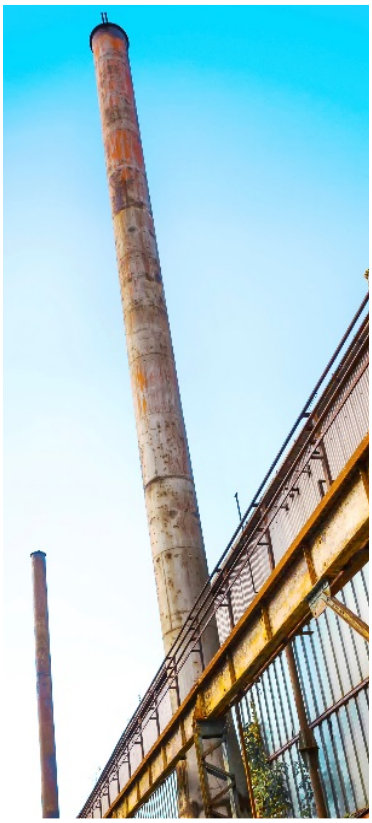
Monitoring Well Installation and First Quarter Monitoring Report

Martin Brower Transportation Facility
1409 Puyallup Street
Sumner, Washington

Martin Brower LLC



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1. Introduction

GHD Services Inc. (GHD) is submitting this report on behalf of Martin Brower to summarize the recent groundwater monitoring well installation and sampling activities at the Martin Brower Transportation Facility located at 1409 Puyallup Street, Sumner, Pierce County, Washington (Site; Figure 1). The purpose of the well installation and groundwater monitoring described herein is to evaluate current groundwater conditions with respect to the 1989 release from product piping in order to determine if the existing Environmental Covenant (EC) can be rescinded. Field activities were completed in accordance with the Proposal for Site *Investigation and Professional Services* dated August 16, 2019.

2. Site Description and Background

Currently, the Site is owned by Martin Brower and operates as a food warehousing and distribution center. The Site is located on the northwest corner of Tacoma Avenue and Puyallup Street in Sumner, Washington. The Site covers 5.98-acres of land (Pierce County Parcel No. 0420138005) developed with an 86,900-square-foot distribution warehouse also containing office space, a 5,740-square-foot maintenance shop that includes fueling, truck maintenance and truck washing facilities, associated paved parking and drive lanes, and landscaping (Figure 2). The Site adjoins several light industrial facilities to the north, south, east and west.

The Site currently operates one regulated fuel UST which is located within an excavation west of the maintenance building. Other facilities on Site include two fuel dispensers with fueling lanes located within the south end of the maintenance building. The Site layout is depicted on Figure 2.

The Site is registered in Washington State Department of Ecology's (DOE) Toxics Cleanup sites database with facility ID 95968134. A historical petroleum release was discovered in 1989 when product lines from the former USTs were tested and failed. In 1997, following an independent remedial action, the Site received a no further action determination with an EC. During the recent fueling system upgrade, confirmation sampling and limited soil removal resulted in the DOE determination that no soil contamination remained on-Site from the 1997 release. However, historic groundwater monitoring frequency and reported analytical parameters were not sufficient to fully rescind the EC.

3. Investigation Summary

3.1 Monitoring Well Installation

Well Install Date:	September 25, 2019
Well Install Company:	Holt Drilling
Well Install Details:	Four monitoring wells (MW-1A through MW-4A) were installed in the vicinity of the former diesel UST, and downgradient of the historic soil

impacts. Soil borings were cleared of subsurface utilities by public and private utility locators. Soil borings were advanced up to 5 feet below ground surface (bgs) using a hand auger to ensure the absence of underground utilities. The soil borings were advanced via direct push rilling to the total depth of approximately 15 feet bgs. Monitoring wells were installed subsequently in each boring. Monitoring wells were developed by Holt using a submersible pump. Monitoring well construction details are included in Table 1, boring logs and construction diagrams are included as Appendix A.

3.2 Monitoring Well Survey

Survey Date:	October 30, 2019
Survey Company:	Statewide Land Surveying Inc. (SWLS)
Survey Details:	SWLS performed the surveying or four monitoring wells (MW-1A thorough MW-4A) and two soil borings (B-5 and B-6) under the direction of Emily Blakeway (Project Coordinator and Brian Richardson (Project Manager) of GHD.

3.3 Groundwater Sampling

Sampling Date:	October 3, 2019
Sampling Company:	Blaine Tech Services, Inc. (Blaine Tech)
Personnel:	Patrick Ho of Blaine Tech performed the sampling activities under the direction of Emily Blakeway (Project Coordinator) and Brian Richardson (Project Manager) of GHD.
Sampling Method:	Low-Flow purging and sampling methodology in accordance with EPA EQASOP-GW4
Sampling Details:	Monitoring Wells MW-1A through MW-4A were sampled following stabilization for VOCs, PAHs, and TPH.
Groundwater Levels:	Groundwater was encountered between approximately 3.95 and 4.67 feet bgs.
Disposal Method:	Purged groundwater generated from sampling activities was placed into a US Department of Transportation (DOT) approved 55-gallon drum. The drum was subsequently transported and disposed off-Site by DH Environmental, Inc.

4. Groundwater Monitoring Results

Depth to groundwater was measured in Site monitoring wells on October 3, 2019. Groundwater flow direction was towards the northwest with a vertical hydraulic gradient of 0.021. Groundwater

samples were collected from monitoring wells MW-1A through MW-4A following the depth to water measurements.

A groundwater contour map is included as Figure 3 and groundwater elevations are included as Table 2.

Each groundwater sample was submitted for laboratory analysis and analyzed for the following:

- Total petroleum hydrocarbons (TPH) as diesel (TPHD), and TPH as heavy oil (TPH-O), by Method NWTPH-Dx
- Total Compound list - volatile organic compounds (VOCs) by EPA Method 8260B
- Polynuclear Aromatic Hydrocarbons (PAHs), by EPA method 8270D

VOCs were reported as not detected with exception to isopropylbenzene and n-propylbenzene in the sample collected from well MW-3A. Isopropyl Benzene and N-Propylbenzene were reported at concentrations of 0.00269 mg/L and 0.00438 mg/L, respectively. No VOCs were reported above MTCA Method A cleanup levels (CULs).

PAHs were reported as not detected above MTCA Method A CULs. Specifically, 1- and 2-Methylnaphthalene were detected above laboratory detection limits but below the MTCA Method A CULs in groundwater collected from well MW-3A at concentrations of 0.0105 mg/L and 0.0126 mg/L, respectively.

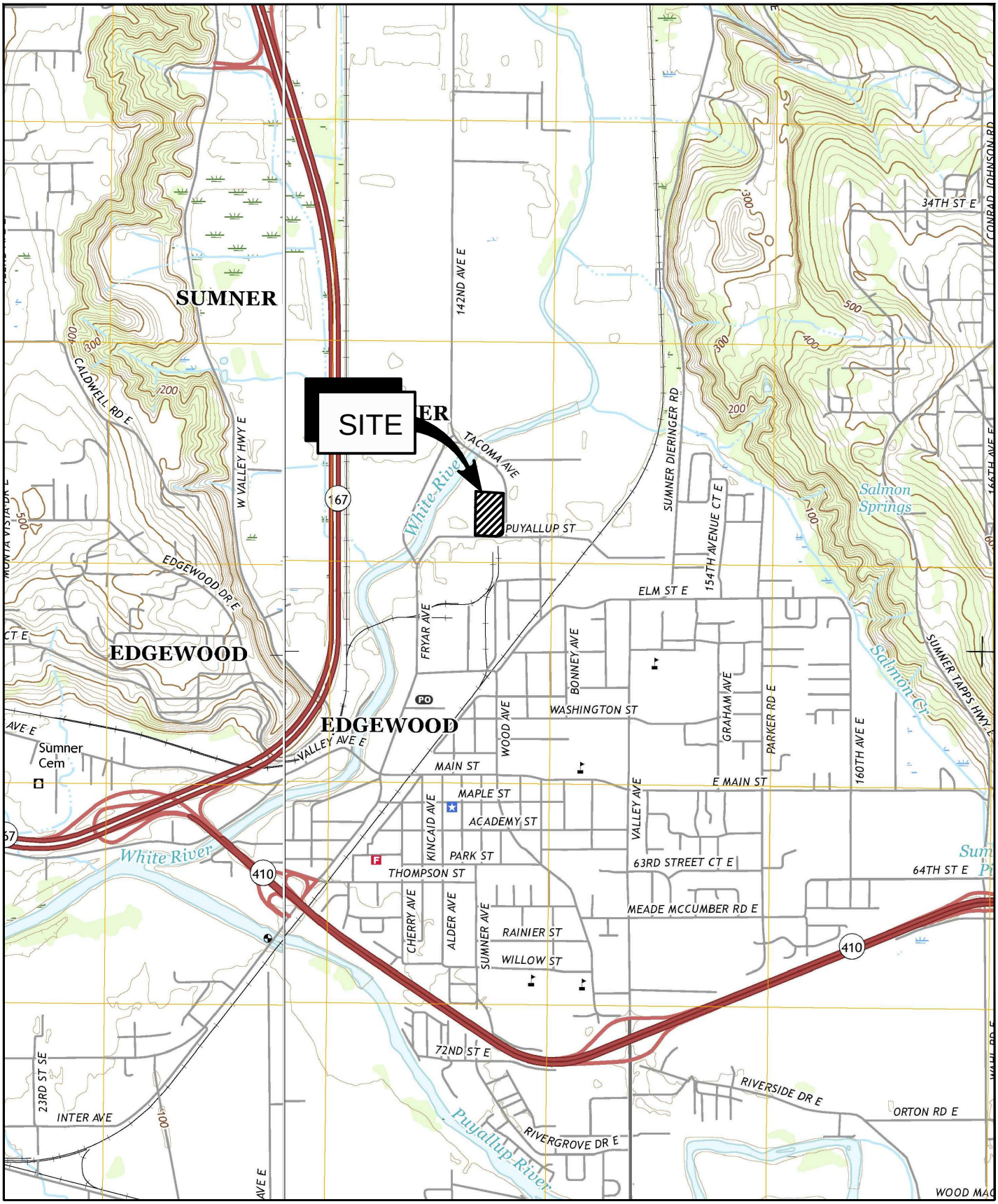
TPH-D and TPH-O were both detected above MTCA Method A CULs in groundwater collected from well MW-3A at concentrations of 1.77 milligrams per liter (mg/L) and 1.39 mg/L, respectively. TPH was detected above laboratory detection limits but below MTCA Method A CULs in the form of TPH-D and TPH-O in groundwater collected from well MW-1A at concentrations of 0.220 mg/L and 0.360 mg/L, respectively, and well MW-2A at concentrations of 0.454 mg/L and 0.425 mg/L, respectively. Additionally, TPH-D was detected above the laboratory detection limit but below the MTCA Method A CUL in groundwater collected from well MW-4A at a concentration of 0.363 mg/L.

A map with groundwater analytical results is included as Figure 4. Table 3 summarizes the groundwater analytical data. Field forms are presented in Appendix B, and Appendix C provides the laboratory analytical report.

5. Summary and Conclusions

On September 25, 2019, GHD oversaw the installation of four monitoring wells to the west of the maintenance and fueling facility in the vicinity of the former diesel UST. On October 3, 2019, GHD returned to perform the first round of groundwater sampling on-Site. The groundwater monitoring event indicated groundwater impacts above MTCA Method A CULs are present on-Site in one monitoring well that is north (cross gradient) of the former diesel UST. However, based on the paucity of VOCs and PAHs in groundwater, it does not appear that the TPH detections are related to a fuel release, and the compounds detected within the heavier TPH carbon ranges may be caused by the detection on non-target compounds. Quarterly groundwater monitoring will continue through the third quarter of 2020. If TPH concentrations continue to be reported above the laboratory reporting limits and no PAHs or VOCs are not detected, TPH maybe evaluated using a silica gel

cleanup method to determine if naturally occurring organic compounds in soil are affecting the analytical results.



SOURCE: USGS QUADRANGLE MAP; PUYALLUP, WASHINGTON, 2017; SUMNER, WASHINGTON, 2017

0 1000 2000ft

MARTIN BROWER
1409 PUYALLUP STREET
SUMNER, WASHINGTON

11202705

Jan 17, 2020

SITE LOCATION

FIGURE 1

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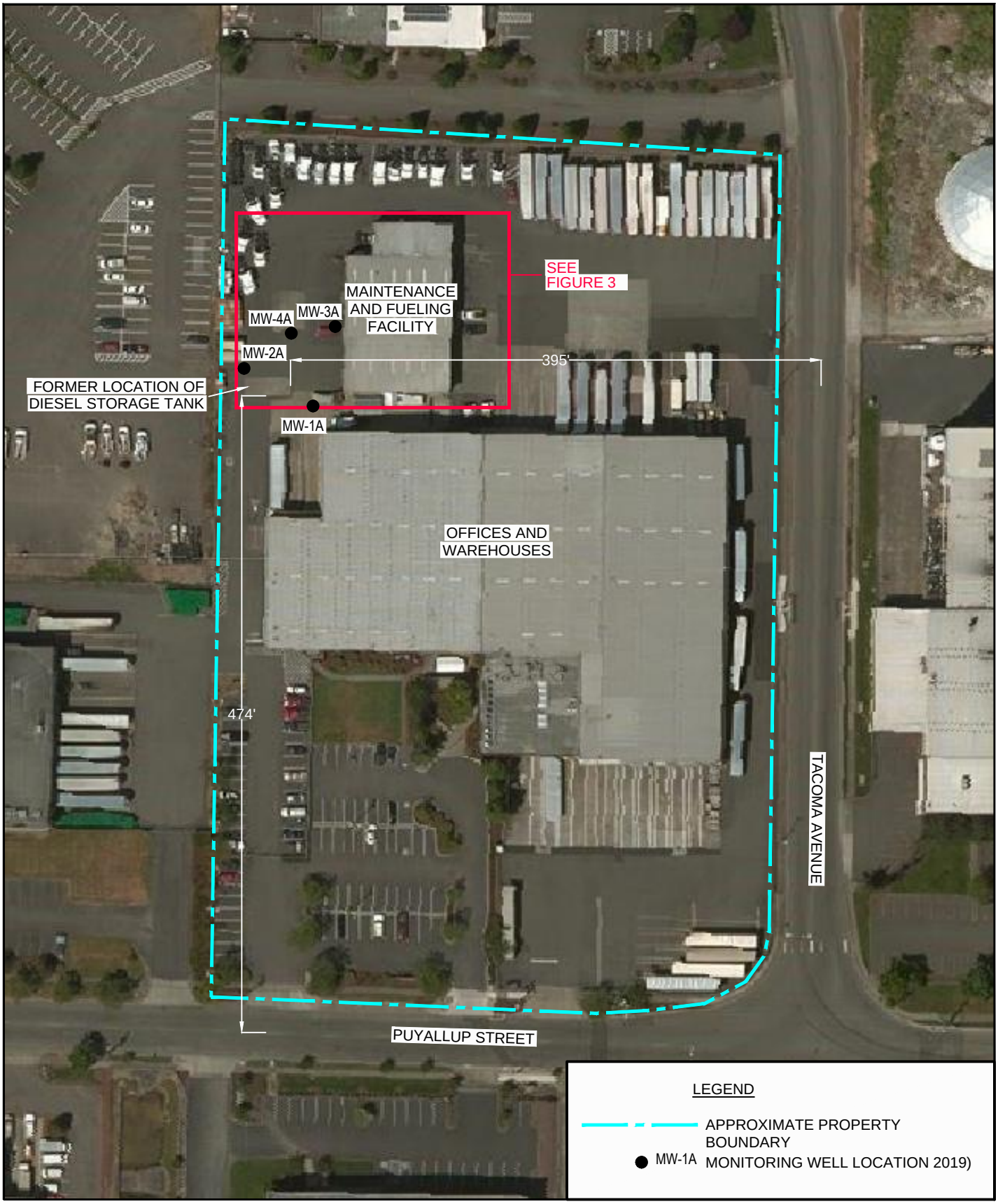


Source: Microsoft Product Screen Shot(s) Reprinted with permission from Microsoft Corporation, Acquisition Date [unknown], Accessed: 2018

0 50 100ft

Coordinate System:
STATE PLANE
WA-NAD83

MARTIN BROWER
1409 PUYALLUP STREET
SUMNER, WASHINGTON

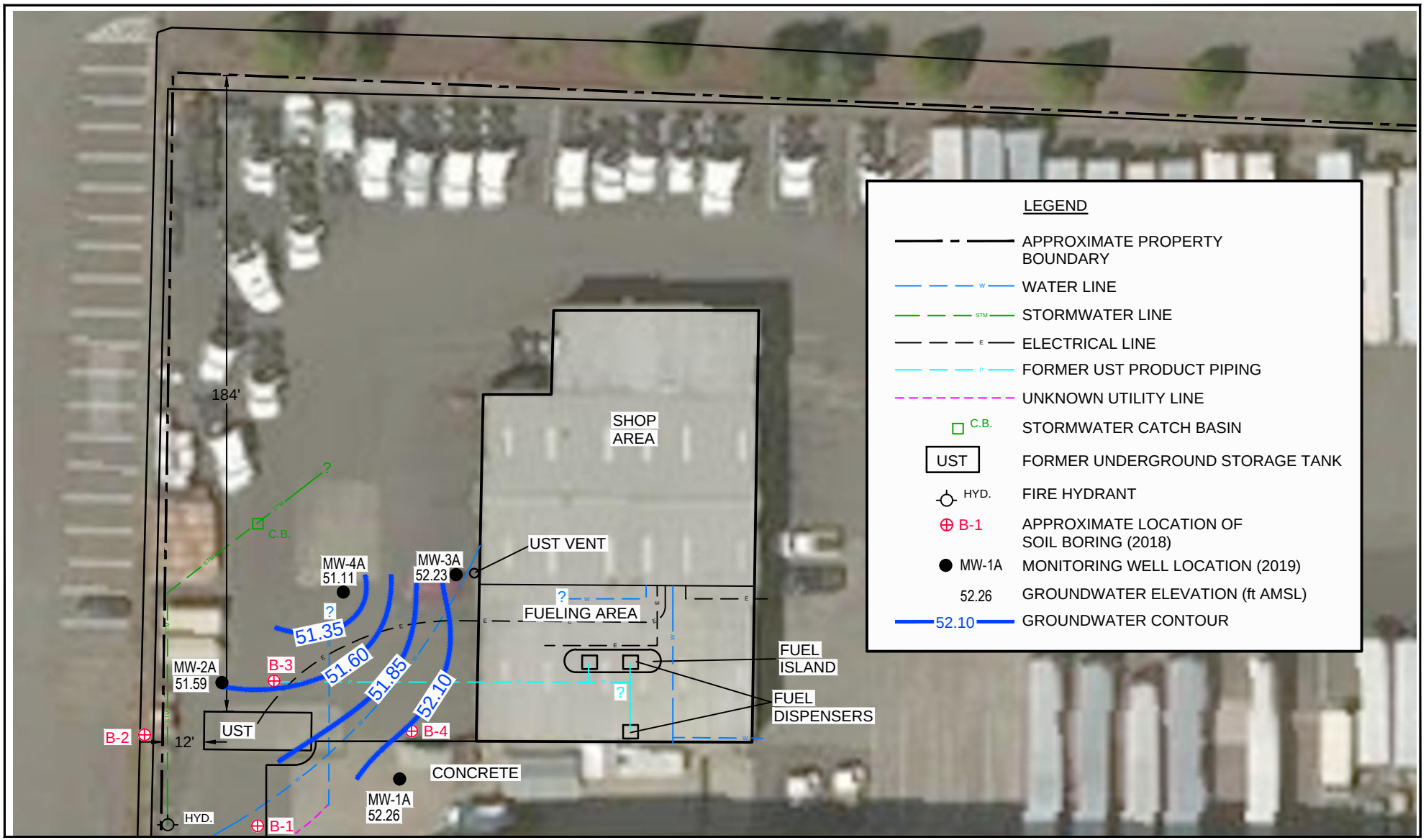
11202705

Jan 17, 2020

SITE MAP

FIGURE 2

CAD File: N:\US\Detroit\Projects\563\11202705\Digital_Design\ACAD 2018\Figures\RPT-002\11202705-03(RPT-002SUMNERWASHINGTON)GN-DE002.DWG



