<2.0	<3.0	<5.0	<2.0
TOC: 98.00 feet	10/11/16	12.13	85.87	<50	290	<260	<2.0	<2.0	<3.0	<5.0	<2.0
MW16	06/09/06	10.47	88.82	<50	446[Q6]	**541**[D-06]	<0.5	<0.5	<0.5	<1	<5
TOC: 99.29 feet	09/18/06	11.53	87.76	<50	<236	<472	<0.5	<0.5	<0.5	<1	<5
	12/21/06	8.97	90.32	<50	<236	<472	<0.5	<0.5	<0.5	<3	<5
	03/27/07	8.23	91.06	<50	<240	<481	<0.5	<0.5	<0.5	<1	<5
	05/25/07	10.29	89.00	<50	<250	<500	<0.5	<0.5	<0.5	<1	<5
	09/06/07	11.99	87.30	<50	<243	<485	<0.5	<0.5	<0.5	<1	<5
	12/05/07	10.61	88.68	<50	<243	<485	<0.5	<0.5	<0.5	<1	--
	03/07/08	10.10	89.19	<50	<236	<472	<0.5	<0.5	<0.5	<1	<5
	06/13/08	8.89	90.40	<50	<245	<490	<0.5	<0.5	<0.5	<1	<5
	09/10/08	10.11	89.18	<50	<238	<476	<0.5	<0.5	<0.5	<3	<5[J]
	12/30/08	8.33	90.96	<50	<248	<495	<0.5	<0.5	<0.5	<1	--
	03/11/09	10.51	88.78	<50	<238	<476	<0.5	<0.5	<0.5	<3	<5
	06/17/09	10.63	88.66	<80	<238	<476	<1	<1	<1	<3	<1
	09/09/09	12.60	86.69	<50	<238	<476	<1	<1	<1	<3	<1
	12/16/09	8.95	90.34	<50	230[Y]	**620**	<1	<1	<1	<3	<1[H]
	03/10/10	10.21	89.08	<50	200[Y]	370[Y]	<1	<1	<1	<3	<1
	06/07/10	9.27	90.02	<50	300[Y]	**530**[Y]	<1	<1	<1	<3	<1
	09/09/10	11.70	87.59	<50	230[Y]	310[Y]	<1	<1	<1	<3	<1
	12/16/10	8.78	90.51	<50	180[Y]	**510**[Y]	<1	<1	<1	<3	<1
	03/09/11	8.42	90.87	<50	240[Y]	380[Y]	<1	<1	<1	<3	<1
	06/16/11	9.49	89.80	<50	310[Y]	**510**[Y]	<1	<1	<1	<3	<1
	08/30/11	10.93	88.36	<50	230[Y]	300[Y]	<0.2	<0.5	<0.5	<1	<2
	12/08/11	9.91	89.38	<50	200[Y]	<240^	<1	<1	<1	<3	<1
	03/30/12	8.59	90.70	<50	420[Y]	**810**[Y]	<1	<1	<1	<3	<1
	06/28/12	9.05	90.24	<50	230[Y]	430[Y]	<1	<1	<1	<3	--
	08/16/12	10.48	88.81	<50	160[Y]	460[Y]	<1	<1	<1	<3	<1
	11/20/12	9.68	89.61	<50	210[Y]	330[Y]	<1	<1	<1	<3	<1
	02/15/13	8.86	90.43	<50	330[Y]	**620**[Y]	<1.0	<1.0	<1.0	<3	<1.0
	05/24/13	9.88	89.41	<50	260[Y]	390[Y]	<1.0	<1.0	<1.0	<3.0	<1.0
	08/08/13	11.32	87.97	<50	<130	<250	<1.0	<1.0	<1.0	<3.0	<1.0
	11/12/13	10.78	88.51	<50	180[Y]	290[Y]	<1.0	<1.0	<1.0	<3.0	<1.0
	02/04/14	8.92	90.37	<50	140[Y]	340[Y]	<1.0	<1.0	<1.0	<3.0	<1.0
	05/06/14	8.61	90.68	<50	140[Y]	260[Y]	<1.0	<1.0	<1.0	<3.0	<3.0
	07/21/14	10.99	88.30	<50	140[Y]	<250	<1.0	<1.0	<1.0	<3.0	<3.0
	10/14/14	11.63	87.66	<50	180[Y]	<240	<1.0	<1.0	<1.0	<3.0	<3.0
	03/02/15	9.15	90.14	<100	260[Y]	390[Y]	<2.0	<2.0[^]	<3.0[^]	<3.0	<2.0
	05/26/15	11.03	88.26	<50[^]	<210	<480	<2.0	<2.0[^]	<3.0	<3.0	<2.0
	08/19/15	13.21	86.08	<100	130	<270*	<1.0*	<1.0	<1.0	<3.0	--
	11/03/15	11.99	87.30	<50	120	<260	<2.0	<2.0	<3.0	<5.0	<2.0
	01/25/16	8.76	90.53	<50[H*]	290	320	<2.0	<2.0*	<3.0	<5.0*	<2.0
	04/21/16	9.66	89.63	<50	300	480	<2.0	<2.0	<3.0	<5.0	<2.0
	07/27/16	11.43	87.86	<50	110	<260	<2.0	<2.0	<3.0	<5.0	<2.0
TOC: 98.48 feet	10/11/16	12.85	85.63	<50	150	<250	<2.0	<2.0	<3.0	<5.0	<2.0
MW17	12/21/06	8.21	91.20	71.5	<236	<472	<0.5	<0.5	<0.5	<3	<5
TOC: 99.41 feet	03/27/07	7.51	91.90	<50.0	<238	<476	<0.5	<0.5	<0.5	<1	<5
	05/25/07	9.41	90.00	<50.0	<250	<500	<0.5	<0.5	<0.5	<1	<5
	09/06/07	11.30	88.11	<50.0	<243	<485	<0.5	<0.5	<0.5	<1	<5
	12/05/07	9.77	89.64	<50.0	<240	<481	<0.5	<0.5	<0.5	<1	--
	03/07/08	9.23	90.18	<50.0	<236	<472	<0.5	<0.5	<0.5	<1	<5
	06/13/08	8.60	90.81	<50.0	<240	<481	<0.5	<0.5	<0.5	<1	<5
	09/10/08	9.13	90.28	<50.0	<238	<476	<0.5	<0.5	<0.5	<3	<5[J]
	12/30/08	7.59	91.82	<50.0	285[Q6]	<481	<0.5	<0.5	<0.5	<1	--
MTCA Method A Cleanup Level for Groundwater[6]				**1,000/800**[7]	**500**	**500**	**5**	**1,000**	**700**	**1,000**	**160**

SoundEarth Strategies

Table 1
Summary of Groundwater Data
Former Bulk Fuel Facility
West Fir Street
Mount Vernon, Washington

Well ID	Sample Date	Depth to Groundwater[1] (feet)	Groundwater Elevation[2] (feet)	Analytical Results (micrograms per liter) GRPH[3]	DRPH[4]	ORPH[4]	Benzene[5]	Toluene[5]	Ethylbenzene[5]	Total Xylenes[5]	Naphthalene[5]
MW17	03/12/09	9.66	89.75	<50.0	<245	<490	<0.5	<0.5	<0.5	<3	<5
(continued)	06/18/09	9.95	89.46	<80.0	<263	<526	<1	<1	<1	<3	<1
TOC: 99.41 feet	09/09/09	11.70	87.71	<50	<238	<476	<1	<1	<1	<3	<1
	12/17/09	8.33	91.08	<50	180[Y]	**660**	<1	<1	<1	<3	<1
	03/10/10	9.43	89.98	<50	<120	<240	<1	<1	<1	<3	<1
	06/07/10	8.49	90.92	<50	240[Y]	380[Y]	<1	<1	<1	<3	<1
	09/09/10	10.42	88.99	<50	<120	<240	<1	<1	<1	<3	<1
	12/17/10	8.13	91.28	<50	220[Y]	**700**[Y]	<1	<1	<1	<3	<1
	03/09/11	7.68	91.73	<50	150[Y]	250[Y]	<1	<1	<1	<3	<1
	06/17/11	8.85	90.56	<50	<120	<240	<1	<1	<1	<3	<1
	08/30/11	10.26	89.15	<50	150[Y]	<240	<0.2	<0.5	<0.5	<1	<2
	12/08/11	9.19	90.22	<50	<120	<240^	<1	<1	<1	<3	<1
	03/30/12	7.85	91.56	<50	260[Y]	**530**[Y]	<1	<1	<1	<3	<1
	06/28/12	8.46	90.95	<50	<120	<240	<1	<1	<1	<3	--
	08/16/12	9.97	89.44	<50	<120	<240	<1	<1	<1	<3	<1
	11/21/12	9.01	90.40	<50	280[Y]	400[Y]	<1	<1	<1	<3	<1
	02/14/13	8.14	91.27	<50	340[Y]	**790**[Y]	<1.0	<1.0	<1.0	<3.0	<1.0
	05/24/13	9.18	90.23	<50	120[Y]	<250	<1.0	<1.0	<1.0	<3.0	<1.0
	08/08/13	10.68	88.73	<50	<140	<280	<1.0	<1.0	<1.0	<3.0	<1.0
	11/13/13	9.93	89.48	<50	<120	<240	<1.0	<1.0	<1.0	<3.0	<1.0
	02/03/14	8.15	91.26	<50	160[Y]	430[Y]	<1.0	<1.0	<1.0	<3.0	<1.0
	05/06/14	7.90	91.51	<50	<130	<250	<1.0	<1.0	<1.0	<3.0	<3.0
	07/21/14	10.55	88.86	<50	<120	<240	<1.0	<1.0	<1.0[J]	<3.0	<3.0
	10/14/14	10.79	88.62	<50	<120	<240	<1.0	<1.0	<1.0	<3.0	<3.0
	03/02/15	8.48	90.93	<100	120[Y]	<240[Y]	<2.0	<2.0^	<3.0^	<3.0	<2.0
	05/26/15	10.35	89.06	<50^	<210	<480	<2.0	<2.0^	<3.0	<3.0	<2.0
	08/19/15	11.72	87.69	<100	<120	<270*	<1.0*	<1.0	<1.0	<3.0	--
	11/03/15	10.20	89.21	<50	120	<250	<2.0[H]	<2.0[H]	<3.0[H]	<5.0[H*]	<2.0[H]
	01/25/16	7.94	91.47	<50H*	120	<260	<2.0	<2.0	<3.0	<5.0	<2.0
	04/21/16	8.87	90.54	<50	<110	<250	<2.0	<2.0	<3.0	<5.0	<2.0
	07/27/16	10.65	88.76	<50	<110	<260	<2.0	<2.0	<3.0	<5.0	<2.0
TOC: 98.56 feet	10/11/16	11.33	87.23	<50	<110	<260	<2.0	<2.0	<3.0	<5.0	<2.0
MW18	12/21/06	7.93	91.18	**5,090**	**2,730**[Q4, Q5]	**1,680**[Q4]	2.2	4.86	98.4	225	68.2
TOC: 99.11 feet	03/27/07	7.30	91.81	**3,840**	**1,150**[Q5]	**682**	4.06	4.60	92.8	341	132
	05/25/07	9.29	89.82	**3,320**	**518**[Q5]	<500	4.54	4.26	63.6	198	<25
	09/06/07	11.48	87.63	**2,580**	310[Q5]	<485	3.62	4.78	73.6	350	109
	12/05/07	9.85	89.26	**5,800**	**1,460**[Q5]	<481	**6.00**	7.08	166	434	--
	03/07/08	9.25	89.86	**6,780**	**1,600**[Q5]	**853**[Q9]	**6.79**	8.5	216	510	**337**
	06/13/08	8.73	90.38	**5,840**	**1,140**[Q5]	<481	**5.31**	7.77	227	462	**305**
	09/10/08	9.12	89.99	**1,570**	**565**[Q5]	<490	0.720	0.620	28.5	28.1	21.6[J]
	12/30/08	7.64	91.47	**6,070**[Q1]	**1,020**[Q5]	<481	3.44	6.26	259	620	--
	03/12/09	9.74	89.37	**4,560**	**1,490**[Q5]	**976**[Q1]	0.900	1.91	112	216	91.4
	06/18/09	9.95	89.16	591	365	<500	<1	<1	18	8.8	7.2
	09/09/09	11.98	87.13	**2,800**	323	<476	<1	2	74	187	57
	12/17/09	8.13	90.98	**19,000**	**6,100**[Y]	**510**	3.6	15	500	970	**880**
	03/11/10	9.95	89.16	**4,400**	**2,000**[Y]	**550**	<1	1.8	96	174	79
	06/08/10	8.36	90.75	**7,200**	**4,000**[Y]	**850**[Y]	1.2	3.7	140	256	**270**
	09/09/10	11.15	87.96	**4,500**	**2,400**[Y]	<240	<1	2.4	130	221	73[B]
	12/17/10	7.98	91.13	**11,000**	**4,400**[Y]	420[Y]	1.5	7.2	300[H]	346	**520**[H,B]
	03/09/11	7.53	91.58	**20,000**	**5,500**[Y]	**750**[Y]	2.2	12	500	830	**910**
	06/17/11	8.66	90.45	**13,000**	**4,200**[Y]	**1,200**[Y]	2	8.9	700	800	**1,100**
	08/31/11	10.28	88.83	**4,500**	**1,900**[Y]	**590**[Y]	0.66	2	116	187	70.5
	12/09/11	9.09	90.02	**4,700**	**2,500**[Y]	**580**[Y]	1.1	4.5	200	249	**270**
	03/29/12	7.70	91.41	**13,000**	**6,600**[Y]	**1,900**[Y]	1.4	9.7	410	550	**760**
	06/29/12	8.30	90.81	**8,700**	**2,800**[Y]	**1,100**[Y]	<1	4	200	240	--
	08/17/12	9.78	89.33	**5,900**	**2,700**[Y]	**1,600**[Y]	<1	3.3	150	223	**170**
	11/21/12	8.91	90.20	**6,600**	**2,700**[Y]	270[Y]	<1	3.5	160	230	**230**
	02/14/13	7.96	91.15	**7,300**	**4,600**[Y]	**1,200**[Y]	<1.0	5.2	280	445	**430**
	05/23/13	9.05	90.06	**15,000**	**5,000**[Y]	**950**[Y]	1.2	5.9	380	330	**400**
	08/08/13	10.67	88.44	**2,100**	**920**[Y]	**590**[Y]	<1.0	1.9	100	150	58
	11/13/13	9.99	89.12	**3,100**	**1,300**[Y]	<240	<1.0	1.5	89	105	25
MTCA Method A Cleanup Level for Groundwater[6]				**1,000/800**[7]	**500**	**500**	**5**	**1,000**	**700**	**1,000**	**160**

SoundEarth Strategies

Table 1
Summary of Groundwater Data
Former Bulk Fuel Facility
West Fir Street
Mount Vernon, Washington