Source: Microsoft Product Screen Shot(s) Reprinted with permission from Microsoft Corporation, Acquisition Date [unknown], Accessed: 2018

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Coordinate System:
STATE PLANE
WA-NAD83

MARTIN BROWER
1409 PUYALLUP STREET
SUMNER, WASHINGTON

11202705

Jan 23, 2020

GROUNDWATER CONTOUR MAP - OCTOBER 3, 2019

FIGURE 3

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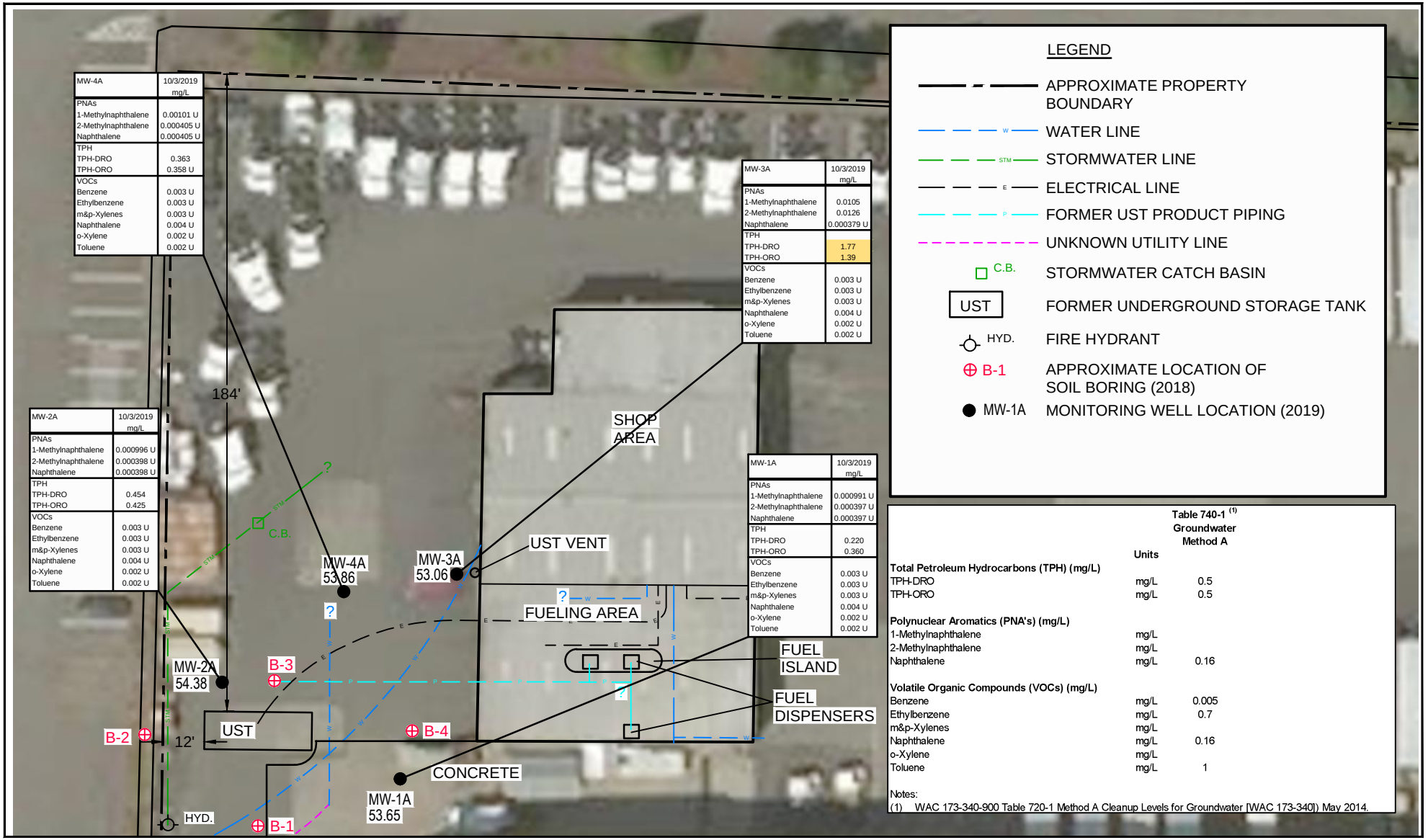

Table 740-1 (1) Groundwater Method A

	Units	
Total Petroleum Hydrocarbons (TPH) (mg/L)		
TPH-DRO	mg/L	0.5
TPH-ORO	mg/L	0.5
Polynuclear Aromatics (PNA's) (mg/L)		
1-Methylnaphthalene	mg/L	
2-Methylnaphthalene	mg/L	
Naphthalene	mg/L	0.16
Volatile Organic Compounds (VOCs) (mg/L)		
Benzene	mg/L	0.005
Ethylbenzene	mg/L	0.7
m&p-Xylenes	mg/L	
Naphthalene	mg/L	0.16
o-Xylene	mg/L	
Toluene	mg/L	1

Notes:
(1) WAC 173-340-900 Table 720-1 Method A Cleanup Levels for Groundwater [WAC 173-340]) May 2014.

Source: Microsoft Product Screen Shot(s) Reprinted with permission from Microsoft Corporation, Acquisition Date [unknown], Accessed: 2018

0 20 40ft

Coordinate System: STATE PLANE WA-NAD83

MARTIN BROWER
1409 PUYALLUP STREET
SUMNER, WASHINGTON

11202705

Jan 24, 2020

GROUNDWATER ANALYTICAL RESULTS - OCTOBER 3, 2019

FIGURE 4

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Table 1

Monitoring Well Construcion Details
Martin Brower
1409 Puyallup Street
Sumner, Washington

Well ID	Ground Surface Elevation (ft AMSL)	Top of Casing Elevation (ft AMSL)	Well Diameter (inches)	Total Depth (ft bgs)	Screen Interval (ft bgs)
MW-1A	56.36	56.21	2	14	4-14 ft bgs
MW-2A	56.61	56.26	2	15	5-15 ft bgs
MW-3A	56.82	56.65	2	14	4-14 ft bgs
MW-4A	55.83	55.67	2	15	5-15 ft bgs

Notes:
All monitoring wells constructed of Schedule 40 PVC with flush mount steel well box surface completion.
BGS - Below ground surface
AMSL - Above mean sea level

Table 2

Groundwater Elevations
Martin Brower
1409 Puyallup Street
Sumner, Washington

Well ID	Date	Top of Casing Elevation (ft AMSL)	Depth to Groundwater (ft BGS)	Groundwater Elevation (ft BGS)
MW-1A	10/3/2019	56.21	3.95	52.26
MW-2A	10/3/2019	56.26	4.67	51.59
MW-3A	10/3/2019	56.65	4.42	52.23
MW-4A	10/3/2019	55.67	4.56	51.11

Notes:
BGS - Below ground surface
AMSL - Above mean sea level

Table 3

Groundwater Analytical Results
Martin Brower
1409 Puyallup Street
Sumner, Washington

Sample Location:		**Table 740-1 [(1)]**	**MW-1A**	**MW-2A**	**MW-3A**	**MW-4A**
Sample Identification:		**Groundwater**	**MW-1A**	**MW-2A**	**MW-3A**	**MW-4A**
Sample Date:		**Method A**	**10/3/2019**	**10/3/2019**	**10/3/2019**	**10/3/2019**
	Units					
Total Petroleum Hydrocarbons (TPH)						
Total Petroleum Hydrocarbons (C10-C24) Diesel #2	mg/L	0.5	0.220	0.454	**1.77**	0.363
Total Petroleum Hydrocarbons (C24-C44) Motor Oil	mg/L	0.5	0.360	0.425	**1.39**	0.358 U
Polynuclear Aromatics (PNA's)						
1-Methylnaphthalene	mg/L		0.000991 U	0.000996 U	0.0105	0.00101 U
2-Methylnaphthalene	mg/L		0.000397 U	0.000398 U	0.0126	0.000405 U
Acenaphthene	mg/L		0.000397 U	0.000398 U	0.000379 U	0.000405 U
Acenaphthylene	mg/L		0.000991 U	0.000996 U	0.000948 U	0.00101 U
Anthracene	mg/L		0.0149 U	0.0149 U	0.0142 U	0.0152 U
Benzo(a)anthracene	mg/L		0.000991 U	0.000996 U	0.000948 U	0.00101 U
Benzo(a)pyrene	mg/L	0.0001	0.000991 U	0.000996 U	0.000948 U	0.00101 U
Benzo(b)fluoranthene	mg/L		0.000991 U	0.000996 U	0.000948 U	0.00101 U
Benzo(g,h,i)perylene	mg/L		0.000991 U	0.000996 U	0.000948 U	0.00101 U
Benzo(k)fluoranthene	mg/L		0.000991 U	0.000996 U	0.000948 U	0.00101 U
Chrysene	mg/L		0.000595 U	0.000598 U	0.000569 U	0.000608 U
Dibenz(a,h)anthracene	mg/L		0.000595 U	0.000598 U	0.000569 U	0.000608 U
Fluoranthene	mg/L		0.00297 U	0.00299 U	0.00284 U	0.00304 U
Fluorene	mg/L		0.00198 U	0.00199 U	0.0019 U	0.00203 U
Indeno(1,2,3-cd)pyrene	mg/L		0.000991 U	0.000996 U	0.000948 U	0.00101 U
Naphthalene	mg/L	0.16	0.000397 U	0.000398 U	0.000379 U	0.000405 U
Phenanthrene	mg/L		0.000991 U	0.000996 U	0.000948 U	0.00101 U
Pyrene	mg/L		0.00198 U	0.00199 U	0.0019 U	0.00203 U
Volatile Organic Compounds (VOCs)						
1,1,1,2-Tetrachloroethane	mg/L		0.002 U	0.002 U	0.002 U	0.002 U
1,1,1-Trichloroethane	mg/L	0.2	0.003 U	0.003 U	0.003 U	0.003 U
1,1,2,2-Tetrachloroethane	mg/L		0.003 U	0.003 U	0.003 U	0.003 U
1,1,2-Trichloroethane	mg/L		0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethane	mg/L		0.002 U	0.002 U	0.002 U	0.002 U
1,1-Dichloroethene	mg/L		0.004 U	0.004 U	0.004 U	0.004 U
1,1-Dichloropropene	mg/L		0.003 U	0.003 U	0.003 U	0.003 U
1,2,3-Trichlorobenzene	mg/L		0.005 U	0.005 U	0.005 U	0.005 U
1,2,3-Trichloropropane	mg/L		0.002 U	0.002 U	0.002 U	0.002 U
1,2,4-Trichlorobenzene	mg/L		0.002 U	0.002 U	0.002 U	0.002 U
1,2,4-Trimethylbenzene	mg/L		0.003 U	0.003 U	0.003 U	0.003 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/L		0.01 U	0.01 U	0.01 U	0.01 U
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.00001	0.002 U	0.002 U	0.002 U	0.002 U
1,2-Dichlorobenzene	mg/L		0.002 U	0.002 U	0.002 U	0.002 U
1,2-Dichloroethane	mg/L	0.005	0.002 U	0.002 U	0.002 U	0.002 U
1,2-Dichloropropane	mg/L		0.001 U	0.001 U	0.001 U	0.001 U
1,3,5-Trimethylbenzene	mg/L		0.003 U	0.003 U	0.003 U	0.003 U
1,3-Dichlorobenzene	mg/L		0.002 U	0.002 U	0.002 U	0.002 U
1,3-Dichloropropane	mg/L		0.002 U	0.002 U	0.002 U	0.002 U
1,4-Dichlorobenzene	mg/L		0.004 U	0.004 U	0.004 U	0.004 U
2,2-Dichloropropane	mg/L		0.003 U	0.003 U	0.003 U	0.003 U
2-Chlorotoluene	mg/L		0.003 U	0.003 U	0.003 U	0.003 U
2-Phenylbutane (sec-Butylbenzene)	mg/L		0.003 U	0.003 U	0.003 U	0.003 U
4-Chlorotoluene	mg/L		0.002 U	0.002 U	0.002 U	0.002 U
Benzene	mg/L	0.005	0.003 U	0.003 U	0.003 U	0.003 U
Bromobenzene	mg/L		0.002 U	0.002 U	0.002 U	0.002 U
Bromodichloromethane	mg/L		0.002 U	0.002 U	0.002 U	0.002 U
Bromoform	mg/L		0.003 U	0.003 U	0.003 U	0.003 U
Bromomethane (Methyl bromide)	mg/L		0.006 U	0.006 U	0.006 U	0.006 U
Carbon tetrachloride	mg/L		0.003 U	0.003 U	0.003 U	0.003 U
Chlorobenzene	mg/L		0.002 U	0.002 U	0.002 U	0.002 U
Chlorobromomethane	mg/L		0.002 U	0.002 U	0.002 U	0.002 U
Chloroethane	mg/L		0.005 U	0.005 U	0.005 U	0.005 U
Chloroform (Trichloromethane)	mg/L		0.005 U	0.005 U	0.005 U	0.005 U
Chloromethane (Methyl chloride)	mg/L		0.02 U	0.02 U	0.02 U	0.02 U
cis-1,2-Dichloroethene	mg/L		0.003 U	0.003 U	0.003 U	0.003 U
cis-1,3-Dichloropropene	mg/L		0.001 U	0.001 U	0.001 U	0.001 U
Cymene (p-Isopropyltoluene)	mg/L		0.003 U	0.003 U	0.003 U	0.003 U
Dibromochloromethane	mg/L		0.002 U	0.002 U	0.002 U	0.002 U
Dibromomethane	mg/L		0.002 U	0.002 U	0.002 U	0.002 U
Dichlorodifluoromethane (CFC-12)	mg/L		0.01 U	0.01 U	0.01 U	0.01 U
Ethylbenzene	mg/L	0.7	0.003 U	0.003 U	0.003 U	0.003 U
Hexachlorobutadiene	mg/L		0.006 U	0.006 U	0.006 U	0.006 U
Isopropyl benzene	mg/L		0.002 U	0.002 U	0.00269	0.002 U
m&p-Xylenes	mg/L		0.003 U	0.003 U	0.003 U	0.003 U
Methyl tert butyl ether (MTBE)	mg/L	0.02	0.002 U	0.002 U	0.002 U	0.002 U
Methylene chloride	mg/L	0.005	0.005 U	0.005 U	0.005 U	0.005 U
Naphthalene	mg/L	0.16	0.004 U	0.004 U	0.004 U	0.004 U
N-Butylbenzene	mg/L		0.003 U	0.003 U	0.003 U	0.003 U
N-Propylbenzene	mg/L		0.003 U	0.003 U	0.00438	0.003 U
o-Xylene	mg/L		0.002 U	0.002 U	0.002 U	0.002 U
Styrene	mg/L		0.005 U	0.005 U	0.005 U	0.005 U
tert-Butylbenzene	mg/L		0.003 U	0.003 U	0.003 U	0.003 U
Tetrachloroethene	mg/L	0.005	0.003 U	0.003 U	0.003 U	0.003 U
Toluene	mg/L	1	0.002 U	0.002 U	0.002 U	0.002 U
trans-1,2-Dichloroethene	mg/L		0.003 U	0.003 U	0.003 U	0.003 U
trans-1,3-Dichloropropene	mg/L		0.001 U	0.001 U	0.001 U	0.001 U
Trichloroethene	mg/L	0.005	0.003 U	0.003 U	0.003 U	0.003 U
Trichlorofluoromethane (CFC-11)	mg/L		0.003 U	0.003 U	0.003 U	0.003 U
Vinyl chloride	mg/L	0.0002	0.001 U	0.001 U	0.001 U	0.001 U

Notes:
U - Not detected at the associated reporting limit.
[(1)]WAC 173-340-900 Table 720-1 Method A Cleanup Levels for Groundwater [WAC 173-340] May 2014.