Well ID	Sample Date	Depth to Groundwater[1] (feet)	Groundwater Elevation[2] (feet)	Analytical Results (micrograms per liter)							
				GRPH[3]	DRPH[4]	ORPH[4]	Benzene[5]	Toluene[5]	Ethylbenzene[5]	Total Xylenes[5]	Naphthalene[5]
MW18	02/03/14	8.03	91.08	15,000	2,600[Y]	360[Y]	<1.0	7.0	330	331	350*
(continued)	05/06/14	7.75	91.36	15,000	3,500[Y]	350[Y]	<1.0	5.2	330	501	310
TOC: 99.11 feet	07/22/14	10.38	88.73	5,600	1,500[Y]	450[Y]	<2.0[J,B]	3.3[B]	170	214	89
	10/15/14	10.88	88.23	11,000	1,700[Y]	<240	1.1	5.1	270	461	49
	03/03/15	8.30	90.81	15,000	5,000[Y]	500[Y]	<2.0	<20	370	700	100
	05/27/15	10.27	88.84	4,900[H]	1,400[Y]	<480	<2.0	<2.0[^]	120[H]	110[H]	36
	08/19/15	12.45	86.66	1,900	590	<260*	<1.0*	<1.0	48	115	--
	11/03/15	10.88	88.23	5,600	1,600	<260	<2.0[H]	<2.0[H]	63[H]	93[H]	20[H]
	01/25/16	7.76	91.35	22,000[H*]	4,600	<260	<2.0	8.4	<300	<500	350
	04/21/16	8.66	90.45	16,000	4,900	610	<2.0	6.7	400	590	560
	07/28/16	10.61	88.50	2,600	1,100	<290	<2.0	<2.0	48	79	28
TOC: 98.27 feet	10/11/16	11.98	86.29	4,200	1,400	<260	<2.0	<2.0	73	150	35
MW19	12/21/06	7.94	91.31	<50	489[Q6]	746	<0.5	<0.5	<0.5	<3	<5
TOC: 99.25 feet	03/27/07	7.41	91.84	<50	630[Q3]	838	<0.5	<0.5	<0.5	<1	<5
	05/25/07	9.38	89.87	<50	<250	<500	<0.5	<0.5	<0.5	<1	<5
	09/06/07	11.59	87.66	<50	<243	<485	<0.5	<0.5	<0.5	<1	<5
	12/05/07	9.96	89.29	<50	<240	<481	<0.5	<0.5	<0.5	<1	--
	03/07/08	9.38	89.87	<50	273[Q6]	<472	<0.5	<0.5	<0.5	<1	<5
	06/13/08	8.69	90.56	<50	<248	<495	<0.5	<0.5	<0.5	<1	<5
	09/10/08	9.12	90.13	<50	<243	<485	<0.5	<0.5	<0.5	<3	<5[J]
	12/30/08	8.22	91.03	<50	347[Q6]	<481	<0.5	<0.5	<0.5	<1	--
	03/12/09	9.84	89.41	<50	<236	<472	<0.5	<0.5	<0.5	<3	<5
	06/17/09	10.04	89.21	<80	<243	<485	<1	<1	<1	<3	<1
	09/09/09	12.18	87.07	<50	<236	<472	<1	<1	<1	<3	<1
	12/16/09	8.27	90.98	<50	550[Y]	1,400	<1	<1	<1	<3	<1[H]
	03/10/10	9.50	89.75	<50	250[Y]	590	<1	<1	<1	<3	<1
	06/08/10	8.57	90.68	<50	390[Y]	600[Y]	<1	<1	<1	<3	<1
	09/09/10	11.21	88.04	<50	200[Y]	320[Y]	<1	<1	<1	<3	<1
	12/16/10	8.13	91.12	<50[H]	440[Y]	1,100[Y]	<1[H]	<1[H]	<1[H]	<3[H]	<1[H]
	03/09/11	7.67	91.58	<50	540[Y]	970[Y]	<1	<1	<1	<3	<1
	06/16/11	8.80	90.45	<50	460[Y]	770[Y]	<1	<1	<1	<3	<1
	08/31/11	10.37	88.88	<50	550[Y]	680[Y]	<0.2	<0.5	<0.5	<1	<2
	12/09/11	9.22	90.03	<50^*	290[Y]	490[Y]	<1	<1	<1	<3	<1
	03/29/12	7.85	91.40	<50	900[Y]	1,600[Y]	<1	<1	<1	<3	<1
	06/28/12	8.47	90.78	81	330[Y]	610[Y]	<1	<1	<1	<3	--
	08/17/12	9.87	89.38	<50	200[Y]	590[Y]	<1	<1	<1	<3	<1
	11/20/12	9.09	90.16	<50	320[Y]	530[Y]	<1	<1	<1	<3	<1
	02/15/13	8.12	91.13	<50	520[Y]	920[Y]	<1.0	<1.0	<1.0	<3.0	<1.0
	05/23/13	9.20	90.05	<50	340[Y]	420[Y]	<1.0	<1.0	<1.0	<3.0	<1.0
	08/08/13	10.76	88.49	130	<130	<260	<1.0	<1.0	<1.0	<3.0	<1.0
	11/13/13	10.12	89.13	<50	170[Y]	290[Y]	<1.0	<1.0	<1.0	<3.0	2.6
	02/04/14	8.22	91.03	<50	310[Y]	940[Y]	<1.0	<1.0	<1.0	<3.0	<1.0*
	05/05/14	7.92	91.33	<50	480[Y]	800[Y]	<1.0	<1.0	<1.0	<3.0	<3.0
	07/21/14	10.46	88.79	<50	190[Y]	<240	<2.0	<2.0	<2.0	<6.0	<6.0
	10/14/14	10.91	88.34	<50	280[Y]	<240	<1.0	<1.0	<1.0	<3.0	<3.0
	03/02/15	8.42	90.83	<100	530[Y]	850[Y]	<2.0	<2.0[^]	<3.0[^]	<3.0	<2.0
	05/27/15	10.28	88.97	<50[^]	270[Y]	<480	<2.0	<2.0[^]	<3.0	<3.0	<2.0
	08/19/15	12.57	86.68	<100	160	<280*	<1.0*	<1.0	<1.0	<3.0	--
	11/03/15	11.28	87.97	60	290	<260	<2.0[H]	<2.0[H]	<3.0[H]	<5.0[H*]	<2.0[H]
	01/25/16	8.00	91.25	<50[H*]	390	520	<2.0	<2.0*	<3.0	<5.0*	<2.0
	04/21/16	8.83	90.42	<50	560	730	<2.0	<2.0	<3.0	<5.0	<2.0
	07/28/16	10.71	88.54	<50	210	<260	<2.0	<2.0	<3.0	<5.0	<2.0
TOC: 98.42 feet	10/11/16	12.21	86.21	<50	230	<260	<2.0	<2.0	<3.0	<5.0	<2.0
MW20	12/21/06	7.97	90.80	24,300	8,240[Q4, Q5]	3,920[Q4]	4.66	3.69	438	348	478
TOC: 98.77 feet	03/27/07	7.31	91.46	4,110	1,820[Q5]	908	2.18	1.08	97.3	94.7	83.9
	05/25/07	9.34	89.43	3,970	1,060[Q5]	<500	2.57	1.71	81.4	80.9	215
	09/05/07	11.33	87.44	2,050	287[Q5]	<481	2.78	1.02	45	51.9	87.7
	12/05/07	9.80	88.97	2,710	1,690[Q5]	834	2.54	0.501	73.1	44.1	--
	03/07/08	9.22	89.55	5,810	3,640[Q5]	1,910[Q9]	3.89	2.08	256	100	412
	06/13/08	8.50	90.27	5,030	3,880[Q5]	2,440	3.02	<2.50	173	104	425
	09/10/08	9.13	89.64	5,680	1,820[Q5]	999	1.07	0.950	202	110	348[J]
	12/30/08	7.52	91.25	3,430[Q1]	2,310[Q10]	549[Q4]	2.35	0.851	91.3	87.5	--
	03/12/09	9.66	89.11	9,960	3,010[Q5]	1,390[Q1]	1.08	0.970	211	129	319
	06/18/09	9.81	88.96	1,580	1,260	<490	<1	<1	65	17.8	71
	09/09/09	11.85	86.92	1,600	558	<476	<1	<1	11	5.9	43
	12/17/09	8.12	90.65	14,000	7,600[Y]	2,000	2	2.2	310	174	910
MTCA Method A Cleanup Level for Groundwater[6]				**1,000/800[7]**	**500**	**500**	**5**	**1,000**	**700**	**1,000**	**160**

SoundEarth Strategies

Table 1
Summary of Groundwater Data
Former Bulk Fuel Facility
West Fir Street
Mount Vernon, Washington

Well ID	Sample Date	Depth to Groundwater[1] (feet)	Groundwater Elevation[2] (feet)	Analytical Results (micrograms per liter) GRPH[3]	DRPH[4]	ORPH[4]	Benzene[5]	Toluene[5]	Ethylbenzene[5]	Total Xylenes[5]	Naphthalene[5]
MW20	03/11/10	9.35	89.42	5,200	3,000[Y]	1,100	1.1	<1	130	43	170
(continued)	06/08/10	8.40	90.37	16,000	10,000[Y]	3,800[Y]	1.7	2	420	165	890
TOC: 98.77 feet	09/09/10	10.93	87.84	2,500	2,300[Y]	720[Y]	<1	<1	43	27	98[B]
	12/17/10	7.94	90.83	20,000	11,000[Y]	2,200[Y]	1.9	2.6	510[H]	231	1,600[H,B]
	03/10/11	7.53	91.24	25,000	9,900[Y]	2,100[Y]	2.7	3.5	660	392	1,700
	06/16/11	8.61	90.16	14,000	7,700[Y]	2,000[Y]	2.1	2.2	600	162	1,400
	08/30/11	10.12	88.65	5,100	3,800[Y]	1,200[Y]	0.86	<1	107	48.8	175
	12/08/11	9.03	89.74	12,000	6,000[Y]	1,100[Y]	2	2.1	440	157.8	870
	03/30/12	7.67	91.10	21,000	11,000[Y]	2,200[Y]	1.2	3	640	340	1,300
	06/29/12	8.23	90.54	17,000	6,200[Y]	1,600[Y]	1.2	1.8	370	142	--
	08/17/12	9.65	89.12	8,600	4,200[Y]	1,800[Y]	<1	<1	160	89.4	320
	11/20/12	8.67	90.10	18,000	11,000[Y]	1,400[Y]	<1	1.6	510	234	1,700
	02/15/13	7.99	90.78	12,000	7,300[Y]	1,700[Y]	1.3	2.3	450	151	850
	05/23/13	9.02	89.75	10,000	5,200[Y]	1,400[Y]	1.1	<1.0	220	90	440
	08/09/13	10.51	88.26	2,700	1,800[Y]	840[Y]	<1.0	<1.0	60	22.4	130
	11/13/13	9.95	88.82	6,100	3,000[Y]	890[Y]	<1.0	<1.0	180	34.5	210
	02/04/14	8.03	90.74	25,000	6,700[Y]	1,200[Y]	<1.0	1.7	490	214	1,200*
	05/06/14	6.68	92.09	22,000	6,500[Y]	900[Y]	<1.0	1.0	330	210	1,300
	07/22/14	10.21	88.56	6,900	2,100[Y]	540	<2.0[J,B]	<2.0[J,B]	150	37	220
	10/15/14	10.65	88.12	8,300	2,400[Y]	600[Y]	<1.0	<1.0	160	52	290
	03/03/15	8.29	90.48	9,100	3,900[Y]	820[Y]	<2.0	<2.0[^]	200	91	150
	05/27/15	10.14	88.63	8,000[H^]	1,700[Y]	<480	<2.0	<2.0[^]	150[H]	20	210[H]
	08/19/15	12.40	86.37	--	--	--	--	--	--	--	--
	11/03/15	11.08	87.69	8,200	3,200	<250	<2.0[H]	<2.0[H]	150[H]	34[H]	100[H]
	01/25/16	7.81	90.96	23,000[H*]	8,300	610	<2.0	<2.0	<300[H]	<300[H]	930[H]
	04/21/16	8.70	90.07	18,000	7,500	930	<2.0	<2.0	330	15	960
	07/28/16	10.57	88.20	9,500	3,500	300	<2.0	<2.0	160	54	320
TOC: 97.93 feet	10/11/16	12.01	85.92	3,900	2,200	330	<2.0	<2.0	35	14	82
MW21	12/21/06	8.53	90.96	240	1,040[Q4]	<472[Q4]	0.570	<0.5	0.570	<3	<5
TOC: 99.49 feet	03/27/07	7.87	91.62	387	560[Q5]	<500	4.63	<0.5	5.61	2.26	<5
	05/25/07	9.80	89.69	296	<250	<500	3.63	0.639	1.50	<1	<5
	09/06/07	11.55	87.94	102	<245	<490	1.31	<0.5	0.811	<1	<5
	12/05/07	10.12	89.37	256	381	<481	3.63	0.734	3.88	1.24	--
	03/07/08	9.65	89.84	260	855[Q4]	609[Q9]	3.25	0.888	<0.5	1.3	<5
	06/13/08	8.90	90.59	297	493[Q12]	<481	3.95	<0.5	3.78	<1	9.66
	09/10/08	9.66	89.83	279	<238	<476	2.31	<0.5	1.04	<3	<5[J]
	12/30/08	7.96	91.53	328	578[Q12]	<485	5.85	0.831	6.05	2.40	--
	03/12/09	10.15	89.34	302	410[Q5]	<481	1.51	<0.5	2.22	<3	<5
	06/17/09	10.36	89.13	152	<250	<500	<1	<1	1	<3	<1
	09/09/09	12.03	87.46	150	<238	<476	<1	<1	<1	<3	<1
	12/17/09	8.58	90.91	<50	850[Y]	550	1.1	<1	1.7	<3	<1
	03/11/10	9.72	89.77	160	560[Y]	630	<1	<1	1.1	<3	<1
	06/07/10	8.36	91.13	450	710[Y]	390[Y]	1.6	<1	2.9	<3	1.5
	09/09/10	11.32	88.17	170	140[Y]	<240	<1	<1	<1	<3	1.1
	12/16/10	8.42	91.07	310	430[Y]	280[Y]	2.7	<1	4.6	<3	2.5
	03/10/11	8.02	91.47	390	1,100[Y]	350[Y]	2.8	<1	3	<3	<1
	06/16/11	9.16	90.33	300	630[Y]	360[Y]	2	<1	2.5	<3	<1
	08/30/11	10.65	88.84	240	450[Y]	250[Y]	0.29	<0.5	<0.5	<1	<2
	12/09/11	9.51	89.98	110	530[Y]	290[Y]	<1	<1	1.3	<3	<1
	03/30/12	8.22	91.27	290	2,700[Y]	1,700[Y]	1.5	<1.015	2.1	<3	<1
	06/29/12	8.72	90.77	430	470[Y]	300[Y]	<1	<1	1.3	<3	--
	08/17/12	10.26	89.23	180	370[Y]	320[Y]	<1	<1	<1	<3	<1
	11/21/12	9.30	90.19	140	780	440	<1	<1	<1	<3	<1
	02/15/13	8.43	91.06	120	1,300[Y]	680[Y]	<1.0	<1.0	<1.0	<3.0	<1.0
	05/24/13	9.45	90.04	250	760[Y]	400[Y]	<1.0	<1.0	<1.0	<3.0	<1.0
	08/09/13	10.95	88.54	260	220[Y]	<240	<1.0	<1.0	<1.0	<3.0	<1.0
	11/13/13	10.22	89.27	180	330[Y]	<240	<1.0	<1.0	<1.0	<3.0	2.3
MTCA Method A Cleanup Level for Groundwater[6]				**1,000/800[7]**	**500**	**500**	**5**	**1,000**	**700**	**1,000**	**160**

SoundEarth Strategies

Table 1
Summary of Groundwater Data
Former Bulk Fuel Facility
West Fir Street
Mount Vernon, Washington

Well ID	Sample Date	Depth to Groundwater[1] (feet)	Groundwater Elevation[2] (feet)	Analytical Results (micrograms per liter)							
				GRPH[3]	DRPH[4]	ORPH[4]	Benzene[5]	Toluene[5]	Ethylbenzene[5]	Total Xylenes[5]	Naphthalene[5]
MW21	02/04/14	8.49	91.00	210	450[Y]	300[Y]	<1.0	<1.0	<1.0	<3.0	<1.0*
(continued)	05/06/14	8.26	91.23	110	380[Y]	<250	<1.0	<1.0	<1.0	<3.0	<3.0
TOC: 99.49 feet	07/22/14	10.77	88.72	110	290[Y]	<250	<2.0[J,B]	<2.0[JB]	<2.0	<6.0	<6.0
	10/15/14	11.20	88.29	200	370[Y]	<240	<1.0	<1.0	<1.0	<3.0	<3.0
	03/03/15	8.82	90.67	130	620[Y]	260[Y]	<2.0	<2.0[^]	<3.0[^]	<3.0	<2.0
	05/27/15	10.76	88.73	92	210[Y]	<480	<2.0[H]	<2.0[H]	<3.0[H]	<3.0[H]	<2.0[H]
	08/19/15	12.11	87.38	<100	<120	<280*	<1.0*	<1.0	<1.0	<3.0	--
	11/03/15	10.82	88.67	160	260	<260	<2.0[H]	<2.0[H]	<3.0[H]	<5.0[H*]	<2.0[H]
	01/25/16	8.27	91.22	95[H*]	670	<250	<2.0	<2.0	<3.0	<5.0	<2.0
	04/21/16	9.16	90.33	170	1,000	410	<2.0	<2.0	<3.0	<.50	<2.0
	07/28/16	10.89	88.60	120	190	<270	<2.0	<2.0	<3.0	<5.0	<2.0
TOC: 98.68 feet	10/11/16	11.70	86.98	78	140	<260	<2.0	<2.0	<3.0	<5.0	<2.0
MW22	12/21/06	8.60	90.80	4,650	3,280[Q4, Q10]	1,930[Q4]	48.8	13	70.9	57.2	<5
TOC: 99.40 feet	03/27/07	7.98	91.42	3,980	1,610[Q5]	<490	24.9	8.54	60.2	43.0	14
	05/25/07	9.96	89.44	3,730	970[Q5]	<500	17.0	6.18	31.9	27.8	5.27
	09/06/07	11.85	87.55	3,240	945[Q5]	<485	30.8	7	18.2	27.1	11.7
	12/05/07	10.36	89.04	4,400	1,560[Q5]	<481	60.4	8.96	28.6	36.7	--
	03/07/08	9.83	89.57	4,260	2,940[Q5]	<472	57.1	11.80	49.1	45.8	18.7
	06/13/08	9.09	90.31	3,970	1,850	<472	44.6	11	58	48.7	47.9
	09/10/08	9.80	89.60	3,900	1,220[Q5]	<490	16.9	5.29	39.6	18.7	<5[I]
	12/30/08	8.14	91.26	3,760	2,070[Q12]	<485	26.1	5.94	49.7	23.2	--
	03/12/09	10.32	89.08	4,330	2,420[Q5]	<495	29.6	5.23	65.2	16.8	<5
	06/18/09	10.46	88.94	2,480	14,700	<500	20	4.7	13	13.7	2.9
	09/09/09	12.59	86.81	3,300[X,I]	995	<476	21	5.2	7.8	16.0	1.2
	12/17/09	8.70	90.70	4,400	5,100[Y]	460	69	7.4	22	19.2	4.4
	03/11/10	9.37	90.03	3,200	5,000[Y]	<240	35	7.7	37	21.6	5.3
	06/08/10	8.92	90.48	4,100	3,900[Y]	390[Y]	33	8.4	51	28.0	4.8
	09/09/10	11.62	87.78	3,300	2,600[Y]	<240	22	7.2	43	27.0	6
	12/17/10	8.55	90.85	3,900	3,800[Y]	240[Y]	38	7.1	40	28	<1
	03/10/11	8.13	91.27	4,500	4,400[Y]	400[Y]	32	8.0	47	28	6.4
	06/17/11	9.24	90.16	3,200	2,200[Y]	450[Y]	21	5.5	31	18	2.9
	08/30/11	10.80	88.60	2,900	1,900[Y]	290[Y]	13.1	4.7	16	15.5	<2
	12/09/11	9.63	89.77	2,500	4,500[Y]	360[Y]	30	6.0	19	20.2	3.4
	03/30/12	8.29	91.11	3,300	5,500[Y]	1,400[Y]	30	6.0	30	17.9	8.7
	06/29/12	8.86	90.54	3,600	2,400[Y]	450[Y]	15	5.4	24	16.9	--
	08/17/12	10.34	89.06	3,400	1,900[Y]	360[Y]	9.8	3.9	11	12.5	3.6
	11/21/12	9.52	89.88	2,900	2,800	320	25	4.5	9.8	13.5	27
	02/15/13	8.59	90.81	2,800	4,900[Y]	930[Y]	24	5.6	16	14.6	4.3
	05/24/13	9.63	89.77	3,100	2,900[Y]	440[Y]	12	4.5	19	15	2.7
	08/09/13	11.20	88.20	1,900	1,300[Y]	<240	7.3	3.9	13	10.5	<1.0
	11/13/13	10.57	88.83	3,600	2,300[Y]	<240	14	4.2	15	11.0	1.6
	02/04/14	8.62	90.78	4,200	2,300[Y]	360[Y]	13	3.9	17	8.4	2.5*
	05/06/14	8.39	91.01	3,400	1,800[Y]	310[Y]	6.7	2.7	10	6.5	8.5
	07/22/14	10.89	88.51	3,100	1,300[Y]	<240	7.9[B]	3.8[B]	8.2	7.6	<6.0
	10/15/14	11.53	87.87	3,200	1,000[Y]	<240	9.1	2.7	17	7.4	<3.0
	03/03/15	8.91	90.49	2,700	1,800[Y]	290[Y]	7.8	2.0	6.4	5.5	3.3
	05/27/15	10.87	88.53	3,600[H]	1,300[Y]	<480	<10[H]	<10[H]	<15[H]	<15[H]	<10[H]
	08/19/15	13.07	86.33	2,700	930	<270*	2.5	1.2	3.1	3.1	--
	11/03/15	11.42	87.98	3,300	1,700	<260	8.2[H]	<2.0[H]	4.9[H]	3.7[H*]	<2.0[H]
	01/25/16	8.40	91.00	3,500[H*]	2,400	<250	8.0	2.5	12[H]	4.9[H]	2.1[H]
	04/21/16	9.28	90.12	3,100	2,400	350	5.1	2.1	8.0	5.4	<2.0
	07/28/16	11.21	88.19	2,700	1,500	<280	3.3	<2.0	4.7	3.8	<2.0
TOC: 98.63 feet	10/11/16	12.62	86.01	2,900	1,200	<260	2.8	<2.0	3.6	3.2	5.3
Off-Property Wells											
MW-12	02/03/14	7.50	91.35	--	--	--	--	--	--	--	--
TOC: 98.85 feet	05/05/14	7.26	91.59	--	--	--	--	--	--	--	--
	07/21/14	9.64	89.21	--	--	--	--	--	--	--	--
	10/14/14	9.85	89.00	--	--	--	--	--	--	--	--
	03/02/15	7.74	91.11	--	--	--	--	--	--	--	--
	05/26/15	9.31	89.54	--	--	--	--	--	--	--	--
	08/19/15	11.60	87.25	--	--	--	--	--	--	--	--
	11/03/15	10.21	88.64	--	--	--	--	--	--	--	--
	01/25/16	7.39	91.46	--	--	--	--	--	--	--	--
	04/21/16	8.63	90.22	--	--	--	--	--	--	--	--
	07/27/16	9.73	89.12	--	--	--	--	--	--	--	--
TOC: 98.01 feet	10/11/16	11.10	86.91	--	--	--	--	--	--	--	--
MTCA Method A Cleanup Level for Groundwater[6]				**1,000/800[7]**	**500**	**500**	**5**	**1,000**	**700**	**1,000**	**160**

SoundEarth Strategies

Table 1
Summary of Groundwater Data
Former Bulk Fuel Facility
West Fir Street
Mount Vernon, Washington

Well ID	Sample Date	Depth to Groundwater[1] (feet)	Groundwater Elevation[2] (feet)	Analytical Results (micrograms per liter) GRPH[3]	DRPH[4]	ORPH[4]	Benzene[5]	Toluene[5]	Ethylbenzene[5]	Total Xylenes[5]	Naphthalene[5]
Off-Property Wells											
MW-13	02/03/14	8.09	91.19	--	--	--	--	--	--	--	--
TOC: 99.28 feet	05/05/14	7.86	91.42	--	--	--	--	--	--	--	--
	07/21/14	10.22	89.06	--	--	--	--	--	--	--	--
	10/14/14	10.65	88.63	--	--	--	--	--	--	--	--
	03/02/15	8.30	90.98	--	--	--	--	--	--	--	--
	05/26/15	9.94	89.34	--	--	--	--	--	--	--	--
	08/19/15	11.95	87.33	--	--	--	--	--	--	--	--
	11/03/15	11.16	88.12	--	--	--	--	--	--	--	--
	01/25/16	7.95	91.33	--	--	--	--	--	--	--	--
	04/21/16	8.07	91.21	--	--	--	--	--	--	--	--
	07/27/16	10.38	88.90	--	--	--	--	--	--	--	--
TOC: 98.47 feet	10/11/16	11.69	86.78	--	--	--	--	--	--	--	--
MW-15	02/03/14	8.52	91.22	--	--	--	--	--	--	--	--
TOC: 99.74 feet	05/05/14	7.87	91.87	--	--	--	--	--	--	--	--
	07/21/14	10.65	89.09	--	--	--	--	--	--	--	--
	10/14/14	11.21	88.53	--	--	--	--	--	--	--	--
	03/02/15	8.72	91.02	--	--	--	--	--	--	--	--
	05/26/15	10.42	89.32	--	--	--	--	--	--	--	--
	08/19/15	11.42	88.32	--	--	--	--	--	--	--	--
	11/03/15	11.25	88.49	--	--	--	--	--	--	--	--
	01/25/16	8.36	91.38	--	--	--	--	--	--	--	--
	04/21/16	9.08	90.66	--	--	--	--	--	--	--	--
	07/27/16	10.84	88.90	--	--	--	--	--	--	--	--
TOC: 98.91 feet	10/11/16	11.38	87.53	--	--	--	--	--	--	--	--
MTCA Method A Cleanup Level for Groundwater[6]				**1,000/800[7]**	**500**	**500**	**5**	**1,000**	**700**	**1,000**	**160**

NOTES:

Red denotes concentrations exceeding the MTCA Method A cleanup level for groundwater.

Samples analyzed by TestAmerica Laboratories, Inc., of Tacoma, Washington.

[1]Measured below the top of the well casing.

[2]Measured relative to a temporary benchmark with an assumed elevation of 100.00 feet.

[3]Analyzed by Method NWTPH-Gx.

[4]Analyzed by Method NWTPH-Dx.

[5]Analyzed by U.S. Environmental Protection Agency Method 8260B, 8260C, or 8021B.

[6]MTCA Cleanup Regulation, Method A Cleanup Levels, Table 720-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, revised November 2007.

[7]1,000 µg/L when benzene is not present and 800 µg/L when benzene is present.

-- = not analyzed

< = not detected above the laboratory reporting limit

µg/L = micrograms per liter

DRPH = diesel-range petroleum hydrocarbons

GRPH = gasoline-range petroleum hydrocarbons

LCS = laboratory control standard

LCSD = laboratory control standard duplicate

MTCA = Washington State Model Toxics Control Act

NWTPH = Northwest Total Petroleum Hydrocarbon

ORPH = oil-range petroleum hydrocarbons

TOC = top of casing elevation

Laboratory Notes:

[B]Compound was found in the blank and sample.

[D-06]The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

[I]Indicates the presence of an interference, recovery is not calculated.

[J]Results flagged as estimate.

[Q1]Does not match typical pattern.

[Q3]The chromatographic pattern is not consistent with diesel fuel.

[Q4]The hydrocarbons present are a complex mixture of diesel-range and heavy oil-range organics.

[Q5]Results in the diesel organics range are primarily due to overlap from a gasoline-range product.

[Q6]Results in the diesel organics range are primarily due to overlap from a heavy oil-range product.

[Q7]Heavy oil-range organics present are due to hydrocarbons eluting primarily in the diesel range.

[Q9]Hydrocarbon pattern most closely resembles hydraulic oil.

[Q10]Hydrocarbon pattern most closely resembles a blend of gasoline- and diesel-range organics.

[Q11]Detected hydrocarbons in the diesel range do not have a distinct diesel pattern and may be due to heavily weathered diesel.

[Q12]Detected hydrocarbons in the diesel range do not have a distinct diesel pattern and may be due to heavily weathered diesel or biogenic interference.

[H]Sample was prepped or analyzed beyond the specified holding time.

[X]Surrogate exceeds the control limits.

[Y]The chromatographic response resembles a typical fuel pattern.

*Relative percent difference of the LCS or LCSD exceeds the control limits **or** the LCS or LCSD is outside acceptance limits.

^Instrument calibration related quality control exceeds the control limits.

ATTACHMENT A
SITE BACKGROUND

The Property is currently vacant and occupies the western portion of an irregularly shaped tax parcel that covers approximately 33,105 square feet of land. An active retail gasoline station (Tesoro Facility No. 62159) operates on the eastern portion of the tax parcel. Tesoro purchased the Property from Gull Industries in 2001 and sold it to MYOB, LLC on July 26, 2006. During underground storage tank excavation activities conducted in 2005 at the adjacent retail gasoline service station, several product lines were noted extending to the west beneath the station's convenience store. After discovering the product lines, SoundEarth conducted a limited historical review of activities conducted on the tax parcel, which revealed that the western portion of the parcel had historically been used as a bulk fuel storage facility.

Subsurface investigations conducted since 2005 have confirmed that the historical operation of a bulk fuel storage facility on the Property has resulted in adverse environmental impacts to soil and groundwater. Laboratory analytical data indicated that concentrations of GRPH, DRPH, ORPH, benzene, ethylbenzene, and naphthalene exceeded the MTCA Method A cleanup levels in both soil and groundwater beneath the Property.

According to Ecology's *Guidelines for Property Cleanups Under the Voluntary Cleanup Program* dated July 2008, a site is defined by the nature and extent of contamination associated with one or more releases of hazardous substances prior to any cleanup of that contamination. Based on this definition of a site and that provided in Section 200 of Chapter 340 of Title 173 of the Washington Administrative Code, the Former Bulk Fuel Facility (the Site) includes petroleum-contaminated soil and groundwater located beneath significant portions of the Property and may also extend beneath the west-adjoining Burlington Northern Railroad property.

Groundwater sampling at wells MW07 through MW10 has been discontinued because monitoring events conducted at these four wells in 2005 and 2006 indicated concentrations of the chemicals of concern were below the applicable MTCA Method A cleanup levels.

The adjacent retail gasoline service station received a No Further Action designation in April 2013.

ATTACHMENT B
FIELD METHODS

SoundEarth personnel opened on-Property wells MW04 through MW06 and MW15 through MW22 on October 11, 2016, to collect depth-to-groundwater measurements. In addition, at the request of Ecology site manager Ms. Heather Vick, three off-Property wells (MW-12, MW-13, and MW-15) located on the east-adjoining Tesoro retail station were included in depth-to-groundwater measurements and subsequent groundwater elevation contouring. Groundwater samples were not collected from the three off-Property wells.

Water levels were permitted to equilibrate with atmospheric pressure for a minimum of 30 minutes before groundwater level measurements were obtained. Groundwater levels were measured relative to the top of well casing to an accuracy of 0.01 feet using an electronic water level meter.

On October 11, 2016, SoundEarth personnel collected groundwater samples from each of the on-Property wells in accordance with the EPA *Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedures* (April 1996). Purging and sampling of each well were performed using a peristaltic pump and dedicated polyethylene tubing at a flow rate ranging from 100 to 300 milliliters per minute. The tubing intake was placed approximately 2 to 3 feet below the surface of the groundwater or mid-screen in each well.

During purging, water quality was monitored using a multi-parameter water quality meter equipped with a flow-through cell. The water quality parameters monitored and recorded during well purging included temperature, pH, specific conductivity, dissolved oxygen, turbidity, and oxidation-reduction potential. Each well was purged until all six water quality parameters or the minimum subset of pH, specific conductance, and turbidity or dissolved oxygen stabilized.

Following purging, groundwater samples were collected from the pump outlet tubing located upstream of the flow-through cell and placed directly into clean, laboratory-prepared sample containers. Each container was labeled with a unique sample identification number, placed on ice in a cooler, and transported to TestAmerica Laboratories, Inc., of Tacoma, Washington, under standard chain-of-custody protocols for laboratory analysis. The groundwater samples were submitted for analysis of GRPH by Method NWTPH-Gx; DRPH and ORPH by Method NWTPH-Dx; naphthalene and BTEX by EPA Method 8260C. Purge water generated during the monitoring event was placed in an appropriately labeled 55-gallon steel drum and temporarily stored on the Property pending receipt of analytical data and proper disposal.

ATTACHMENT C
FIELD FORMS

SoundEarth Strategies

FIELD REPORT

Client & Site Name/Number:		SoundEarth Project Number:	Date:
Tesoro		0271-018-12	10/11/16
Site Address:		**Purpose of Visit/Task #:**	**Field Report Prepared by:**
115 West Fir Street, Mount Vernon, WA		2016 Q4 GWS	CJT
Temp/Weather:	**Permit Required to Work:**	**Time of Arrival/Departure (2400):**	**Personnel Onsite:**
30s, sunny		0655 onsite to 1600 offsite	CJT

0655- CJT onsite. Runs PDE & checks in with site attendant.
0700 - Conduct H&S meeting.
0705- Begin opening monitoring wells & allow to equilibrate.
0715- Calibrating WQ meters.
0745- WQ meters calibrated. Begin measuring DTW in all wells.
0810- Complete DTW measurements. Setting up at MW17.
0818- Begin sampling MW17.
0845- MW17 Complete. Moving to MW06.
0920- MW06 complete. Moving to MW15.
0955 - MW15 Complete. Moving to MW16.
1050 - MW16 Complete. Moving to MW19.
1115 - MW19 complete. Moving to MW04.
1150 - MW04 Complete. Moving to MW21.
1230 - MW21 complete. Moving to MW18.
1315 - MW18 Complete. Moving to MW05.
1350- MW05 Complete. Moving to MW20 (field duplicate)
1450 - MW20 Complete. Moving to MW22.
1530 - All wells sampled. Decoming equipment & pouring purge water into drum #001.
1600 - CJT offsite.

Clan Tech 10/11/16

Attachments: H&S, JSA, DTW, Cal, purge, CoC

Daily Health and Safety Briefing Log

Date: 10/11/16

Time: 0700

Site Discussed:

Tesoro Bulk Fueling Facility
115 West Fir Street
Mount Vernon, Washington

Subjects Discussed:

- [x] Slips, trips and falls
- [x] PPE
- [ ] Heavy Equipment
- [x] Traffic and moving equipment
- [x] COCs (GRPH, DRPH, ORPH, BTEX)
- [x] Eyewash/ fire extinguisher locations
- [ ] Excavation/trenching safety
- [ ] Air quality
- [ ] Overhead and underground utilities
- [x] Spill kit location
- [x] Emergency meeting locations
- [x] Site control and visitors
- [x] Hospital location and 911
- [x] Lifting techniques
- [x] Weather exposure, hydration
- [x] Noise
- [ ] Ladder safety
- [x] Handtool safety
- [x] First aid kit locations
- [ ] General Contractor Specific Safety Items

Additional Notes:

Attendees:

Print Name	Signature

CA 10/11/16

Meeting Conducted by:

Clare Tochlin — Clare Tochlin

(Site Health and Safety Officer)

SoundEarth Strategies

Job Safety Analysis

Groundwater Sampling

Work Activity: **Groundwater Sampling – Bulk Fuel 62159**	☒ New ☐ Revised	Date: 6/13/16

Personal Protective Equipment (PPE): Minimum PPE is Level D including: safety glasses or goggles, hard hat, high visibility traffic vest, steel-toed boots, hearing protection, and gloves (type dependent on job-specific requirements) **Additional PPE may be required in the Site Specific Health & Safety Plan (HASP). Also refer to the HASP for required traffic control, air monitoring, and emergency procedures.**

Development Team	Position/Title	Reviewed By	Position/Title	Date
Joe Ellingson	Staff Engineer	John Murnane	Safety Manager	6/13/16

Field staff must review job-specific work plan and coordinate with project manager to verify that all up-front logistics are completed prior to starting work including, but not limited to, utility locates, permitting, access agreements, and notification to required contacts (e.g. site managers, inspectors, clients, subcontractors, etc.). Additionally, a tailgate safety meeting must be performed and documented at the beginning of each work day. Remind all participants of right and responsibility to use **STOP WORK AUTHORITY**, and Management of Change (MOC).

Job # 0271-018	***Date read***	***Signatures*** *(File signed copy with project paper work.)*
	10/11/16	1. [signature] 2. 3.

● Job Steps	● Potential Hazard	● Critical Actions
1. Pre-Job		• Conduct tailgate safety meeting • Refer to site specific HASP and JSA • Identify and address new or unforeseen hazards
2. Opening Wells	Proximity to traffic	• Delineators and caution tape must be used at all times • Use vehicle as traffic control if possible
	Slips/Trips/Falls	• Minimize risk with good housekeeping and cleanliness
	Pinch points	• Use proper tools for opening well vaults • Discard tool if damaged or nonfunctioning
	Crossing street	• Drive rather than walk if practical • Take multiple trips to carry equipment if necessary • Use marked crosswalks
3. Sample Collection	Exposure to COCs	• Proper PPE to include single or double layer protective nitrile gloves, cut resistant if necessary – refer to site specific HASP
	Proximity to traffic	• Delineators and caution tape must be used at all times • Use vehicle as traffic control if possible
	Splashing water	• Proper PPE to include safety glasses or goggles
4. List Unforeseen Hazards & Critical Actions	A. B. C. D. E.	