Appendices

Appendix A
Monitoring Well Construction Diagrams

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: MARTIN BROWER TRANSPORTATION FACILITY
PROJECT NUMBER: 11202705
CLIENT: MARTIN BROWER
LOCATION: 1409 PUYALLUP STREET, SUMNER, WA

HOLE DESIGNATION: MW-1A
DATE COMPLETED: 25 September 2019
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: A.NAYLOR
WELL TAG ID: BME 804

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH	MONITORING WELL	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE	SAMPLE PID (ppm)
	CONCRETE	0.50						
	COBBLES	1.50						
2	SP-SAND, medium grey, fine-grained, stiff, moist, no odor	3.00		DP1		50		0.0
	ML-SILT, medium grey, stiff, moist, no odor	3.50						0.0
4	CL-SILTY CLAY, medium grey, stiff, moist, no odor	4.75						0.0
6	SP-SAND, medium greyish brown, fine-grained w/organic material at 5.75 ft bgs, wet, no odor	5.75						0.0
	SM-SILTY SAND, medium grey, soft, moist, no odor							0.0
8				DP2		80		0.0
	SP-SAND, medium grey, fine-grained, wet, no odor	9.00						0.0
10								0.0
	ML-SILT, medium grey w/trace clay, soft, moist, no odor	11.00						0.0
12				DP3		100		0.0
	CL-SILT, blueish grey w/clay, stiff, moist, no odor	13.00						
14								0.0
	ML-SILT, blueish grey w/trace fine sand, stiff, moist, no odor	14.75						0.0
16	END OF BOREHOLE @ 15.0ft BGS	15.00						
18								
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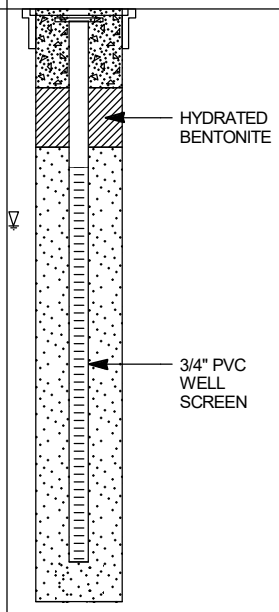


WELL DETAILS
Screened interval:
4.00 to 14.00ft BGS
Length: 10ft
Diameter: 0.8in
Slot Size: 0.010
Sand Pack:
3.50 to 14.00ft BGS

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: MARTIN BROWER TRANSPORTATION FACILITY
PROJECT NUMBER: 11202705
CLIENT: MARTIN BROWER
LOCATION: 1409 PUYALLUP STREET, SUMNER, WA

HOLE DESIGNATION: MW-2A
DATE COMPLETED: 25 September 2019
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: A.NAYLOR
WELL TAG ID: BME 803

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH	MONITORING WELL	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE	SAMPLE PID (ppm)
0	ASPHALT	0.25						
	NO RECOVERY from 3"-5' large cobbles from 3" to 1.5'		HYDRATED BENTONITE	DP1		0		0.0
6	SP-SAND, medium gray, fine-grained, wet, no odor	6.50	▽					0.0
8	- CL-CLAY-medium brown, moist at 7.5ft BGS			DP2		60		0.0
10	ML-SILTY SAND, w/clay, medium grey, firm, moist, no odor	10.00	3/4" PVC WELL SCREEN					0.0
		11.00						0.0
12	CL-CLAY, silty, medium grey, firm, moist, no odor			DP3		100		0.0
14	SM-SAND, silty, medium grey, fine-grained, soft, wet, no odor	13.50						0.0
		14.50						0.0
	ML-SILT, blueish grey w/trace find sand, stiff, moist, no odor	15.00						0.0
16	END OF BOREHOLE @ 15.0ft BGS							
18								
20								
22								
24								
26								
28								
30								
32								
34								

WELL DETAILS
Screened interval:
5.00 to 15.00ft BGS
Length: 10ft
Diameter: 0.8in
Slot Size: 0.010
Sand Pack:
4.50 to 15.00ft BGS

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: MARTIN BROWER TRANSPORTATION FACILITY
PROJECT NUMBER: 11202705
CLIENT: MARTIN BROWER
LOCATION: 1409 PUYALLUP STREET, SUMNER, WA

HOLE DESIGNATION: MW-3A
DATE COMPLETED: 25 September 2019
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: A.NAYLOR
WELL TAG ID: BME 801

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH	MONITORING WELL	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	PID (ppm)
	ASPHALT	0.25					0.2
2	GM-SAND, medium grey, fine-grained w/few gravels, moist, no odor	2.00					4.5
	ML-SILT, medium grey, stiff, moist, slight hydrocarbon odor		HYDRATED BENTONITE	DP1		30	69.2
4	SM-SILTY SAND, medium grey, fine-grained, wet, slight hydrocarbon odor	4.00					
		5.50					91.7
6	ML-SILT, medium grey, wet, hydrocarbon odor						112.1
	- dark brown organic material, strong hydrocarbon odor at 6.0ft BGS	6.50					
8	SP-SAND, medium grey, fine-grained, wet, strong hydrocarbon odor			DP2		75	85.7
10	SW-SAND, medium grey, fine- to medium-grained, moist, hydrocarbon odor	10.00	3/4" PVC WELL SCREEN				60.1
12	CL-CLAY, w/trace silt, medium grey, firm, moist, hydrocarbon odor	12.00		DP3		80	62.8
							22.9
14							15.6
	SW-SAND, fine sand lense, wet	14.75					17.5
	END OF BOREHOLE @ 15.0ft BGS	15.00					
16							
18							
20							
22							
24							
26							
28							
30							
32							
34							

WELL DETAILS
Screened interval:
4.00 to 14.00ft BGS
Length: 10ft
Diameter: 0.8in
Slot Size: 0.010
Sand Pack:
3.50 to 14.00ft BGS

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: MARTIN BROWER TRANSPORTATION FACILITY
PROJECT NUMBER: 11202705
CLIENT: MARTIN BROWER
LOCATION: 1409 PUYALLUP STREET, SUMNER, WA

HOLE DESIGNATION: MW-4A
DATE COMPLETED: 25 September 2019
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: A.NAYLOR
WELL TAG ID: BME 802

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH	MONITORING WELL	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	PID (ppm)
0	ASPHALT	0.25					
	GM-SAND AND GRAVEL, greyish brown, fine- to coarse-grained, moist, no odor	2.00					
2	ML-SILT, medium grey, stiff, moist, no odor dark brown organic material 4.5-5.0 ftBGS		HYDRATED BENTONITE	DP1		80	0.1
4	- clay lense at 4.5ft BGS						0.1
							0.2
6							0.1
	SP-SAND, medium grey, fine-grained, moist, no odor	6.50	▽				0.1
8				DP2		80	0.1
							0.0
10			3/4" PVC WELL SCREEN				0.0
							0.0
12	ML-SILT, w/trace clay, medium grey, firm, moist, no odor	12.00					0.0
		13.00		DP3		80	0.0
14	SM-SAND, silty, medium grey, fine-grained, moist, no odor	14.00					
	SW-SILTY SAND, medium grey, fine- to medium-grained, wet, no odor	15.00					0.0
16	END OF BOREHOLE @ 15.0ft BGS						
18							
20							
22							
24							
26							
28							
30							
32							
34							

WELL DETAILS
Screened interval:
5.00 to 15.00ft BGS
Length: 10ft
Diameter: 0.8in
Slot Size: 0.010
Sand Pack:
4.50 to 15.00ft BGS

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

Appendix B
Field Forms

WELL GAUGING DATA

Project # 191003-HP1 Date 10/3/19 Client GHD

Site 1409 Puyallup St., Sumner, WA

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	Notes
MW-1A	0817	2					3.95	14.22		
MW-2A	0822	2					4.67	14.85		
MW-3A	0808	2					4.42	13.85		
MW-4A	0812	2					4.56	14.85	↓	

LOW FLOW WELL MONITORING DATA SHEET

Project #: 191003-HP1	Client: GHD
Sampler: HP	Gauging Date: 10/3/19
Well I.D.: MW-1A	Well Diameter (in.): (2) 3 4 6 8 ____
Total Well Depth (ft.): 14.22	Depth to Water (ft.): 3.95
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (PVC) Grade	Flow Cell Type: YSI 556

Purge Method: 2" Grundfos Pump ~~Peristaltic Pump~~ Bladder Pump
Sampling Method: Dedicated Tubing ~~New Tubing~~ Other____

Start Purge Time: 0953 Flow Rate: 200 mL/min Pump Depth: 9'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or (µS/cm))	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or (mL))	Depth to Water (ft.)
0956	16.58	6.65	868	48	2.69	-66.4	600	4.12
0959	16.91	6.64	869	47	0.45	-83.7	1200	4.22
1002	16.97	6.63	870	48	0.38	-88.7	1800	4.30
1005	17.20	6.65	875	48	0.33	-95.2	2400	4.40
1008	17.35	6.66	881	46	0.31	-98.6	3000	4.42
1011	17.41	6.67	883	48	0.34	-99.8	3600	4.47

Did well dewater? Yes (No) Amount actually evacuated: 3.6 L

Sampling Time: 1012 Sampling Date: 10/3/19

Sample I.D.: MW-1A Laboratory: TA

Analyzed for: TPH-G BTEX MTBE TPH-D (Other) see C.O.C.

Equipment Blank I.D.: @ Time Duplicate I.D.:

LOW FLOW WELL MONITORING DATA SHEET

Project #: 191003-HP1	Client: GHD
Sampler: HP	Gauging Date: 10/3/19
Well I.D.: MW-2A	Well Diameter (in.): (2) 3 4 6 8 ____
Total Well Depth (ft.): 14.85	Depth to Water (ft.): 4.67
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (PVC) Grade	Flow Cell Type: YSI 556

Purge Method: 2" Grundfos Pump (Peristaltic Pump) Bladder Pump
Sampling Method: Dedicated Tubing (New Tubing) Other ____

Start Purge Time: 0841 Flow Rate: 200 ml/min Pump Depth: 10'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water (ft.)
0844	18.08	6.78	614	30	1.79	-71.6	600	5.30
0847	18.26	6.77	606	31	0.96	-66.2	1200	5.97
0850	18.36	6.76	588	33	0.74	-63.4	1800	6.18
0853	18.39	6.75	573	35	0.58	-61.0	2400	6.29
0856	18.41	6.74	568	34	0.58	-60.2	3000	6.34
0859	18.44	6.74	566	33	0.59	-59.7	3600	6.41

Did well dewater? Yes (No)	Amount actually evacuated: 3.6L
Sampling Time: 0900	Sampling Date: 10/3/19
Sample I.D.: MW-2A	Laboratory: TA
Analyzed for: TPH-G BTEX MTBE TPH-D	(Other): See C-O-C.
Equipment Blank I.D.: @ Time	Duplicate I.D.:

Bottleset: 3 HCl VOA
2 HCl Amber
2 NP Amber

LOW FLOW WELL MONITORING DATA SHEET

Project #: 191003-HP1	Client: GHD
Sampler: HP	Gauging Date: 10/3/19
Well I.D.: MW-3A	Well Diameter (in.): (2) 3 4 6 8 ____
Total Well Depth (ft.): 13.85	Depth to Water (ft.): 4.42
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (PVC) Grade	Flow Cell Type: YSI 556

Purge Method: 2" Grundfos Pump | (Peristaltic Pump) | Bladder Pump
Sampling Method: Dedicated Tubing | (New Tubing) | Other____

Start Purge Time: 0918 Flow Rate: 200 mL/min Pump Depth: 10'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or (µS/cm))	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or (mL))	Depth to Water (ft.)
0921	17.02	6.67	689	46	2.51	-39.8	600	5.09
0924	17.14	6.69	706	65	0.85	-44.6	1200	5.48
0927	17.22	6.70	715	59	0.50	-49.0	1800	5.51
0930	17.29	6.71	722	54	0.44	-62.9	2400	5.54
0933	17.45	6.73	728	56	0.42	-68.3	3000	5.58
0936	17.43	6.74	730	57	0.41	-67.5	3600	5.59

Did well dewater? Yes (No) Amount actually evacuated: 3.6 L

Sampling Time: 0937 Sampling Date: 10/3/19

Sample I.D.: MW-3A Laboratory: TA

Analyzed for: TPH-G BTEX MTBE TPH-D (Other): See C.O.C.

Equipment Blank I.D.: @ Time Duplicate I.D.:

LOW FLOW WELL MONITORING DATA SHEET

Project #: 191003-HP1	Client: GHD
Sampler: HP	Gauging Date: 10/3/19
Well I.D.: MW-4A	Well Diameter (in.): (2) 3 4 6 8 ____
Total Well Depth (ft.): 14.85	Depth to Water (ft.): 4.56
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (PVC) Grade	Flow Cell Type: YSI 556

Purge Method: 2" Grundfos Pump ~~Peristaltic Pump~~ Bladder Pump
Sampling Method: Dedicated Tubing ~~New Tubing~~ Other____

Start Purge Time: 1031 Flow Rate: 200 mL/min Pump Depth: 9.5'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water (ft.)
1034	18.04	6.85	804	69	1.05	-68.0	600	5.30
1037	18.21	6.85	803	66	0.66	-71.9	1200	5.58
1040	18.47	6.86	802	66	0.44	-77.9	1800	5.72
1043	18.53	6.86	801	65	0.41	-78.7	2400	5.81
1046	18.57	6.86	801	64	0.36	-80.2	3000	5.81
1049	18.79	6.87	801	64	0.35	-80.1	3600	5.88

Did well dewater? Yes (No)	Amount actually evacuated: 3.6 L
Sampling Time: 1050	Sampling Date: 10/3/19
Sample I.D.: MW-4A	Laboratory: TA
Analyzed for: TPH-G BTEX MTBE TPH-D	Other: See C.O.C.
Equipment Blank I.D.: @ Time	Duplicate I.D.:

Eurofins TestAmerica, Seattle
5755 8th Street East
Tacoma, WA 98424
Phone: 253-922-2310 Fax: 253-922-5047

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information	Sampler: Patrick Ho	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 580-35835-11547.1
Client Contact: Brian Richardson	Phone:	E-Mail: roxanne.cisneros@testamericainc.com		Page: Page 1 of 1
Company: GHD Services Inc.				Job #:
Address: 26850 Haggerty Rd.	Due Date Requested:			
City: Farmington Hills	TAT Requested (days):			
State, Zip: MI, 48331				
Phone:	PO #: Purchase Order Requested			
Email: brian.richardson@ghd.com	WO #: 11202705-03			
Project Name: Penske Truck Leasing Co.	Project #: 58014317			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	NWTPH_Dx - NWTPH-Dx w/ SGT	8260B - 8260 VOC	8270D - 8270 PAH	Total Number of containers	Special Instructions/Note:
Preservation Code:							A	A	N		
MW- 1A	10-3-19	1012	G	Water	N	N	X	X	X		
MW- 2A	10-3-19	0900	G	Water	N	N	X	X	X		
MW- 3A	10-3-19	0937	G	Water	N	N	X	X	X		
MW- 4A	10-3-19	1050	G	Water	N	N	X	X	X		
				~~Water~~							

Therm. ID: IR 6 Cor: 6.0° Unc: 5.5°
Cooler Dsc: Lg Bl
Packing: Bub
Cust. Seal: Yes ___ No ___
Blue Ice, Wet, Dry, None
FedEx: ___
UPS: ___
Lab Cour: ___
Other: Cldrv

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

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Patrick Ho	10-3-19 / 1155	BTS		10-3-19 1155	TASEA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

WELLHEAD INSPECTION FORM

Client: GHD Site: 1109 Puyallup St., Sumner, WA Date: 10/3/19

Job #: 191003-HP1 Technician: HP Page 1 of 1

Well ID	Well Inspected - No Corrective Action Required	Check indicates deficiency: Cap non-functional	Lock non-functional	Lock missing	Bolts missing (list qty)	Tabs stripped (list qty)	Tabs broken (list qty)	Annular seal incomplete	Apron damaged	Rim / Lid broken	Trip Hazard	Below Grade	Other (explain in notes)	Well Not Inspected (explain in notes)	Notes (list if cap or lick replaced, if there are access issues associated with repairs, if traffic control is required, if stand pipe damaged, or any specific details not covered by checklist)
MW-1A	X			X											
MW-2A	X			X											
MW-3A	X			X											
MW-4A	X			X											

NOTES:

TEST EQUIPMENT CALIBRATION LOG

PROJECT NAME 1409 Puyallup St. Sumner, WA				PROJECT NUMBER 191003-HP1			
EQUIPMENT NAME	EQUIPMENT NUMBER	DATE/TIME OF TEST	STANDARDS USED	EQUIPMENT READING	CALIBRATED TO: OR WITHIN 10%:	TEMP.	INITIALS
YSI 556	BTS #5	10/3/19 0650	pH-4 7 10	3.97 7.04 10.01	✓ ✓ ✓	16.3 16.8 16.5	HP HP HP
			Cond-3900	3900	✓	16.0	HP
			ORP-245	241	✓	17.4	HP
			DO-100	98.6	✓	17.2	HP

PURGE DRUM INVENTORY LOG

CLIENT GHD

SITE ADDRESS 1409 Puyallup St., Sumner, WA

STATUS OF DRUM(S) UPON ARRIVAL							
Number of drum(s) empty:							
Number of drum(s) 1/4 full:							
Number of drum(s) 1/2 full:	2						
Number of drum(s) 3/4 full:							
Number of drum(s) full:							
Total drum(s) on site:	2						
STATUS OF DRUM(S) UPON DEPARTURE							
Number of drum(s) empty:							
Number of drum(s) 1/4 full:							
Number of drum(s) 1/2 full:	2						
Number of drum(s) 3/4 full:							
Number of drum(s) full:							
Total drum(s) on site:	2						
LOCATION OF DRUM(S)							
Is/Are drum(s) at wellhead(s)?	NO						
Describe location if drum(s) is/are located elsewhere:	NW corner of site by scrap metal bin						
Label drum(s) properly:	yes						
FINAL STATUS							
Number of new drum(s) left on site this event:							
Date of inspection:	10-3-19						
Logged by BTS Field Technician:	HP						
Office reviewed by:							

DAILY FIELD REPORT

Project Number: 11202705	Date: 9/25/19	Site Address: 1409 Puyallup St.
Project Name: 1409 Puyallup St	Field Technician: A. Naylor	GHD PM: Brian Richardson
Weather: sunny, 70°	HSE Meeting Conducted: ☑ Yes ☐ No	
Equipment ID (GHD or rented): PID	Calibrated Completed: ☑ Yes ☐ No ☐ NA	
	Documented below or "D" form attached: ☑ Yes ☐ No ☐ NA — See cal. log from FET	
	Calibration certificate for rental attached: ☑ Yes ☐ No ☐ NA	

Time	Activity/Comments
0700	Arrived onsite. Called John Gelmini to check in for day - no answer
0730	Drillers arrived onsite. Walked site and discussed Safety & logistics for locations
0815	Troy & Norm with MB came out to do site Safety orientation. Completed tailgate meeting and reviewed JSA. Discussed w/ Norm where to put drums.
0835	Began setup for MW-3 location drilling
0930	Called Brian Richardson water level at MW-3 is 5 Ft. Asked to screen from 4-14 Ft.
1030	Spoke with John Gelmini of Martin Brower had questions about the sampling plan and when we would be finished drilling.
	- Setup to drill at MW-4A.
1200	Completed install of MW-4A
1230	Setup to drill @ MW-2A
1435	Setup to drill @ MW-1A
1535	Began cleanup to leave site for evening.
1600	Depart Site

DAILY FIELD REPORT

Project Number: 11202705	Date: 9/26/19	Site Address: 1409 Puyallup St
Project Name: 1409 Puyallup St Survey	Field Technician: A. Naylor	GHD PM: Brian Richardson
Weather: 62° Rainy	HSE Meeting Conducted: ☒ Yes ☐ No	
Equipment ID (GHD or rented): PID	Calibrated Completed: ☒ Yes ☐ No ☐ NA	
	Documented below or "D" form attached: ☒ Yes ☐ No ☐ NA	
	Calibration certificate for rental attached: ☐ Yes ☐ No ☐ NA	

Time	Activity/Comments
0700	Arrived onsite, Hult present.
0715	Held tailgate meeting discussed safety, weather, traffic, slips, pinchpoints
0735	Setup and B-6 location by OWS. Began hand augering. Augered to 5 ft bgs
0745	Began hand augering @ B-5 location, Unable to auger due to gravel under asphalt Spoke w/ Brian Richardson and he was okay w/ using probe in that area, without
1015	Completed Borings B-5 & B-6 by OWS.
1045	Closed up holes and finished surface to match surrounding surface.
1115	Began developing MW-1 thru MW-4,
1245	Depart site.