WATER QUALITY METER CALIBRATION LOG

Client : Tesoro Project #: 0271-018-12 Date/Time of Calibration: 6/11/16 0715

Site Name: Mt Vernon – Bulk Fuel Facility

Ambient Atmospheric Conditions: Temperature 37°F Barometric Pressure 767.3 mm Hg

Personnel Performing Calibration: Clare Tachiki

Water Quality Meter Being Calibrated (circle):

Horiba U-22 Meter Number: —

Quanta Meter Number: —

YSI Model Number: 556

Other (designate)_____

SoundEarth Equipment Number: #4

Turbidimeter Being Calibrated: #3

Location of Calibration (circle) – *it is preferred to have the calibration completed at the site prior to beginning groundwater sampling activities.*

(Site)

SoundEarth Office

Other (designate)_____

Calibration Parameters	Initial Reading	Calibration Standard Value	Final Reading (after calibration)
pH (4 & 7 or 10):	6.92 / 4.05 / 9.94	7.00 / 4.00 / 10.0	7.00 / 4.00 / 10.00
Specific Conductivity(mS/cm):	1.475	1.413 ~~1.409~~	1.413
Turbidity (NTU):	102 / 9.65	100 / 10.0	NA / 9.91
Dissolved Oxygen (mg/L):	272.7 / 32.31	100%	101.3 / 12.01
ORP (mV):	211.1	240	240.0

Temperature of calibration standards(°C): 12.46

Comments Regarding Calibration: —

SoundEarth Strategies

GROUNDWATER MONITORING WELL DATA FORM

Client: Tesoro | Project Number: 0271-018 | Client Site Name & Number: Tesoro Facility Former Bulk Fuel Facility

Date 10/11/16 | Site Location: West Fir Street, Mount Vernon | SES Staff: CJT

Well Identification	Well Dia. (in.)	Time Opened	Time Measured	Depth to Water (BTOC)	Total Depth Measured (BTOC)	Historical Depth to Water	Historical Total Depth Measured	Screen Interval	Well Sampled Y / N	Sample Order	Monument Conditions/Sheen Description/Other Remarks
MW04	2	0711	0755	11.69	—	10.28	15.12	5-15	Y	5 6	
MW05	2	0715	0804	13.29	—	12.12	15.11	5-15	Y	9 8	
MW06	2	0706	0747	10.95	—	9.61	14.87	5-15	Y	2 1	
MW-12	2	0701	0743	11.10	—	9.85	—	—	N	—	Located on adjacent property
MW-13	2	0702	0742	11.09	—	10.65	—	—	N	—	Located on adjacent property
MW-15*	1	0703	0740	11.38	—	11.21	—	—	N	—	Located on adjacent property; Water in Monument
MW15	2	0709	0750 @	~~13.29~~ 12.13	—	10.84	15.15	5-15	Y	3	
MW16	2	0708	0748 @	~~11.70~~ 12.83	—	11.63	15.1	5-15	Y	4	
MW17	2	0705	0745	11.33	—	10.79	14.96	5-15	Y	1 2	
MW18	2	0713	0758	11.98	—	10.88	14.98	5-15	Y	8 10	
MW19	2	0710	0752	12.21	—	10.91	14.71	5-15	Y	6 5	
MW20	2	0714	0801	12.101	—	10.65	13.5	4-14	Y	11 10	Field Duplicate (MW99)
MW21	2	0712	0756	11.70	—	11.2	14.9	5-15	Y	7	
MW22	2	0716	0809	~~13.29~~ 12.62	—	11.53	15.14	5-15	Y	9 11	

Comments: Reordered based on Q3 data.

SoundEarth Strategies

GROUNDWATER PURGE AND SAMPLE FORM
LOW FLOW PUMP

Sample Date: 10/11/16

General Info

Client: Tesoro | Project #: 0271-018-12

Site Name/ #: Bulk Fuel Facility | Field/Sampling Personnel: CJT | **Well ID Number:** MW17

Well Details

Total Depth (TD)	Depth to Water (DTW) (Immediately Prior to Purging)	Water Column (WC) (=TD-DTW)	Casing Diameter / Volume Conversion Factor (VC)					Casing Volume (=WC x VC)
			0.75"	1"	2"	4"	6"	
— Feet BTOC	11.35 Feet BTOC	— Feet BTOC	0.023	0.041	0.16	0.65	1.44	— gallons

Screened Interval: 5 to 15 Feet bgs

Screen Submerged? ☒ NO ⟹ Place tubing intake 2 to 3 feet below depth to water ☐ YES ⟹ Place tubing intake at approximate center of screen

Equipment

Pump Method: ☒ Peristaltic ☐ Other: — Owner/ID #: SES #6 **Water Quality Meter** Brand/Model: YSI 556 Owner/ID #: SES #4

Water Level Instrument: ☒ WL Meter ☐ Bubbler ☐ Interface ☐ Other: — Owner/ID #: SES #6

Sampling

Depth of Tubing Intake: 14 Feet BTOC Time Start Purge: 0818

Time (3-5 min intervals)	Water Level (feet) drawdown <0.33 feet	Purge Rate (L/min) 0.1 – 0.5	pH[1] ± 0.1	Specific Conductivity[1] UNITS: mS/cm ± 3%	Turbidity[1] (NTU) *if ≥10, ±10% if <10, stabilized*	Dissolved Oxygen[1] (mg/L) *if ≥1.00, ± 10% if ≤1.00, ± 0.2*	Temperature (ºC)	ORP (mV)
0821	11.41	0.240	6.91	0.326	3.16	6.95	14.05	206.5
0824	11.42	0.240	6.58	0.316	3.09	5.31	14.02	147.7
0827	11.42	0.240	6.62	0.316	4.82	3.23	14.18	127.0
0830	11.42	0.240	6.60	0.310	4.15	1.07	14.68	115.4
0833	11.42	0.240	6.57	0.310	3.21	0.94	14.98	114.2
0836	11.42	0.240	6.55	0.313	2.07	0.91	15.13	111.8
			Minimum # of Readings					
0839	11.42	0.240	6.53	0.314	2.12	0.92	15.24	109.3
			CJT	10/11/16				

Sample Time: 0840 Field Duplicate Sample Time: — Time Sampling Ended: 0845

Sampling Comments: —

Analytical

Sample Number/ID	Number of Containers and Type	Preservative	Field Filtered?			Analysis Request
MW17-20161011	6 x 40mL VOA	HCl	No	0.45	0.10	NWTPH-Gx and BTEX/Naphthalene
	1 x 250mL Amber Glass Bottle	HCl	No	0.45	0.10	NWTPH-Dx
			No	0.45	0.10	
	CJT 10/11/16		No	0.45	0.10	
			No	0.45	0.10	
			No	0.45	0.10	

Purge Water

Sheen? ☒ NO ☐ YES **Odor?** ☒ NO ☐ YES ⟹ Describe: — Color (describe): Clear

Total Discharged (1Gal = 3.88 liter): ~0.75 gallons Disposal Method: ☒ Drummed ☐ Remediation System ☐ Other: —

Well Condition

Well/Security Devices in good condition (i.e.: Monument, Bolts, Seals, J-cap, Lock)? ☒ YES ☐ NO ⟹ Describe: —

Water in Monument? ☒ NO ☐ YES ⟹ Describe: —

Additional Well Condition Comments or Explanation of any Access Issues: —

[1]At minimum, pH, specific conductivity, and dissolved oxygen and/or turbidity must stabilize within the limits (indicated in *italics*) for three successive readings prior to sampling.

SoundEarth Strategies

GROUNDWATER PURGE AND SAMPLE FORM
LOW FLOW PUMP

Sample Date: 10/11/16

General Info

Client: Tesoro | Project #: 0271-018-12

Site Name/ #: Bulk Fuel Facility | Field/Sampling Personnel: GT | **Well ID Number:** MW06

Well Details

Total Depth (TD)	Depth to Water (DTW) (Immediately Prior to Purging)	Water Column (WC) (=TD-DTW)	Casing Diameter Volume Conversion Factor (VC)					Casing Volume (=WC x VC)
			0.75"	1"	2"	4"	6"	
— Feet BTOC	10.95 Feet BTOC	— Feet BTOC	0.023	0.041	0.16	0.65	1.44	— gallons

Screened Interval: 5 to 15 Feet bgs

Screen Submerged? ☒ NO ⟹ Place tubing intake 2 to 3 feet below depth to water ☐ YES ⟹ Place tubing intake at approximate center of screen

Equipment

Pump Method: ☒ Peristaltic ☐ Other: — Owner/ID #: SES #5

Water Quality Meter Brand/Model: YSI 556 Owner/ID #: SES #4

Water Level Instrument: ☒ WL Meter ☐ Bubbler ☐ Interface ☐ Other: — Owner/ID #: SES #6

Sampling

Depth of Tubing Intake: 13 Feet BTOC Time Start Purge: 0849

Time (3-5 min intervals)	Water Level (feet) drawdown <0.33 feet	Purge Rate (L/min) 0.1 – 0.5	pH[1] ± 0.1	Specific Conductivity[1] UNITS: mS/cm ± 3%	Turbidity[1] (NTU) *If ≥10, ±10% if <10, stabilized*	Dissolved Oxygen[1] (mg/L) *If ≥1.00, ± 10% if ≤1.00, ± 0.2*	Temperature (°C)	ORP (mV)
0852	11.01	0.180	6.81	0.408	7.37	8.81	15.51	214.4
0855	11.01	0.180	6.58	0.804	5.81	3.61	15.43	110.6
0858	11.01	0.180	6.56	0.809	4.21	1.56	15.34	104.3
0901	11.01	0.180	6.54	0.823	4.08	1.41	14.99	103.8
0904	11.01	0.180	6.52	0.825	4.27	1.35	14.65	104.3
0907	11.02	0.180	6.51	0.820	4.16	1.53	14.49	105.5
Minimum # of Readings								
0910	11.02	0.180	6.51	0.819	5.61	1.44	14.43	107.5
			GT 10/11/16					

Sample Time: 0911 Field Duplicate Sample Time: — Time Sampling Ended: 0920

Sampling Comments: —

Analytical

Sample Number/ID	Number of Containers and Type	Preservative	Field Filtered?			Analysis Request
MW06-20161011	6 x 40mL VOA	HCl	No	0.45	0.10	NWTPH-Gx and BTEX/Naphthalene
	2 x 250mL Amber Glass Bottle	HCl	No	0.45	0.10	NWTPH-Dx
			No	0.45	0.10	
			No	0.45	0.10	
			No	0.45	0.10	
			No	0.45	0.10	

GT 10/11/16

Purge Water

Sheen? ☒ NO ☐ YES Odor? ☒ NO ☐ YES ⟹ Describe: — Color (describe): Clear

Total Discharged (1Gal = 3.88 liter): NO.5 gallons Disposal Method: ☒ Drummed ☐ Remediation System ☐ Other: —

Well Condition

Well/Security Devices in good condition (i.e.: Monument, Bolts, Seals, J-cap, Lock)? ☒ YES ☐ NO ⟹ Describe: —

Water in Monument? ☒ NO ☐ YES ⟹ Describe: —

Additional Well Condition Comments or Explanation of any Access Issues: —

[1]At minimum, pH, specific conductivity, and dissolved oxygen and/or turbidity must stabilize within the limits (indicated in *italics*) for three successive readings prior to sampling.

SoundEarth Strategies

GROUNDWATER PURGE AND SAMPLE FORM
LOW FLOW PUMP

Sample Date: 10/11/16

General Info

Client: Tesoro | Project #: 0271-018-12

Site Name/ #: Bulk Fuel Facility | Field/Sampling Personnel: CJT | **Well ID Number:** MW15

Well Details

Total Depth (TD)	Depth to Water (DTW) (Immediately Prior to Purging)	Water Column (WC) (=TD-DTW)	Casing Diameter					Casing Volume (=WC x VC)
			Volume Conversion Factor (VC)					
			0.75"	1"	2"	4"	6"	
— Feet BTOC	12.11 Feet BTOC	— Feet BTOC	0.023	0.041	0.16	0.65	1.44	— gallons

Screened Interval: 5 to 15 Feet bgs

Screen Submerged? ☒ NO ⟹ Place tubing intake 2 to 3 feet below depth to water ☐ YES ⟹ Place tubing intake at approximate center of screen

Equipment

Pump Method: ☒ Peristaltic ☐ Other: — Owner/ID #: SES #6 **Water Quality Meter** Brand/Model: YSI 556 Owner/ID #: SES #4

Water Level Instrument: ☒ WL Meter ☐ Bubbler ☐ Interface ☐ Other: — Owner/ID #: SES #6

Sampling

Depth of Tubing Intake: 14.5 Feet BTOC | Time Start Purge: 0927

Time (3-5 min intervals)	Water Level (feet) drawdown <0.33 feet	Purge Rate (L/min) 0.1 – 0.5	pH[1] ± 0.1	Specific Conductivity[1] UNITS: mS/cm ± 3%	Turbidity[1] (NTU) *If ≥10, ±10% if <10, stabilized*	Dissolved Oxygen[1] (mg/L) *If ≥1.00, ± 10% If ≤1.00, ± 0.2*	Temperature (ºC)	ORP (mV)
0930	12.18	0.180	6.68	1.548	4.39	8.92	13.97	-4.9
0933	12.18	0.180	6.47	1.557	4.26	4.70	14.10	-19.8
0936	12.18	0.180	6.39	1.587	4.81	1.35	14.08	-22.0
0939	12.18	0.180	6.35	1.595	4.59	1.04	14.23	-23.8
0942	12.18	0.180	6.33	1.595	4.04	0.87	14.32	-23.4
0945	12.18	0.180	6.32	1.596	3.72	0.71	14.41	-23.5
Minimum # of Readings								
0948	12.18	0.180	6.32	1.596	3.10	0.69	14.46	-24.6

CJT 10/11/16

Sample Time: 0949 **Field Duplicate Sample Time:** — **Time Sampling Ended:** 0955

Sampling Comments: —

Analytical

Sample Number/ID	Number of Containers and Type	Preservative	Field Filtered?			Analysis Request
MW15-20161011	6 x 40mL VOA	HCl	No	0.45	0.10	NWTPH-Gx and BTEX/Naphthalene
	2 x 250mL Amber Glass Bottle	HCl	No	0.45	0.10	NWTPH-Dx
			No	0.45	0.10	
			No	0.45	0.10	
			No	0.45	0.10	
			No	0.45	0.10	

CJT 10/11/16

Purge Water

Sheen? ☒ NO ☐ YES **Odor?** ☒ NO ☐ YES ⟹ Describe: — **Color (describe):** Clear

Total Discharged (1Gal = 3.88 liter): ~0.75 gallons **Disposal Method:** ☒ Drummed ☐ Remediation System ☐ Other: —

Well Condition

Well/Security Devices in good condition (i.e.: Monument, Bolts, Seals, J-cap, Lock)? ☒ YES ☐ NO ⟹ Describe: —

Water in Monument? ☒ NO ☐ YES ⟹ Describe: —

Additional Well Condition Comments or Explanation of any Access Issues: —

[1] At minimum, pH, specific conductivity, and dissolved oxygen and/or turbidity must stabilize within the limits (indicated in *italics*) for three successive readings prior to sampling.

SoundEarth Strategies

GROUNDWATER PURGE AND SAMPLE FORM
LOW FLOW PUMP

Sample Date: 10/11/16

General Info

Client: Tesoro | Project #: 0271-018-12

Site Name/ #: Bulk Fuel Facility | Field/Sampling Personnel: CJT | **Well ID Number:** MW16

Well Details

Total Depth (TD)	Depth to Water (DTW) (Immediately Prior to Purging)	Water Column (WC) (=TD-DTW)	Casing Diameter Volume Conversion Factor (VC)					Casing Volume (=WC x VC)
			0.75"	1"	2"	4"	6"	
— Feet BTOC	12.85 Feet BTOC	— Feet BTOC	0.023	0.041	0.16	0.65	1.44	— gallons

Screened Interval: 5 to 15 Feet bgs

Screen Submerged? ☒ NO ⟹ Place tubing intake 2 to 3 feet below depth to water ☐ YES ⟹ Place tubing intake at approximate center of screen

Equipment

Pump Method: ☒ Peristaltic ☐ Other: — Owner/ID #: SES #6 **Water Quality Meter** Brand/Model: YSI 556 Owner/ID #: SES #4

Water Level Instrument: ☒ WL Meter ☐ Bubbler ☐ Interface ☐ Other: — Owner/ID #: SES #6

Sampling

Depth of Tubing Intake: 14.5 Feet BTOC | Time Start Purge: 1000

Time (3-5 min intervals)	Water Level (feet) drawdown <0.33 feet	Purge Rate (L/min) 0.1 – 0.5	pH[1] ± 0.1	Specific Conductivity[1] UNITS: mS/cm ± 3%	Turbidity[1] (NTU) *If ≥10, ±10% If <10, stabilized*	Dissolved Oxygen[1] (mg/L) *If ≥1.00, ± 10% If ≤1.00, ± 0.2*	Temperature (ºC)	ORP (mV)
1003	12.90	0.210	6.78	0.854	9.21	8.69	15.56	24.7
1006	12.91	0.200	6.42	1.594	8.83	6.38	15.06	19.7
1009	12.91	0.200	6.31	1.601	6.91	1.33	14.99	27.2
1012	12.91	0.200	6.26	1.606	8.43	0.81	15.04	31.5
1015	12.91	0.200	6.23	1.609	8.39	0.60	15.04	31.9
1018	12.91	0.200	6.23	1.613	5.80	0.54	15.03	30.3
Minimum # of Readings								
1021	12.91	0.200	6.22	1.614	5.61	0.44	15.09	28.0
			CJT 10/11/16					

Sample Time: 1022 Field Duplicate Sample Time: — Time Sampling Ended: 1028

Sampling Comments: —

Analytical

Sample Number/ID	Number of Containers and Type	Preservative	Field Filtered?			Analysis Request
MW16-20161011	6 x 40mL VOA	HCl	No	0.45	0.10	NWTPH-Gx and BTEX/Naphthalene
	2x 250mL Amber Glass Bottle	HCl	No	0.45	0.10	NWTPH-Dx
		CJT 10/11/16	No	0.45	0.10	
			No	0.45	0.10	
			No	0.45	0.10	
			No	0.45	0.10	

Purge Water

Sheen? ☒ NO ☐ YES **Odor?** ☒ NO ☐ YES ⟹ Describe: — Color (describe): clear

Total Discharged (1Gal = 3.88 liter): ~1 gallons Disposal Method: ☒ Drummed ☐ Remediation System ☐ Other: —

Well Condition

Well/Security Devices in good condition (i.e.: Monument, Bolts, Seals, J-cap, Lock)? ☒ YES ☐ NO ⟹ Describe: —

Water in Monument? ☒ NO ☐ YES ⟹ Describe: —

Additional Well Condition Comments or Explanation of any Access Issues: —

[1]At minimum, pH, specific conductivity, and dissolved oxygen and/or turbidity must stabilize within the limits (indicated in *italics*) for three successive readings prior to sampling.