Holt Services, Inc.

Daily Drill Activity

Client: GHD **Project:** Martin Brewer Transportation **Date:** 9/25/19

Driller Signature: [signature] Drill: Probe

BORING ID	Well ID	DESCRIPTION
	BME 801	Probe to 15ft set well at 14ft
		(10ft screen)
	BME 802	Probe to 15ft Set well at 15ft
		(10ft Screen)
	BME 803	Probe to 15ft Set well at 15ft
		(10ft Screen)
	BME 804	Probe to 15ft Set well at 14Ft
		(10Ft Screen)

QTY	SUPPLIES
	PVC Riser - 5 foot 4"
	PVC riser - 10 foot
	PVC Screen - 5 foot
	PVC Screen - 10 foot
	PVC End Cap 2"
	Locking Cap 2"
	Sand
	Bentonite Chips
	Bentonite Casing Seal
	Concrete Mix
	Asphalt Patch
	Flush Cover
	16 Gal Drum
	55 Gal Drum
	MC5 Liner
	DT22 Liner
	Sample Tubing
	Expendable Point
	2" Prepack

TIME LOG - NOTES

6:30-6:45 - Shop
6:45-7:30 - Mob
7:30-12:00 Site
12:00-12:30 Lunch
12:30-3:45 on site

ADDITIONAL ITEM - SUPPLIES

ADDITIONAL/RENTAL EQUIP

Client Signature: [signature] Date:

Holt Services, Inc.

Daily Drill Activity

Client: GHD **Project:** Marion Brewer Transportation **Date:** 9/26/19

Driller Signature: [signature] 9:45pm - 26-19 Drill: Prob

BORING ID	Well ID	DESCRIPTION
		Probe to 15ft Soil
		Probe to 15ft Soil + water
		Development of 4 wells

QTY	SUPPLIES
2	PVC Riser - 5 foot
	PVC riser - 10 foot
4	PVC Screen - 5 foot
	PVC Screen - 10 foot
2	PVC End Cap
	Locking Cap
	Sand
1	Bentonite Chips
	Bentonite Casing Seal
	Concrete Mix
	Asphalt Patch
	Flush Cover
	16 Gal Drum
2	55 Gal Drum
6	MC5 Liner
	DT22 Liner
	Sample Tubing
1	Expendable Point
	2" Prepack

TIME LOG - NOTES

6:15-6:30 Shop
6:30-7:00 Mob
7:00-12:30 on site

ADDITIONAL ITEM - SUPPLIES

ADDITIONAL/RENTAL EQUIP

Client Signature: [signature] Date:

Stratigraphy Log (Overburden)
(Form SP-14)
Page 1 of 1

Project name: 1409 Puyallup St
Project number: 11202705
Client: Martin Brewer
Location: Sumner, WA

Drilling contractor: Holt
Driller: Louie
Surface elevation:
Weather (A.M.): 62° sunny
(P.M.):

Hole designation: MW-3A
Date/Time started: 9/25/19 0845
Date/Time completed: 9/25/19 1030
Drilling method: Direct Push
GHD supervisor: Aubrey, Waylar

Stratigraphic Intervals (Depths in ft/m BGS) From	At	To	Sample Description: Order of descriptors: Soil type symbol(s) - primary component(s), (nature of deposit), secondary components, relative density/consistency, grain size/plasticity, gradation/structure, colour, moisture content, Note: Plasticity determination requires the addition of moisture if the sample is too dry to roll (indicate if moisture was added or not).	Sample Details: Sample Number	Sampling Method	Penetration Record Split Spoon Blows (Record N-Values & Recoveries) 6"	6"	6"	6"	N	R	Sample Interval	PID/FID (ppm)	Chemical Analysis	Grain Size/ Other Analysis
0		3"	Asphalt												
3"		2'	medium grey, fine to medium sand w/ few gravels, moist, no odor (GM)						0-5=	80%		1	0.2		
2'		4'	medium grey silt, moist, stiff, slight HC odor (ML)									2	4.5		
												3	69.2		
4'		5.5	silty fine sand, medium grey, wet, slight HC odor (SM)									5	91.7		
								8-10=	75%			6	112.1		
5.5		6	~~Silt, medium grey wt dark brown organic material, strong HC odor, moist~~ wet, HC odor (ML)									8	85.7		
												10	60.1		
6		6.5	med grey silt w/ dark brown organic material ~~strong HC odor~~									12	62.8		
6.5		10	fine sand, medium grey, strong HC odor, wet (SP)									13	22.9		
								10-15=	80%			14	15.6		
10		12	medium grey fine to med. sand, moist, HC odor (SW)									15	17.5		
12		15	clay w/ ~~trace~~ silt, medium grey, ~~moist, firm~~, HC odor (CL)												
			@ 14.75-15 fine sand lense (SW) ~~moist wet~~												

Notes and Comments

Depth of borehole caving _____ Depth of first groundwater encounter 5' bgs Topsoil thickness _____
Water level in open borehole on completion _____ After _____ Hours _____
Notes: pre-pack 2" well w/ expendable BOH @ 15ft bgs
screened 4-14ft bgs
well tag Id: BME 801
14-3.5 sand
3.5-2 bentonite
2-0 concrete

Stratigraphy Log (Overburden)
(Form SP-14)
Page 1 of 1

Project name: 1409 Puyallup St.
Project number: 11202705
Client: Martin Brower
Location: Sumner, WA

Drilling contractor: Holt
Driller: Lavie
Surface elevation:
Weather (A.M.): 71° Sunny
(P.M.):

Hole designation: MW-1A
Date/Time started: 9/25/19 1435
Date/Time completed: 9/25/19 1535
Drilling method: Direct Push
GHD supervisor: A. Naylor

Stratigraphic Intervals (Depths in ft/m BGS) From	At	To	Sample Description: Order of descriptors: Soil type symbol(s) - primary component(s), (nature of deposit), secondary components, relative density/consistency, grain size/plasticity, gradation/structure, colour, moisture content, Note: Plasticity determination requires the addition of moisture if the sample is too dry to roll (indicate if moisture was added or not).	Sample Details: Sample Number	Sampling Method	Penetration Record Split Spoon Blows (Record N-Values & Recoveries) 6"	6"	6"	6"	N	R	Sample Interval	PID/FID (ppm)	Chemical Analysis	Grain Size/ Other Analysis
0		6"	Concrete												
6"		1.5	Cobbles						0-5 = 50%						
2.5		3	medium grey, fine sand, moist, (SP) no odor (STIFF)									2.5	0.0		
3		3.5	silt, medium grey, stiff moist, (ML) no odor									3	0.0		
3.5		4.75	silty clay, medium grey, moist, (CL) no odor, stiff									5	0.0		
4.75		5.75	medium greyish brown fine sand w/ organic material starting @ 5.75ft bgs. wet, no odors (SP)									6	0.0		
									5-10 = 80%			7	0.0		
5.75		9	medium grey, silty sand, moist, (SM) soft, no odor									8	0.0		
9		11	medium grey, fine sand, wet, (SP) no odor									9	0.0		
11		13	silt w/ trace clay, medium grey (ML) soft, moist, no odor									10	0.0		
13		14.75	bluish grey, silt w/ clay, stiff (CL)									11	0.0		
14.75		15.	moist, no odor						10-15 = 100%			12	0.0		
			> bluish grey, silt w/ trace fine sand, stiff moist, no odor (ML)									14	0.0		
												15	0.0		

Notes and Comments

Depth of borehole caving _____ Depth of first groundwater encounter 5.5 ft bgs Topsoil thickness _____
Water level in open borehole on completion _____ After _____ Hours _____

Notes: Pre-pack 2" well w/ expendable tip
screened 4-14 ft
14-3.5 sand.
3.5-2 bentonite
2-0 concrete

BOH @ 15 ft bgs

Well Id = BME-804

Stratigraphy Log (Overburden)
(Form SP-14)
Page ___ of ___

Project name: 1409 Puyallup St.
Project number: 11202705
Client: Martin Brower
Location: Sumner, WA

Drilling contractor: Holt
Driller: Levie
Surface elevation:
Weather (A.M.): 68°, Sunny
(P.M.):

Hole designation: MW-24
Date/Time started: 9/25/19 1230
Date/Time completed: 9/25/19 1400
Drilling method: Direct Push
GHD supervisor: A. Naylor

Stratigraphic Intervals (Depths in ft/m BGS) From	At	To	Sample Description: Order of descriptors: Soil type symbol(s) - primary component(s), (nature of deposit), secondary components, relative density/consistency, grain size/plasticity, gradation/structure, colour, moisture content, Note: Plasticity determination requires the addition of moisture if the sample is too dry to roll (indicate if moisture was added or not).	Sample Details: Sample Number	Sampling Method	Penetration Record Split Spoon Blows (Record N-Values & Recoveries) 6"	6"	6"	6"	N	R	Sample Interval	PID/FID (ppm)	Chemical Analysis	Grain Size/ Other Analysis
0		3"	asphalt												
			3"-5' - no recovery large cobbles from 3" to 5'					0-5= 0%							
6.5		10	medium gray, fine sand, wet (SP)					5-10= 60%			6	0.0			
			no odor @ 7.5-7.75' clay layer, (CL)								7	0.0			
			medium brown, moist								8	0.0			
10		11	medium gray, fine silty sand w/ clay, no odor, moist (ML)								9	0.0			
											10	0.0			
11		13.5	silty clay, medium grey, firm (CL) moist, no odor					10-15=100%			11	0.0			
											12	0.0			
13.5		14.5	Silty fine sand, medium gray (SM)								13	0.0			
			wet, no odor, soft								14	0.0			
14.5		15	blueish gray silt w/ trace fine sand, stiff moist, no odor (ML)								15	0.0			

Notes and Comments

Depth of borehole caving ___ Depth of first groundwater encounter 6.5 ft bgs Topsoil thickness ___
Water level in open borehole on completion ___ After ___ Hours ___

Notes:
pre pack 2" well
screened 5-15 ft bgs
sand 15-4.5 ft bgs
bentonite 4.5-2' bgs
cement 2-0' bgs

well top Id = BME 803

Stratigraphy Log (Overburden)
(Form SP-14)
Page 1 of 1

Project name: 1409 Puyallup St.
Project number: 11202305
Client: Martin Brower
Location: Sumner, WA

Drilling contractor: Holt
Driller: Louie
Surface elevation:
Weather (A.M.): 67° Sunny
(P.M.):

Hole designation: MW-4A
Date/Time started: 9/25/19 1030
Date/Time completed: 9/25/19 1200
Drilling method: Direct Push
GHD supervisor: Aubrey Naylor

Stratigraphic Intervals (Depths in ft/m BGS) From	At	To	Sample Description: Order of descriptors: Soil type symbol(s) - primary component(s), (nature of deposit), secondary components, relative density/consistency, grain size/plasticity, gradation/structure, colour, moisture content, Note: Plasticity determination requires the addition of moisture if the sample is too dry to roll (indicate if moisture was added or not).	Sample Details: Sample Number	Sampling Method	Penetration Record Split Spoon Blows (Record N-Values & Recoveries) 6"	6"	6"	6"	N	R	Sample Interval	PID/FID (ppm)	Chemical Analysis	Grain Size/ Other Analysis
0		3"	asphalt						0-5' = 80%						
3"		2	greyish brown, fine to coarse sand and gravels, moist, no odor (SM)								2	0.1			
2		6.5	silt, medium grey, stiff, moist no odor (ML) @ 4.5-6.5 dark brown organic material @ 4.5-5.0 clay lense								3	0.1			
											4	0.2			
											5	0.1			
6.5		12	medium grey, fine sand, moist (SP) no odor						5-10' = 80%		6	0.1			
12		13	silt w/ trace clay, medium grey, moist, no odor, firm (ML)								7	0.1			
											8	0.1			
13		14	silty fine sand, medium grey (SM) moist, no odor								9	0.0			
											10	0.0			
14		15	fine to medium silty sand, medium grey, wet, no odor (SW)						10-15 = 80%		11	0.0			
											12	0.0			
											13	0.0			
											15	0.0			

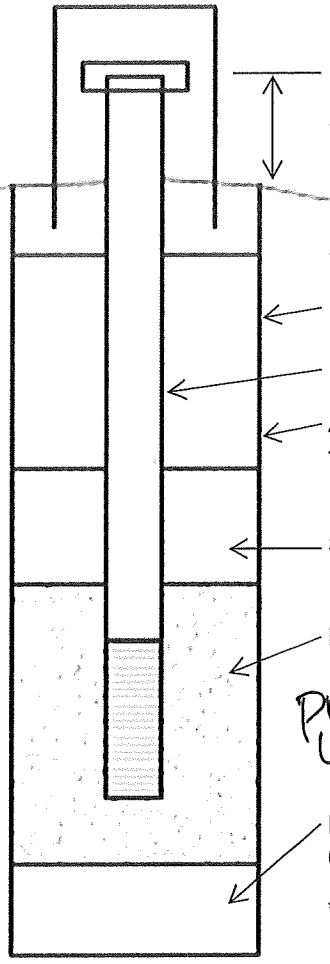
Notes and Comments

Depth of borehole caving _____ Depth of first groundwater encounter 6.5' bgs Topsoil thickness _____
Water level in open borehole on completion _____ After _____ Hours _____
Notes: Pre-pack 2" well screened 5-15 ft bgs
Sand 15-4.5' bgs
Bentonite 4.5-2' bgs
cement 2-0' bgs
Bott @ 15' bgs well btm ID BMF 807

Well Instrumentation Log
(Form SP-15)

Project Name: 1409 Puyallup St
Project Number: 11202705
Client: Martin Brower
Location: Sumner, WA

Well Designation: MW-2A, MW-3A
Date Completed: 9/25/19
Drilling Method: Direct Push
GHD Supervisor: Aubrey Naylor



Cap Type: J-PVC
Protective Casing Type: steel traffic box
Bottom of Surface Seal: 0 ft/m
Top of Seal* at: 2 ft/m
Bottom of Seal* at: 4.5 ft/m
Top of Screen* at: 5 (ft/m)
Bottom of Screen* at: 15.0 ft/m
Bottom of Filter Pack at: 15 ft/m
Bottom of Hole* at: 15.0 ft/m

Measure bottom of well (after completion) _____ ft/m (below top of riser pipe)
Stick up = _____ ft/m
Surface Seal Type: _____
Borehole Diameter: 2 (in/cm)
Riser Pipe
Annulus Backfill Type: Concrete
Seal Type: hydrated bentonite
Pack Type: - sand, size 10/20 (#3)
- gravel
- natural
Pre-packed well
Borehole Backfill Material (if not filter pack): _____

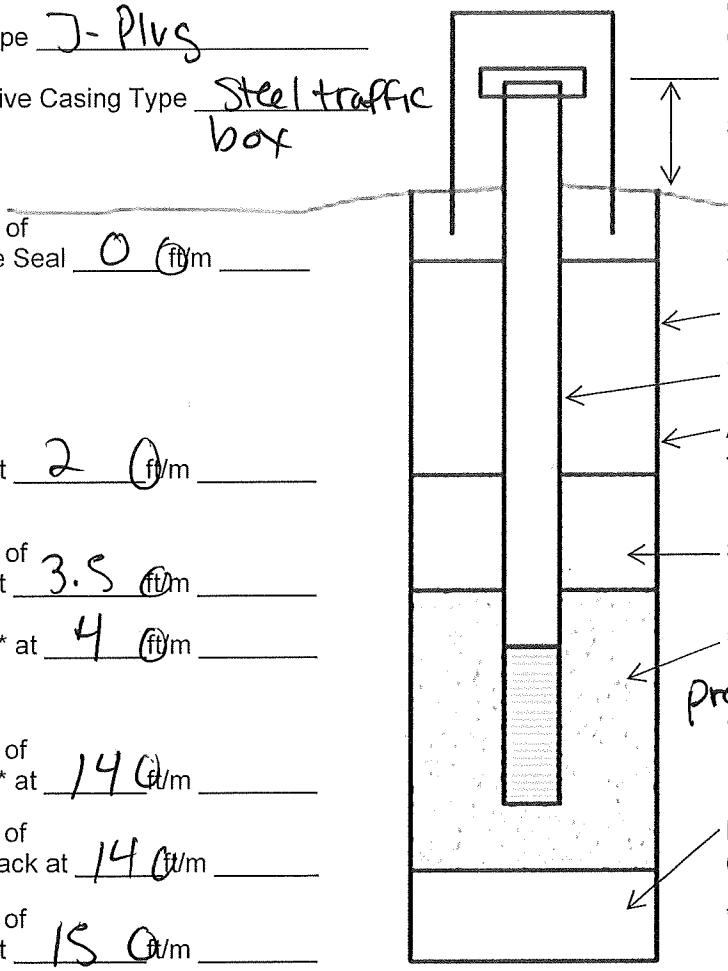
* Note: All dimensions are below ground surface (bgs)

Screen Type: ☒ continuous slot ☐ wire wrapped ☐ louvre ☐ other: _____
Screen Material: ☐ stainless steel ☒ pvc ☐ other: _____
Screen Length: 10 (ft/m) Screen Diameter: ~~2~~ 3/4 (in/cm) Screen Slot Size: .010-in
Riser Pipe Material: PVC Riser Pipe Diameter: ~~3/4~~ 2" (in/cm)
Surface Casing (Y/N) flush mount Material _____ Depth _____ ft/m
Diameter _____ in/cm Sealant _____
Development: Method: _____ Duration: _____
Description of Purged Water: _____

Well Instrumentation Log
(Form SP-15)

Project Name: 1409 Puyallup St.
Project Number: 11202405
Client: Martin Brower
Location: Sumner, WA

Well Designation: MW-1A, MW-3A
Date Completed: 9/25/19
Drilling Method: Direct Push
GHD Supervisor: Aubrey Naylor



Cap Type: J-Plug
Protective Casing Type: Steel traffic box

Measure bottom of well (after completion) _____ ft/m (below top of riser pipe)

Stick up = _____ ft/m

Bottom of Surface Seal: 0 (ft)/m

Surface Seal Type: _____

Borehole Diameter: 2 (in)/cm

Riser Pipe

Annulus Backfill Type: Concrete

Top of Seal* at: 2 (ft)/m

Seal Type: hydrated bentonite

Bottom of Seal* at: 3.5 (ft)/m

Top of Screen* at: 4 (ft)/m

Pack Type: - sand, size 10/2 (#3)
- gravel
- natural
Pre-pack well

Bottom of Screen* at: 14 (ft)/m

Bottom of Filter Pack at: 14 (ft)/m

Borehole Backfill Material (if not filter pack) _____

Bottom of Hole* at: 15 (ft)/m

* Note: All dimensions are below ground surface (bgs)