SoundEarth Strategies

GROUNDWATER PURGE AND SAMPLE FORM
LOW FLOW PUMP

Sample Date: 10/11/16

General Info

Client: Tesoro | Project #: 0271-018-12

Site Name/ #: Bulk Fuel Facility | Field/Sampling Personnel: CJT

Well ID Number: MW19

Well Details

Total Depth (TD)	Depth to Water (DTW) (Immediately Prior to Purging)	Water Column (WC) (=TD-DTW)	Casing Diameter Volume Conversion Factor (VC)					Casing Volume (=WC x VC)
			0.75"	1"	2"	4"	6"	
— Feet BTOC	12.20 Feet BTOC	— Feet BTOC	0.023	0.041	0.16	0.65	1.44	— gallons

Screened Interval: 5 to 15 Feet bgs

Screen Submerged? ☒ NO ⟹ Place tubing intake 2 to 3 feet below depth to water ☐ YES ⟹ Place tubing intake at approximate center of screen

Equipment

Pump Method: ☒ Peristaltic ☐ Other: — Owner/ID #: SES #6

Water Quality Meter Brand/Model: YSI 556 Owner/ID #: SES #4

Water Level Instrument: ☒ WL Meter ☐ Bubbler ☐ Interface ☐ Other: — Owner/ID #: SES #6

Sampling

Depth of Tubing Intake: 14.5 Feet BTOC | Time Start Purge: 1043

Time (3-5 min intervals)	Water Level (feet) drawdown <0.33 feet	Purge Rate (L/min) 0.1 – 0.5	pH[2] *± 0.1*	Specific Conductivity[1] UNITS: mS/cm *± 3%*	Turbidity[2] (NTU) *If ≥10, ±10% if <10, stabilized*	Dissolved Oxygen[1] (mg/L) *If ≥1.00, ± 10% if ≤1.00, ± 0.2*	Temperature (ºC)	ORP (mV)
1046	12.23	0.180	7.07	0.1377	4.91	4.41	16.28	-25.9
1049	12.23	0.180	6.77	0.1673	4.16	3.26	16.07	-32.8
1052	12.23	0.180	6.51	0.1660	3.67	3.13	16.01	-32.6
1055	12.23	0.180	6.44	0.1656	4.61	1.27	15.96	-33.8
1058	12.23	0.180	6.41	0.1650	2.35	0.78	15.97	-32.8
1101	12.23	0.180	6.40	0.1645	2.68	0.64	15.96	-28.3
Minimum # of Readings								
1104	12.23	0.180	6.39	0.1640	1.54	0.56	15.94	-23.9
1107	12.23	0.180	6.38	0.1639	1.21	0.49	15.92	-21.7
				CJT				
				10/11/16				

Sample Time: 1108 | Field Duplicate Sample Time: — | Time Sampling Ended: 1114

Sampling Comments: —

Analytical

Sample Number/ID	Number of Containers and Type	Preservative	Field Filtered?			Analysis Request
MW19-20161011	6 x 40mL VOA	HCl	No	0.45	0.10	NWTPH-Gx and BTEX/Naphthalene
	1 ~~2~~ x 250mL Amber Glass Bottle	HCl	No	0.45	0.10	NWTPH-Dx
			No	0.45	0.10	
			No	0.45	0.10	
			No	0.45	0.10	
			No	0.45	0.10	

CJT 10/11/16

Purge Water

Sheen? ☒ NO ☐ YES Odor? ☒ NO ☐ YES ⟹ Describe: — Color (describe): Clear

Total Discharged (1Gal = 3.88 liter): ~1 gallons Disposal Method: ☒ Drummed ☐ Remediation System ☐ Other: —

Well Condition

Well/Security Devices in good condition (i.e.: Monument, Bolts, Seals, J-cap, Lock)? ☒ YES ☐ NO ⟹ Describe: —

Water in Monument? ☒ NO ☐ YES ⟹ Describe: —

Additional Well Condition Comments or Explanation of any Access Issues: —

[1]At minimum, pH, specific conductivity, and dissolved oxygen and/or turbidity must stabilize within the limits (indicated in *italics*) for three successive readings prior to sampling.

SoundEarth Strategies

GROUNDWATER PURGE AND SAMPLE FORM
LOW FLOW PUMP

Sample Date: 10/11/16

General Info

Client: Tesoro | Project #: 0271-018-12

Site Name/ #: Bulk Fuel Facility | Field/Sampling Personnel: CJT

Well ID Number: MW04

Well Details

Total Depth (TD)	Depth to Water (DTW) (Immediately Prior to Purging)	Water Column (WC) (=TD-DTW)	Casing Diameter Volume Conversion Factor (VC)					Casing Volume (=WC x VC)
			0.75"	1"	2"	4"	6"	
Feet BTOC	11.70 Feet BTOC	Feet BTOC	0.023	0.041	0.16	0.65	1.44	gallons

Screened Interval: 5 to 15 Feet bgs

Screen Submerged? ☒ NO ⟹ Place tubing intake 2 to 3 feet below depth to water ☐ YES ⟹ Place tubing intake at approximate center of screen

Equipment

Pump Method: ☒ Peristaltic ☐ Other: | Owner/ID #: SES #6 | Water Quality Meter Brand/Model: YSI 556 | Owner/ID #: SES #4

Water Level Instrument: ☒ WL Meter ☐ Bubbler ☐ Interface ☐ Other: | Owner/ID #: SES #6

Sampling

Depth of Tubing Intake: 14 Feet BTOC | Time Start Purge: 1120

Time (3-5 min intervals)	Water Level (feet) drawdown <0.33 feet	Purge Rate (L/min) 0.1 – 0.5	pH[1] ± 0.1	Specific Conductivity[1] UNITS: mS/cm ± 3%	Turbidity[1] (NTU) *If ≥10, ±10% If <10, stabilized*	Dissolved Oxygen[1] (mg/L) *If ≥1.00, ± 10% If ≤1.00, ± 0.2*	Temperature (ºC)	ORP (mV)
1123	11.71	0.300	6.68	1.670	13.2	2.69	15.28	-6.7
1126	11.71	0.300	6.47	1.758	5.27	1.30	15.07	-10.1
1129	11.71	0.300	6.40	1.769	3.48	1.16	14.98	-10.4
1132	11.71	0.300	6.38	1.771	2.77	0.61	14.97	-12.4
1135	11.71	0.300	6.38	1.775	2.90	0.35	14.95	-14.1
1138	11.71	0.300	6.38	1.776	2.30	0.19	14.95	-16.1
				Minimum # of Readings				
1141	11.71	0.300	6.39	1.775	2.37	0.14	14.93	-17.9
1144	11.71	0.300	6.39	1.773	2.01	0.20	14.92	-18.5

CJT 10/11/16

Sample Time: 1145 | Field Duplicate Sample Time: | Time Sampling Ended: 1150

Sampling Comments:

Analytical

Sample Number/ID	Number of Containers and Type	Preservative	Field Filtered?			Analysis Request
MW04-20161011	6 x 40mL VOA	HCl	No	0.45	0.10	NWTPH-Gx and BTEX/Naphthalene
" "	2 x 250mL Amber Glass Bottle	HCl	No	0.45	0.10	NWTPH-Dx
			No	0.45	0.10	
			No	0.45	0.10	
			No	0.45	0.10	
			No	0.45	0.10	

CJT 10/11/16

Purge Water

Sheen? ☒ NO ☐ YES Odor? ☐ NO ☒ YES ⟹ Describe: faint HC odor Color (describe): clear

Total Discharged (1Gal = 3.88 liter): ~1.25 gallons Disposal Method: ☒ Drummed ☐ Remediation System ☐ Other:

Well Condition

Well/Security Devices in good condition (i.e.: Monument, Bolts, Seals, J-cap, Lock)? ☒ YES ☐ NO ⟹ Describe:

Water in Monument? ☒ NO ☐ YES ⟹ Describe:

Additional Well Condition Comments or Explanation of any Access Issues:

[1]At minimum, pH, specific conductivity, and dissolved oxygen and/or turbidity must stabilize within the limits (indicated in *italics*) for three successive readings prior to sampling.

SoundEarth Strategies

GROUNDWATER PURGE AND SAMPLE FORM
LOW FLOW PUMP

Sample Date: 10/11/16

General Info

Client: Tesoro | Project #: 0271-018-12

Site Name/ #: Bulk Fuel Facility | Field/Sampling Personnel: CJT | **Well ID Number:** MW21

Well Details

Total Depth (TD)	Depth to Water (DTW) (Immediately Prior to Purging)	Water Column (WC) (=TD-DTW)	Casing Diameter Volume Conversion Factor (VC)					Casing Volume (=WC x VC)
			0.75"	1"	2"	4"	6"	
— Feet BTOC	11.66 Feet BTOC	— Feet BTOC	0.023	0.041	0.16	0.65	1.44	— gallons

Screened Interval: 5 to 15 Feet bgs

Screen Submerged? ☒ NO ⟹ Place tubing intake 2 to 3 feet below depth to water ☐ YES ⟹ Place tubing intake at approximate center of screen

Equipment

Pump Method: ☒ Peristaltic ☐ Other: — Owner/ID #: SES #6 **Water Quality Meter** Brand/Model: YSI 556 Owner/ID #: SES #4

Water Level Instrument: ☒ WL Meter ☐ Bubbler ☐ Interface ☐ Other: — Owner/ID #: SES #6

Sampling

Depth of Tubing Intake: 14 Feet BTOC Time Start Purge: 1157

Time (3-5 min intervals)	Water Level (feet) drawdown <0.33 feet	Purge Rate (L/min) 0.1 – 0.5	pH[1] ± 0.1	Specific Conductivity[1] UNITS: mS/cm ± 3%	Turbidity[1] (NTU) *If ≥10, ±10% If <10, stabilized*	Dissolved Oxygen[1] (mg/L) *If ≥1.00, ± 10% If ≤1.00, ± 0.2*	Temperature (°C)	ORP (mV)
1200	11.70	0.250	6.57	0.467	24.1	9.75	15.63	-8.4
1203	11.70	0.250	6.33	0.479	16.5	1.99	15.69	-6.3
1206	11.70	0.250	6.28	0.450	7.08	0.90	15.87	-8.2
1209	11.70	0.250	6.27	0.445	4.09	0.80	15.89	-8.7
1212	11.70	0.250	6.26	0.441	2.13	0.58	15.95	-9.4
1215	11.70	0.250	6.25	0.439	1.10	0.53	15.95	-9.9
				Minimum # of Readings				
1218	11.70	0.250	6.25	0.437	0.82	0.42	15.93	-11.0
1221	11.70	0.250	6.24	0.437	0.61	0.44	15.94	-11.6
			CJT 10/11/16					

Sample Time: 1222 Field Duplicate Sample Time: — Time Sampling Ended: 1227

Sampling Comments: —

Analytical

Sample Number/ID	Number of Containers and Type	Preservative	Field Filtered?			Analysis Request
MW21-20161011	6 x 40mL VOA	HCl	No	0.45	0.10	NWTPH-Gx and BTEX/Naphthalene
" "	2 x 250mL Amber Glass Bottle	HCl	No	0.45	0.10	NWTPH-Dx
			No	0.45	0.10	
		CJT 10/11/16	No	0.45	0.10	
			No	0.45	0.10	
			No	0.45	0.10	

Purge Water

Sheen? ☒ NO ☐ YES **Odor?** ☐ NO ☒ YES ⟹ Describe: Moderate H2S odor Color (describe): Cloudy to Clear

Total Discharged (1Gal = 3.88 liter): — gallons Disposal Method: ☒ Drummed ☐ Remediation System ☐ Other: —

Well Condition

Well/Security Devices in good condition (i.e.: Monument, Bolts, Seals, J-cap, Lock)? ☒ YES ☐ NO ⟹ Describe: —

Water in Monument? ☒ NO ☐ YES ⟹ Describe: —

Additional Well Condition Comments or Explanation of any Access Issues: —

[1]At minimum, pH, specific conductivity, and dissolved oxygen and/or turbidity must stabilize within the limits (indicated in *italics*) for three successive readings prior to sampling.

SoundEarth Strategies

GROUNDWATER PURGE AND SAMPLE FORM
LOW FLOW PUMP

Sample Date: 10/11/16

General Info

Client: Tesoro | Project #: 0271-018-12

Site Name/ #: Bulk Fuel Facility | Field/Sampling Personnel: CJT | **Well ID Number:** MW18

Well Details

Total Depth (TD)	Depth to Water (DTW) (Immediately Prior to Purging)	Water Column (WC) (=TD-DTW)	Casing Diameter					Casing Volume (=WC x VC)
			Volume Conversion Factor (VC)					
			0.75"	1"	2"	4"	6"	
Feet BTOC	11.98 Feet BTOC	Feet BTOC	0.023	0.041	0.16	0.65	1.44	gallons

Screened Interval: 5 to 15 Feet bgs

Screen Submerged? ☐ NO ⟹ Place tubing intake 2 to 3 feet below depth to water ☐ YES ⟹ Place tubing intake at approximate center of screen

Equipment

Pump Method: ☒ Peristaltic ☐ Other: — Owner/ID #: SES #6 **Water Quality Meter** Brand/Model: YSI 556 Owner/ID #: SES #4

Water Level Instrument: ☒ WL Meter ☐ Bubbler ☐ Interface ☐ Other: — Owner/ID #: SES #6

Sampling

Depth of Tubing Intake: 14 Feet BTOC | Time Start Purge: 1235

Time (3-5 min intervals)	Water Level (feet) drawdown <0.33 feet	Purge Rate (L/min) 0.1 – 0.5	pH[1] *± 0.1*	Specific Conductivity[2] UNITS: mS/cm *± 3%*	Turbidity[1] (NTU) *If ≥10, ±10% if <10, stabilized*	Dissolved Oxygen[1] (mg/L) *If ≥1.00, ± 10% If ≤1.00, ± 0.2*	Temperature (ºC)	ORP (mV)
1238	12.10	0.150	6.57	0.213	2.52	0.59	15.53	-29.2
1241	12.11	0.150	6.41	0.405	2.43	0.33	15.28	-34.2
1244	12.11	0.150	6.37	0.404	2.33	0.32	15.23	-36.4
1247	12.11	0.150	6.35	0.404	2.01	0.22	15.18	-37.7
1250	12.11	0.150	6.34	0.407	1.62	0.24	15.11	-39.4
1253	12.11	0.150	6.37	0.443	1.59	0.26	15.05	-42.8
				Minimum # of Readings				
1256	12.11	0.150	6.40	0.461	1.21	0.21	14.97	-45.9
1259	12.11	0.150	6.43	0.462	1.04	0.18	14.94	-47.7
1302	12.11	0.150	6.44	0.463	0.88	0.20	14.95	-48.5
				CJT 10/11/16				

Sample Time: 1303 **Field Duplicate Sample Time:** — **Time Sampling Ended:** 1310

Sampling Comments: —

Analytical

Sample Number/ID	Number of Containers and Type	Preservative	Field Filtered?			Analysis Request
MW18-20161011	6 x 40mL VOA	HCl	No	0.45	0.10	NWTPH-Gx and BTEX/Naphthalene
" "	2 x 250mL Amber Glass Bottle	HCl	No	0.45	0.10	NWTPH-Dx
			No	0.45	0.10	
			No	0.45	0.10	
			No	0.45	0.10	
			No	0.45	0.10	

CJT 10/11/16

Purge Water

Sheen? ☒ NO ☐ YES **Odor?** ☐ NO ☒ YES ⟹ Describe: Strong HC odor **Color (describe):** Clear

Total Discharged (1Gal = 3.88 liter): ~1 gallons **Disposal Method:** ☒ Drummed ☐ Remediation System ☐ Other: —

Well Condition

Well/Security Devices in good condition (i.e.: Monument, Bolts, Seals, J-cap, Lock)? ☒ YES ☐ NO ⟹ Describe: —

Water in Monument? ☒ NO ☐ YES ⟹ Describe: —

Additional Well Condition Comments or Explanation of any Access Issues: —

[1] At minimum, pH, specific conductivity, and dissolved oxygen and/or turbidity must stabilize within the limits (indicated in *italics*) for three successive readings prior to sampling.