Screen Type: ☒ continuous slot ☐ wire wrapped ☐ louvre ☐ other: _____

Screen Material: ☐ stainless steel ☒ pvc ☐ other: _____

Screen Length: 10 (ft)/m Screen Diameter: 3/4 (in)/cm Screen Slot Size: .010 in

Riser Pipe Material: PVC Riser Pipe Diameter: 2" (in)/cm

Surface Casing (Y/N) Flush Mount Material _____ Depth _____ ft/m

Diameter _____ in/cm Sealant _____

Development: Method: _____ Duration: _____

Description of Purged Water: _____

Stratigraphy Log (Overburden)
(Form SP-14)
Page 1 of 1

Project name: 1409 Puyallup St.
Project number: 11202705
Client: Martin Brower
Location: Sumner WA

Drilling contractor: Holt
Driller: Louie
Surface elevation:
Weather (A.M.): 62°, rain
(P.M.):

Hole designation: B-5
Date/Time started: 9/26/19 0745
Date/Time completed: 9/26/19 1015
Drilling method: Direct Push
GHD supervisor: M. Naylor

Stratigraphic Intervals (Depths in ft/m BGS) From	At	To	Sample Description: Order of descriptors: Soil type symbol(s) - primary component(s), (nature of deposit), secondary components, relative density/consistency, grain size/plasticity, gradation/structure, colour, moisture content, Note: Plasticity determination requires the addition of moisture if the sample is too dry to roll (indicate if moisture was added or not).	Sample Number	Sampling Method	Penetration Record Split Spoon Blows (Record N-Values & Recoveries) 6"	6"	6"	6"	N	R	Sample Interval	PID/FID (ppm)	Chemical Analysis	Grain Size/ Other Analysis
0		6"	concrete												
6"		2.0	medium grey, fine to medium sand (SM) w/few gravels, moist, no odor			0-5 ft bgs hand auger						1	0.0		
~~2.0~~		~~3~~										2	0.0		
2.0		3.0	medium grey silt, moist, no odor (ML)									3	0.0		
3.0		7.0	medium grey silty clay, firm, (CL) moist, no odor @ 4.5' dark brown organic material			5			5-10= 60%			4	0.0		
						S-11202705-92619-B-5-6.5@850							0.0		
												6	0.0		
7.0		7.5	dark brown, silt w/ organic material moist, no odor, firm (ML)			Direct push						8	0.0		
												9	0.0		
7.5		10	medium grey, fine sand, wet (SP) no odor									11	0.0		
10		14	Silty clay, grading from medium grey to greyish blue, moist (CL) no odor, soft to firm						10-15= 100%			12	0.0		
												13	0.0		
												14	0.0		
14		15	medium grey fine sand w/ trace fine gravels (SM) wet, no odor			15						15	0.0		

Notes and Comments

Depth of borehole caving _____ Depth of first groundwater encounter 7.0 Topsoil thickness _____
Water level in open borehole on completion _____ After _____ Hours _____
Notes:

Both @ 15 ft bgs

Sample: GW-11202705-92619-AN-B-5@1015

Stratigraphy Log (Overburden)
(Form SP-14)
Page 1 of 1

Project name: 1409 Puyallup St, Sumner WA
Project number: 11202705
Client: Martin Brower
Location: Sumner WA

Drilling contractor: Holt
Driller: Levie
Surface elevation:
Weather (A.M.): rainy 62°
(P.M.):

Hole designation: B-6
Date/Time started: 9/26/19 0745
Date/Time completed: 9/26/19 0915
Drilling method: Direct Push
GHD supervisor: A. Naylor

Stratigraphic Intervals (Depths in ft/m BGS) From	At	To	Sample Description: Order of descriptors: Soil type symbol(s) - primary component(s), (nature of deposit), secondary components, relative density/consistency, grain size/plasticity, gradation/structure, colour, moisture content, Note: Plasticity determination requires the addition of moisture if the sample is too dry to roll (indicate if moisture was added or not).	Sample Number	Sampling Method	Penetration Record Split Spoon Blows (Record N-Values & Recoveries) 6"	6"	6"	N	R	Sample Interval	PID/FID (ppm)	Chemical Analysis	Grain Size/ Other Analysis
0		3"	asphalt (0-5" hand auger)				0	-5		60%	1	0.2		
3"		6"	gravel (crushed rock)								2	0.7		
6"		2.5	medium brown fine to medium sand w/ gravels, moist								3	0.1		
											4	4.1		
2.5		3.5	no odor fine to medium sand,								5	2.7		
			medium grey, no odor,								6	0.0		
3.5		4.5	~~dark~~ moist medium grey silt, stiff, moist				5	-10		80%	8	0.0		
		7.5	no odor								9	0.0		
4.5		~~7.0~~	silty clay, medium brown,			5-11202705-92619-B-6								
			moist @ 5.5 dark brown							@ 0915	10	0.0		
7.5	~~7.0~~	12.5	organics to @ 8.0 ft bgs, no odor								11	0.0		
			medium grey fine sand wet, no odor								12	0.0		
12		~~14.0~~	silty clay w/ trace fine sand, ~~soft~~ firm				10	-15		100%	14	0.0		
14		14.5	@ 14 ft fine sand lense								15	0.0		
			medium greyish blue silt w/ trace clay, moist, firm no odor											
			14.5 - 15.0 fine sand ~~water~~ medium grey, moist, no odor											

Depth of borehole caving _____ Depth of first groundwater encounter 9.5 Topsoil thickness _____
Water level in open borehole on completion _____ After _____ Hours _____

Notes and Comments
Notes: Boh @ 15 ft bgs

Underground U[illegible]ties Checklist

QSF-019)

Pre-Drilling/Excavation Checklist and Utility Clearance Log

Project number:	11202705	**Project name:**	Martin Brower 1409 Puyallup St.
Date:	9/18/19	**Project location:**	1409 Puyallup St, Sumner WA
Public utility locator:	Washington One Call	**Public utility locator phone number:**	811
Date of public utility locator request:	9/13/19	**Public locator call reference number:**	19403900
Private utility locator (If applicable):	ULS- Geomarkout	**Private utility locator phone number:**	Mike Benedict 206-384-2857

Utilities (indicate that location/utility presence was checked)

Borehole/ Excavation location	Date (mm/dd/yyyy)	Telephone	Water	Storm sewer	Sanitary sewer	Process sewer	Gas	Electrical	Cable	Overhead utilities	Other	Comments/Warnings
B-5	9/10/19	X	X	X	X	X	X	X	X	none		
B-6	↓	X	X	X	X	X	X	X	X	↓		
MW-1A		X	X	X	X	X	X	X	X			
MW-2A		X	X	X	X	X	X	X	X			
MW-3A		X	X	X	X	X	X	X	X			
MW-4A	↓	X	X	X	X	X	X	X	X	↓		
Utility owner												

Instructions: This checklist is to be completed by GHD personnel prior to initiation of field activities as a safety measure, to ensure that all underground utility lines, other underground structures, and above-ground power lines are clearly marked in the area selected for boring or excavation.

Notes: _____

Client: Martin Brower **Client representative:** John Gelmin **Phone number:** 253-321-5215

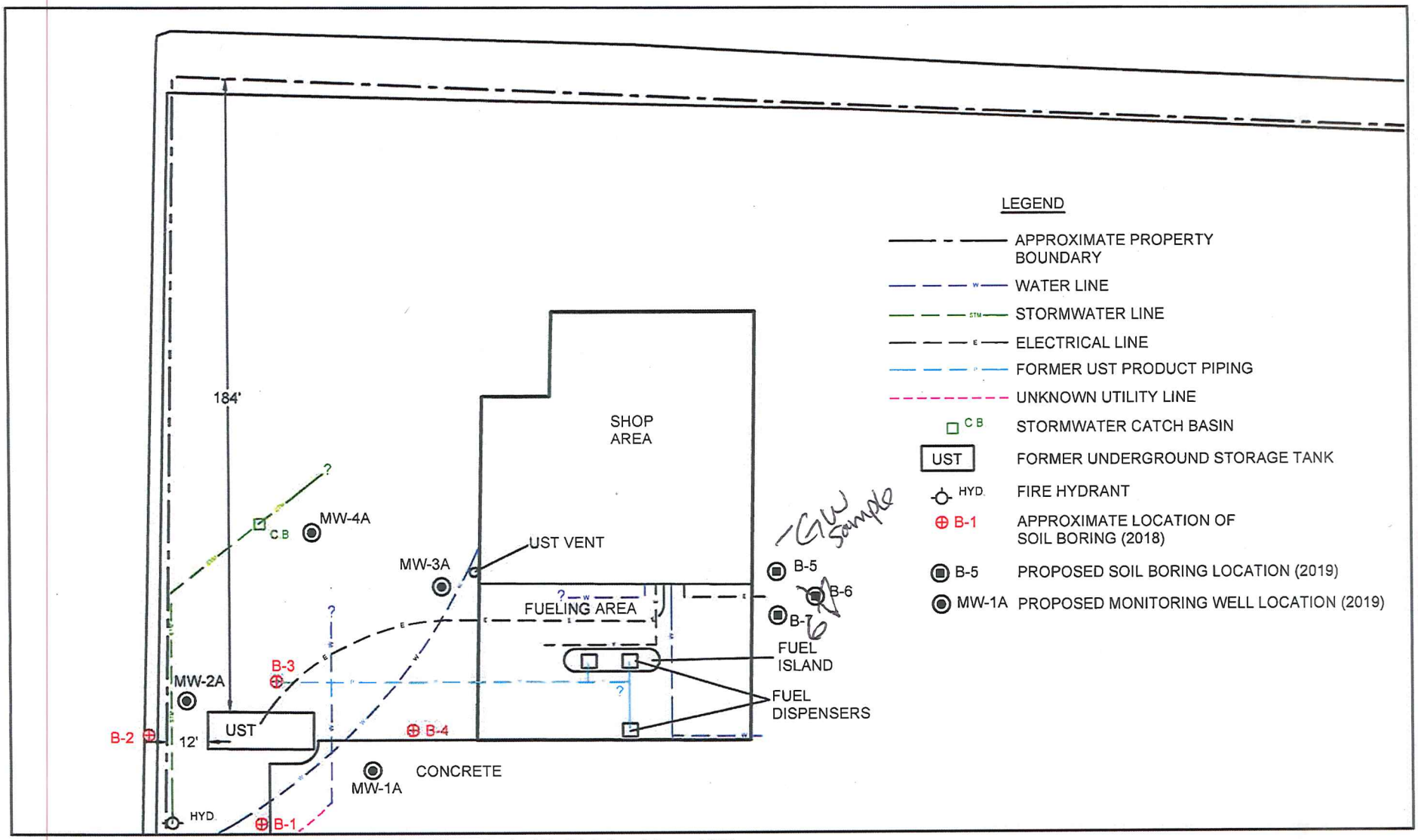
Client or property owner acknowledgement of utility clearance: _____ (Client, property owner, or authorized agent signature)

Subcontractor acknowledgement of utility clearance: _____ (Subcontractor or subcontractor representative signature)

GHD field representative name: Abbey Naylor **Signature:** _____

GHD project manager's review/confirmation of locate completion: _____

In the event that client or property owner acknowledgement cannot be obtained, all boreholes shall be hydro vacuumed and the costs passed on to the client. Attach any clearance documentation from utility owner/operator to this document.



Source: Microsoft Product Screen Shot(s) Reprinted with permission from Microsoft Corporation, Acquisition Date [unknown], Accessed: 2018

0 20 40ft

Coordinate System:
STATE PLANE
WA-NAD83

MARTIN BROWER
1409 PUYALLUP STREET
SUMNER, WASHINGTON

11200357-00

Jul 31, 2019

SITE MAP WITH PROPOSED BORING AND WELL LOCATIONS

FIGURE 2

CAD File: I:\drawings\11200000s\11200357\11200357-CORR\11200357-00(GREI001)\11200357-00(GREI001)GN\11200357-00(GREI001)GN-DE002.dwg

Appendix C
Laboratory Analytical Data

eurofins | Environment Testing TestAmerica

ANALYTICAL REPORT

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

Laboratory Job ID: 580-89737-1
Laboratory Sample Delivery Group: 11202705-03
Client Project/Site: Martin Brower Transportation Facility

For:
GHD Services Inc.
26850 Haggerty Rd.
Farmington Hills, Michigan 48331

Attn: Brian Richardson

Roxanne Cisneros

Authorized for release by:
10/23/2019 3:47:33 PM

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Case Narrative

Client: GHD Services Inc.
Project/Site: Martin Brower Transportation Facility

Job ID: 580-89737-1
SDG: 11202705-03

Job ID: 580-89737-1

Laboratory: Eurofins TestAmerica, Seattle

Narrative

Job Narrative
580-89737-1

Comments
No additional comments.

Receipt
The samples were received on 10/3/2019 11:55 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 6.0º C.

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

GC/MS Semi VOA
Method 8270D: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for batch preparation batch 580-313789 and 580-313789 and analytical batch 580-314169 recovered outside control limits for the following analytes: Indeno[1,2,3-cd]pyrene and Dibenz(a,h)anthracene.

Method 8270D: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-3A (580-89737-3). Elevated reporting limits (RLs) are provided.

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

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

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

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

Client: GHD Services Inc.
Project/Site: Martin Brower Transportation Facility

Job ID: 580-89737-1
SDG: 11202705-03

Qualifiers

GC/MS VOA

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

GC/MS Semi VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
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 (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample ID: MW-1A

Date Collected: 10/03/19 10:12
Date Received: 10/03/19 11:55

Lab Sample ID: 580-89737-1

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.00		ug/L			10/09/19 23:16	1
Bromobenzene	ND		2.00		ug/L			10/09/19 23:16	1
Bromoform	ND		3.00		ug/L			10/09/19 23:16	1
Bromomethane	ND		6.00		ug/L			10/09/19 23:16	1
Carbon tetrachloride	ND		3.00		ug/L			10/09/19 23:16	1
Chlorobenzene	ND		2.00		ug/L			10/09/19 23:16	1
Chlorobromomethane	ND		2.00		ug/L			10/09/19 23:16	1
Chlorodibromomethane	ND		2.00		ug/L			10/09/19 23:16	1
Chloroethane	ND		5.00		ug/L			10/09/19 23:16	1
Chloroform	ND		5.00		ug/L			10/09/19 23:16	1
Chloromethane	ND		20.0		ug/L			10/09/19 23:16	1
2-Chlorotoluene	ND		3.00		ug/L			10/09/19 23:16	1
4-Chlorotoluene	ND		2.00		ug/L			10/09/19 23:16	1
cis-1,2-Dichloroethene	ND		3.00		ug/L			10/09/19 23:16	1
cis-1,3-Dichloropropene	ND		1.00		ug/L			10/09/19 23:16	1
1,2-Dibromo-3-Chloropropane	ND		10.0		ug/L			10/09/19 23:16	1
Dibromomethane	ND		2.00		ug/L			10/09/19 23:16	1
1,2-Dichlorobenzene	ND		2.00		ug/L			10/09/19 23:16	1
1,3-Dichlorobenzene	ND		2.00		ug/L			10/09/19 23:16	1
1,4-Dichlorobenzene	ND		4.00		ug/L			10/09/19 23:16	1
Dichlorobromomethane	ND		2.00		ug/L			10/09/19 23:16	1
Dichlorodifluoromethane	ND		10.0		ug/L			10/09/19 23:16	1
1,1-Dichloroethane	ND		2.00		ug/L			10/09/19 23:16	1
1,2-Dichloroethane	ND		2.00		ug/L			10/09/19 23:16	1
1,1-Dichloroethene	ND		4.00		ug/L			10/09/19 23:16	1
1,2-Dichloropropane	ND		1.00		ug/L			10/09/19 23:16	1
1,3-Dichloropropane	ND		2.00		ug/L			10/09/19 23:16	1
2,2-Dichloropropane	ND		3.00		ug/L			10/09/19 23:16	1
1,1-Dichloropropene	ND		3.00		ug/L			10/09/19 23:16	1
Ethylbenzene	ND		3.00		ug/L			10/09/19 23:16	1
Ethylene Dibromide	ND		2.00		ug/L			10/09/19 23:16	1
Hexachlorobutadiene	ND		6.00		ug/L			10/09/19 23:16	1
Isopropylbenzene	ND		2.00		ug/L			10/09/19 23:16	1
4-Isopropyltoluene	ND		3.00		ug/L			10/09/19 23:16	1
Methylene Chloride	ND		5.00		ug/L			10/09/19 23:16	1
Methyl tert-butyl ether	ND		2.00		ug/L			10/09/19 23:16	1
m-Xylene & p-Xylene	ND		3.00		ug/L			10/09/19 23:16	1
Naphthalene	ND		4.00		ug/L			10/09/19 23:16	1
n-Butylbenzene	ND		3.00		ug/L			10/09/19 23:16	1
N-Propylbenzene	ND		3.00		ug/L			10/09/19 23:16	1
o-Xylene	ND		2.00		ug/L			10/09/19 23:16	1
sec-Butylbenzene	ND		3.00		ug/L			10/09/19 23:16	1
Styrene	ND		5.00		ug/L			10/09/19 23:16	1
tert-Butylbenzene	ND		3.00		ug/L			10/09/19 23:16	1
1,1,1,2-Tetrachloroethane	ND		2.00		ug/L			10/09/19 23:16	1
1,1,2,2-Tetrachloroethane	ND		3.00		ug/L			10/09/19 23:16	1
Tetrachloroethene	ND		3.00		ug/L			10/09/19 23:16	1
Toluene	ND		2.00		ug/L			10/09/19 23:16	1
trans-1,2-Dichloroethene	ND		3.00		ug/L			10/09/19 23:16	1

Client Sample ID: MW-1A

Date Collected: 10/03/19 10:12
Date Received: 10/03/19 11:55

Lab Sample ID: 580-89737-1

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		1.00		ug/L			10/09/19 23:16	1
1,2,3-Trichlorobenzene	ND		5.00		ug/L			10/09/19 23:16	1
1,2,4-Trichlorobenzene	ND		2.00		ug/L			10/09/19 23:16	1
1,1,1-Trichloroethane	ND		3.00		ug/L			10/09/19 23:16	1
1,1,2-Trichloroethane	ND		1.00		ug/L			10/09/19 23:16	1
Trichloroethene	ND		3.00		ug/L			10/09/19 23:16	1
Trichlorofluoromethane	ND		3.00		ug/L			10/09/19 23:16	1
1,2,3-Trichloropropane	ND		2.00		ug/L			10/09/19 23:16	1
1,2,4-Trimethylbenzene	ND		3.00		ug/L			10/09/19 23:16	1
1,3,5-Trimethylbenzene	ND		3.00		ug/L			10/09/19 23:16	1
Vinyl chloride	ND		1.00		ug/L			10/09/19 23:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*80 - 120*		*10/09/19 23:16*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 120*		*10/09/19 23:16*	*1*
1,2-Dichloroethane-d4 (Surr)	*105*		*80 - 126*		*10/09/19 23:16*	*1*
Toluene-d8 (Surr)	*105*		*80 - 120*		*10/09/19 23:16*	*1*
Trifluorotoluene (Surr)	*96*		*80 - 120*		*10/09/19 23:16*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.397		ug/L		10/09/19 14:36	10/14/19 16:56	1
Acenaphthylene	ND		0.991		ug/L		10/09/19 14:36	10/14/19 16:56	1
Anthracene	ND		14.9		ug/L		10/09/19 14:36	10/14/19 16:56	1
Benzo[a]anthracene	ND		0.991		ug/L		10/09/19 14:36	10/14/19 16:56	1
Benzo[a]pyrene	ND		0.991		ug/L		10/09/19 14:36	10/14/19 16:56	1
Benzo[b]fluoranthene	ND		0.991		ug/L		10/09/19 14:36	10/14/19 16:56	1
Benzo[g,h,i]perylene	ND		0.991		ug/L		10/09/19 14:36	10/14/19 16:56	1
Benzo[k]fluoranthene	ND		0.991		ug/L		10/09/19 14:36	10/14/19 16:56	1
Chrysene	ND		0.595		ug/L		10/09/19 14:36	10/14/19 16:56	1
Dibenz(a,h)anthracene	ND	*	0.595		ug/L		10/09/19 14:36	10/14/19 16:56	1
Fluoranthene	ND		2.97		ug/L		10/09/19 14:36	10/14/19 16:56	1
Fluorene	ND		1.98		ug/L		10/09/19 14:36	10/14/19 16:56	1
Indeno[1,2,3-cd]pyrene	ND	*	0.991		ug/L		10/09/19 14:36	10/14/19 16:56	1
1-Methylnaphthalene	ND		0.991		ug/L		10/09/19 14:36	10/14/19 16:56	1
2-Methylnaphthalene	ND		0.397		ug/L		10/09/19 14:36	10/14/19 16:56	1
Naphthalene	ND		0.397		ug/L		10/09/19 14:36	10/14/19 16:56	1
Phenanthrene	ND		0.991		ug/L		10/09/19 14:36	10/14/19 16:56	1
Pyrene	ND		1.98		ug/L		10/09/19 14:36	10/14/19 16:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14 (Surr)	*78*		*61 - 126*	*10/09/19 14:36*	*10/14/19 16:56*	*1*

Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH with Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	**0.220**		0.113		mg/L		10/09/19 08:47	10/11/19 13:21	1
Motor Oil (C24-C44)	**0.360**		0.360		mg/L		10/09/19 08:47	10/11/19 13:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*84*		*50 - 150*	*10/09/19 08:47*	*10/11/19 13:21*	*1*

Client Sample ID: MW-2A

Date Collected: 10/03/19 09:00
Date Received: 10/03/19 11:55

Lab Sample ID: 580-89737-2

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.00		ug/L			10/09/19 23:41	1
Bromobenzene	ND		2.00		ug/L			10/09/19 23:41	1
Bromoform	ND		3.00		ug/L			10/09/19 23:41	1
Bromomethane	ND		6.00		ug/L			10/09/19 23:41	1
Carbon tetrachloride	ND		3.00		ug/L			10/09/19 23:41	1
Chlorobenzene	ND		2.00		ug/L			10/09/19 23:41	1
Chlorobromomethane	ND		2.00		ug/L			10/09/19 23:41	1
Chlorodibromomethane	ND		2.00		ug/L			10/09/19 23:41	1
Chloroethane	ND		5.00		ug/L			10/09/19 23:41	1
Chloroform	ND		5.00		ug/L			10/09/19 23:41	1
Chloromethane	ND		20.0		ug/L			10/09/19 23:41	1
2-Chlorotoluene	ND		3.00		ug/L			10/09/19 23:41	1
4-Chlorotoluene	ND		2.00		ug/L			10/09/19 23:41	1
cis-1,2-Dichloroethene	ND		3.00		ug/L			10/09/19 23:41	1
cis-1,3-Dichloropropene	ND		1.00		ug/L			10/09/19 23:41	1
1,2-Dibromo-3-Chloropropane	ND		10.0		ug/L			10/09/19 23:41	1
Dibromomethane	ND		2.00		ug/L			10/09/19 23:41	1
1,2-Dichlorobenzene	ND		2.00		ug/L			10/09/19 23:41	1
1,3-Dichlorobenzene	ND		2.00		ug/L			10/09/19 23:41	1
1,4-Dichlorobenzene	ND		4.00		ug/L			10/09/19 23:41	1
Dichlorobromomethane	ND		2.00		ug/L			10/09/19 23:41	1
Dichlorodifluoromethane	ND		10.0		ug/L			10/09/19 23:41	1
1,1-Dichloroethane	ND		2.00		ug/L			10/09/19 23:41	1
1,2-Dichloroethane	ND		2.00		ug/L			10/09/19 23:41	1
1,1-Dichloroethene	ND		4.00		ug/L			10/09/19 23:41	1
1,2-Dichloropropane	ND		1.00		ug/L			10/09/19 23:41	1
1,3-Dichloropropane	ND		2.00		ug/L			10/09/19 23:41	1
2,2-Dichloropropane	ND		3.00		ug/L			10/09/19 23:41	1
1,1-Dichloropropene	ND		3.00		ug/L			10/09/19 23:41	1
Ethylbenzene	ND		3.00		ug/L			10/09/19 23:41	1
Ethylene Dibromide	ND		2.00		ug/L			10/09/19 23:41	1
Hexachlorobutadiene	ND		6.00		ug/L			10/09/19 23:41	1
Isopropylbenzene	ND		2.00		ug/L			10/09/19 23:41	1
4-Isopropyltoluene	ND		3.00		ug/L			10/09/19 23:41	1
Methylene Chloride	ND		5.00		ug/L			10/09/19 23:41	1
Methyl tert-butyl ether	ND		2.00		ug/L			10/09/19 23:41	1
m-Xylene & p-Xylene	ND		3.00		ug/L			10/09/19 23:41	1
Naphthalene	ND		4.00		ug/L			10/09/19 23:41	1
n-Butylbenzene	ND		3.00		ug/L			10/09/19 23:41	1
N-Propylbenzene	ND		3.00		ug/L			10/09/19 23:41	1
o-Xylene	ND		2.00		ug/L			10/09/19 23:41	1
sec-Butylbenzene	ND		3.00		ug/L			10/09/19 23:41	1
Styrene	ND		5.00		ug/L			10/09/19 23:41	1
tert-Butylbenzene	ND		3.00		ug/L			10/09/19 23:41	1
1,1,1,2-Tetrachloroethane	ND		2.00		ug/L			10/09/19 23:41	1
1,1,2,2-Tetrachloroethane	ND		3.00		ug/L			10/09/19 23:41	1
Tetrachloroethene	ND		3.00		ug/L			10/09/19 23:41	1
Toluene	ND		2.00		ug/L			10/09/19 23:41	1
trans-1,2-Dichloroethene	ND		3.00		ug/L			10/09/19 23:41	1

Client Sample ID: MW-2A

Date Collected: 10/03/19 09:00
Date Received: 10/03/19 11:55

Lab Sample ID: 580-89737-2

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		1.00		ug/L			10/09/19 23:41	1
1,2,3-Trichlorobenzene	ND		5.00		ug/L			10/09/19 23:41	1
1,2,4-Trichlorobenzene	ND		2.00		ug/L			10/09/19 23:41	1
1,1,1-Trichloroethane	ND		3.00		ug/L			10/09/19 23:41	1
1,1,2-Trichloroethane	ND		1.00		ug/L			10/09/19 23:41	1
Trichloroethene	ND		3.00		ug/L			10/09/19 23:41	1
Trichlorofluoromethane	ND		3.00		ug/L			10/09/19 23:41	1
1,2,3-Trichloropropane	ND		2.00		ug/L			10/09/19 23:41	1
1,2,4-Trimethylbenzene	ND		3.00		ug/L			10/09/19 23:41	1
1,3,5-Trimethylbenzene	ND		3.00		ug/L			10/09/19 23:41	1
Vinyl chloride	ND		1.00		ug/L			10/09/19 23:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*		*10/09/19 23:41*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 120*		*10/09/19 23:41*	*1*
1,2-Dichloroethane-d4 (Surr)	*106*		*80 - 126*		*10/09/19 23:41*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*10/09/19 23:41*	*1*
Trifluorotoluene (Surr)	*93*		*80 - 120*		*10/09/19 23:41*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.398		ug/L		10/09/19 14:36	10/14/19 17:19	1
Acenaphthylene	ND		0.996		ug/L		10/09/19 14:36	10/14/19 17:19	1
Anthracene	ND		14.9		ug/L		10/09/19 14:36	10/14/19 17:19	1
Benzo[a]anthracene	ND		0.996		ug/L		10/09/19 14:36	10/14/19 17:19	1
Benzo[a]pyrene	ND		0.996		ug/L		10/09/19 14:36	10/14/19 17:19	1
Benzo[b]fluoranthene	ND		0.996		ug/L		10/09/19 14:36	10/14/19 17:19	1
Benzo[g,h,i]perylene	ND		0.996		ug/L		10/09/19 14:36	10/14/19 17:19	1
Benzo[k]fluoranthene	ND		0.996		ug/L		10/09/19 14:36	10/14/19 17:19	1
Chrysene	ND		0.598		ug/L		10/09/19 14:36	10/14/19 17:19	1
Dibenz(a,h)anthracene	ND	*	0.598		ug/L		10/09/19 14:36	10/14/19 17:19	1
Fluoranthene	ND		2.99		ug/L		10/09/19 14:36	10/14/19 17:19	1
Fluorene	ND		1.99		ug/L		10/09/19 14:36	10/14/19 17:19	1
Indeno[1,2,3-cd]pyrene	ND	*	0.996		ug/L		10/09/19 14:36	10/14/19 17:19	1
1-Methylnaphthalene	ND		0.996		ug/L		10/09/19 14:36	10/14/19 17:19	1
2-Methylnaphthalene	ND		0.398		ug/L		10/09/19 14:36	10/14/19 17:19	1
Naphthalene	ND		0.398		ug/L		10/09/19 14:36	10/14/19 17:19	1
Phenanthrene	ND		0.996		ug/L		10/09/19 14:36	10/14/19 17:19	1
Pyrene	ND		1.99		ug/L		10/09/19 14:36	10/14/19 17:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14 (Surr)	*73*		*61 - 126*	*10/09/19 14:36*	*10/14/19 17:19*	*1*

Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH with Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	**0.454**		0.114		mg/L		10/09/19 08:47	10/11/19 13:41	1
Motor Oil (C24-C44)	**0.425**		0.364		mg/L		10/09/19 08:47	10/11/19 13:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*88*		*50 - 150*	*10/09/19 08:47*	*10/11/19 13:41*	*1*

Client: GHD Services Inc.
Project/Site: Martin Brower Transportation Facility

Job ID: 580-89737-1
SDG: 11202705-03

Client Sample ID: MW-3A
Date Collected: 10/03/19 09:37
Date Received: 10/03/19 11:55

Lab Sample ID: 580-89737-3
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.00		ug/L			10/10/19 00:07	1
Bromobenzene	ND		2.00		ug/L			10/10/19 00:07	1
Bromoform	ND		3.00		ug/L			10/10/19 00:07	1
Bromomethane	ND		6.00		ug/L			10/10/19 00:07	1
Carbon tetrachloride	ND		3.00		ug/L			10/10/19 00:07	1
Chlorobenzene	ND		2.00		ug/L			10/10/19 00:07	1
Chlorobromomethane	ND		2.00		ug/L			10/10/19 00:07	1
Chlorodibromomethane	ND		2.00		ug/L			10/10/19 00:07	1
Chloroethane	ND		5.00		ug/L			10/10/19 00:07	1
Chloroform	ND		5.00		ug/L			10/10/19 00:07	1
Chloromethane	ND		20.0		ug/L			10/10/19 00:07	1
2-Chlorotoluene	ND		3.00		ug/L			10/10/19 00:07	1
4-Chlorotoluene	ND		2.00		ug/L			10/10/19 00:07	1
cis-1,2-Dichloroethene	ND		3.00		ug/L			10/10/19 00:07	1
cis-1,3-Dichloropropene	ND		1.00		ug/L			10/10/19 00:07	1
1,2-Dibromo-3-Chloropropane	ND		10.0		ug/L			10/10/19 00:07	1
Dibromomethane	ND		2.00		ug/L			10/10/19 00:07	1
1,2-Dichlorobenzene	ND		2.00		ug/L			10/10/19 00:07	1
1,3-Dichlorobenzene	ND		2.00		ug/L			10/10/19 00:07	1
1,4-Dichlorobenzene	ND		4.00		ug/L			10/10/19 00:07	1
Dichlorobromomethane	ND		2.00		ug/L			10/10/19 00:07	1
Dichlorodifluoromethane	ND		10.0		ug/L			10/10/19 00:07	1
1,1-Dichloroethane	ND		2.00		ug/L			10/10/19 00:07	1
1,2-Dichloroethane	ND		2.00		ug/L			10/10/19 00:07	1
1,1-Dichloroethene	ND		4.00		ug/L			10/10/19 00:07	1
1,2-Dichloropropane	ND		1.00		ug/L			10/10/19 00:07	1
1,3-Dichloropropane	ND		2.00		ug/L			10/10/19 00:07	1
2,2-Dichloropropane	ND		3.00		ug/L			10/10/19 00:07	1
1,1-Dichloropropene	ND		3.00		ug/L			10/10/19 00:07	1
Ethylbenzene	ND		3.00		ug/L			10/10/19 00:07	1
Ethylene Dibromide	ND		2.00		ug/L			10/10/19 00:07	1
Hexachlorobutadiene	ND		6.00		ug/L			10/10/19 00:07	1
Isopropylbenzene	**2.69**		2.00		ug/L			10/10/19 00:07	1
4-Isopropyltoluene	ND		3.00		ug/L			10/10/19 00:07	1
Methylene Chloride	ND		5.00		ug/L			10/10/19 00:07	1
Methyl tert-butyl ether	ND		2.00		ug/L			10/10/19 00:07	1
m-Xylene & p-Xylene	ND		3.00		ug/L			10/10/19 00:07	1
Naphthalene	ND		4.00		ug/L			10/10/19 00:07	1
n-Butylbenzene	ND		3.00		ug/L			10/10/19 00:07	1
N-Propylbenzene	**4.38**		3.00		ug/L			10/10/19 00:07	1
o-Xylene	ND		2.00		ug/L			10/10/19 00:07	1
sec-Butylbenzene	ND		3.00		ug/L			10/10/19 00:07	1
Styrene	ND		5.00		ug/L			10/10/19 00:07	1
tert-Butylbenzene	ND		3.00		ug/L			10/10/19 00:07	1
1,1,1,2-Tetrachloroethane	ND		2.00		ug/L			10/10/19 00:07	1
1,1,2,2-Tetrachloroethane	ND		3.00		ug/L			10/10/19 00:07	1
Tetrachloroethene	ND		3.00		ug/L			10/10/19 00:07	1
Toluene	ND		2.00		ug/L			10/10/19 00:07	1
trans-1,2-Dichloroethene	ND		3.00		ug/L			10/10/19 00:07	1

Client Sample ID: MW-3A

Date Collected: 10/03/19 09:37
Date Received: 10/03/19 11:55

Lab Sample ID: 580-89737-3

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		1.00		ug/L			10/10/19 00:07	1
1,2,3-Trichlorobenzene	ND		5.00		ug/L			10/10/19 00:07	1
1,2,4-Trichlorobenzene	ND		2.00		ug/L			10/10/19 00:07	1
1,1,1-Trichloroethane	ND		3.00		ug/L			10/10/19 00:07	1
1,1,2-Trichloroethane	ND		1.00		ug/L			10/10/19 00:07	1
Trichloroethene	ND		3.00		ug/L			10/10/19 00:07	1
Trichlorofluoromethane	ND		3.00		ug/L			10/10/19 00:07	1
1,2,3-Trichloropropane	ND		2.00		ug/L			10/10/19 00:07	1
1,2,4-Trimethylbenzene	ND		3.00		ug/L			10/10/19 00:07	1
1,3,5-Trimethylbenzene	ND		3.00		ug/L			10/10/19 00:07	1
Vinyl chloride	ND		1.00		ug/L			10/10/19 00:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*		*10/10/19 00:07*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 120*		*10/10/19 00:07*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*80 - 126*		*10/10/19 00:07*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*10/10/19 00:07*	*1*
Trifluorotoluene (Surr)	*96*		*80 - 120*		*10/10/19 00:07*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.379		ug/L		10/09/19 14:36	10/14/19 17:43	1
Acenaphthylene	ND		0.948		ug/L		10/09/19 14:36	10/14/19 17:43	1
Anthracene	ND		14.2		ug/L		10/09/19 14:36	10/14/19 17:43	1
Benzo[a]anthracene	ND		0.948		ug/L		10/09/19 14:36	10/14/19 17:43	1
Benzo[a]pyrene	ND		0.948		ug/L		10/09/19 14:36	10/14/19 17:43	1
Benzo[b]fluoranthene	ND		0.948		ug/L		10/09/19 14:36	10/14/19 17:43	1
Benzo[g,h,i]perylene	ND		0.948		ug/L		10/09/19 14:36	10/14/19 17:43	1
Benzo[k]fluoranthene	ND		0.948		ug/L		10/09/19 14:36	10/14/19 17:43	1
Chrysene	ND		0.569		ug/L		10/09/19 14:36	10/14/19 17:43	1
Dibenz(a,h)anthracene	ND	*	0.569		ug/L		10/09/19 14:36	10/14/19 17:43	1
Fluoranthene	ND		2.84		ug/L		10/09/19 14:36	10/14/19 17:43	1
Fluorene	ND		1.90		ug/L		10/09/19 14:36	10/14/19 17:43	1
Indeno[1,2,3-cd]pyrene	ND	*	0.948		ug/L		10/09/19 14:36	10/14/19 17:43	1
1-Methylnaphthalene	**10.5**		0.948		ug/L		10/09/19 14:36	10/14/19 17:43	1
Naphthalene	ND		0.379		ug/L		10/09/19 14:36	10/14/19 17:43	1
Phenanthrene	ND		0.948		ug/L		10/09/19 14:36	10/14/19 17:43	1
Pyrene	ND		1.90		ug/L		10/09/19 14:36	10/14/19 17:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14 (Surr)	*69*		*61 - 126*	*10/09/19 14:36*	*10/14/19 17:43*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	**12.6**		1.90		ug/L		10/09/19 14:36	10/22/19 23:31	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14 (Surr)	*85*		*61 - 126*	*10/09/19 14:36*	*10/22/19 23:31*	*5*