SoundEarth Strategies

GROUNDWATER PURGE AND SAMPLE FORM
LOW FLOW PUMP

Sample Date: 10/11/16

General Info

Client: Tesoro | Project #: 0271-018-12

Site Name/ #: Bulk Fuel Facility | Field/Sampling Personnel: CJT | **Well ID Number:** MW05

Well Details

Total Depth (TD)	Depth to Water (DTW) (Immediately Prior to Purging)	Water Column (WC) (=TD-DTW)	Casing Diameter Volume Conversion Factor (VC)					Casing Volume (=WC x VC)
			0.75"	1"	2"	4"	6"	
Feet BTOC	13.30 Feet BTOC	Feet BTOC	0.023	0.041	0.16	0.65	1.44	gallons

Screened Interval: 5 to 15 Feet bgs

Screen Submerged? ☒ NO ⟹ Place tubing intake 2 to 3 feet below depth to water ☐ YES ⟹ Place tubing intake at approximate center of screen

Equipment

Pump Method: ☒ Peristaltic ☐ Other: _____ Owner/ID #: SES #6 **Water Quality Meter** Brand/Model: YSI 556 Owner/ID #: SES #4

Water Level Instrument: ☒ WL Meter ☐ Bubbler ☐ Interface ☐ Other: _____ Owner/ID #: SES #6

Sampling

Depth of Tubing Intake: 14.5 Feet BTOC | Time Start Purge: 1318

Time (3-5 min intervals)	Water Level (feet) drawdown <0.33 feet	Purge Rate (L/min) 0.1 – 0.5	pH[1] ± 0.1	Specific Conductivity[1] UNITS: mS/cm ± 3%	Turbidity[1] (NTU) *If ≥10, ±10% If <10, stabilized*	Dissolved Oxygen[1] (mg/L) *If ≥1.00, ± 10% If ≤1.00, ± 0.2*	Temperature (ºC)	ORP (mV)
1321	13.38	0.1160	6.71	0.225	17.3	1.79	14.40	-33.6
1324	13.38	0.1160	6.53	0.425	18.7	1.29	14.42	-38.0
1327	13.38	0.160	6.44	0.421	10.4	0.78	14.44	-35.7
1330	13.38	0.160	6.39	0.415	4.63	0.57	14.44	-34.3
1333	13.38	0.1160	6.36	0.411	2.52	0.41	14.46	-34.5
1336	13.38	0.1160	6.35	0.408	2.19	0.36	14.47	-35.2
				Minimum # of Readings				
1339	13.38	0.1160	6.35	0.407	1.44	0.25	14.46	-36.1

CJT 10/11/16

Sample Time: 1340 Field Duplicate Sample Time: _____ Time Sampling Ended: 1345

Sampling Comments: _____

Analytical

Sample Number/ID	Number of Containers and Type	Preservative	Field Filtered?			Analysis Request
MW05-20161011	6 x 40mL VOA	HCl	No	0.45	0.10	NWTPH-Gx and BTEX/Naphthalene
" "	2x 250mL Amber Glass Bottle	HCl	No	0.45	0.10	NWTPH-Dx
			No	0.45	0.10	
			No	0.45	0.10	
			No	0.45	0.10	
			No	0.45	0.10	

CJT 10/11/16

Purge Water

Sheen? ☒ NO ☐ YES **Odor?** ☐ NO ☒ YES ⟹ Describe: Moderate HC odor Color (describe): Clear

Total Discharged (1Gal = 3.88 liter): NU.75 gallons Disposal Method: ☒ Drummed ☐ Remediation System ☐ Other: _____

Well Condition

Well/Security Devices in good condition (i.e.: Monument, Bolts, Seals, J-cap, Lock)? ☒ YES ☐ NO ⟹ Describe: _____

Water in Monument? ☒ NO ☐ YES ⟹ Describe: _____

Additional Well Condition Comments or Explanation of any Access Issues: _____

[1] At minimum, pH, specific conductivity, and dissolved oxygen and/or turbidity must stabilize within the limits (indicated in *italics*) for three successive readings prior to sampling.

FIELD DUPLICATE

SoundEarth Strategies

GROUNDWATER PURGE AND SAMPLE FORM
LOW FLOW PUMP

Sample Date: 10/11/16

General Info

Client: Tesoro | Project #: 0271-018-12

Site Name/ #: Bulk Fuel Facility | Field/Sampling Personnel: CJT | **Well ID Number:** MW20

Well Details

Total Depth (TD)	Depth to Water (DTW) (Immediately Prior to Purging)	Water Column (WC) (=TD-DTW)	Casing Diameter Volume Conversion Factor (VC)					Casing Volume (=WC x VC)
			0.75"	1"	2"	4"	6"	
— Feet BTOC	12.04 Feet BTOC	— Feet BTOC	0.023	0.041	0.16	0.65	1.44	— gallons

Screened Interval: 4 to 14 Feet bgs

Screen Submerged? ☒ NO ⟹ Place tubing intake 2 to 3 feet below depth to water ☐ YES ⟹ Place tubing intake at approximate center of screen

Equipment

Pump Method: ☒ Peristaltic ☐ Other: — Owner/ID #: SES #6 **Water Quality Meter** Brand/Model: YSI 556 Owner/ID #: SES #4

Water Level Instrument: ☒ WL Meter ☐ Bubbler ☐ Interface ☐ Other: — Owner/ID #: SES #6

Sampling

Depth of Tubing Intake: 13.5 Feet BTOC | Time Start Purge: 1355

Time (3-5 min intervals)	Water Level (feet) drawdown <0.33 feet	Purge Rate (L/min) 0.1 – 0.5	pH[1] ± 0.1	Specific Conductivity[1] UNITS: mS/cm ± 3%	Turbidity[1] (NTU) *If ≥10, ±10% if <10, stabilized*	Dissolved Oxygen[1] (mg/L) *If ≥1.00, ± 10% if ≤1.00, ± 0.2*	Temperature (ºC)	ORP (mV)
1358	12.20	0.140	6.41	0.277	9.15	0.54	15.11	-31.4
1401	12.25	0.120	6.43	0.526	4.61	0.52	15.12	-37.3
1404	12.26	0.100	6.42	0.531	3.08	0.35	15.13	-43.1
1407	12.27	0.100	6.43	0.538	2.65	0.31	15.11	-49.0
1410	12.28	0.100	6.44	0.539	2.41	0.21	15.09	-52.6
1415	12.28	0.100	6.44	0.539	2.01	0.26	15.07	-54.7

Minimum # of Readings

CJT 10/11/16

Sample Time: 1414 | Field Duplicate Sample Time: 1414 | Time Sampling Ended: 1444 CT 1435

Sampling Comments:

Analytical

Sample Number/ID	Number of Containers and Type	Preservative	Field Filtered?			Analysis Request
MW20-20161011	6 x 40mL VOA	HCl	(No)	0.45	0.10	NWTPH-Gx and BTEX/Naphthalene
"	2 x 250mL Amber Glass Bottle	HCl	(No)	0.45	0.10	NWTPH-Dx
MW99-20161011	6 x 40 mL VOA	HCl	(No)	0.45	0.10	NWTPH-Gx + BTEX/Naphthalene
"	1 x 250 mL Amber	HCl	(No)	0.45	0.10	NWTPH-Dx
			No	0.45	0.10	
			No	0.45	0.10	

CJT 10/11/16

Purge Water

Sheen? ☒ NO ☐ YES **Odor?** ☐ NO ☒ YES ⟹ Describe: moderate HC odor Color (describe): Clear

Total Discharged (1Gal = 3.88 liter): ~0.5 gallons Disposal Method: ☒ Drummed ☐ Remediation System ☐ Other: —

Well Condition

Well/Security Devices in good condition (i.e.: Monument, Bolts, Seals, J-cap, Lock)? ☒ YES ☐ NO ⟹ Describe: —

Water in Monument? ☒ NO ☐ YES ⟹ Describe: —

Additional Well Condition Comments or Explanation of any Access Issues: —

[1]At minimum, pH, specific conductivity, and dissolved oxygen and/or turbidity must stabilize within the limits (indicated in *italics*) for three successive readings prior to sampling.

SoundEarth Strategies

GROUNDWATER PURGE AND SAMPLE FORM
LOW FLOW PUMP

Sample Date: 10/11/16

General Info

Client: Tesoro | Project #: 0271-018-12

Site Name/ #: Bulk Fuel Facility | Field/Sampling Personnel: CJT | **Well ID Number:** MW22

Well Details

Total Depth (TD)	Depth to Water (DTW) (Immediately Prior to Purging)	Water Column (WC) (=TD-DTW)	Casing Diameter / Volume Conversion Factor (VC)					Casing Volume (=WC x VC)
			0.75"	1"	2"	4"	6"	
~ Feet BTOC	12.60 Feet BTOC	~ Feet BTOC	0.023	0.041	0.16	0.65	1.44	~ gallons

Screened Interval: 5 to 15 Feet bgs

Screen Submerged? ☒ NO ⟹ Place tubing intake 2 to 3 feet below depth to water ☐ YES ⟹ Place tubing intake at approximate center of screen

Equipment

Pump Method: ☒ Peristaltic ☐ Other: ~ Owner/ID #: SES #6 **Water Quality Meter** Brand/Model: YSI 556 Owner/ID #: SES #4

Water Level Instrument: ☒ WL Meter ☐ Bubbler ☐ Interface ☐ Other: ~ Owner/ID #: SES #6

Sampling

Depth of Tubing Intake: 14.5 Feet BTOC Time Start Purge: 1454

Time (3-5 min intervals)	Water Level (feet) drawdown <0.33 feet	Purge Rate (L/min) 0.1 – 0.5	pH[1] ± 0.1	Specific Conductivity[1] UNITS: mS/cm ± 3%	Turbidity[1] (NTU) If ≥10, ±10% If <10, stabilized	Dissolved Oxygen[1] (mg/L) If ≥1.00, ± 10% If ≤1.00, ± 0.2	Temperature (°C)	ORP (mV)
1457	12.66	0.200	6.35	0.372	1.20	6.39	15.11	1.5
1500	12.66	0.200	6.24	0.372	0.86	1.38	14.99	-3.1
1503	12.66	0.200	6.23	0.372	0.44	0.88	14.93	-6.1
1506	12.66	0.200	6.23	0.372	0.69	0.87	14.91	-8.5
1509	12.666	0.200	6.22	0.371	0.55	0.87	14.85	-10.7
1512	12.666	0.200	6.22	0.371	0.28	0.78	14.81	-12.0

Minimum # of Readings

CJT 10/11/16

Sample Time: 1513 **Field Duplicate Sample Time:** ~ **Time Sampling Ended:** 1520

Sampling Comments: ~

Analytical

Sample Number/ID	Number of Containers and Type	Preservative	Field Filtered?			Analysis Request
MW22-20161011	6 x 40mL VOA	HCl	No	0.45	0.10	NWTPH-Gx and BTEX/Naphthalene
" "	2 x 250mL Amber Glass Bottle	HCl	No	0.45	0.10	NWTPH-Dx
			No	0.45	0.10	
			No	0.45	0.10	
			No	0.45	0.10	
			No	0.45	0.10	

CJT 10/11/16

Purge Water

Sheen? ☒ NO ☐ YES **Odor?** ☐ NO ☒ YES ⟹ Describe: Moderate Hcarbr Color (describe): clear

Total Discharged (1Gal = 3.88 liter): ~1 gallons Disposal Method: ☒ Drummed ☐ Remediation System ☐ Other: ~

Well Condition

Well/Security Devices in good condition (i.e.: Monument, Bolts, Seals, J-cap, Lock)? ☒ YES ☐ NO ⟹ Describe: ~

Water in Monument? ☒ NO ☐ YES ⟹ Describe: ~

Additional Well Condition Comments or Explanation of any Access Issues: ~

[1]At minimum, pH, specific conductivity, and dissolved oxygen and/or turbidity must stabilize within the limits (indicated in *italics*) for three successive readings prior to sampling.

ATTACHMENT D
LABORATORY ANALYTICAL REPORT

TestAmerica Laboratories, Inc. #580-63267-1

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Seattle
5755 8th Street East
Tacoma, WA 98424
Tel: (253)922-2310

TestAmerica Job ID: 580-63267-1
Client Project/Site: Tesoro - Bulk Fuel Facility

For:
SoundEarth Strategies Inc
2811 Fairview Ave East
Suite 2000
Seattle, Washington 98102

Attn: Rob Roberts

Authorized for release by:
10/26/2016 4:20:49 PM

Robert Greer, Project Manager II
(253)922-2310
robert.greer@testamericainc.com

Table of Contents

Job ID: 580-63267-1

Laboratory: TestAmerica Seattle

Narrative

Job Narrative
580-63267-1

Receipt
The samples were received on 10/12/2016 12:45 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.6º C.

GC/MS VOA
Method(s) 8260C: The following sample was diluted to bring the concentration of m-Xylene & p-Xylene within the calibration range: MW18-20161011 (580-63267-8). Elevated reporting limits (RLs) are provided.

Method(s) NWTPH-Gx: Surrogate recovery of 4-Bromofluorobenzene for the following samples was outside control limits: MW05-20161011 (580-63267-9) and MW22-20161011 (580-63267-12). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis 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(s) NWTPH-Dx: The following continuing calibration verification (CCV) standard associated with batch 580-230464 recovered outside acceptance criteria for %D for surrogate o-Terphenyl. Since the %Rec is within the acceptance criteria for the surrogate in the CCV and associated samples, the data have been reported.

Method(s) NWTPH-Dx: The following samples contained a hydrocarbon pattern in the diesel range; however, the elution pattern was later than the typical diesel fuel pattern used by the laboratory for quantitative purposes: MW06-20161011 (580-63267-2), MW15-20161011 (580-63267-3), MW16-20161011 (580-63267-4), MW19-20161011 (580-63267-5), MW04-20161011 (580-63267-6) and MW21-20161011 (580-63267-7).

Method(s) NWTPH-Dx: The following samples contained a hydrocarbon pattern in the diesel range; however, the elution pattern was earlier than the typical diesel fuel pattern used by the laboratory for quantitative purposes: MW18-20161011 (580-63267-8), MW05-20161011 (580-63267-9), MW20-20161011 (580-63267-10), MW99-20161011 (580-63267-11) and MW22-20161011 (580-63267-12).

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.

Definitions/Glossary

Client: SoundEarth Strategies Inc
Project/Site: Tesoro - Bulk Fuel Facility

TestAmerica Job ID: 580-63267-1

Qualifiers

GC VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits

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
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
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)

Client Sample ID: MW17-20161011

Date Collected: 10/11/16 08:40
Date Received: 10/12/16 12:45

Lab Sample ID: 580-63267-1

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			10/20/16 12:38	1
Toluene	ND		2.0		ug/L			10/20/16 12:38	1
Ethylbenzene	ND		3.0		ug/L			10/20/16 12:38	1
m-Xylene & p-Xylene	ND		3.0		ug/L			10/20/16 12:38	1
o-Xylene	ND		2.0		ug/L			10/20/16 12:38	1
Naphthalene	ND		2.0		ug/L			10/20/16 12:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*98*		*80 - 141*		*10/20/16 12:38*	*1*
Toluene-d8 (Surr)	*101*		*82 - 122*		*10/20/16 12:38*	*1*
1,2-Dichloroethane-d4 (Surr)	*106*		*65 - 143*		*10/20/16 12:38*	*1*
4-Bromofluorobenzene (Surr)	*94*		*75 - 125*		*10/20/16 12:38*	*1*
Dibromofluoromethane (Surr)	*101*		*77 - 118*		*10/20/16 12:38*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			10/18/16 14:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*50 - 150*		*10/18/16 14:07*	*1*
Trifluorotoluene (Surr)	*86*		*50 - 150*		*10/18/16 14:07*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.11		mg/L		10/20/16 15:12	10/22/16 09:51	1
Motor Oil (>C24-C36)	ND		0.26		mg/L		10/20/16 15:12	10/22/16 09:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*98*		*50 - 150*	*10/20/16 15:12*	*10/22/16 09:51*	*1*

Client Sample ID: MW06-20161011

Date Collected: 10/11/16 09:11
Date Received: 10/12/16 12:45

Lab Sample ID: 580-63267-2

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			10/20/16 13:06	1
Toluene	ND		2.0		ug/L			10/20/16 13:06	1
Ethylbenzene	ND		3.0		ug/L			10/20/16 13:06	1
m-Xylene & p-Xylene	ND		3.0		ug/L			10/20/16 13:06	1
o-Xylene	ND		2.0		ug/L			10/20/16 13:06	1
Naphthalene	ND		2.0		ug/L			10/20/16 13:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*99*		*80 - 141*		*10/20/16 13:06*	*1*
Toluene-d8 (Surr)	*100*		*82 - 122*		*10/20/16 13:06*	*1*
1,2-Dichloroethane-d4 (Surr)	*106*		*65 - 143*		*10/20/16 13:06*	*1*
4-Bromofluorobenzene (Surr)	*95*		*75 - 125*		*10/20/16 13:06*	*1*
Dibromofluoromethane (Surr)	*102*		*77 - 118*		*10/20/16 13:06*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			10/17/16 17:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*50 - 150*		*10/17/16 17:48*	*1*
Trifluorotoluene (Surr)	*91*		*50 - 150*		*10/17/16 17:48*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	**0.33**		0.11		mg/L		10/20/16 15:12	10/22/16 10:13	1
Motor Oil (>C24-C36)	**0.35**		0.26		mg/L		10/20/16 15:12	10/22/16 10:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*88*		*50 - 150*	*10/20/16 15:12*	*10/22/16 10:13*	*1*

Client Sample ID: MW15-20161011
Date Collected: 10/11/16 09:49
Date Received: 10/12/16 12:45

Lab Sample ID: 580-63267-3
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			10/20/16 13:35	1
Toluene	ND		2.0		ug/L			10/20/16 13:35	1
Ethylbenzene	ND		3.0		ug/L			10/20/16 13:35	1
m-Xylene & p-Xylene	ND		3.0		ug/L			10/20/16 13:35	1
o-Xylene	ND		2.0		ug/L			10/20/16 13:35	1
Naphthalene	ND		2.0		ug/L			10/20/16 13:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*99*		*80 - 141*		*10/20/16 13:35*	*1*
Toluene-d8 (Surr)	*99*		*82 - 122*		*10/20/16 13:35*	*1*
1,2-Dichloroethane-d4 (Surr)	*109*		*65 - 143*		*10/20/16 13:35*	*1*
4-Bromofluorobenzene (Surr)	*96*		*75 - 125*		*10/20/16 13:35*	*1*
Dibromofluoromethane (Surr)	*104*		*77 - 118*		*10/20/16 13:35*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			10/17/16 18:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*50 - 150*		*10/17/16 18:52*	*1*
Trifluorotoluene (Surr)	*91*		*50 - 150*		*10/17/16 18:52*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	**0.29**		0.11		mg/L		10/20/16 15:12	10/22/16 10:35	1
Motor Oil (>C24-C36)	ND		0.26		mg/L		10/20/16 15:12	10/22/16 10:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*99*		*50 - 150*	*10/20/16 15:12*	*10/22/16 10:35*	*1*

Client Sample ID: MW16-20161011

Date Collected: 10/11/16 10:22
Date Received: 10/12/16 12:45

Lab Sample ID: 580-63267-4

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			10/20/16 14:04	1
Toluene	ND		2.0		ug/L			10/20/16 14:04	1
Ethylbenzene	ND		3.0		ug/L			10/20/16 14:04	1
m-Xylene & p-Xylene	ND		3.0		ug/L			10/20/16 14:04	1
o-Xylene	ND		2.0		ug/L			10/20/16 14:04	1
Naphthalene	ND		2.0		ug/L			10/20/16 14:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*99*		*80 - 141*		*10/20/16 14:04*	*1*
Toluene-d8 (Surr)	*100*		*82 - 122*		*10/20/16 14:04*	*1*
1,2-Dichloroethane-d4 (Surr)	*106*		*65 - 143*		*10/20/16 14:04*	*1*
4-Bromofluorobenzene (Surr)	*96*		*75 - 125*		*10/20/16 14:04*	*1*
Dibromofluoromethane (Surr)	*100*		*77 - 118*		*10/20/16 14:04*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			10/17/16 19:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*50 - 150*		*10/17/16 19:24*	*1*
Trifluorotoluene (Surr)	*91*		*50 - 150*		*10/17/16 19:24*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	**0.15**		0.11		mg/L		10/20/16 15:12	10/22/16 10:57	1
Motor Oil (>C24-C36)	ND		0.25		mg/L		10/20/16 15:12	10/22/16 10:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*95*		*50 - 150*	*10/20/16 15:12*	*10/22/16 10:57*	*1*

Client Sample ID: MW19-20161011

Date Collected: 10/11/16 11:08
Date Received: 10/12/16 12:45

Lab Sample ID: 580-63267-5

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			10/20/16 14:32	1
Toluene	ND		2.0		ug/L			10/20/16 14:32	1
Ethylbenzene	ND		3.0		ug/L			10/20/16 14:32	1
m-Xylene & p-Xylene	ND		3.0		ug/L			10/20/16 14:32	1
o-Xylene	ND		2.0		ug/L			10/20/16 14:32	1
Naphthalene	ND		2.0		ug/L			10/20/16 14:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*99*		*80 - 141*		*10/20/16 14:32*	*1*
Toluene-d8 (Surr)	*101*		*82 - 122*		*10/20/16 14:32*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*65 - 143*		*10/20/16 14:32*	*1*
4-Bromofluorobenzene (Surr)	*95*		*75 - 125*		*10/20/16 14:32*	*1*
Dibromofluoromethane (Surr)	*101*		*77 - 118*		*10/20/16 14:32*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			10/17/16 19:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*50 - 150*		*10/17/16 19:56*	*1*
Trifluorotoluene (Surr)	*92*		*50 - 150*		*10/17/16 19:56*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	**0.23**		0.11		mg/L		10/20/16 15:12	10/22/16 11:18	1
Motor Oil (>C24-C36)	ND		0.26		mg/L		10/20/16 15:12	10/22/16 11:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*90*		*50 - 150*	*10/20/16 15:12*	*10/22/16 11:18*	*1*

Client: SoundEarth Strategies Inc
Project/Site: Tesoro - Bulk Fuel Facility

TestAmerica Job ID: 580-63267-1

Client Sample ID: MW04-20161011
Date Collected: 10/11/16 11:45
Date Received: 10/12/16 12:45

Lab Sample ID: 580-63267-6
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			10/20/16 15:00	1
Toluene	ND		2.0		ug/L			10/20/16 15:00	1
Ethylbenzene	ND		3.0		ug/L			10/20/16 15:00	1
m-Xylene & p-Xylene	ND		3.0		ug/L			10/20/16 15:00	1
o-Xylene	ND		2.0		ug/L			10/20/16 15:00	1
Naphthalene	ND		2.0		ug/L			10/20/16 15:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*101*		*80 - 141*		*10/20/16 15:00*	*1*
Toluene-d8 (Surr)	*101*		*82 - 122*		*10/20/16 15:00*	*1*
1,2-Dichloroethane-d4 (Surr)	*109*		*65 - 143*		*10/20/16 15:00*	*1*
4-Bromofluorobenzene (Surr)	*95*		*75 - 125*		*10/20/16 15:00*	*1*
Dibromofluoromethane (Surr)	*105*		*77 - 118*		*10/20/16 15:00*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			10/17/16 20:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*50 - 150*		*10/17/16 20:29*	*1*
Trifluorotoluene (Surr)	*91*		*50 - 150*		*10/17/16 20:29*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	**0.15**		0.11		mg/L		10/20/16 15:12	10/22/16 11:40	1
Motor Oil (>C24-C36)	ND		0.25		mg/L		10/20/16 15:12	10/22/16 11:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*96*		*50 - 150*	*10/20/16 15:12*	*10/22/16 11:40*	*1*

Client Sample ID: MW21-20161011
Date Collected: 10/11/16 12:22
Date Received: 10/12/16 12:45

Lab Sample ID: 580-63267-7
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			10/20/16 15:29	1
Toluene	ND		2.0		ug/L			10/20/16 15:29	1
Ethylbenzene	ND		3.0		ug/L			10/20/16 15:29	1
m-Xylene & p-Xylene	ND		3.0		ug/L			10/20/16 15:29	1
o-Xylene	ND		2.0		ug/L			10/20/16 15:29	1
Naphthalene	ND		2.0		ug/L			10/20/16 15:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*98*		*80 - 141*		*10/20/16 15:29*	*1*
Toluene-d8 (Surr)	*98*		*82 - 122*		*10/20/16 15:29*	*1*
1,2-Dichloroethane-d4 (Surr)	*107*		*65 - 143*		*10/20/16 15:29*	*1*
4-Bromofluorobenzene (Surr)	*98*		*75 - 125*		*10/20/16 15:29*	*1*
Dibromofluoromethane (Surr)	*103*		*77 - 118*		*10/20/16 15:29*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**0.078**		0.050		mg/L			10/17/16 21:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*50 - 150*		*10/17/16 21:00*	*1*
Trifluorotoluene (Surr)	*90*		*50 - 150*		*10/17/16 21:00*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	**0.14**		0.11		mg/L		10/20/16 15:12	10/22/16 12:24	1
Motor Oil (>C24-C36)	ND		0.26		mg/L		10/20/16 15:12	10/22/16 12:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*92*		*50 - 150*	*10/20/16 15:12*	*10/22/16 12:24*	*1*

Client Sample ID: MW18-20161011

Date Collected: 10/11/16 13:03
Date Received: 10/12/16 12:45

Lab Sample ID: 580-63267-8

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			10/20/16 15:58	1
Toluene	ND		2.0		ug/L			10/20/16 15:58	1
Ethylbenzene	**73**		3.0		ug/L			10/20/16 15:58	1
o-Xylene	**20**		2.0		ug/L			10/20/16 15:58	1
Naphthalene	**35**		2.0		ug/L			10/20/16 15:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*97*		*80 - 141*		*10/20/16 15:58*	*1*
Toluene-d8 (Surr)	*100*		*82 - 122*		*10/20/16 15:58*	*1*
1,2-Dichloroethane-d4 (Surr)	*107*		*65 - 143*		*10/20/16 15:58*	*1*
4-Bromofluorobenzene (Surr)	*101*		*75 - 125*		*10/20/16 15:58*	*1*
Dibromofluoromethane (Surr)	*98*		*77 - 118*		*10/20/16 15:58*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	**130**		30		ug/L			10/21/16 18:52	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*96*		*80 - 141*		*10/21/16 18:52*	*10*
Toluene-d8 (Surr)	*106*		*82 - 122*		*10/21/16 18:52*	*10*
1,2-Dichloroethane-d4 (Surr)	*99*		*65 - 143*		*10/21/16 18:52*	*10*
4-Bromofluorobenzene (Surr)	*102*		*75 - 125*		*10/21/16 18:52*	*10*
Dibromofluoromethane (Surr)	*97*		*77 - 118*		*10/21/16 18:52*	*10*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**4.2**		0.050		mg/L			10/17/16 21:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*142*		*50 - 150*		*10/17/16 21:32*	*1*
Trifluorotoluene (Surr)	*89*		*50 - 150*		*10/17/16 21:32*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	**1.4**		0.11		mg/L		10/20/16 15:12	10/22/16 12:46	1
Motor Oil (>C24-C36)	ND		0.26		mg/L		10/20/16 15:12	10/22/16 12:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*98*		*50 - 150*	*10/20/16 15:12*	*10/22/16 12:46*	*1*

Client Sample ID: MW05-20161011
Date Collected: 10/11/16 13:40
Date Received: 10/12/16 12:45

Lab Sample ID: 580-63267-9
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			10/20/16 16:26	1
Toluene	ND		2.0		ug/L			10/20/16 16:26	1
Ethylbenzene	ND		3.0		ug/L			10/20/16 16:26	1
m-Xylene & p-Xylene	ND		3.0		ug/L			10/20/16 16:26	1
o-Xylene	ND		2.0		ug/L			10/20/16 16:26	1
Naphthalene	**2.7**		2.0		ug/L			10/20/16 16:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*98*		*80 - 141*		*10/20/16 16:26*	*1*
Toluene-d8 (Surr)	*99*		*82 - 122*		*10/20/16 16:26*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*65 - 143*		*10/20/16 16:26*	*1*
4-Bromofluorobenzene (Surr)	*101*		*75 - 125*		*10/20/16 16:26*	*1*
Dibromofluoromethane (Surr)	*97*		*77 - 118*		*10/20/16 16:26*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**2.2**		0.050		mg/L			10/17/16 22:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*186*	*X*	*50 - 150*		*10/17/16 22:05*	*1*
Trifluorotoluene (Surr)	*99*		*50 - 150*		*10/17/16 22:05*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	**1.1**		0.11		mg/L		10/20/16 15:12	10/22/16 13:08	1
Motor Oil (>C24-C36)	ND		0.26		mg/L		10/20/16 15:12	10/22/16 13:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*102*		*50 - 150*	*10/20/16 15:12*	*10/22/16 13:08*	*1*

Client: SoundEarth Strategies Inc
Project/Site: Tesoro - Bulk Fuel Facility

TestAmerica Job ID: 580-63267-1

Client Sample ID: MW20-20161011
Date Collected: 10/11/16 14:14
Date Received: 10/12/16 12:45

Lab Sample ID: 580-63267-10
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			10/20/16 16:55	1
Toluene	ND		2.0		ug/L			10/20/16 16:55	1
Ethylbenzene	**35**		3.0		ug/L			10/20/16 16:55	1
m-Xylene & p-Xylene	**14**		3.0		ug/L			10/20/16 16:55	1
o-Xylene	ND		2.0		ug/L			10/20/16 16:55	1
Naphthalene	**82**		2.0		ug/L			10/20/16 16:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*95*		*80 - 141*		*10/20/16 16:55*	*1*
Toluene-d8 (Surr)	*98*		*82 - 122*		*10/20/16 16:55*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*65 - 143*		*10/20/16 16:55*	*1*
4-Bromofluorobenzene (Surr)	*100*		*75 - 125*		*10/20/16 16:55*	*1*
Dibromofluoromethane (Surr)	*97*		*77 - 118*		*10/20/16 16:55*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**3.9**		0.050		mg/L			10/17/16 22:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*134*		*50 - 150*		*10/17/16 22:37*	*1*
Trifluorotoluene (Surr)	*90*		*50 - 150*		*10/17/16 22:37*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	**2.2**		0.11		mg/L		10/20/16 15:12	10/22/16 13:30	1
Motor Oil (>C24-C36)	**0.33**		0.26		mg/L		10/20/16 15:12	10/22/16 13:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*87*		*50 - 150*	*10/20/16 15:12*	*10/22/16 13:30*	*1*

Client Sample ID: MW99-20161011

Date Collected: 10/11/16 14:44
Date Received: 10/12/16 12:45

Lab Sample ID: 580-63267-11

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			10/20/16 17:24	1
Toluene	ND		2.0		ug/L			10/20/16 17:24	1
Ethylbenzene	**39**		3.0		ug/L			10/20/16 17:24	1
m-Xylene & p-Xylene	**15**		3.0		ug/L			10/20/16 17:24	1
o-Xylene	ND		2.0		ug/L			10/20/16 17:24	1
Naphthalene	**85**		2.0		ug/L			10/20/16 17:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*97*		*80 - 141*		*10/20/16 17:24*	*1*
Toluene-d8 (Surr)	*101*		*82 - 122*		*10/20/16 17:24*	*1*
1,2-Dichloroethane-d4 (Surr)	*99*		*65 - 143*		*10/20/16 17:24*	*1*
4-Bromofluorobenzene (Surr)	*98*		*75 - 125*		*10/20/16 17:24*	*1*
Dibromofluoromethane (Surr)	*97*		*77 - 118*		*10/20/16 17:24*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**4.3**		0.050		mg/L			10/17/16 23:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*139*		*50 - 150*		*10/17/16 23:09*	*1*
Trifluorotoluene (Surr)	*91*		*50 - 150*		*10/17/16 23:09*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	**2.2**		0.11		mg/L		10/20/16 15:12	10/22/16 13:53	1
Motor Oil (>C24-C36)	**0.38**		0.26		mg/L		10/20/16 15:12	10/22/16 13:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*101*		*50 - 150*	*10/20/16 15:12*	*10/22/16 13:53*	*1*

Client Sample ID: MW22-20161011

Date Collected: 10/11/16 15:13
Date Received: 10/12/16 12:45

Lab Sample ID: 580-63267-12

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**2.8**		2.0		ug/L			10/20/16 17:52	1
Toluene	ND		2.0		ug/L			10/20/16 17:52	1
Ethylbenzene	**3.6**		3.0		ug/L			10/20/16 17:52	1
m-Xylene & p-Xylene	**3.2**		3.0		ug/L			10/20/16 17:52	1
o-Xylene	ND		2.0		ug/L			10/20/16 17:52	1
Naphthalene	**5.3**		2.0		ug/L			10/20/16 17:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*94*		*80 - 141*		*10/20/16 17:52*	*1*
Toluene-d8 (Surr)	*101*		*82 - 122*		*10/20/16 17:52*	*1*
1,2-Dichloroethane-d4 (Surr)	*95*		*65 - 143*		*10/20/16 17:52*	*1*
4-Bromofluorobenzene (Surr)	*98*		*75 - 125*		*10/20/16 17:52*	*1*
Dibromofluoromethane (Surr)	*95*		*77 - 118*		*10/20/16 17:52*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**2.9**		0.050		mg/L			10/17/16 23:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*197*	*X*	*50 - 150*		*10/17/16 23:41*	*1*
Trifluorotoluene (Surr)	*103*		*50 - 150*		*10/17/16 23:41*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	**1.2**		0.11		mg/L		10/20/16 15:12	10/22/16 14:15	1
Motor Oil (>C24-C36)	ND		0.26		mg/L		10/20/16 15:12	10/22/16 14:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*96*		*50 - 150*	*10/20/16 15:12*	*10/22/16 14:15*	*1*

Client Sample ID: Trip Blank

Date Collected: 10/11/16 00:00
Date Received: 10/12/16 12:45

Lab Sample ID: 580-63267-13

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			10/20/16 12:09	1
Toluene	ND		2.0		ug/L			10/20/16 12:09	1
Ethylbenzene	ND		3.0		ug/L			10/20/16 12:09	1
m-Xylene & p-Xylene	ND		3.0		ug/L			10/20/16 12:09	1
o-Xylene	ND		2.0		ug/L			10/20/16 12:09	1
Naphthalene	ND		2.0		ug/L			10/20/16 12:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*99*		*80 - 141*		*10/20/16 12:09*	*1*
Toluene-d8 (Surr)	*102*		*82 - 122*		*10/20/16 12:09*	*1*
1,2-Dichloroethane-d4 (Surr)	*108*		*65 - 143*		*10/20/16 12:09*	*1*
4-Bromofluorobenzene (Surr)	*95*		*75 - 125*		*10/20/16 12:09*	*1*
Dibromofluoromethane (Surr)	*101*		*77 - 118*		*10/20/16 12:09*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			10/17/16 15:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*50 - 150*		*10/17/16 15:07*	*1*
Trifluorotoluene (Surr)	*91*		*50 - 150*		*10/17/16 15:07*	*1*

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

Lab Sample ID: MB 580-230277/5

Matrix: Water
Analysis Batch: 230277

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			10/20/16 10:44	1
Toluene	ND		2.0		ug/L			10/20/16 10:44	1
Ethylbenzene	ND		3.0		ug/L			10/20/16 10:44	1
m-Xylene & p-Xylene	ND		3.0		ug/L			10/20/16 10:44	1
o-Xylene	ND		2.0		ug/L			10/20/16 10:44	1
Naphthalene	ND		2.0		ug/L			10/20/16 10:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*99*		*80 - 141*		*10/20/16 10:44*	*1*
Toluene-d8 (Surr)	*100*		*82 - 122*		*10/20/16 10:44*	*1*
1,2-Dichloroethane-d4 (Surr)	*105*		*65 - 143*		*10/20/16 10:44*	*1*
4-Bromofluorobenzene (Surr)	*98*		*75 - 125*		*10/20/16 10:44*	*1*
Dibromofluoromethane (Surr)	*101*		*77 - 118*		*10/20/16 10:44*	*1*