Client: GHD Services Inc.
Project/Site: Martin Brower Transportation Facility

Job ID: 580-89737-1
SDG: 11202705-03

Client Sample ID: MW-3A
Date Collected: 10/03/19 09:37
Date Received: 10/03/19 11:55

Lab Sample ID: 580-89737-3
Matrix: Water

Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH with Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	1.77		0.117		mg/L		10/09/19 08:47	10/11/19 14:01	1
Motor Oil (C24-C44)	1.39		0.371		mg/L		10/09/19 08:47	10/11/19 14:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*89*		*50 - 150*	*10/09/19 08:47*	*10/11/19 14:01*	*1*

Client Sample ID: MW-4A

Date Collected: 10/03/19 10:50
Date Received: 10/03/19 11:55

Lab Sample ID: 580-89737-4

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.00		ug/L			10/10/19 00:32	1
Bromobenzene	ND		2.00		ug/L			10/10/19 00:32	1
Bromoform	ND		3.00		ug/L			10/10/19 00:32	1
Bromomethane	ND		6.00		ug/L			10/10/19 00:32	1
Carbon tetrachloride	ND		3.00		ug/L			10/10/19 00:32	1
Chlorobenzene	ND		2.00		ug/L			10/10/19 00:32	1
Chlorobromomethane	ND		2.00		ug/L			10/10/19 00:32	1
Chlorodibromomethane	ND		2.00		ug/L			10/10/19 00:32	1
Chloroethane	ND		5.00		ug/L			10/10/19 00:32	1
Chloroform	ND		5.00		ug/L			10/10/19 00:32	1
Chloromethane	ND		20.0		ug/L			10/10/19 00:32	1
2-Chlorotoluene	ND		3.00		ug/L			10/10/19 00:32	1
4-Chlorotoluene	ND		2.00		ug/L			10/10/19 00:32	1
cis-1,2-Dichloroethene	ND		3.00		ug/L			10/10/19 00:32	1
cis-1,3-Dichloropropene	ND		1.00		ug/L			10/10/19 00:32	1
1,2-Dibromo-3-Chloropropane	ND		10.0		ug/L			10/10/19 00:32	1
Dibromomethane	ND		2.00		ug/L			10/10/19 00:32	1
1,2-Dichlorobenzene	ND		2.00		ug/L			10/10/19 00:32	1
1,3-Dichlorobenzene	ND		2.00		ug/L			10/10/19 00:32	1
1,4-Dichlorobenzene	ND		4.00		ug/L			10/10/19 00:32	1
Dichlorobromomethane	ND		2.00		ug/L			10/10/19 00:32	1
Dichlorodifluoromethane	ND		10.0		ug/L			10/10/19 00:32	1
1,1-Dichloroethane	ND		2.00		ug/L			10/10/19 00:32	1
1,2-Dichloroethane	ND		2.00		ug/L			10/10/19 00:32	1
1,1-Dichloroethene	ND		4.00		ug/L			10/10/19 00:32	1
1,2-Dichloropropane	ND		1.00		ug/L			10/10/19 00:32	1
1,3-Dichloropropane	ND		2.00		ug/L			10/10/19 00:32	1
2,2-Dichloropropane	ND		3.00		ug/L			10/10/19 00:32	1
1,1-Dichloropropene	ND		3.00		ug/L			10/10/19 00:32	1
Ethylbenzene	ND		3.00		ug/L			10/10/19 00:32	1
Ethylene Dibromide	ND		2.00		ug/L			10/10/19 00:32	1
Hexachlorobutadiene	ND		6.00		ug/L			10/10/19 00:32	1
Isopropylbenzene	ND		2.00		ug/L			10/10/19 00:32	1
4-Isopropyltoluene	ND		3.00		ug/L			10/10/19 00:32	1
Methylene Chloride	ND		5.00		ug/L			10/10/19 00:32	1
Methyl tert-butyl ether	ND		2.00		ug/L			10/10/19 00:32	1
m-Xylene & p-Xylene	ND		3.00		ug/L			10/10/19 00:32	1
Naphthalene	ND		4.00		ug/L			10/10/19 00:32	1
n-Butylbenzene	ND		3.00		ug/L			10/10/19 00:32	1
N-Propylbenzene	ND		3.00		ug/L			10/10/19 00:32	1
o-Xylene	ND		2.00		ug/L			10/10/19 00:32	1
sec-Butylbenzene	ND		3.00		ug/L			10/10/19 00:32	1
Styrene	ND		5.00		ug/L			10/10/19 00:32	1
tert-Butylbenzene	ND		3.00		ug/L			10/10/19 00:32	1
1,1,1,2-Tetrachloroethane	ND		2.00		ug/L			10/10/19 00:32	1
1,1,2,2-Tetrachloroethane	ND		3.00		ug/L			10/10/19 00:32	1
Tetrachloroethene	ND		3.00		ug/L			10/10/19 00:32	1
Toluene	ND		2.00		ug/L			10/10/19 00:32	1
trans-1,2-Dichloroethene	ND		3.00		ug/L			10/10/19 00:32	1

Client Sample ID: MW-4A

Date Collected: 10/03/19 10:50
Date Received: 10/03/19 11:55

Lab Sample ID: 580-89737-4

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		1.00		ug/L			10/10/19 00:32	1
1,2,3-Trichlorobenzene	ND		5.00		ug/L			10/10/19 00:32	1
1,2,4-Trichlorobenzene	ND		2.00		ug/L			10/10/19 00:32	1
1,1,1-Trichloroethane	ND		3.00		ug/L			10/10/19 00:32	1
1,1,2-Trichloroethane	ND		1.00		ug/L			10/10/19 00:32	1
Trichloroethene	ND		3.00		ug/L			10/10/19 00:32	1
Trichlorofluoromethane	ND		3.00		ug/L			10/10/19 00:32	1
1,2,3-Trichloropropane	ND		2.00		ug/L			10/10/19 00:32	1
1,2,4-Trimethylbenzene	ND		3.00		ug/L			10/10/19 00:32	1
1,3,5-Trimethylbenzene	ND		3.00		ug/L			10/10/19 00:32	1
Vinyl chloride	ND		1.00		ug/L			10/10/19 00:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*80 - 120*		*10/10/19 00:32*	*1*
Dibromofluoromethane (Surr)	*96*		*80 - 120*		*10/10/19 00:32*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*80 - 126*		*10/10/19 00:32*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*		*10/10/19 00:32*	*1*
Trifluorotoluene (Surr)	*97*		*80 - 120*		*10/10/19 00:32*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.405		ug/L		10/09/19 14:36	10/14/19 18:06	1
Acenaphthylene	ND		1.01		ug/L		10/09/19 14:36	10/14/19 18:06	1
Anthracene	ND		15.2		ug/L		10/09/19 14:36	10/14/19 18:06	1
Benzo[a]anthracene	ND		1.01		ug/L		10/09/19 14:36	10/14/19 18:06	1
Benzo[a]pyrene	ND		1.01		ug/L		10/09/19 14:36	10/14/19 18:06	1
Benzo[b]fluoranthene	ND		1.01		ug/L		10/09/19 14:36	10/14/19 18:06	1
Benzo[g,h,i]perylene	ND		1.01		ug/L		10/09/19 14:36	10/14/19 18:06	1
Benzo[k]fluoranthene	ND		1.01		ug/L		10/09/19 14:36	10/14/19 18:06	1
Chrysene	ND		0.608		ug/L		10/09/19 14:36	10/14/19 18:06	1
Dibenz(a,h)anthracene	ND	*	0.608		ug/L		10/09/19 14:36	10/14/19 18:06	1
Fluoranthene	ND		3.04		ug/L		10/09/19 14:36	10/14/19 18:06	1
Fluorene	ND		2.03		ug/L		10/09/19 14:36	10/14/19 18:06	1
Indeno[1,2,3-cd]pyrene	ND	*	1.01		ug/L		10/09/19 14:36	10/14/19 18:06	1
1-Methylnaphthalene	ND		1.01		ug/L		10/09/19 14:36	10/14/19 18:06	1
2-Methylnaphthalene	ND		0.405		ug/L		10/09/19 14:36	10/14/19 18:06	1
Naphthalene	ND		0.405		ug/L		10/09/19 14:36	10/14/19 18:06	1
Phenanthrene	ND		1.01		ug/L		10/09/19 14:36	10/14/19 18:06	1
Pyrene	ND		2.03		ug/L		10/09/19 14:36	10/14/19 18:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14 (Surr)	*71*		*61 - 126*	*10/09/19 14:36*	*10/14/19 18:06*	*1*

Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH with Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	**0.363**		0.113		mg/L		10/09/19 08:47	10/11/19 14:21	1
Motor Oil (C24-C44)	ND		0.358		mg/L		10/09/19 08:47	10/11/19 14:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*91*		*50 - 150*	*10/09/19 08:47*	*10/11/19 14:21*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-313857/7
Matrix: Water
Analysis Batch: 313857

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.00		ug/L			10/09/19 17:49	1
Bromobenzene	ND		2.00		ug/L			10/09/19 17:49	1
Bromoform	ND		3.00		ug/L			10/09/19 17:49	1
Bromomethane	ND		6.00		ug/L			10/09/19 17:49	1
Carbon tetrachloride	ND		3.00		ug/L			10/09/19 17:49	1
Chlorobenzene	ND		2.00		ug/L			10/09/19 17:49	1
Chlorobromomethane	ND		2.00		ug/L			10/09/19 17:49	1
Chlorodibromomethane	ND		2.00		ug/L			10/09/19 17:49	1
Chloroethane	ND		5.00		ug/L			10/09/19 17:49	1
Chloroform	ND		5.00		ug/L			10/09/19 17:49	1
Chloromethane	ND		20.0		ug/L			10/09/19 17:49	1
2-Chlorotoluene	ND		3.00		ug/L			10/09/19 17:49	1
4-Chlorotoluene	ND		2.00		ug/L			10/09/19 17:49	1
cis-1,2-Dichloroethene	ND		3.00		ug/L			10/09/19 17:49	1
cis-1,3-Dichloropropene	ND		1.00		ug/L			10/09/19 17:49	1
1,2-Dibromo-3-Chloropropane	ND		10.0		ug/L			10/09/19 17:49	1
Dibromomethane	ND		2.00		ug/L			10/09/19 17:49	1
1,2-Dichlorobenzene	ND		2.00		ug/L			10/09/19 17:49	1
1,3-Dichlorobenzene	ND		2.00		ug/L			10/09/19 17:49	1
1,4-Dichlorobenzene	ND		4.00		ug/L			10/09/19 17:49	1
Dichlorobromomethane	ND		2.00		ug/L			10/09/19 17:49	1
Dichlorodifluoromethane	ND		10.0		ug/L			10/09/19 17:49	1
1,1-Dichloroethane	ND		2.00		ug/L			10/09/19 17:49	1
1,2-Dichloroethane	ND		2.00		ug/L			10/09/19 17:49	1
1,1-Dichloroethene	ND		4.00		ug/L			10/09/19 17:49	1
1,2-Dichloropropane	ND		1.00		ug/L			10/09/19 17:49	1
1,3-Dichloropropane	ND		2.00		ug/L			10/09/19 17:49	1
2,2-Dichloropropane	ND		3.00		ug/L			10/09/19 17:49	1
1,1-Dichloropropene	ND		3.00		ug/L			10/09/19 17:49	1
Ethylbenzene	ND		3.00		ug/L			10/09/19 17:49	1
Ethylene Dibromide	ND		2.00		ug/L			10/09/19 17:49	1
Hexachlorobutadiene	ND		6.00		ug/L			10/09/19 17:49	1
Isopropylbenzene	ND		2.00		ug/L			10/09/19 17:49	1
4-Isopropyltoluene	ND		3.00		ug/L			10/09/19 17:49	1
Methylene Chloride	ND		5.00		ug/L			10/09/19 17:49	1
Methyl tert-butyl ether	ND		2.00		ug/L			10/09/19 17:49	1
m-Xylene & p-Xylene	ND		3.00		ug/L			10/09/19 17:49	1
Naphthalene	ND		4.00		ug/L			10/09/19 17:49	1
n-Butylbenzene	ND		3.00		ug/L			10/09/19 17:49	1
N-Propylbenzene	ND		3.00		ug/L			10/09/19 17:49	1
o-Xylene	ND		2.00		ug/L			10/09/19 17:49	1
sec-Butylbenzene	ND		3.00		ug/L			10/09/19 17:49	1
Styrene	ND		5.00		ug/L			10/09/19 17:49	1
tert-Butylbenzene	ND		3.00		ug/L			10/09/19 17:49	1
1,1,1,2-Tetrachloroethane	ND		2.00		ug/L			10/09/19 17:49	1
1,1,2,2-Tetrachloroethane	ND		3.00		ug/L			10/09/19 17:49	1
Tetrachloroethene	ND		3.00		ug/L			10/09/19 17:49	1
Toluene	ND		2.00		ug/L			10/09/19 17:49	1

Client: GHD Services Inc.
Project/Site: Martin Brower Transportation Facility

Job ID: 580-89737-1
SDG: 11202705-03

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

Lab Sample ID: MB 580-313857/7
Matrix: Water
Analysis Batch: 313857

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		3.00		ug/L			10/09/19 17:49	1
trans-1,3-Dichloropropene	ND		1.00		ug/L			10/09/19 17:49	1
1,2,3-Trichlorobenzene	ND		5.00		ug/L			10/09/19 17:49	1
1,2,4-Trichlorobenzene	ND		2.00		ug/L			10/09/19 17:49	1
1,1,1-Trichloroethane	ND		3.00		ug/L			10/09/19 17:49	1
1,1,2-Trichloroethane	ND		1.00		ug/L			10/09/19 17:49	1
Trichloroethene	ND		3.00		ug/L			10/09/19 17:49	1
Trichlorofluoromethane	ND		3.00		ug/L			10/09/19 17:49	1
1,2,3-Trichloropropane	ND		2.00		ug/L			10/09/19 17:49	1
1,2,4-Trimethylbenzene	ND		3.00		ug/L			10/09/19 17:49	1
1,3,5-Trimethylbenzene	ND		3.00		ug/L			10/09/19 17:49	1
Vinyl chloride	ND		1.00		ug/L			10/09/19 17:49	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*		*10/09/19 17:49*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 120*		*10/09/19 17:49*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*80 - 126*		*10/09/19 17:49*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*		*10/09/19 17:49*	*1*
Trifluorotoluene (Surr)	*95*		*80 - 120*		*10/09/19 17:49*	*1*

Lab Sample ID: LCS 580-313857/4
Matrix: Water
Analysis Batch: 313857

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	10.0	9.334		ug/L		93	75 - 121
Bromobenzene	10.0	8.728		ug/L		87	80 - 120
Bromoform	10.0	7.039		ug/L		70	61 - 132
Bromomethane	10.0	9.701		ug/L		97	66 - 125
Carbon tetrachloride	10.0	7.834		ug/L		78	72 - 129
Chlorobenzene	10.0	9.071		ug/L		91	80 - 120
Chlorobromomethane	10.0	8.808		ug/L		88	78 - 120
Chlorodibromomethane	10.0	8.184		ug/L		82	71 - 120
Chloroethane	10.0	8.974		ug/L		90	65 - 132
Chloroform	10.0	9.832		ug/L		98	73 - 127
Chloromethane	10.0	8.884	J	ug/L		89	52 - 135
2-Chlorotoluene	10.0	9.059		ug/L		91	80 - 120
4-Chlorotoluene	10.0	9.125		ug/L		91	80 - 120
cis-1,2-Dichloroethene	10.0	9.012		ug/L		90	76 - 129
cis-1,3-Dichloropropene	10.0	9.328		ug/L		93	77 - 120
1,2-Dibromo-3-Chloropropane	10.0	8.330	J	ug/L		83	65 - 125
Dibromomethane	10.0	8.777		ug/L		88	80 - 120
1,2-Dichlorobenzene	10.0	9.645		ug/L		96	80 - 120
1,3-Dichlorobenzene	10.0	9.578		ug/L		96	80 - 120
1,4-Dichlorobenzene	10.0	9.417		ug/L		94	80 - 120
Dichlorobromomethane	10.0	8.971		ug/L		90	75 - 124
Dichlorodifluoromethane	10.0	5.943	J	ug/L		59	20 - 150
1,1-Dichloroethane	10.0	9.310		ug/L		93	70 - 129

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

Lab Sample ID: LCS 580-313857/4
Matrix: Water
Analysis Batch: 313857

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	10.0	9.507		ug/L		95	76 - 131
1,1-Dichloroethene	10.0	8.583		ug/L		86	70 - 129
1,2-Dichloropropane	10.0	9.738		ug/L		97	72 - 126
1,3-Dichloropropane	10.0	9.560		ug/L		96	79 - 120
2,2-Dichloropropane	10.0	10.25		ug/L		102	62 - 140
1,1-Dichloropropene	10.0	8.368		ug/L		84	80 - 120
Ethylbenzene	10.0	9.841		ug/L		98	80 - 120
Ethylene Dibromide	10.0	8.688		ug/L		87	79 - 120
Hexachlorobutadiene	10.0	8.402		ug/L		84	74 - 125
Isopropylbenzene	10.0	9.476		ug/L		95	75 - 120
4-Isopropyltoluene	10.0	9.266		ug/L		93	77 - 120
Methylene Chloride	10.0	11.76		ug/L		118	77 - 125
Methyl tert-butyl ether	10.0	9.472		ug/L		95	72 - 130
m-Xylene & p-Xylene	10.0	9.351		ug/L		94	80 - 120
Naphthalene	10.0	9.840		ug/L		98	44 - 144
n-Butylbenzene	10.0	8.852		ug/L		89	78 - 120
N-Propylbenzene	10.0	9.804		ug/L		98	80 - 120
o-Xylene	10.0	9.838		ug/L		98	80 - 120
sec-Butylbenzene	10.0	9.335		ug/L		93	78 - 120
Styrene	10.0	9.259		ug/L		93	76 - 121
tert-Butylbenzene	10.0	9.208		ug/L		92	80 - 121
1,1,1,2-Tetrachloroethane	10.0	9.014		ug/L		90	79 - 120
1,1,2,2-Tetrachloroethane	10.0	10.64		ug/L		106	74 - 124
Tetrachloroethene	10.0	8.751		ug/L		88	76 - 120
Toluene	10.0	9.923		ug/L		99	80 - 120
trans-1,2-Dichloroethene	10.0	8.987		ug/L		90	77 - 124
trans-1,3-Dichloropropene	10.0	8.969		ug/L		90	80 - 122
1,2,3-Trichlorobenzene	10.0	9.465		ug/L		95	23 - 150
1,2,4-Trichlorobenzene	10.0	9.405		ug/L		94	57 - 140
1,1,1-Trichloroethane	10.0	8.844		ug/L		88	74 - 130
1,1,2-Trichloroethane	10.0	9.852		ug/L		99	80 - 121
Trichloroethene	10.0	8.026		ug/L		80	70 - 120
Trichlorofluoromethane	10.0	8.014		ug/L		80	64 - 136
1,2,3-Trichloropropane	10.0	8.611		ug/L		86	76 - 124
1,2,4-Trimethylbenzene	10.0	9.938		ug/L		99	80 - 120
1,3,5-Trimethylbenzene	10.0	9.811		ug/L		98	80 - 120
Vinyl chloride	10.0	8.902		ug/L		89	65 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*
Dibromofluoromethane (Surr)	*100*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*102*		*80 - 126*
Toluene-d8 (Surr)	*103*		*80 - 120*
Trifluorotoluene (Surr)	*95*		*80 - 120*