Lab Sample ID: LCS 580-230277/6

Matrix: Water
Analysis Batch: 230277

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		107	80 - 120		
Toluene			10.0	10.1		ug/L		101	75 - 120		
Ethylbenzene			10.0	10.3		ug/L		102	75 - 119		
m-Xylene & p-Xylene			10.0	10.3		ug/L		102	75 - 119		
o-Xylene			10.0	10.1		ug/L		101	74 - 120		
Naphthalene			10.0	10.0		ug/L		100	55 - 134		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Trifluorotoluene (Surr)	*98*		*80 - 141*
Toluene-d8 (Surr)	*100*		*82 - 122*
1,2-Dichloroethane-d4 (Surr)	*103*		*65 - 143*
4-Bromofluorobenzene (Surr)	*100*		*75 - 125*
Dibromofluoromethane (Surr)	*99*		*77 - 118*

Lab Sample ID: LCSD 580-230277/7

Matrix: Water
Analysis Batch: 230277

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	10.5		ug/L		105	80 - 120	2	14
Toluene			10.0	10.7		ug/L		107	75 - 120	6	19
Ethylbenzene			10.0	10.4		ug/L		103	75 - 119	1	14
m-Xylene & p-Xylene			10.0	10.6		ug/L		106	75 - 119	3	14
o-Xylene			10.0	10.0		ug/L		100	74 - 120	1	16
Naphthalene			10.0	9.46		ug/L		95	55 - 134	6	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Trifluorotoluene (Surr)	*95*		*80 - 141*

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

Lab Sample ID: LCSD 580-230277/7
Matrix: Water
Analysis Batch: 230277

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

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Toluene-d8 (Surr)	99		82 - 122
1,2-Dichloroethane-d4 (Surr)	100		65 - 143
4-Bromofluorobenzene (Surr)	96		75 - 125
Dibromofluoromethane (Surr)	100		77 - 118

Lab Sample ID: MB 580-230388/5
Matrix: Water
Analysis Batch: 230388

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	ND		3.0		ug/L			10/21/16 10:05	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	96		80 - 141		10/21/16 10:05	1
Toluene-d8 (Surr)	105		82 - 122		10/21/16 10:05	1
1,2-Dichloroethane-d4 (Surr)	99		65 - 143		10/21/16 10:05	1
4-Bromofluorobenzene (Surr)	99		75 - 125		10/21/16 10:05	1
Dibromofluoromethane (Surr)	97		77 - 118		10/21/16 10:05	1

Lab Sample ID: LCS 580-230388/6
Matrix: Water
Analysis Batch: 230388

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
m-Xylene & p-Xylene			10.0	10.9		ug/L		108	75 - 119		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Trifluorotoluene (Surr)	94		80 - 141
Toluene-d8 (Surr)	105		82 - 122
1,2-Dichloroethane-d4 (Surr)	99		65 - 143
4-Bromofluorobenzene (Surr)	96		75 - 125
Dibromofluoromethane (Surr)	97		77 - 118

Lab Sample ID: LCSD 580-230388/7
Matrix: Water
Analysis Batch: 230388

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
m-Xylene & p-Xylene			10.0	11.0		ug/L		110	75 - 119	1	14

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Trifluorotoluene (Surr)	96		80 - 141
Toluene-d8 (Surr)	105		82 - 122
1,2-Dichloroethane-d4 (Surr)	98		65 - 143
4-Bromofluorobenzene (Surr)	98		75 - 125
Dibromofluoromethane (Surr)	100		77 - 118

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

Lab Sample ID: MB 580-230000/7
Matrix: Water
Analysis Batch: 230000

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			10/17/16 12:59	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*50 - 150*		*10/17/16 12:59*	*1*
Trifluorotoluene (Surr)	*93*		*50 - 150*		*10/17/16 12:59*	*1*

Lab Sample ID: LCS 580-230000/8
Matrix: Water
Analysis Batch: 230000

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline			1.16	1.09		mg/L		94	79 - 110		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*50 - 150*
Trifluorotoluene (Surr)	*95*		*50 - 150*

Lab Sample ID: LCSD 580-230000/9
Matrix: Water
Analysis Batch: 230000

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline			1.16	1.10		mg/L		95	79 - 110	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*50 - 150*
Trifluorotoluene (Surr)	*96*		*50 - 150*

Lab Sample ID: MB 580-230092/7
Matrix: Water
Analysis Batch: 230092

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			10/18/16 12:31	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*50 - 150*		*10/18/16 12:31*	*1*
Trifluorotoluene (Surr)	*89*		*50 - 150*		*10/18/16 12:31*	*1*

Lab Sample ID: LCS 580-230092/8
Matrix: Water
Analysis Batch: 230092

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline			1.16	1.06		mg/L		91	79 - 110		

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

Lab Sample ID: LCS 580-230092/8
Matrix: Water
Analysis Batch: 230092

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

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*50 - 150*
Trifluorotoluene (Surr)	*71*		*50 - 150*

Lab Sample ID: LCSD 580-230092/9
Matrix: Water
Analysis Batch: 230092

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline	1.16	1.07		mg/L		92	79 - 110	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*50 - 150*
Trifluorotoluene (Surr)	*90*		*50 - 150*

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

Lab Sample ID: MB 580-230340/1-A
Matrix: Water
Analysis Batch: 230464

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 230340

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.11		mg/L		10/20/16 15:12	10/22/16 06:35	1
Motor Oil (>C24-C36)	ND		0.25		mg/L		10/20/16 15:12	10/22/16 06:35	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*92*		*50 - 150*	*10/20/16 15:12*	*10/22/16 06:35*	*1*

Lab Sample ID: LCS 580-230340/2-A
Matrix: Water
Analysis Batch: 230464

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 230340

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
#2 Diesel (C10-C24)	2.01	1.71		mg/L		85	59 - 120
Motor Oil (>C24-C36)	2.01	1.78		mg/L		88	53 - 129

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*94*		*50 - 150*

Lab Sample ID: LCSD 580-230340/3-A
Matrix: Water
Analysis Batch: 230464

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 230340

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
#2 Diesel (C10-C24)	2.01	1.76		mg/L		88	59 - 120	3	27
Motor Oil (>C24-C36)	2.01	1.85		mg/L		92	53 - 129	4	19

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

Lab Sample ID: LCSD 580-230340/3-A
Matrix: Water
Analysis Batch: 230464

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 230340

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
o-Terphenyl	100		50 - 150

Client Sample ID: MW17-20161011
Lab Sample ID: 580-63267-1
Date Collected: 10/11/16 08:40
Matrix: Water
Date Received: 10/12/16 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	230277	10/20/16 12:38	TL1	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	230092	10/18/16 14:07	CJ	TAL SEA
Total/NA	Prep	3510C			230340	10/20/16 15:12	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	230464	10/22/16 09:51	KZ1	TAL SEA

Client Sample ID: MW06-20161011
Lab Sample ID: 580-63267-2
Date Collected: 10/11/16 09:11
Matrix: Water
Date Received: 10/12/16 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	230277	10/20/16 13:06	TL1	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	230000	10/17/16 17:48	TL1	TAL SEA
Total/NA	Prep	3510C			230340	10/20/16 15:12	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	230464	10/22/16 10:13	KZ1	TAL SEA

Client Sample ID: MW15-20161011
Lab Sample ID: 580-63267-3
Date Collected: 10/11/16 09:49
Matrix: Water
Date Received: 10/12/16 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	230277	10/20/16 13:35	TL1	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	230000	10/17/16 18:52	TL1	TAL SEA
Total/NA	Prep	3510C			230340	10/20/16 15:12	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	230464	10/22/16 10:35	KZ1	TAL SEA

Client Sample ID: MW16-20161011
Lab Sample ID: 580-63267-4
Date Collected: 10/11/16 10:22
Matrix: Water
Date Received: 10/12/16 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	230277	10/20/16 14:04	TL1	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	230000	10/17/16 19:24	TL1	TAL SEA
Total/NA	Prep	3510C			230340	10/20/16 15:12	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	230464	10/22/16 10:57	KZ1	TAL SEA

Client Sample ID: MW19-20161011
Lab Sample ID: 580-63267-5
Date Collected: 10/11/16 11:08
Matrix: Water
Date Received: 10/12/16 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	230277	10/20/16 14:32	TL1	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	230000	10/17/16 19:56	TL1	TAL SEA

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			230340	10/20/16 15:12	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	230464	10/22/16 11:18	KZ1	TAL SEA

Client Sample ID: MW04-20161011 — Lab Sample ID: 580-63267-6

Date Collected: 10/11/16 11:45 — **Matrix: Water**
Date Received: 10/12/16 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	230277	10/20/16 15:00	TL1	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	230000	10/17/16 20:29	TL1	TAL SEA
Total/NA	Prep	3510C			230340	10/20/16 15:12	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	230464	10/22/16 11:40	KZ1	TAL SEA

Client Sample ID: MW21-20161011 — Lab Sample ID: 580-63267-7

Date Collected: 10/11/16 12:22 — **Matrix: Water**
Date Received: 10/12/16 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	230277	10/20/16 15:29	TL1	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	230000	10/17/16 21:00	TL1	TAL SEA
Total/NA	Prep	3510C			230340	10/20/16 15:12	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	230464	10/22/16 12:24	KZ1	TAL SEA

Client Sample ID: MW18-20161011 — Lab Sample ID: 580-63267-8

Date Collected: 10/11/16 13:03 — **Matrix: Water**
Date Received: 10/12/16 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	230277	10/20/16 15:58	TL1	TAL SEA
Total/NA	Analysis	8260C	DL	10	230388	10/21/16 18:52	TL1	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	230000	10/17/16 21:32	TL1	TAL SEA
Total/NA	Prep	3510C			230340	10/20/16 15:12	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	230464	10/22/16 12:46	KZ1	TAL SEA

Client Sample ID: MW05-20161011 — Lab Sample ID: 580-63267-9

Date Collected: 10/11/16 13:40 — **Matrix: Water**
Date Received: 10/12/16 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	230277	10/20/16 16:26	TL1	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	230000	10/17/16 22:05	TL1	TAL SEA
Total/NA	Prep	3510C			230340	10/20/16 15:12	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	230464	10/22/16 13:08	KZ1	TAL SEA

Lab Chronicle

Client: SoundEarth Strategies Inc
Project/Site: Tesoro - Bulk Fuel Facility

TestAmerica Job ID: 580-63267-1

Client Sample ID: MW20-20161011
Date Collected: 10/11/16 14:14
Date Received: 10/12/16 12:45

Lab Sample ID: 580-63267-10
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	230277	10/20/16 16:55	TL1	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	230000	10/17/16 22:37	TL1	TAL SEA
Total/NA	Prep	3510C			230340	10/20/16 15:12	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	230464	10/22/16 13:30	KZ1	TAL SEA

Client Sample ID: MW99-20161011
Date Collected: 10/11/16 14:44
Date Received: 10/12/16 12:45

Lab Sample ID: 580-63267-11
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	230277	10/20/16 17:24	TL1	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	230000	10/17/16 23:09	TL1	TAL SEA
Total/NA	Prep	3510C			230340	10/20/16 15:12	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	230464	10/22/16 13:53	KZ1	TAL SEA

Client Sample ID: MW22-20161011
Date Collected: 10/11/16 15:13
Date Received: 10/12/16 12:45

Lab Sample ID: 580-63267-12
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	230277	10/20/16 17:52	TL1	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	230000	10/17/16 23:41	TL1	TAL SEA
Total/NA	Prep	3510C			230340	10/20/16 15:12	JCV	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	230464	10/22/16 14:15	KZ1	TAL SEA

Client Sample ID: Trip Blank
Date Collected: 10/11/16 00:00
Date Received: 10/12/16 12:45

Lab Sample ID: 580-63267-13
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	230277	10/20/16 12:09	TL1	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	230000	10/17/16 15:07	TL1	TAL SEA

Laboratory References:

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Certification Summary

Client: SoundEarth Strategies Inc
Project/Site: Tesoro - Bulk Fuel Facility

TestAmerica Job ID: 580-63267-1

Laboratory: TestAmerica Seattle

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C553	02-17-17

Analysis Method	Prep Method	Matrix	Analyte

Sample Summary

Client: SoundEarth Strategies Inc
Project/Site: Tesoro - Bulk Fuel Facility

TestAmerica Job ID: 580-63267-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-63267-1	MW17-20161011	Water	10/11/16 08:40	10/12/16 12:45
580-63267-2	MW06-20161011	Water	10/11/16 09:11	10/12/16 12:45
580-63267-3	MW15-20161011	Water	10/11/16 09:49	10/12/16 12:45
580-63267-4	MW16-20161011	Water	10/11/16 10:22	10/12/16 12:45
580-63267-5	MW19-20161011	Water	10/11/16 11:08	10/12/16 12:45
580-63267-6	MW04-20161011	Water	10/11/16 11:45	10/12/16 12:45
580-63267-7	MW21-20161011	Water	10/11/16 12:22	10/12/16 12:45
580-63267-8	MW18-20161011	Water	10/11/16 13:03	10/12/16 12:45
580-63267-9	MW05-20161011	Water	10/11/16 13:40	10/12/16 12:45
580-63267-10	MW20-20161011	Water	10/11/16 14:14	10/12/16 12:45
580-63267-11	MW99-20161011	Water	10/11/16 14:44	10/12/16 12:45
580-63267-12	MW22-20161011	Water	10/11/16 15:13	10/12/16 12:45
580-63267-13	Trip Blank	Water	10/11/16 00:00	10/12/16 12:45

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Seattle
5755 8th Street E.
Tacoma, WA 98424
Tel. 253-922-2310
Fax 253-922-5047
www.testamericainc.com

☐ Rush

☐ Short Hold

Chain of Custody Record

Client: Sound Earth Strategies | Client Contact: Rob Roberts | Date: 10/11/16 | Chain of Custody Number: 33776

Address: 2811 Fairview Ave E | Telephone Number (Area Code)/Fax Number: 206-306-1900 | Lab Number: | Page 1 of 2

City: Seattle, WA | State: WA | Zip Code: 98102 | Sampler: Clare Tochilin | Lab Contact:

Project Name and Location (State): Tesoro - Bulk Fuel Facility (WA) | Billing Contact:

Contract/Purchase Order/Quote No.: 0271-018-12

Sample I.D. and Location/Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	NWTPH-Gx	NWTPH-Dx	BTEX & Naphthalene	Special Instructions/ Conditions of Receipt
MW17-20161011	10/11/16	0840		X						7			X	X	X	
MW06-20161011	10/11/16	0911		X						7			X	X	X	
MW15-20161011	10/11/16	0949		X						7			X	X	X	
MW16-20161011	10/11/16	1022		X						7			X	X	X	
MW19-20161011	10/11/16	1108		X						7			X	X	X	
MW04-20161011	10/11/16	1145		X						7			X	X	X	
MW21-20161011	10/11/16	1222		X						7			X	X	X	580-63267 Chain of Custody
MW18-20161011	10/11/16	1303		X						7			X	X	X	
MW05-20161011	10/11/16	1340		X						7			X	X	X	TB AZ Cooler ___ Cor 3.6° Unc 3.8°
MW20-20161011	10/11/16	1414		X						7			X	X	X	Cooler Dsc Ls Dhebh. 'YL @Lab 1415
MW99-20161011	10/11/16	1444		X						7			X	X	X	Wet/Packs Packing Bubble w/o
MW22-20161011	10/11/16	1513		X						7			X	X	X	

Cooler: ☐ Yes ☐ No Cooler Temp: ______

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For ______ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required (business days): ☐ 24 Hours ☐ 48 Hours ☐ 5 Days ☐ 10 Days ☐ 15 Days ☐ Other standard

QC Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished By (Sign/Print): Clare Tochilin	10/11/16	1730	1. Received By (Sign/Print): Francisco Luna, Jr	10/12/16	1245
2. Relinquished By (Sign/Print):			2. Received By (Sign/Print):		
3. Relinquished By (Sign/Print):			3. Received By (Sign/Print):		

Comments

DISTRIBUTION: WHITE – Stays with the Samples; CANARY – Returned to Client with Report; PINK – Field Copy

TAL-8274-580 (0210)

TestAmerica
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TestAmerica Seattle
5755 8th Street E.
Tacoma, WA 98424
Tel. 253-922-2310
Fax 253-922-5047
www.testamericainc.com

☐ Rush
☐ Short Hold

Chain of Custody Record

Client	Client Contact	Date	Chain of Custody Number
SoundEarth Strategies	Rob Roberts	10/11/16	33775
Address 2811 Fairview Ave E	**Telephone Number (Area Code)/Fax Number** 206-306-1900	**Lab Number**	**Page** 2 of 2
City Seattle	**State** WA	**Zip Code** 98102	**Sampler** Clare Tourtin	**Lab Contact**
Project Name and Location (State) Tesoro - Bulk Fuel Facility (WA)	**Billing Contact**
Contract/Purchase Order/Quote No. 0271-018-12

Sample I.D. and Location/Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: NWTPH-Gx	BTEX - Naphthalene	Special Instructions/ Conditions of Receipt
Trip Blank	10/11/16	—		X						6			X	X	
		CJT 10/11/16													

Cooler
☐ Yes ☐ No Cooler Temp: _____

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months
(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required (business days)
☐ 24 Hours ☐ 48 Hours ☐ 5 Days ☐ 10 Days ☐ 15 Days ☐ Other Standard

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By Sign/Print: Clare Tourtin	10/11/16	1730	1. Received By Sign/Print: Francisco Luna, Jr.	10/12/16	1245
2. Relinquished By Sign/Print			2. Received By Sign/Print		
3. Relinquished By Sign/Print			3. Received By Sign/Print		

Comments

DISTRIBUTION: WHITE – Stays with the Samples; CANARY – Returned to Client with Report; PINK – Field Copy

TAL-8274-580 (0210)

Login Sample Receipt Checklist

Client: SoundEarth Strategies Inc

Job Number: 580-63267-1

Login Number: 63267
List Number: 1
Creator: Bean, Dennis L

List Source: TestAmerica Seattle

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature 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?	True	
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.	True	
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	