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

Lab Sample ID: LCSD 580-313857/5
Matrix: Water
Analysis Batch: 313857

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	9.586		ug/L		96	75 - 121	3	14
Bromobenzene	10.0	8.770		ug/L		88	80 - 120	0	13
Bromoform	10.0	7.072		ug/L		71	61 - 132	0	20
Bromomethane	10.0	9.464		ug/L		95	66 - 125	2	27
Carbon tetrachloride	10.0	7.786		ug/L		78	72 - 129	1	19
Chlorobenzene	10.0	9.196		ug/L		92	80 - 120	1	15
Chlorobromomethane	10.0	8.686		ug/L		87	78 - 120	1	20
Chlorodibromomethane	10.0	8.320		ug/L		83	71 - 120	2	24
Chloroethane	10.0	8.952		ug/L		90	65 - 132	0	35
Chloroform	10.0	9.363		ug/L		94	73 - 127	5	22
Chloromethane	10.0	8.951	J	ug/L		90	52 - 135	1	23
2-Chlorotoluene	10.0	8.952		ug/L		90	80 - 120	1	15
4-Chlorotoluene	10.0	9.178		ug/L		92	80 - 120	1	14
cis-1,2-Dichloroethene	10.0	8.958		ug/L		90	76 - 129	1	15
cis-1,3-Dichloropropene	10.0	9.520		ug/L		95	77 - 120	2	20
1,2-Dibromo-3-Chloropropane	10.0	8.460	J	ug/L		85	65 - 125	2	27
Dibromomethane	10.0	8.583		ug/L		86	80 - 120	2	22
1,2-Dichlorobenzene	10.0	9.617		ug/L		96	80 - 120	0	15
1,3-Dichlorobenzene	10.0	9.454		ug/L		95	80 - 120	1	14
1,4-Dichlorobenzene	10.0	9.192		ug/L		92	80 - 120	2	17
Dichlorobromomethane	10.0	8.687		ug/L		87	75 - 124	3	22
Dichlorodifluoromethane	10.0	5.812	J	ug/L		58	20 - 150	2	35
1,1-Dichloroethane	10.0	9.597		ug/L		96	70 - 129	3	26
1,2-Dichloroethane	10.0	9.263		ug/L		93	76 - 131	3	18
1,1-Dichloroethene	10.0	8.477		ug/L		85	70 - 129	1	27
1,2-Dichloropropane	10.0	9.876		ug/L		99	72 - 126	1	26
1,3-Dichloropropane	10.0	9.574		ug/L		96	79 - 120	0	26
2,2-Dichloropropane	10.0	9.797		ug/L		98	62 - 140	5	23
1,1-Dichloropropene	10.0	8.186		ug/L		82	80 - 120	2	14
Ethylbenzene	10.0	9.927		ug/L		99	80 - 120	1	14
Ethylene Dibromide	10.0	8.944		ug/L		89	79 - 120	3	20
Hexachlorobutadiene	10.0	8.277		ug/L		83	74 - 125	1	22
Isopropylbenzene	10.0	9.364		ug/L		94	75 - 120	1	20
4-Isopropyltoluene	10.0	9.175		ug/L		92	77 - 120	1	13
Methylene Chloride	10.0	11.52		ug/L		115	77 - 125	2	18
Methyl tert-butyl ether	10.0	9.528		ug/L		95	72 - 130	1	18
m-Xylene & p-Xylene	10.0	9.546		ug/L		95	80 - 120	2	14
Naphthalene	10.0	9.821		ug/L		98	44 - 144	0	31
n-Butylbenzene	10.0	8.672		ug/L		87	78 - 120	2	14
N-Propylbenzene	10.0	9.611		ug/L		96	80 - 120	2	13
o-Xylene	10.0	9.761		ug/L		98	80 - 120	1	16
sec-Butylbenzene	10.0	9.224		ug/L		92	78 - 120	1	15
Styrene	10.0	8.949		ug/L		89	76 - 121	3	16
tert-Butylbenzene	10.0	9.206		ug/L		92	80 - 121	0	14
1,1,1,2-Tetrachloroethane	10.0	8.681		ug/L		87	79 - 120	4	20
1,1,2,2-Tetrachloroethane	10.0	10.50		ug/L		105	74 - 124	1	18
Tetrachloroethene	10.0	8.580		ug/L		86	76 - 120	2	20
Toluene	10.0	10.14		ug/L		101	80 - 120	2	19

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

Lab Sample ID: LCSD 580-313857/5
Matrix: Water
Analysis Batch: 313857

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
trans-1,2-Dichloroethene			10.0	9.191		ug/L		92	77 - 124	2	21
trans-1,3-Dichloropropene			10.0	9.050		ug/L		90	80 - 122	1	25
1,2,3-Trichlorobenzene			10.0	9.546		ug/L		95	23 - 150	1	35
1,2,4-Trichlorobenzene			10.0	9.624		ug/L		96	57 - 140	2	27
1,1,1-Trichloroethane			10.0	8.832		ug/L		88	74 - 130	0	18
1,1,2-Trichloroethane			10.0	9.725		ug/L		97	80 - 121	1	21
Trichloroethene			10.0	7.828		ug/L		78	70 - 120	3	21
Trichlorofluoromethane			10.0	8.096		ug/L		81	64 - 136	1	27
1,2,3-Trichloropropane			10.0	8.703		ug/L		87	76 - 124	1	30
1,2,4-Trimethylbenzene			10.0	9.762		ug/L		98	80 - 120	2	16
1,3,5-Trimethylbenzene			10.0	9.420		ug/L		94	80 - 120	4	14
Vinyl chloride			10.0	8.718		ug/L		87	65 - 130	2	28

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*
Dibromofluoromethane (Surr)	*96*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*102*		*80 - 126*
Toluene-d8 (Surr)	*104*		*80 - 120*
Trifluorotoluene (Surr)	*96*		*80 - 120*

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

Lab Sample ID: MB 580-313789/1-A
Matrix: Water
Analysis Batch: 314169

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 313789

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.400		ug/L		10/09/19 14:36	10/14/19 15:21	1
Acenaphthylene	ND		1.00		ug/L		10/09/19 14:36	10/14/19 15:21	1
Anthracene	ND		15.0		ug/L		10/09/19 14:36	10/14/19 15:21	1
Benzo[a]anthracene	ND		1.00		ug/L		10/09/19 14:36	10/14/19 15:21	1
Benzo[a]pyrene	ND		1.00		ug/L		10/09/19 14:36	10/14/19 15:21	1
Benzo[b]fluoranthene	ND		1.00		ug/L		10/09/19 14:36	10/14/19 15:21	1
Benzo[g,h,i]perylene	ND		1.00		ug/L		10/09/19 14:36	10/14/19 15:21	1
Benzo[k]fluoranthene	ND		1.00		ug/L		10/09/19 14:36	10/14/19 15:21	1
Chrysene	ND		0.600		ug/L		10/09/19 14:36	10/14/19 15:21	1
Dibenz(a,h)anthracene	ND		0.600		ug/L		10/09/19 14:36	10/14/19 15:21	1
Fluoranthene	ND		3.00		ug/L		10/09/19 14:36	10/14/19 15:21	1
Fluorene	ND		2.00		ug/L		10/09/19 14:36	10/14/19 15:21	1
Indeno[1,2,3-cd]pyrene	ND		1.00		ug/L		10/09/19 14:36	10/14/19 15:21	1
1-Methylnaphthalene	ND		1.00		ug/L		10/09/19 14:36	10/14/19 15:21	1
2-Methylnaphthalene	ND		0.400		ug/L		10/09/19 14:36	10/14/19 15:21	1
Naphthalene	ND		0.400		ug/L		10/09/19 14:36	10/14/19 15:21	1
Phenanthrene	ND		1.00		ug/L		10/09/19 14:36	10/14/19 15:21	1
Pyrene	ND		2.00		ug/L		10/09/19 14:36	10/14/19 15:21	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14 (Surr)	*113*		*61 - 126*	*10/09/19 14:36*	*10/14/19 15:21*	*1*

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

Lab Sample ID: LCS 580-313789/2-A
Matrix: Water
Analysis Batch: 314169

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 313789

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Acenaphthene			2.00	2.005		ug/L		100	56 - 120		
Acenaphthylene			2.00	1.795		ug/L		90	50 - 120		
Anthracene			2.00	1.850	J	ug/L		92	44 - 120		
Benzo[a]anthracene			2.00	2.094		ug/L		105	65 - 124		
Benzo[a]pyrene			2.00	1.753		ug/L		88	41 - 120		
Benzo[b]fluoranthene			2.00	2.182		ug/L		109	62 - 131		
Benzo[g,h,i]perylene			2.00	2.207		ug/L		110	65 - 125		
Benzo[k]fluoranthene			2.00	2.267		ug/L		113	57 - 128		
Chrysene			2.00	2.201		ug/L		110	57 - 126		
Dibenz(a,h)anthracene			2.00	2.239	*	ug/L		112	62 - 131		
Fluoranthene			2.00	2.220	J	ug/L		111	64 - 128		
Fluorene			2.00	2.017		ug/L		101	64 - 120		
Indeno[1,2,3-cd]pyrene			2.00	2.199	*	ug/L		110	55 - 148		
1-Methylnaphthalene			2.00	2.138		ug/L		107	59 - 120		
2-Methylnaphthalene			2.00	2.148		ug/L		107	53 - 120		
Naphthalene			2.00	2.104		ug/L		105	63 - 120		
Phenanthrene			2.00	2.177		ug/L		109	63 - 120		
Pyrene			2.00	2.249		ug/L		112	64 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Terphenyl-d14 (Surr)	*92*		*61 - 126*

Lab Sample ID: LCSD 580-313789/3-A
Matrix: Water
Analysis Batch: 314169

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 313789

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene			2.00	1.932		ug/L		97	56 - 120	4	35
Acenaphthylene			2.00	1.760		ug/L		88	50 - 120	2	35
Anthracene			2.00	1.907	J	ug/L		95	44 - 120	3	26
Benzo[a]anthracene			2.00	2.069		ug/L		103	65 - 124	1	27
Benzo[a]pyrene			2.00	1.640		ug/L		82	41 - 120	7	29
Benzo[b]fluoranthene			2.00	1.904		ug/L		95	62 - 131	14	27
Benzo[g,h,i]perylene			2.00	1.757		ug/L		88	65 - 125	23	25
Benzo[k]fluoranthene			2.00	1.828		ug/L		91	57 - 128	21	26
Chrysene			2.00	2.096		ug/L		105	57 - 126	5	26
Dibenz(a,h)anthracene			2.00	1.680	*	ug/L		84	62 - 131	29	28
Fluoranthene			2.00	2.082	J	ug/L		104	64 - 128	6	20
Fluorene			2.00	1.901	J	ug/L		95	64 - 120	6	28
Indeno[1,2,3-cd]pyrene			2.00	1.789	*	ug/L		89	55 - 148	21	20
1-Methylnaphthalene			2.00	1.975		ug/L		99	59 - 120	8	25
2-Methylnaphthalene			2.00	1.940		ug/L		97	53 - 120	10	29
Naphthalene			2.00	1.933		ug/L		97	63 - 120	9	34
Phenanthrene			2.00	2.022		ug/L		101	63 - 120	7	20
Pyrene			2.00	2.129		ug/L		106	64 - 120	5	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Terphenyl-d14 (Surr)	*85*		*61 - 126*

Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH with Silica Gel Cleanup

Lab Sample ID: MB 580-313704/1-A
Matrix: Water
Analysis Batch: 313948

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 313704

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.110		mg/L		10/09/19 08:47	10/10/19 17:55	1
Motor Oil (C24-C44)	ND		0.350		mg/L		10/09/19 08:47	10/10/19 17:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*92*		*50 - 150*	*10/09/19 08:47*	*10/10/19 17:55*	*1*

Lab Sample ID: LCS 580-313704/2-A
Matrix: Water
Analysis Batch: 313948

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 313704

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
#2 Diesel (C10-C24)			2.00	1.923		mg/L		96	50 - 120		
Motor Oil (C24-C44)			2.00	2.271		mg/L		114	64 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*85*		*50 - 150*

Lab Sample ID: LCSD 580-313704/3-A
Matrix: Water
Analysis Batch: 313948

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 313704

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
#2 Diesel (C10-C24)			2.00	1.693		mg/L		85	50 - 120	13	26
Motor Oil (C24-C44)			2.00	2.010		mg/L		101	64 - 120	12	24

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl	*86*		*50 - 150*

Lab Chronicle

Client: GHD Services Inc.
Project/Site: Martin Brower Transportation Facility

Job ID: 580-89737-1
SDG: 11202705-03

Client Sample ID: MW-1A
Date Collected: 10/03/19 10:12
Date Received: 10/03/19 11:55

Lab Sample ID: 580-89737-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	313857	10/09/19 23:16	W1T	TAL SEA
Total/NA	Prep	3520C			313789	10/09/19 14:36	PRO	TAL SEA
Total/NA	Analysis	8270D		1	314169	10/14/19 16:56	CJ	TAL SEA
Total/NA	Prep	3510C			313704	10/09/19 08:47	T1L	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313983	10/11/19 13:21	JCM	TAL SEA

Client Sample ID: MW-2A
Date Collected: 10/03/19 09:00
Date Received: 10/03/19 11:55

Lab Sample ID: 580-89737-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	313857	10/09/19 23:41	W1T	TAL SEA
Total/NA	Prep	3520C			313789	10/09/19 14:36	PRO	TAL SEA
Total/NA	Analysis	8270D		1	314169	10/14/19 17:19	CJ	TAL SEA
Total/NA	Prep	3510C			313704	10/09/19 08:47	T1L	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313983	10/11/19 13:41	JCM	TAL SEA

Client Sample ID: MW-3A
Date Collected: 10/03/19 09:37
Date Received: 10/03/19 11:55

Lab Sample ID: 580-89737-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	313857	10/10/19 00:07	W1T	TAL SEA
Total/NA	Prep	3520C			313789	10/09/19 14:36	PRO	TAL SEA
Total/NA	Analysis	8270D		1	314169	10/14/19 17:43	CJ	TAL SEA
Total/NA	Prep	3520C	DL		313789	10/09/19 14:36	PRO	TAL SEA
Total/NA	Analysis	8270D	DL	5	314821	10/22/19 23:31	T1W	TAL SEA
Total/NA	Prep	3510C			313704	10/09/19 08:47	T1L	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313983	10/11/19 14:01	JCM	TAL SEA

Client Sample ID: MW-4A
Date Collected: 10/03/19 10:50
Date Received: 10/03/19 11:55

Lab Sample ID: 580-89737-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	313857	10/10/19 00:32	W1T	TAL SEA
Total/NA	Prep	3520C			313789	10/09/19 14:36	PRO	TAL SEA
Total/NA	Analysis	8270D		1	314169	10/14/19 18:06	CJ	TAL SEA
Total/NA	Prep	3510C			313704	10/09/19 08:47	T1L	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	313983	10/11/19 14:21	JCM	TAL SEA

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

Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: Martin Brower Transportation Facility

Job ID: 580-89737-1
SDG: 11202705-03

Laboratory: Eurofins TestAmerica, Seattle

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-024	01-19-22
ANAB	Dept. of Defense ELAP	L2236	01-19-22
ANAB	ISO/IEC 17025	L2236	01-19-22
California	State	2901	11-05-19
Montana (UST)	State	NA	04-13-21
Oregon	NELAP	WA100007	11-05-19
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	US Federal Programs	P330-17-00039	02-10-20
Washington	State	C553	02-17-20

Sample Summary

Client: GHD Services Inc.
Project/Site: Martin Brower Transportation Facility

Job ID: 580-89737-1
SDG: 11202705-03

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-89737-1	MW-1A	Water	10/03/19 10:12	10/03/19 11:55	
580-89737-2	MW-2A	Water	10/03/19 09:00	10/03/19 11:55	
580-89737-3	MW-3A	Water	10/03/19 09:37	10/03/19 11:55	
580-89737-4	MW-4A	Water	10/03/19 10:50	10/03/19 11:55	

Eurofins TestAmerica, Seattle
5755 8th Street East
Tacoma, WA 98424
Phone: 253-922-2310 Fax: 253-922-5047

Chain of Custody Record

eurofins Environment Testing TestAmerica

Client Information	Sampler: Patrick Ho	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 580-35835-11547.1
Client Contact: Brian Richardson	Phone:	E-Mail: roxanne.cisneros@testamericainc.com		Page: Page 1 of 1
Company: GHD Services Inc.				Job #:
Address: 26850 Haggerty Rd.	Due Date Requested:			
City: Farmington Hills	TAT Requested (days):			
State, Zip: MI, 48331				
Phone:	PO #: Purchase Order Requested			
Email: brian.richardson@ghd.com	WO #: 11202705-03			
Project Name: Penske Truck Leasing Co.	Project #: 58014317			
Site:	SSOW#:			

Analysis Requested

Loc: 580
89737

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	NWTPH_Dx - NWTPH-Dx w/ SGT	8260B - 8260 VOC	8270D - 8270 PAH	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A	A	N		
MW- 1A	10-3-19	1012	G	Water	N	N	X	X	X		
MW- 2A	10-3-19	0900	G	Water	N	N	X	X	X		
MW- 3A	10-3-19	0937	G	Water	N	N	X	X	X		
MW- 4A	10-3-19	1050	G	Water	N	N	X	X	X		
				~~Water~~							

580-89737 Chain of Custody

Therm. ID: IR 6 Cor: 6.0° Unc: 5.5°
Cooler Dsc: Ice Bl
Packing: Bub
Cust. Seal: Yes No
Blue Ice, Wet, Dry, None
FedEx:
UPS:
Lab Cour:
Other: Cl dry

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

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by: Patrick Ho	10-3-19 / 1155	BTS		10-3-19 1155	TASEA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: △ Yes △ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 580-89737-1
SDG Number: 11202705-03

Login Number: 89737
List Number: 1
Creator: Hobbs, Kenneth F

List Source: Eurofins TestAmerica, Seattle

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
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	

about GHD

GHD is one of the world's leading professional services companies operating in the global markets of water, energy and resources, environment, property and buildings, and transportation. We provide engineering, environmental, and construction services to private and public sector clients.

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